EMBRACING COMPLEXITY

Unravelling mechanisms in health promotion in the Healthy Futures Nearby programme

Lette Hogeling

Propositions

1. The perception that participation of groups experiencing vulnerability is a generic effective health promoting mechanism hinders effectiveness.
   (this thesis)

2. Humanizing health promotion is an essential element of effectively reducing health inequalities.
   (this thesis)

3. Outcome measures defined by funders restrict the potential for new insights from scientific research in complex social systems.

4. Extensive testing of cognitive skills in primary schools hinders broad development of school-aged children.

5. Building strong communities is key to reducing inequalities.

6. Prohibit student participation in community-based participatory research projects.

Propositions belonging to the thesis, entitled

Embracing complexity. Unravelling mechanisms in health promotion in the Healthy Futures Nearby Programme.

Lette Hogeling
Wageningen, 22 December 2023

Embracing complexity

Unravelling mechanisms in health promotion in the Healthy Futures Nearby programme

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Embracing complexity

Unravelling mechanisms in health promotion in the Healthy Futures Nearby programme

Lette Hogeling

Thesis

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Table of contents

Chapter 1

General introduction

1.1 Background

In the Netherlands, people with higher educational attainment have a higher (healthy) life expectancy compared to those with lower educational attainment (CBS, 2023). The mean difference in life expectancy between the two groups is as much as 4.4 years (RIVM, 2023). Such differences are not found solely according to educational level, nor is (healthy) life expectancy the only health indicator in which socioeconomic health inequalities occur. For example, the prevalence of diabetes is related to both educational level and household income. Loneliness occurs more amongst men and women with lower educational attainment, as well as amongst people with lower income and those who are unemployed (RIVM, 2023). Differences are even more striking in terms of years lived in good perceived health. Men and women with higher educational attainment live respectively 14.6 and 15 years longer in good perceived health than people with lower educational attainment (CBS, 2023; RIVM, 2023).

Health inequalities in the Netherlands are determined by a complex interplay of factors. These factors and their interrelationships have been a topic of study since the 1980s. Key publications from European countries have revealed the gravity of inequalities in several high-income countries in the region (Mackenbach & Stronks, 2004). There is ample evidence that life expectancy and health are influenced by a variety of factors. Examples include health-related behaviours, experiences in early life and the social determinants of health, including the physical environment (Nutbeam & Muscat, 2021).

In the Netherlands, national and local policies have addressed health inequalities from a variety of health-promotion approaches. Regional and national institutes focus on promoting health amongst specific groups or targeting specific behavioural or health-related issues. Despite numerous efforts that have been taken to reduce health inequalities in recent decades, however, the gap persists and has even widened (Gheorghe, Wubulihasimu, Peters, Nusselder, & Van Baal, 2016).

In 1948, the WHO defined health as ‘a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity’ (World Health Organization, 1995, p. 1). Although many have criticised this definition (Huber et al., 2011) and proposed adjustments (World Health Organization, 1986), it has not changed to date (World Health Organization, 2023). Despite these critiques, the definition has at least one valuable strength: the notion that health includes multiple dimensions—physical, mental and social.

In the Netherlands, health inequalities are often defined in terms of indicators, like (healthy) life expectancy and perceived health (RIVM, 2023). Differences in health between people of different socioeconomic positions are not restricted to indicators of physical health. Socioeconomic differences have also been reported for indicators of social health, such as loneliness (Theeke, 2010), as well as for mental health, such as emotional symptoms and life satisfaction (Weinberg, Stevens, Duinhof, & Finkenauer, 2019). Mental and social health can shape physical health, and vice versa. For example, chronic loneliness has been related to a multitude of issues relating to behavioural health (e.g. less exercise, more tobacco use) and physical health (e.g. more chronic illnesses) (Theeke, 2010). These interrelationships underscore the need to consider all dimensions of health, when unravelling the complex interplay of factors associated with health inequalities.

Families and health

In recent decades, researchers and policymakers have identified the 'family' as a key entity for health-promotion efforts. First, as a social environment, the family plays an important role in shaping and sustaining health-related behaviours amongst all family members (Novilla, Barnes, De La Cruz, & Williams, 2006). In general, the same social and physical context influences the health and well-being of all family members. Moreover, the behaviours of parents/caretakers play a crucial role in determining what children learn, as well as in what they do—both now and in the future (Elder Jr, 1998; Masten & Coatsworth, 1998). Children need the support provided by family members to maintain their own health and well-being (Heinze, Kruger, Reischl, Cupal, & Zimmerman, 2015). Intergenerational influences within families can develop into a cycle of adverse health-related behaviours and, consequently issues relating to health and well-being (Slagboom, Crone, & Reis, 2022). To break such adverse intergenerational cycles, efforts aimed at promoting family health should focus on involving the family as a whole (Crone et al., 2021). Families may also have an impact on the communities in which they live (Hanson et al., 2019), thereby potentially contributing to positive or adverse social (or other) environments for other members of the wider community. It is clear that the family is a valuable entity in health research and promotion.

In clinical practice, targeting the whole family is a widely used approach to healthcare, as in the case of care for children in hospital settings (Shields, 2015; Shields, Pratt, Davis, & Hunter, 2007) or of community health services (Ridgway, Hackworth, Nicholson, & McKenna, 2021). Outside the clinical healthcare setting, most family-centred initiatives focus on preventing the abuse or maltreatment of children. Meanwhile, the concept of

families as a crucial entry point and area of focus is increasingly being included in other health-promotion approaches, including community and school-based health promotion. In addition, researchers are increasingly applying the concept of the 'health-promoting family' to explore how family members, both children and adults, promote the health of their families (Christensen, 2004; Michaelson, Pilato, & Davison, 2021). Several prevention (and other) programmes have been based on a primarily family-focused approach to health promotion (Davison, Lawson, & Coatsworth, 2012; Olds, 2002). As the focus of health promotion, however, the family is generally underutilised (Barnes et al., 2020).

There is no specific right way to address families who are experiencing one or more challenging conditions, such as unemployment, financial problems, difficulties with school or social relationships and physical, mental or social health issues. To my knowledge, the recent literature on health promotion amongst families in challenging circumstances is ambiguous concerning how to refer to these families. Commonly used terms include 'families experiencing (conditions of) vulnerability' (Krakouer, Mitchell, Trevitt, & Kochanoff, 2017; Roberts, 2017), 'vulnerable families' (Arney & Scott, 2013; McKeown, 2000; Morris, 2013), 'families at risk' (Force, 2008) and 'multi-problem households' (G. Nagelhout, Abidi, Lodder, Schutte, & de Vries, 2020; G. E. Nagelhout, Hogeling, Spruijt, Postma, & De Vries, 2017).

In this thesis, I refer to these families as 'families experiencing vulnerability' whenever possible. This avoids labelling human beings as 'types' of families, as if the vulnerability that is being experienced is a characteristic of the family rather than a temporary (or protracted) situation. I am aware that this terminology is also not ideal, as is probably the case for any label assigned to a group of people so diverse in their circumstances and experiences. In some chapters in this thesis, I apply a different label for the families under study. This is largely because the studies discussed in these chapters are part of the overall evaluation of a programme involving a narrowly defined target group of families, which was adopted in these studies for the sake of clarity.

One of the main challenges encountered when involving families as a whole in research and practice relating to health promotion, and specifically with regard to families experiencing vulnerability, has to do with the limited accessibility (whether actual or perceived) of the families. Existing studies describe (albeit with varying degrees of success) strategies for the inclusion of specific groups in healthcare, including children and/or families (Dworkin, Hessel, Gliske, & Rudi, 2016; Haine-Schlagel & Walsh, 2015). Despite the frequent emphasis on the importance and benefits of family participation in health

promotion (Barnes et al., 2020), the actual and sustained involvement of family members in the design and implementation of health-promotion interventions continues to pose a challenge (Langford, Bonell, Jones, & Campbell, 2015).

1.2 Aim of this thesis

Health inequalities are a persistent problem in the Netherlands, and they are shaped by a complex interplay of environmental, social and individual factors. Policymakers, practitioners and researchers have focused on reducing such inequalities in general, as well as within the context of promoting health specifically amongst people experiencing vulnerability and suffering from health disparities. Families are a key entity, both as a point of entry to and as a source of health-promotion efforts. While effective health-promotion initiatives have been identified and supported by evidence, the relative effectiveness of different approaches remains unclear, especially for families experiencing vulnerability. Little is known about how and why such specific approaches work or not. In addition, many programmes struggle to reach out to the right people and to succeed in creating sustained involvement on the part of people in vulnerable situations.

Taken together, these situations reflect a need for in-depth research into health-promotion approaches for families experiencing vulnerability. The central aim of this thesis is therefore *to generate insight into the effectiveness of and mechanisms at play in various health-promotion approaches intended for families experiencing vulnerability*.

1.3 The Healthy Futures Nearby programme

This thesis is part of and an addition to the overall evaluation of the Healthy Futures Nearby (translated from Dutch: *Gezonde Toekomst Dichterbij*) programme. In this section, I describe this programme as the setting for the current thesis. In the period 2016–2020, the FNO charitable organisation (FNO, 2023) funded 46 projects under the umbrella of the national, multi-project programme entitled Healthy Futures Nearby (FNO, 2015). The programme was launched in 2015 with the aim of reducing health disparities amongst people with low socioeconomic status and, more specifically, amongst families experiencing vulnerability. The objective was thus to create ‘approaches’ (interventions), that would lead to reductions in smoking, alcohol use and overweight, as well as to improvements in perceived health amongst these families. All projects were designed to target at least one family member, and they were expected to include attention to improving the health-related skills and the physical and social environment of the family

(FNO, 2015). The families to be included in the projects were further defined as households (1) in which at least one parent and one child were living together; (2) who were experiencing multiple problems with regard to finances, education, work or well-being; and (3) who were experiencing health disparities related to smoking, alcohol use, overweight or underlying psychosocial issues (FNO, 2015).

A call for proposals was launched for two types of projects: area-specific (*gebiedsgericht*') projects, which would receive funding for both a preparatory and an implementation phase; and integrated ('*integrale*') projects, which would receive funding for the implementation phase. An additional call was launched in 2016, with the aim of funding projects focusing specifically on the topics of smoking and alcohol use, which had been under-represented in the first two groups of proposals. The three calls resulted in funding for 46 projects under the umbrella of the Healthy Futures Nearby programme. Projects were required to have arranged co-funding, as well as partnerships with local municipalities and communities. The main characteristics and structure of the programme are presented in Table 1.1.

Table 1.1 Main characteristics and general structure of the Healthy Futures Nearby programme. Information adapted from the programme text (FNO, 2015).

Healthy Futures Nearby Programme

<table>
<tr><td colspan="4">Aim:
- To reduce health disparities amongst families experiencing vulnerability
- To create interventions leading to reductions in smoking, alcohol use and overweight, as well as to improvements in perceived health
Programme target group:
- People with low socioeconomic status and, more specifically, families experiencing vulnerability
Research and evaluation:
- The overall evaluation aims to contribute to knowledge about reducing health disparities amongst families in the Netherlands.
- Each project cooperates with and is included in an overall evaluation of all the projects and the programme as a whole.</td></tr>
<tr><td>Project type:</td><td>Area-specific projects</td><td>Integrated projects</td><td>Additional integrated projects</td></tr>
<tr><td>Funding for:</td><td>(1) A preparatory phase (‘Startfoto’), which should map the needs and health risks of families in a specific area
(2) An implementation phase</td><td>An implementation phase</td><td>An implementation phase</td></tr>
<tr><td>Focus:</td><td colspan="3">- Interventions should include the physical and social environment of families, as well as intrapersonal competences (e.g. health skills)
- Projects should either include an evidence-based intervention or scientifically test the intervention it implements.</td></tr>
<tr><td>Project-specific target group:</td><td colspan="3">- At least one family member of a household (1) in which at least one parent and one child are living together; (2) who are experiencing multiple problems with regard to finances, education, work or well-being; and (3) who are experiencing health disparities related to smoking, alcohol use, overweight or underlying psychosocial issues.</td></tr>
<tr><td>Research & evaluation</td><td colspan="3">- Each project has its own project-specific evaluation.</td></tr>
</table>

In this thesis, the Healthy Futures Nearby programme is sometimes referred to as a multi-project programme (MPP). To my knowledge, this concept is more commonly used in management and organisational studies (Vuorinen & Martinsuo, 2018; Wiley, Deckro, & Jackson Jr, 1998) than it is within the field of health promotion. In general, both 'programmes' and 'projects' in health promotion refer to interventions or settings that are more or less defined, or to be designed. By using MPP to refer to the Healthy Futures Nearby programme, I intend to stress the diversity of the projects included under a programme with an overall aim. The multitude and diversity of the projects contribute to the complexity of the programme and its evaluation. For this reason, I decided to use a concept that inherently implies such diversity.

Overall evaluation of the Healthy Futures Nearby programme

Parallel to the implementation of the programme, an overall evaluation was conducted. This evaluation was assigned to a research consortium consisting of the Verwey-Jonker Institute, Wageningen Economic Research and the Health and Society chair group from Wageningen University and Research. Project management was performed by Wageningen University and Research, and all parties contributed equally to the design and implementation of the overall evaluation. Each partner institution joined the consortium with 2–3 researchers.

A call for the overall evaluation of the Healthy Futures Nearby programme was launched, along with the requirements and conditions for the research. The design originally proposed for the evaluation was finalised in the first year of the evaluation, based on an initial exploration of the projects, and it was approved by FNO. This evaluation design is included in Chapter 2 as a study protocol (Hogeling, Vaandrager, & Koelen, 2019). This chapter provides details about the design of the overall evaluation, the background of the choices made for the protocol and the objectives of the overall evaluation.

On a more practical note, the research consortium decided to divide the projects amongst themselves. To this end, they designated an 'account holder' for each of the 46 projects. The argument for this structure was two-dimensional: (1) project leaders and stakeholders were given a consistent contact person for the overall evaluation, and (2) researchers were able to focus their work on a smaller number of projects, thus enabling more in-depth knowledge on specific individual projects and topics. A final evaluation report on the overall evaluation was published in 2020 (Vaandrager et al., 2020).

1.4 Theoretical framework

Many theoretical models exist with regard to health-promotion amongst people experiencing vulnerability. Given that families are part of a community (i.e. a system) in addition to comprising individual family members, many theoretical approaches could provide a suitable base for studying approaches to health promotion and behaviour change amongst families. Within the field of health promotion in general, the focus has shifted from primarily individual, behavioural theories—such as the health belief model (Champion & Skinner, 2008; Rosenstock, 1974)—to theories that include environmental and community-based influences (Nutbeam, Harris, & Wise, 2010; Raingruber, 2014)—such as the socio-ecological model (Bronfenbrenner, 1986) and a whole-systems approach. More recent theories of health promotion shift the perspective away from illness and towards well-being and positive resources. Examples include asset-based approaches (Cassetti, Powell, Barnes, & Sanders, 2020; Morgan, 2014; Morgan & Ziglio, 2007) and the salutogenic model of health (Antonovsky, 1996). While the shift from individual/behavioural to ecological factors and from a focus on illness to a focus on well-being is apparent in policy, practice and research, all of these varied approaches are currently still being used to guide the design, implementation and evaluation of interventions and programmes.

Participatory approaches

Community-based participatory research (Wallerstein & Duran, 2017), community engagement (O'Mara-Eves et al., 2015; Swainston & Summerbell, 2008) and other participatory approaches that involve communities and/or beneficiaries are now regarded as undisputed strategies in many health-promotion programmes. The main idea underlying these approaches is that the involvement of communities in the design, implementation and/or evaluation of health-promotion efforts is crucial to reducing health inequalities, including or specifically amongst populations experiencing vulnerability. Participatory approaches are diverse. One of the main distinctions is between theories that regard engagement (or empowerment) as an independent objective and those that regard the engagement of beneficiaries as instrumental to achieving health outcomes (Brunton et al., 2017). There is evidence that, in general, participatory approaches can lead to improved health outcomes for communities experiencing vulnerability (O'Mara-Eves et al., 2015; South et al., 2010). It nevertheless remains unclear exactly which of the diverse engagement approaches works, for whom and why (Cyril, Smith, Possamai-Inesedy, & Renzaho, 2015; O'Mara-Eves et al., 2015).

Complexity

Most health-promotion efforts (i.e. programmes and projects) are conducted within a complex reality. Moreover, these efforts are often complex in themselves as well. There is considerable diversity concerning what is understood as complexity in social problems, health-promotion interventions and research. Glouberman and Zimmerman (2002) provide a clear set of characteristics for complex problems, which can be applied to analysis of social problems, including health promotion amongst families experiencing vulnerability. Within a context of complexity, outcomes and results are both uncertain and emergent (Glouberman & Zimmerman, 2002; Rogers, 2008). Other scholars (Dubois et al., 2012) have argued that complex interventions have specific structural features (e.g. interacting components and multiple actors). Another element of complex interventions is that they exist in interaction with environments—which are also changing (Jolley, 2014). This emphasises the importance of understanding the context.

This thesis is part of the overall evaluation of the Healthy Futures Nearby programme, which consists of 46 diverse projects. The complexity of the evaluation is exacerbated by the structure of the programme, with its diversity and flexibility in terms of the approaches adopted by the individual projects. One feature shared by all projects, however, is the inherent complexity of health promotion amongst families. Within this shared complexity, we identified opportunities for the design of the overall evaluation and the studies included in this thesis. We chose to adopt a *theory-based* and *realist-informed approach* to investigating the effectiveness of and the mechanisms at play in various approaches to promoting health amongst families experiencing vulnerability. These two perspectives, which often overlap, are elaborated in greater detail below, as well as the reasons why they were chosen to guide our research.

Theory-based approach

Both the programme design and the individual project approaches contribute to the theoretical base or assumptions that underly the activities and strategies in the projects. In other words, it would be pointless to adopt a single shared theoretical model to guide the overall study of 46 very diverse projects. It would be far more relevant and suitable to build or identify an overall programme theory based on programmes and projects assumptions concerning what works in health promotion for families experiencing vulnerability. Such a theoretical base must undoubtedly comprise existing scientific theories on health-related behaviour change and improving perceived health, as this was the main aim of the programme. The theoretical base should be inclusive as well,

however, meaning that it should also include more practice-based and, possibly, implicit assumptions from healthcare (or other) practitioners and project staff concerning what works and what does not (Davidoff, Dixon-Woods, Leviton, & Michie, 2015).

In this thesis, I adopt a theory-based approach revolving around the identification of programme theory that specifies the mechanisms of change (Rogers & Weiss, 2007; Weiss, 1997) and that provides a base for further evaluation. In addition to referring to the use of scientific theory to guide the design, implementation and evaluation of health promotion interventions, theory-based evaluation 'requires surfacing the assumptions on which the program is based in considerable detail (…)' (Birckmayer and Weiss, 2000, p. 408). Adoption of a theory-based approach can clarify a programme's focus and surface implicit assumptions, and it can subsequently strengthen the programme (Jolley, 2014). As argued by Skivington et al. (2021), identifying the theory that underpins a programme is a core element in the phases of evaluating complex interventions.

Given the diversity and complexity of the Healthy Futures Nearby programme and the projects under its umbrella, we adopted a theory-based approach. The way in which this approach is woven into the design of the overall evaluation and, in its turn, in this thesis, is discussed in the study protocol presented in Chapter 2.

Realist evaluation

One type of theory-based evaluation (Stame, 2004) is realist evaluation (Pawson, Tilley, & Tilley, 1997). This perspective on evaluation (and synthesis) does justice to the complexity encountered in many social programmes and the evaluation thereof (Wong, 2018; Wong et al., 2016). One key element in realist research involves identifying configurations of contexts, mechanisms and outcomes, which provide in-depth insight into how, for whom, to what extent and within which context complex interventions work (Wong et al., 2016). This is in contrast to the approach of seeking evidence for the effectiveness of an intervention as a whole (does it work?). The aim of this thesis is to provide such in-depth answers concerning how approaches to promoting health amongst families experiencing vulnerability work. To this end, I adopt a realist-informed approach in two case studies, which are reported in Chapters 4 and 5), along with a more detailed description of the approach.

Mixed methods

Neither theory-based evaluation nor the related realist approach to evaluation requires the use of any specific method, nor do these approaches imply a preference for one method over others (Gilmore, McAuliffe, Power, & Vallières, 2019; Wong et al., 2016). Some scholars argue that a mixed-method design can do justice to the challenges associated with that evaluation within a context of complexity (Chen, 1990, 2006). In addition to the theory-based and realist-informed approaches, I adopt a mixed-method approach for the overall evaluation and the studies in this thesis. In Chapter 2, which consists of the study protocol for the overall evaluation, I discuss what this means for the design of the evaluation and the individual studies.

1.5 Research questions

The objective of this thesis is to provide insight into the effectiveness of and mechanisms at play in various approaches to health promotion for families experiencing vulnerability. This objective is pursued within the context of the Healthy Futures Nearby programme, which involves the implementation of multiple and diverse small-scale health-promotion projects for families experiencing vulnerability. My investigations were guided by four research questions:

1. Which interpretations of effective ways to promote change in health-related behaviours and to improve perceived health amongst families experiencing vulnerability are included within the Healthy Futures Nearby programme?

2. What works and how (and what does not work and why) with regard to community engagement for health promotion amongst families experiencing vulnerability?

3. Which mechanisms play a role in the involvement of professionals in the implementation of health-promotion for families experiencing vulnerability?

4. Which approaches—community engagement/participation, customisation of professional practices, neighbourhood networks, a behavioural approach—or combinations of approaches can contribute to improvements in the perceived health and/or weight or activity status of families experiencing vulnerability?

Each of these research questions is used to guide the research for one of the chapters in this thesis (Table 1.2). The position of Chapter 2 (Study protocol for the overall evaluation) is explained below.

Table 1.2 Research questions and chapters.

Research question	**Chapter**
1. Which interpretations of effective ways to promote change in health-related behaviours and improve perceived health amongst families experiencing vulnerability are included within the Healthy Futures Nearby programme?	**Chapter 3**: What works for vulnerable families? Interpretations of effective health promotion
2. What works and how (and what does not work and why) with regard to community engagement for health promotion amongst families experiencing vulnerability?	**Chapter 4**: What works—and what does not work—in community engagement in health promotion. A multiple-case study
3. Which mechanisms play a role in the involvement of professionals in the implementation of health-promotion for families experiencing vulnerability?	**Chapter 5**: The involvement of professionals in health promotion for vulnerable families: A realist-informed case study
4. Which approaches—community engagement/participation, changes in professional practice, neighbourhood networks, a behavioural approach—or combinations of approaches can contribute to improvements in the perceived health and/or weight or activity status of families experiencing vulnerability?	**Chapter 6**: Conditions and combinations of conditions leading to reductions in risky health-related behaviour and/or improvement of perceived health amongst vulnerable families in the Netherlands: A qualitative comparative analysis

This thesis and the overall evaluation

This paragraph further clarifies the position of the studies in this thesis with regard to the work in the overall evaluation. In these studies, I contributed to the overall evaluation by using innovative, explorative and in-depth perspectives on the evaluation of multi-project health-promotion programmes. This thesis is thus part of and adds depth to the overall evaluation. Some parts of the overall evaluation were conducted parallel to studies included in this thesis.

The proposed design for the overall evaluation of the Healthy Futures Nearby programme also provided a starting point and framework for the studies in this thesis. This evaluation design was therefore translated into a study protocol for the overall evaluation, and it is included as Chapter 2 in this thesis. Similarly, the overall evaluation included the identification of a theoretical base for the projects, as translated in Chapter 3. The programme evaluation includes findings on reach, participation and project sustainability. Finally, both the overall evaluation and this thesis include an exploration of the effectiveness of the programme approaches. Figure 1.1 further clarifies how the studies in this thesis overlap with and add to the overall evaluation of the Healthy Futures Nearby programme.

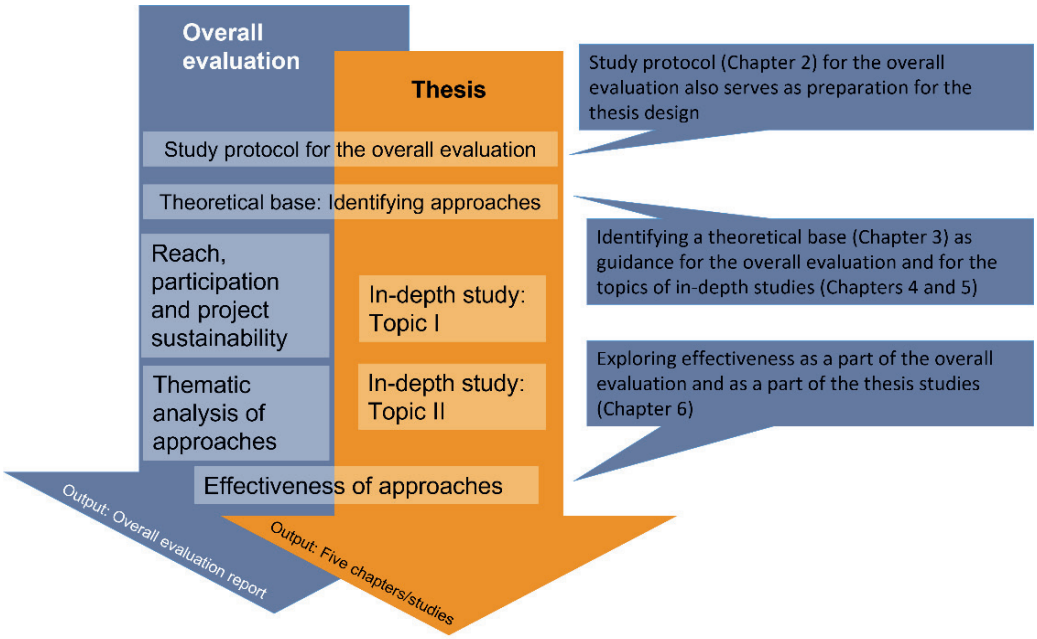

Figure 1.1 This thesis as part of the overall evaluation and in-depth addition to the overall evaluation of the Healthy Futures Nearby Programme.

1.6 Thesis outline

This introduction (Chapter 1) is followed by a study protocol for the evaluation of the Healthy Futures Nearby programme (Chapter 2). This protocol provides a clear example of an evaluation design that is suited to the complexity and diversity encountered within the programme, whilst also providing insight into the effectiveness and mechanisms of the programme and project approaches. It is important to note that the study protocol relates to the overall evaluation, while the studies included in this thesis are both part of and in addition to the overall evaluation of the Healthy Futures Nearby programme.

The theory-based approach that is described in the study protocol as one of the main approaches to the evaluation is elaborated in Chapter 3. More specifically, I identify the main approaches applied in the 46 projects, along with their assumptions concerning the promotion of health amongst families experiencing vulnerability, thus providing a theoretical base for further evaluation and in-depth studies.

The focus of the remaining three chapters involves three dimensions. Two approaches — community engagement (Chapter 4) and the involvement of professionals (Chapter 5) —

are studied guided by realist principles, thus providing in-depth insights into the operation of the approaches. In Chapter 6, I use qualitative comparative analysis (QCA) to explore the information that this method could yield about the effectiveness of the approaches in the Healthy Futures Nearby programme with regard to health-related behavioural outcomes and perceived health amongst vulnerable families. Chapter 7 includes conclusions and a discussion. More specifically, it summarises the main results from the previous chapters, discusses the methodology used in this thesis, along with their implications for practice, policy and future research on health promotion and evaluation.

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Chapter 2

Evaluating the Healthy Futures Nearby Program: Protocol for Unravelling Mechanisms in Health-Related Behaviour Change and Improving Perceived Health Among Socially Vulnerable Families in the Netherlands

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Abstract

Background: The persistence of health inequalities within high-income societies such as the Netherlands indicates the importance of researching effective ways to reduce those inequalities. Multiple strategies for reducing health inequalities have been identified. Specifically targeting health-related behaviors among lower socioeconomic status groups is one of those strategies. All in all, it seems relatively clear what types of approaches in general lead to health-related behavior change. However, it is still unclear *how* these approaches, in interaction with context, trigger a specific desired change. In the Netherlands, the private funding organization, Fonds NutsOhra, funded 46 small-scale projects under the umbrella of the Healthy Futures Nearby program. The projects aim to reduce vulnerable families' health deprivation by triggering lifestyle changes.

Objective: This study aimed to outline and justify the protocol for the overall evaluation of the program. The evaluation aimed to find out *to what extent* and *how* the small-scale projects and approaches within the program affect (or not) health-related behaviors and improve perceived health.

Methods: The approach to the overall evaluation of the 46 projects builds on a combination of 3 frequently used evaluation models; it is theory-based, realist informed, and uses a mixed methodology design. Methods include analysis of quantitative project data, document analysis, focus groups, and interviews. A study design has been drawn up that values and uses the multifaceted development of the projects and the influence this might have on implementation and project outcomes. Also, it respects the complex nature of the projects and is suited to studying health promotion mechanisms in depth. Finally, it optimizes the usage of all—quantitative and qualitative—project evaluation data available.

Results: This study protocol included the design of at least 4 different studies. The results will hence provide information on (1) building and defining theories of change in health promotion practice, (2) mechanisms at work in promotion of healthy behavior among vulnerable families, (3) what works and what does not in professionals' practices in health promotion among those vulnerable groups, and (4) what works and what does not in health promotion projects with a participatory approach. In addition, data will be collected on the overall effectiveness of the 46 initiatives. Data collection started in 2016. Data analysis is currently under way, and the first results are expected to be submitted for publication in 2019.

Conclusions: This overall evaluation provides a unique opportunity. The diversity of projects allows for a study protocol that answers in greater depth questions of *how*

specific health promotion approaches work while also elucidating their effectiveness in a more traditional way. Using a theory-based complexity-sensitive approach that is mainly realist informed, this study also provides an opportunity to see whether combining assumptions from different evaluation perspectives yields relevant information.

2.1 Introduction

Background

In the Netherlands, life expectancy has increased over the past decades. The National Institute for Public Health and the Environment also reports an increase in *healthy* life expectancy [1], meaning that people are not only living longer but also living longer *healthier* lives. However, inequalities in health between and within countries—including high-income countries such as the Netherlands—remain substantial [2,3]. Health inequalities are an issue of fairness and social justice [4,5]. People who are vulnerable to health deprivation may not reach their full potential as individuals and as a group in society. The issue is even more pressing as health inequalities appear to be reproduced from one generation to the next [6,7]. The persistence of health inequalities within societies indicates the importance of research on what the World Health Organization (WHO) has called the *social determinants* of health [8] and on policies that aim to reduce inequalities. There have been many studies on the causes of health inequalities, both within and outside the Netherlands [2,9-12].

Besides looking at what causes health inequalities, scholars, policymakers, and practitioners have dedicated themselves to finding ways to reduce those inequalities. In the Ottawa Charter, WHO stated [13], and more recently the International Union for Health Promotion and Education declared in its Curitiba statement [14], that addressing the social, environmental, and economic determinants of health is crucial for reducing health inequalities, in addition to recognizing the importance of personal skills and capabilities [15,16]. Furthermore, WHO has stated the importance of involving a range of stakeholders, including citizens, in health promotion initiatives. Multiple strategies for reducing health inequalities have been identified [5,17-19], of which specifically targeting health-related behavior among lower socioeconomic status groups is one. In the Netherlands, Beenackers et al [20] conducted a review on effective interventions for behavioral change leading toward the reduction of health inequalities, focusing on smoking, alcohol consumption, overweight, and perceived health. Overall, they concluded that approaches could be more effective in changing behavior if they are targeted specifically at the needs of those vulnerable to deprivation, if they use existing structures and the expertise of local health professionals, and if they are designed in an integrated way; this means including various perspectives and involving different sectors and stakeholders. Others have written about the effectiveness of a community-based

approach in reducing health inequalities. However, for each of these measures, substantial uncertainties remain around successful implementation [21,22]. Contextual factors appear to have a major influence on whether specific approaches, or elements of approaches, work or not. Community-based approaches work in some cases but have proved much less effective in others [21,23]. Successful collaboration with local experts may be largely dependent on whether such a network actually exists, whether professionals are open or willing to collaborate, whether previous local projects have been successful and thus what the initial starting position is, and so on. All in all, even though it may be relatively clear what types of approaches in general lead to better health, it is still unclear how certain approaches, or elements of approaches, in interaction with context trigger specific outcomes.

More traditional approaches to health promotion evaluation focus predominantly on researching evidence for specific interventions by measuring (quantitatively) the effectiveness of predefined outcomes. However, evidence on the effectiveness of interventions does not provide a sufficient or workable base for future work in health promotion. As argued, varying and dynamic contexts combined with participatory approaches require in-depth study of mechanisms rather than of specific interventions. What mechanisms underlie successes in the promotion of healthy behaviors or the discouragement of health risks? What contexts enable or hinder such processes? To answer such questions, more in-depth studies and data are needed to enable researchers to look at different social and physical settings and mechanisms at play within those contexts. These studies should be designed to grasp the full interactions, relations, and influences of and between contextual factors, interventions, mechanisms, and outcomes. This paper outlines the protocol for an evaluation study particularly aimed at unraveling these mechanisms. We have made an effort to create an overall evaluation plan that does justice to the dynamics and complexity of local, community health promotion projects and results in relevant information on what works in (the process of) promoting a healthy lifestyle. The novelty of our design lies, among other things, in our flexible approach to evaluation with regard to the initiatives' plans and dynamics, creativity in collecting and combining diverse data, and the focus on what works instead of which project works.

2.2 Research Questions

A program (Textbox 2.1) funding 46 small-scale health promotion projects within the Netherlands [24] presented the opportunity to study what happens in different settings

and contexts while also looking in depth at processes at play. These diverse, merely local initiatives have all designed their own intervention and evaluation. Information from these initiatives and evaluations is available for the overall evaluation. The combination of diverse small-scale projects offers both a very broad and an in-depth source of information on the workings of health promotion through lifestyle changes in specific contexts. This provides a unique opportunity to study mechanisms for changing socially vulnerable families' health-related behaviors. The overall evaluation aims to find answers to 2 main questions:

1. To what extent do (shared) approaches within small-scale projects affect health-related behaviors and improve perceived health (impact)?
2. How do the approaches within the program affect (or not) health-related behaviors and improve perceived health (mechanisms)?

Textbox 2.1. The Healthy Futures Nearby program and projects.

In the Netherlands, the private funding organization, Fonds NutsOhra, funded 46 small-scale projects under the umbrella of the Healthy Futures Nearby (HFN) program [24] and issued an overall evaluation of the program to learn about participation, effectiveness, and sustainability. The projects all aim to reduce health inequalities through lifestyle changes in vulnerable families.

The HFN program aims to "improve the health behaviors of vulnerable families with a low socioeconomic background to reduce health inequalities." Vulnerable families are defined as households in which at least 1 adult and 1 child live together, who experience multiple problems with finances, education, work, or well-being and who suffer health deprivation by smoking, heavy consumption of alcohol, or unhealthy weight combined with a lower perceived health.

- Projects have been awarded funding for the years 2016 to 2019 (34 projects) or 2017 to 2019 (12 projects).
- Projects use either a neighborhood-oriented (similar to community development) participatory approach or work from an intersectoral approach (similar to a systems perspective, including different stakeholders and levels) to reduce inequalities by promoting healthy lifestyles. These 2 approaches can be understood as the program's *theory of change*.
- All 46 small-scale projects focus directly or indirectly on reducing alcohol use, promoting smoking cessation, promoting a healthy weight and improving perceived health. To reach their goals, the projects develop and implement a range of strategies and activities. For instance, some employ a participatory, dynamic neighborhood-oriented approach, whereas others focus on improving social infrastructures for families facing multiple problems.

All projects conduct their own project evaluations, which almost always include pre- and post-measurement of project-specific outcome measures (behaviors and perceived health) among vulnerable families (Figure 2.1).

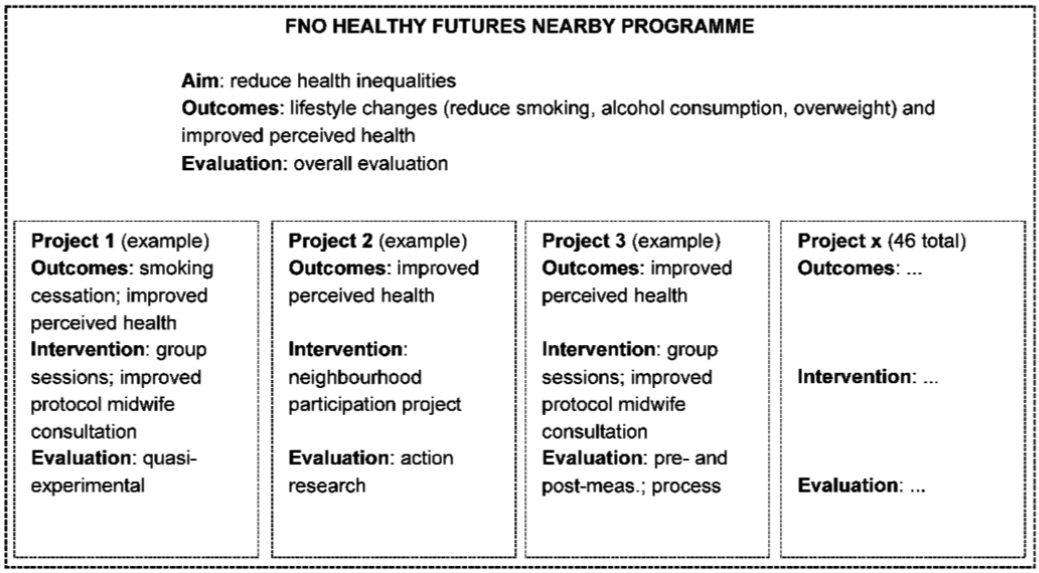

Figure 2.1 Structure of the Healthy Futures Nearby Programme.

2.3 Opportunities

There are 4 ways in which the program and projects (Textbox 2.1) offer a unique opportunity to study health promotion mechanisms: (1) the evaluation data from the 46 small-scale projects potentially enable the study of the projects' *effectiveness* in changing health-related behavior and improving perceived health; (2) the projects offer a diverse and in-depth source of information on how particular approaches, in different contexts, may lead to specific outcomes and thus provide a basis for *unraveling mechanisms* of health promotion; (3) partial homogeneity in approaches and desired outcomes provides the opportunity to *compare* the effectiveness and mechanisms of similar approaches in varying contexts; and (4) the timing of the overall evaluation, parallel to the implementation of the projects, allows for a strong focus during the evaluation on *learning while doing* for all stakeholders involved. These 4 opportunities, elaborated below, set the framework for the overall evaluation.

First, the information made available by the projects is potentially of high enough quality to examine to some extent the effectiveness of their activities and approaches. Such information on effectiveness could provide relevant information at the higher program or policy level [25]. Projects conduct their own evaluations, consisting of at least a baseline and post activities measurement of relevant project-specific outcomes at the participant

(family) level. However, project-specific research designs vary greatly and not all projects use a (quasi) experimental setup, meaning that for instance control groups are not included in most of the project evaluations. Considering these limitations, by examining effectiveness, we aimed to study the extent to which the projects have changed health-related behaviors and led to an improved perceived health among socially vulnerable families participating in the projects. An initial exploration of the combined project baseline data will help determine which methodological approach is best suited to combine and analyze the set of information on health-related behavior.

A second opportunity lies in the in-depth information contained in the 46 small-scale projects, which can potentially be very useful for unraveling mechanisms. Whereas effectiveness is often the central focus of evaluation, the diversity of projects under study here is suited to answering more in-depth questions on how the various health promotion approaches work (or not) in different contexts. Various projects work with similar approaches, enabling the study of these approaches in different contexts. Understanding the influence of contextual factors—social, historical, and physical—has been identified as crucial to policymakers' and practitioners' successful implementation of health promotion initiatives [26]. To generate success, it is essential to understand under what circumstances specific interventions may work or not. Evaluation should aim to generate knowledge on these context-mechanism interactions instead of focusing solely on the experimental effectiveness of interventions. Context should therefore play a major role in learning through evaluation. Also, the main challenge in learning from (community) health promotion projects is to study and define *how* and *why* communities may benefit [21]. This has often been addressed as opening the black box: it is known whether a specific project works or not, but possibilities for transferability are limited because it is not known *why* and *how* the project or approach works or does not work in relation to a specific context [27]. The 46 projects can provide that in-depth information. Looking at mechanisms and including contextual influences does, however, have implications for the evaluation design. More traditional, experimental evaluation designs do not suffice. Although the interaction between approach and context is considered an important factor in health promotion projects, designs such as randomized controlled trails deliberately exclude such contextual influences to keep causal relations *clean*. Also, these designs leave little room for variations in approaches, dynamics, and changes during implementation and valuable unexpected effects and serendipity—all very relevant in the complex reality addressed in health promotion interventions. Kok et al [22] provided 6

reasons why a more traditional, reductionist approach is not well-suited to health promotion evaluation: lack of clarity about what the approach precisely is; lack of clarity about what is expected of local contexts for effectiveness; the very diverse and open settings for health promotion; diversity in organizations and underdeveloped organizational systems; the impossibility of realizing similar configurations in different locations; and the difficulty in determining whether a project or approach works in practice as intended.

Third, the information from the projects is sufficiently diverse and substantial to look at different approaches to changing health-related behavior: promoting healthy behavior or discouraging risky behavior. Groups of projects work toward a similar outcome in varying ways, such as promoting smoking cessation (outcome) by offering one-on-one counseling or organizing group sessions (approaches). Also, some projects appear to be working along the lines of similar approaches but aim at different outcomes—for instance, the development of a participatory project together with neighborhood residents to raise awareness of risky health-related behaviors or to increase active citizen participation in neighborhood activities. The existence of similar approaches and outcomes within projects allows us to additionally compare groups of projects.

A fourth opportunity resides in the fact that the development and evaluation of the 46 projects are themselves relevant processes. A range of different stakeholders have been and will be involved in development, implementation, and evaluation. Almost half of the project designs imply the dominance of community participation. Most projects have been inspired and shaped by policy, science, and practice. Also, timewise, the overall evaluation will be conducted parallel to the implementation of the projects. These 2 characteristics, participation of diverse stakeholders and timing of the evaluation, mean that the overall evaluation could be very much a *learning* opportunity for all involved.

2.4 Methods

Study Design

For the overall evaluation of the 46 projects, a protocol was designed that respects the criteria set by the program. It takes into account the multifaceted development of the projects and the influence this might have on implementation and project outcomes, and the complex nature of the program and projects [25]. The aim of the protocol was to

enable researchers to study mechanisms of health promotion in depth. Finally, the design sought to optimize the usage of all—quantitative and qualitative—project evaluation data available.

The 4 opportunities, or program and project characteristics, mentioned in the previous paragraphs guided the study design. In addition, the program's main principles that have guided the design of projects shaped the evaluation design: promotion of healthy lifestyles to reduce health inequalities, a participatory approach, an intersectoral design, and a community development approach. The evaluation design should fit these project design guidelines, if only to ensure that the potential of the information offered is harnessed. In addition, we believed that research in health promotion should ideally be oriented toward also improving practices in health promotion [28]. The methods selected for evaluation should furthermore be most likely to illuminate relevant issues, both success factors and barriers, within projects and programs and be sufficiently diverse to reflect the individual, social, cultural, organizational, and economic factors at play [28]. The overall evaluation of the 46 projects builds on a combination of 3 frequently used approaches to evaluation; it is theory-based, realist informed, and uses a mixed methodology design. We recognized the complex nature of the health promotion projects by combining these approaches. In the study, a theory-based perspective on evaluation provided opportunities to involve views from all relevant stakeholders, including those who offer more practical experience and knowledge (professionals) and those who offer knowledge from the lived experience (target group), as well as stakeholders who offer a more scientific, more abstract, or theoretical view (researchers). The theory-based perspective is important throughout the study. Frequent updating of the project theories will remind the researchers to maintain an open view on the dynamic nature of the projects' settings, contexts, and activities. As the study was realist informed, the realist perspective was used to guide the in-depth search for mechanisms by means of realist case studies [29].

The overall evaluation will be conducted by a team of researchers from 3 organizations: Wageningen Economic Research, the Verwey-Jonker Institute, and Wageningen University, Chairgroup Health and Society.

The study design encompassed 4 steps: A to D, presented in Figure 2.2 A is an ongoing first step to identify the theoretical assumptions about—not necessarily linear—causal

pathways underlying each project. After that, step B is performed to measure effectiveness, and steps C and D are performed to study and unravel mechanisms. Each step is used to support, provide feedback into, and verify the other steps in the design. In combination (data triangulation), all steps lead to answers to both the main research questions. Figure 2 shows the steps in the design of the overall evaluation. Each step is discussed in detail in this section.

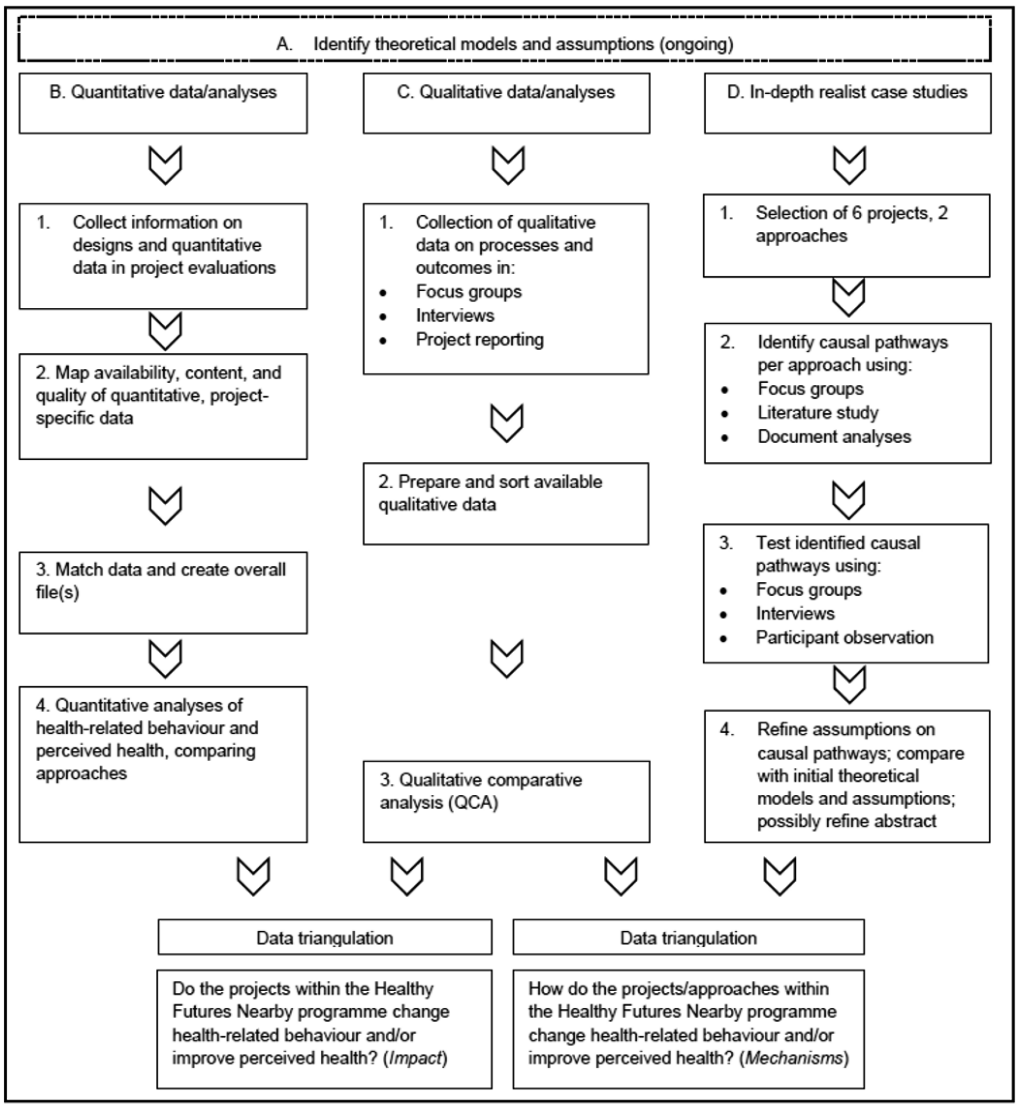

Figure 2.2 Steps in the research protocol.

Step A: Identify Theoretical Models and Assumptions

The first step in the overall evaluation is to identify the (theoretical) assumptions on causal pathways for each project. Identifying and using these assumptions (theory-based evaluation) can strengthen program design and implementation and promote policy and practice learning about the effectiveness of interventions [30]. The assumptions about pathways that lead to desired outcomes in a project have been referred to in many different ways [25,31]. In this paper, we use *theoretical models and assumptions* and *presumed causal pathways* interchangeably. Following Rogers [31], both refer to "a variety of ways of developing a causal model linking program inputs and activities to a chain of intended or observed outcomes, and then using this model to guide evaluation." The models will be identified using project proposals and, additionally, group interviews in an *Effectenarena* format [32]. This interview format is designed to facilitate participatory decision making through multistakeholder discussions. The method uses a few key concepts to streamline the group discussion: investors (stakeholders that *invest* time, money, and knowledge in the project), expected activities and conditions for those activities, and expected effects and *collectors* (those who benefit in any way). It enables the researchers as well as the project stakeholders to gain more insights into the desired outcomes, assumed causal pathways, contextual factors, and possible drivers and barriers. Focusing solely on project proposals may provide a biased result (because they are often written by project leaders). Specifically, for this study, the group interview ensures that all stakeholders involved *have their say* when it comes to assumptions relevant to the project. A group session in the *Effectenarena* format will thus be organized with each project, involving all relevant stakeholders including the vulnerable target group when possible. In total, 2 researchers will facilitate the discussions and draft a short report of the meeting, which will then be presented to the respective project leader for approval. In addition, the researcher involved will draw a visualization of the model for each project. The research team will use the sessions and reports and any other relevant documentation such as project proposals to extract for each project the underlying theoretical models and assumptions. This will be both a list of assumptions and a visual map. Given the complex, dynamic, and not necessarily linear nature of the projects, initial theoretical models and assumptions will serve as a basic set of assumptions that are open to adjustments as the projects develop. Over the course of the years, regular monitoring through interviews, group sessions, and administrative reports will build on and test these initial sets of assumptions. Insights into how HFN program principles (Textbox 2.1) have

translated into project models and assumptions may offer valuable lessons for the implementation of future health promotion policies.

Step B: Quantitative Data Collection and Analysis

All projects (taking place over the years 2016 to 2019) will conduct their own project-specific (primary) analysis and evaluation. Step B, in this study, includes the *overall* collection and secondary analysis of quantitative project-specific data throughout 2016 and 2019 to study program impact. Complete project-specific data and publications on desired outcomes among vulnerable families will only be available during the last stage of the overall evaluation. Also, the project-specific evaluations and the overall evaluation will be conducted in parallel. This may offer opportunities for collaboration and mutual learning, but it also requires careful planning to avoid heavy participant burden. As already mentioned, all 46 projects have their own specified evaluation design. From these project evaluations, we aim as much as possible to use the information already gathered. More specifically, our focus will be on data on perceived health and health-related behavior outcomes at the individual level of vulnerable family members. Although the projects' evaluation designs range from randomized controlled trails to participatory action research, most conduct some form of pre- and postmeasurement of these health-related behavior outcomes. In total, 4 main activities have been distinguished in this step:

1. Collection of information on designs and quantitative data in project evaluations. Project proposals, available research proposals, and *Effectenarena* sessions will be used to collect information on the quantitative data collected in each project, by whom, for which specific target group, and using which methods and instruments. This step also includes an exploration of possibilities to combine and match data from different projects.
2. Map content and quality of quantitative project-specific data. A substantial number of project baseline measurements will take place over the first 1.5 years of the funding period. After this, we shall gather the data available from these baseline measurements. An initial exploration of the quality of the datasets will be conducted in close consultation with the (local) researchers involved in the projects.
3. Match data and create overall file(s). Statistical software R [47] will be used to match project data and thus create the overall file(s). The matching exercise will examine possible effects and compare those effects on health-related behavior and perceived health between *approaches*. Theoretically and ideally, this should lead to a number of files combining information from different projects on perceived health, weight,

physical activity, smoking, and drinking behavior. Exploration of the available data as described in steps 1 and 2 will show which comparisons are possible at which levels of aggregation.

4. Quantitative analyses. Statistical software (R) will be used to compare projects and approaches relating to effects on health-related behavior and perceived health.

Step C: Qualitative Data Collection and Analysis

A parallel step (C) in the design concerns the collection and use of qualitative data. This step entails primary data gathered by the researchers on the overall evaluation from each individual local initiative. The qualitative data will provide information to direct and support the quantitative analysis and contribute to answering *which* questions about mechanisms. In total, 3 sources of information will be included:

1. Information gathered in 46 group interviews—*Effectenarena* sessions as well as 2 *audit* sessions per project, scheduled at half term and at the end of the subsidiary period. The aim of the audits is twofold: to provide the researchers with information on outcomes and (preliminary) results, processes, and developments in the different projects, while creating space for project teams to reflect on developments and collaboration and learn from experiences and results so far. All relevant stakeholders for each individual project will be invited to the audits, including the vulnerable target group when possible. The discussions will be semistructured, including topics on participation, outcomes, mechanisms, collaboration, and sustainability, but leaving room for discussions tailored to project-specific issues and developments. A timeline exercise [33-35] will be used to involve all participants in the discussion. A guideline for a semistructured group interview will be developed covering the aforementioned topics. Audits will be facilitated by a researcher, preferably the researcher who has led the *Effectenarena* session for this specific project. A second researcher or research assistant, present during the sessions, will draw up a short report, which will in turn be presented to the project leader. This person will be asked to judge how accurately the report reflects the group sessions.
2. Information collected through yearly rounds of interviews with all 46 projects leaders. Telephone interviews will be scheduled yearly with all project leaders. The interviews will be conducted by a member of the overall research team. Each interview will follow a predefined semistructured format, thereby ensuring that data are collected on results, participation, mechanisms, and

sustainability, but leaving room for project-specific tailoring. Furthermore, the structure and the content of the interviews are dependent on the timing: the first round will focus more on participation and collaboration, whereas later rounds will focus more on results, mechanisms, and sustainability. Project leaders will be notified beforehand about the aim of the interview, the main topics, and the (anonymous) way in which the information will be used. Before the interview, their permission will be requested to record the conversation. All recordings will be transcribed, and both audio files and transcriptions will be stored at a secure site.

3. Information collected through project reporting forms. Project leaders will be regularly asked (approximately twice every year) to fill out a reporting form on developments and results within their projects. To minimize the research and accounting and administrative burden for project leaders, these forms will be drafted in collaboration with Fonds NutsOhra (FNO). FNO requires project leaders to regularly fill out reports, so combining these will be efficient.

Qualitative comparative analysis (QCA) [36-38] will be used to analyze the qualitative data from group interviews, interviews with project leaders, and project reporting forms. QCA is an analytic approach and a set of research tools that combines formalized cross-case comparisons with detailed within-case analysis [38]. QCA will be carried out using R QCA software [47].

Step D: In-Depth, Realist Informed Case Studies

In our 46 projects, altogether, and for a substantial number of specific projects, outcomes and results are uncertain as well as emergent. That is why, following Glouberman and Zimmerman, we regard them as complex rather than simple or complicated situations [39], although this does not mean that the projects do not have simple or complicated components in them as well [31]. The complex nature of the projects requires an appropriate evaluation design. To deal with this complexity and the related importance of context [40], realist informed case studies will be executed in a fourth step (D). Unraveling mechanisms for health-related behavior change and improved perceived health is the main aim of these in-depth studies. The case studies will be designed to look at specific *approaches* or situations instead of studying specific projects or interventions. An approach or situation exists within projects; a project is often more than just this situation, for instance, building a relationship between a (care) professional and a family

member or organizing a participatory session for a specific group of vulnerable families. In other words, the level of evaluation within the case studies is that of specific relevant situations rather than that of the complete intervention. This will ensure that the evaluation results are relevant to all stakeholders instead of just a few projects. Also, choosing some *projects* as a main subject of study might be discouraging for others, whereas choosing *approaches* may spark interest and learning for everyone and encourage far more projects. The case studies include 4 steps: (1) Selection of 2 approaches and, per approach, 3 projects working with these approaches (a total of 6 projects). The selection of approaches is based on possibilities to study the approaches within the 46 projects and theoretical and societal relevance. Possible approaches are community participation, the role of health professionals in promoting healthy lifestyles, improving local networks, and so on. Project selection will be finalized in consultation with project leaders and program management. (2) Identification of possible causal pathways for each selected approach using a realist perspective. These causal pathways are often called C (Context), M (Mechanism), and O (Outcome) configurations [40,41]. Mechanisms are determinants of behavior that work to generate an intended or unintended outcome. In so doing, mechanisms depend strongly on context. Jagosh et al [42] refer to context as the *backdrop* of programs and research and can thus include cultural norms and history of a community, geographic location, the nature of existing social networks, and neighborhood infrastructure. Outcomes are the result of an interaction between mechanisms and context. Methodologies for the case studies include literature review, interviews, document analysis, and focus groups. (3) Identified causal pathways are translated into more abstract-level theories. Further field study, using focus groups, interviews, and participant observation, will test identified and alternative causal pathways. (4) Translation of findings into a more abstract level and possible refinement of the abstract-level theory. These realist case studies will provide information to answer the main research question on mechanisms (research question 2).

Data Triangulation and Analysis

Steps A to D as described above ensure the collection of information on the overall impact of the program and on mechanisms of health-related behavior change at work in the projects. Using source triangulation (combining views from different stakeholders and perspectives) and method triangulation (combining qualitative and qualitative sources) can support better understanding. Data triangulation will combine the available information toward answering both research questions.

1. Results from the quantitative analysis will be compared with results from qualitative methods to provide answers on *impact*. The QCA as described above provides information that supports or contradicts the patterns derived from quantitative data analysis. Qualitative analysis will also include thematic coding and content analysis. The qualitative data will be used to complement, but also to question and test, the insights from quantitative analysis. In turn, the quantitative information will be used to inform further qualitative analysis.
2. Information from qualitative sources combined with realist informed case studies will provide insights into how the approaches within projects may bring about change: the *mechanisms* at play. A realist informed analysis, exploring and testing context mechanism outcome configurations such as those described above, is the basis. Mechanisms at work within approaches (eg, how does involving local professionals work in promoting physical activity) will be identified and tested. Further qualitative data, collected in addition to the case studies, may be used to further understand and explain these identified and tested mechanisms.

2.5 Results

The overall evaluation project was funded in 2016. This study protocol included the design of at least 4 different studies. The results will hence provide information on (1) building and defining theories of change in health promotion practice, (2) mechanisms at work in promotion of healthy behavior among vulnerable families, (3) what works and what does not in professionals' practices in health promotion among those vulnerable groups, and (4) what works and what does not in health promotion projects with a participatory approach. In addition, data will be collected on the overall effectiveness of the 46 initiatives. This will yield insights into possibilities for comparisons using diverse, quantitative, and qualitative data. The first data collection—the gathering and defining theories of change for each separate project—started in 2016, and data collection is currently ongoing. According to Dutch law, this study did not require formal ethics committee approval. However, special attention is paid in all activities to inform respondents and protect their privacy. All participants are provided with information about the purpose and contents of the research. Participation is voluntarily, and participants are able to withdraw from the study at any time for any reason. The collected data are treated confidentially and anonymously. Data analysis is currently under way, and the first results are expected to be submitted for publication in 2018.

2.6 Discussion

Opportunities

The 46 small-scale projects—which can be described as very diverse but with common principles—provide a unique opportunity for research on mechanisms in health promotion. They offer an extended range of relevant cases, instead of just one or two. To our knowledge, not many program evaluations have the same potential to provide such rich material on multiple cases in varying contexts. The availability of project-specific evaluation data provides the possibility to study the *impact* of different approaches with regard to changes in health-related behavior and perceived health. Similarities in strategies for health promotion as well as differences between projects enable such analysis. However, the diversity in the projects allows for a study protocol that also answers in greater depth questions of how specific health promotion approaches work, what we have called unraveling *mechanisms*. The multitude of contexts under study combined with various projects implementing similar approaches and activities potentially provides the opportunity to compare impact and mechanisms in interaction with

contextual factors. Last but not least, the timing and the participatory approach applied in the overall evaluation enables all stakeholders to maximize learning throughout the 4 years of funding. Using a theory-based, complexity-sensitive approach that is predominantly realist informed, this study will also provide an opportunity to see whether combining assumptions from different approaches yields relevant information. This proposed combination of approaches in one evaluation design could theoretically open up black boxes while also elucidating more traditional measures of effectiveness.

Challenges

In addition to the great opportunity provided, we acknowledge that the overall evaluation includes some challenges. The 3 important remarks are as follows: (1) the evaluation is shaped by the information available in the HFN program, (2) there is a difference between the program's distal aim and the projects' proximal focus, and (3) the possible weaknesses in the evaluation designs of the individual projects may lead to low-quality data on the overall level. We have briefly explained these remarks below.

First, the FNO has laid out multiple guidelines as well as suggestions for project leaders to use in the design of their projects. Guidelines have been issued about the focus of the projects—health-related behavior or perceived health—and about target groups—socially vulnerable families. On the one hand, it seems that project leaders have been following these guidelines; all say they will focus on smoking cessation, the reduction of alcohol consumption, promoting healthy weight through feeding practices or exercise, or improving perceived health. On the other hand, regarding target groups, projects often seem to have been less compliant. Target groups are all classified as vulnerable families but range from single mothers with a low income or education to multiproblem households in specific urban areas. Also, the focus on health-related behavior may cause projects to ignore outcomes at the intermediate level. The diversity in target groups may complicate combined analyses of project data at the overall level. This means that, however rich the information offered by the program is, it may at times prove either too diverse or too focused for the researches to be able to analyze its effectiveness and processes at the higher program level. In this study, we addressed this issue by not only looking at effectiveness but also broadening the scope of the research to in-depth mechanisms of health promotion. In addition, we explored alternative ways of analysis to address effectiveness.

A related second limitation lies in the fact that, even though the programs aim to reduce health inequalities, a specific focus on health-related behavior among socially vulnerable families has been prescribed for the projects. Graham [17] has distinguished 3 approaches to reducing health inequalities. Targeted programs may improve the health of those in the worst socioeconomic position without making any effort to improve the health of those in higher socioeconomic positions. Other programs may target the health gap between low and high socioeconomic groups by improving the health of the poorest groups fastest. Another last approach Graham mentions is to explicitly address *gradients* in heath inequalities [17,43]. Most HFN projects are designed to target specifically, and in several cases only, those in the lowest socioeconomic position. By not addressing the gradient, the projects may thus fail to improve the health of intermediate groups [43]. However, the information that this study may produce on mechanisms among the most vulnerable groups could be an important contribution to shaping future health promotion initiatives. As mechanisms operate in specific contexts—that is, for specific groups—results may even prove more valuable when restricted to a group, place, or time.

The gap in levels between the program's aim and the projects' focus may be seen as the difference between proximal and distal factors [28]: factors contributing to health that are on a level closer to the individual, such as behavior, and factors or differences that emerge at a level further away from the individual, such as societal inequalities. The program appears to build on the notion that positive outcomes on causes at the proximal level, behavioral changes, may indicate successful outcomes at the distal level: reducing health inequalities. Although the usage of the terminology of proximal and distal in an evaluation framework has certain advantages [44], especially in clarifying theoretical models, it also complicates matters [45]. One complication relevant to the program under study is that embracing the notions of proximal and distal may lead to considering 1 factor (in this case, the proximal: behavior change) as more important than others at the distal level in explaining and reducing health inequalities. Previous research indicates that, although behavior change is certainly related to changes in health inequalities, it is not considered the one most important explanation [20,46]. In-depth information on for whom, when, and where certain behavior change interventions work or not can, however, still contain valuable tools for the design of future health promotion interventions.

Finally, the proposed study design is not tailored to measure changes in inequalities per se in a traditional, experimental way. There are few possibilities to include control groups in

the evaluation design. The projects' geographical and target group boundaries are often vague and dynamic. Therefore, expected outcomes may appear at different levels and in a variety of sizes. In many projects, the project-specific evaluation design has been tailored to such dynamics and complexity, using quasi-experimental, nonexperimental, participatory, process-focused or mostly qualitative designs. The consequent limited possibilities for conducting a randomized experiment at the project level will complicate the aggregation of quantitative data at the higher level. We cannot change the fact that we have to work with a diverse range of data. Optimizing communication with project leaders and project researchers and starting off with an exploration of the possibilities for data aggregation, we still hope to make as much use as possible of the information available.

It is very valuable that the information from multiple relevant cases is combined and that all projects address the same proximal indicators for health. This evaluation enables us to study effectiveness in addition to mechanisms. Its timing, parallel to the implementation of the projects, allows for continuous learning by all stakeholders involved. The diversity in contexts and approaches additionally holds promise for the transferability of successful mechanisms, thereby informing future programs.

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Authors' Contributions

LH was the first author of the manuscript and participated in the design of the study. LV and MK designed the study. All authors have read and approved the final manuscript and contributed to the drafting and revision of the manuscript.

Conflicts of Interest

None declared.

Abbreviations

FNO: Fonds NutsOhra
HFN: Healthy Futures Nearby
QCA: Qualitative Comparative Analysis
WHO: World Health Organization

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Chapter 3

What works for vulnerable families? Interpretations of effective health promotion

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Abstract

Under the umbrella of the Healthy Futures Nearby (HFN) programme, 46 small scale projects were funded to promote changes in health-related behaviours (smoking, alcohol, diet and exercise) and to improve perceived health among vulnerable families in the Netherlands. The evaluation of these health-related multiple project programmes is often based on funder defined outcomes and strategies. However, within the funded projects, assumptions about improving the health of vulnerable families based on local knowledge and experiences will also shape the project outcomes and strategies. These additional outcomes and strategies are project-specific interpretations of effective health promotion. Knowing these interpretations is crucial for the policy-related and scientific relevance of the evaluation. Therefore, we aimed to determine the interpretations of each project and how they translate into relevant inputs for the overall evaluation of the programme. Based on 46 semi-structured group interviews with local project stakeholders, we produced a list of assumptions about what health promotion for vulnerable families should look like and then identified five main clusters: (1) strategies of offering pre-defined, health (behaviour)-related activities to families, (2) actively involving vulnerable families in the initiative, (3) assumptions about how health promotion should start with or include non-health related topics, (4) assumptions on how one should build on what already exists in the local context of the families, and (5) assumptions on the role of the (health) professional in health promotion among vulnerable families. These project interpretations of effective health promotion provide inputs and priorities for the HFN programme's overall evaluation.

3.1 Introduction

Nation-wide programmes or policies are often designed to promote the health of vulnerable groups and thereby reduce health inequality; however, the persistence of health inequality in high-income countries stresses the need for evaluation of such programmes and initiatives. Learning what works, in what way and for whom is crucial for future actions related to health disparities. Over the last few decades, health promotion programmes have often typically been designed as multiple project programmes (MPP). Such programmes – in which multiple (local) projects are included and/or funded under the aim of one central programme (Brown and Knopp, 2014, Kniefel, 1973) - allow for diversity through its funding scheme and facilitate a relatively large role for stakeholders from civil society and (through that) the participation of vulnerable groups in the design and implementation of activities (Bekker et al., 2017). Moreover, these MPPs often take on a particular approach, such as an multi sectoral approach (Storm et al., 2014) or a community participation approach (Wold and Mittelmark, 2018, Woodall et al., 2018). In the Netherlands, the private funding organization, FNO, funded 46 small-scale projects under the umbrella of the Healthy Futures Nearby (HFN) program (FondsNutsOhra, 2015) and issued an overall evaluation of the program to learn about participation, effectiveness, and sustainability. The projects all aim to reduce health inequalities through lifestyle changes in vulnerable families.

There are, however, multiple issues one may encounter in the evaluation of such MPPs. We previously elaborated on the main challenges of such programmes and the ways we will address these in the design of the overall evaluation of the Healthy Futures Nearby (HFN) programme ((Hogeling *et al.*, 2019). In this paper, we elaborate on two of these challenges. First, the evaluation of health-related MPPs must fit the complexity of the programme under study. Others have successfully argued that such complexity challenges the use of more traditional, reductionist evaluation approaches (Kok *et al.*, 2012). We address this challenge by conducting a theory-driven evaluation (Rogers, 2000, Rogers, 2008, Stame, 2004, Westhorp, 2013, Westhorp, 2012). Secondly, the scale and diversity of MPPs challenges the connection between practice-based input and priorities and programme-level results. Studying an MPP highlights the local contextual differences that influence its implementation and results. This is addressed by collecting and analysing both practice-based and scientific input to identifying the expectations and assumptions in the programme and set priorities for the evaluation (Birckmayer and Weiss, 2000, Weiss,

1997). In other words, we use 'local' interpretations of effective health promotion to prioritise the topics for evaluation.

Complexity and theory-driven evaluation

Many MPPs promote a multi sectoral approach to reduce health inequalities (Hogeling, Vaandrager and Koelen, 2019, Storm, van Koperen, van der Lucht, van Oers and Schuit, 2014). Furthermore, programmes often focus on the comprehensive set of determinants of health (WHO, 1986). Such programmes have been characterised as being complex (Brousselle and Buregeya, 2018, Glouberman *et al.*, 2002, Jolley, 2014, Moore *et al.*, 2019, Nutbeam, 1998, Pawson, 2004, Rogers, 2008, Stame, 2004, Westhorp, 2012). These programmes anticipate health-related changes in varying (social) settings, which by definition involves the interaction of the initiatives with varying contexts at multiple levels and involving multiple stakeholders. Complexity is often perceived as a challenge when it comes to evaluation (Douthwaite *et al.*, 2017, Moore, Evans, Hawkins, Littlecott, Melendez-Torres, Bonell and Murphy, 2019, Pawson, 2004, Stame, 2004); however, complex systems potentially also comprise a lot of relevant information about health-related change in social settings. This could be assessed through the design and use of suitable evaluations.

We adopted a theory-driven approach for the evaluation of the HFN programme (Chen, 1990, Hogeling, Vaandrager and Koelen, 2019, Van Belle *et al.*, 2010, Weiss, 1995). A theory-driven evaluation can be understood as an evaluation in which the selection of programme features for evaluation is determined by an explicit conceptualisation of the programme in terms of a theory (Fitz-Gibbon and Morris, 1996). Such conceptualisations are often called the theory of change or *programme theory*, and comprise a set of assumptions (or theories) about how the programme works and how the programme produces the desired effects (Fitz-Gibbon and Morris, 1996). This *programme theory* – we will use this terminology hereafter - is the core of the evaluation (Rogers *et al.*, 2000). During the evaluation, one tests the assumptions and relationships laid out in the defined programme theory, which should result in its improvement (Van Belle, Marchal, Dubourg and Kegels, 2010).

Theory-driven evaluations enable the identification of priorities for evaluation, facilitates learning and thereby support the evaluation of complexity (Birckmayer and Weiss, 2000, Connell *et al.*, 1995, Weiss, 1995, Weiss, 1997). It also allows for the possibility of

identifying important common themes across cases, promoting cross-programme discoveries (Dunn *et al.*, 2013, Pawson and Tilley, 1997). Moore et al. (2019) argued that the evaluation of interventions in complex social systems is inevitably not comprehensible due to the extensive nature of all possible changes and mechanisms at work. As a consequence, choices must be made in the focus of the evaluation. Identifying key issues and priorities is thus crucial for the informative evaluation of the HFN programme. The first stage a theory driven evaluation can be to develop a programme theory to frame and guide the evaluation (Weiss, 1995, Weiss, 1997), which we will initially develop and present as a list of assumptions present in all projects under the umbrella of the HFN programme.

Local interpretations of effective health promotion

Developing a programme theory for a specific initiative is ideally a process that involves all relevant stakeholders (Van Belle, Marchal, Dubourg and Kegels, 2010). Chen (Chen, 1994, Chen, 1990) argued that, instead of using only scientific theoretical sources, 'important sources for constructing programme theory come from stakeholder groups, especially programme designers and implementors'. The involvement of stakeholders in the development of a programme theory guarantees that the (implicit) theories and assumptions held in their minds regarding how health-related change works are taken into account in the evaluation framework. Moreover, involving all stakeholders in theory-based evaluations asks professionals to 'make their assumptions explicit and to reach consensus with their colleagues about what they are trying to do and why' (Weiss, 1995). From our experience in evaluation of community projects, we argue that the involvement of the local stakeholders in developing a programme theory, – or more specifically, in deciding what the focus of the research should be, – may enhance the relationships between the community, (health) professionals and researchers. Also, the involvement of all promotes learning in everyone involved.

Overall evaluation of the HFN Programme

Under the umbrella of the HFN programme, 46 small-scale projects were funded to promote a change in health-related behaviours (smoking, alcohol, diet and exercise) and improve perceived health among vulnerable families in the Netherlands. The target group was defined by the funder as a household, consisting of at least one parent and one child, which has multiple problems in the field of finance, education, labour or wellbeing. Besides this, the household members suffer health deprivation through smoking,

consuming high levels of alcohol or being overweight, combined with lower levels of perceived health (FondsNutsOhra, 2015). Additionally, funding by the HFN programme required all projects to adopt a community (participatory) and/or integral approach. Appendix A includes a schematic overview of the programme. A literature review provided further inputs for project proposals on what could be the effective elements in reducing health disparities among vulnerable families (Beenackers *et al.*, 2015).

A diverse group of stakeholders are involved in the 46 projects. Most of them belong to one of the following groups: family-members, volunteers, practitioners and other health professionals, civil society organisations, and professionals working in the communities such as teachers, researchers and municipal officials.

All 46 individual projects were asked to conduct an evaluation of their effectiveness in terms of the funder-defined outcomes. A consortium was commissioned to perform the overall evaluation of the HFN programme. The main aim of the overall evaluation is to 'provide insights in the effects and factors of success and failure of the funded projects and the programmes activities' (FondsNutsOhra, 2015). Desired project outcomes were specified as a reduction of the risky health-related behaviours smoking, a high consumption of alcohol or being overweight, combined with having a lower perceived health. These four indicators could be interpreted as the main pre-defined outcomes of the programme, whereas the participatory and integrated elements can be seen as the programme's strategies.

Aim and research question

The main aim of this study is to provide input for the development of a programme theory that can serve as a framework for the overall evaluation of the HFN programme. Given the diverse and flexible nature of the programme and the goals of the evaluation, this programme theory should be based on project interpretations, and contain sufficient detail at multiple levels, but at the same time cannot be exhaustive and must enable the prioritisation of topics for further in-depth study. Assumptions on what works exist at different levels and may be contradictory to each other, for instance, in one project, group sessions providing knowledge about healthy eating are assumed to work for vulnerable families, while in another project it is assumed that healthy eating is best learned through individual counselling trajectories for families. The assumptions reflect the knowledge and

experience of the stakeholders. Analysis of this list will reveal clusters of what they believe to be effective health promotion.

The main research question is: *what are the interpretations of effective ways to promote change in health-related behaviours and improve perceived health among vulnerable families within the 46 projects in the HFN programme?*

3.2 Methods and procedure

Data collection

To collect data, at the start of each project, 46 group interviews were held using the *EffectenArena* approach (Deuten, 2009, Studio, 2019). This semi-structured approach for group interviews ensures a discussion that is insightful to the researchers in terms of activities, outcomes, conditions, investors and beneficiaries; the main elements of the structured discussion. It facilitates an open, informative discussion between stakeholders and thereby promotes learning and dialogue within the teams. Participation in the group interviews within the projects was based on convenience sampling; the project leaders were asked to invite all stakeholders or representatives. This resulted in a variety of stakeholders taking part, including project leaders, health care and welfare professionals, educators, members of sports clubs and neighbourhood organisations, family-members, researchers and volunteers. For a substantial number of projects, it was difficult to involve participants from vulnerable families. In total, more than 330 people participated in the group interviews, with a mean group size of 7 (range 4-17). The interviews lasted 2-3 hours, and took place at a location chosen by the project leaders and often close to where the projects are implemented.

Each group interview was facilitated by one researcher, while another took detailed notes. These notes were used afterwards to write a comprehensive report (3-5 pages) of the interview following the *EffectenArena* format. In addition, the researchers drafted a flow diagram representing the main elements, processes and expected results of each project. Appendix B shows one of the diagrams made to represent the project's strategies. Both the comprehensive report and the diagram were presented to the project leader, who was asked to reflect on the accuracy of the documents.

Procedure and data analyses

Using interpretive content analysis (Drisko & Maschi, 2016), firstly mixed (but primarily deductive) coding of the interview reports was conducted to identify the stakeholders' assumptions on how the projects work. A code list was drafted, with codes for expectations about activities, but also to mentions of more abstract factors, such as to the conditions involved and details of how, when and where the activities were to be implemented. In an initial test round, three researchers (LH, CL and LV) coded the reports from two projects using the draft code list and the explanation of the coding process. In a discussion between the researchers, the code list was discussed and codes were verified.

All group interview reports were then independently coded by two researchers (CL and LH). Discussions between the researchers were again used to verify the codes and check for differences in their interpretation. We thus developed a list of coded expectations for each project, a list of assumptions on how each project activity and condition would work.

Our next step was to distinguish whether similar assumptions exist between the different projects. Three methods were used to summarise the complete list of identified assumptions into relevant clusters. (1) Discussions between the researchers involved led to an on-the-go clustering of the assumptions. (2) These clusters were presented to the projects' stakeholders in a programme meeting, who were asked to reflect upon the clusters identified and the position of their project among the clusters. To further refine the findings, two researchers (LH and CL) analysed the list of phrases derived from the interview reports to check for additional assumptions and possible clusters. (3) The initial list of assumptions was presented in an expert meeting of health promotion scientists. The participants (n= 8) were asked to reflect on the list in terms of what they identified as relevant clusters based on their knowledge of health promotion theory and practice. Given the diverse nature of the assumptions, the scientists input was valuable to reflect upon and further refine the clusters identified by the researchers involved.

3.3 Results

The reports from the 46 group interviews were analysed to gain an understanding of the (implicit) assumptions (see Appendix C). This list reveals that the 46 projects each involve specific assumptions on how to reach their associated health-related goals. Several projects had similar assumptions about what works and most projects were based on more than one assumption. We identified five main clusters: (1) assumptions about

offering pre-defined, health (behaviour)-related activities to families, (2) assumptions about actively involving vulnerable families in the initiative, (3) assumptions about how health promotion should start with or work via a focus on non-health-related topics and issues; first things first, (4) assumptions about using and strengthening the local context of the families, and (5) assumptions about tailoring practices of (health) professional promotion among vulnerable families (see Appendix D). In addition, we identified assumptions on the topic of establishing contact with and supporting the participation of vulnerable families, which could be seen as an overall prerequisite for the other strategies. For all clusters, we find that assumptions relate to (intermediate) outcomes. Active family involvement, improvement of non-health-related issues or changes in the role of the professional or the local context are often perceived as short-term or proxy outcomes and are distinct from the long-term health-behavioural and health outcomes. Also, stakeholders mention assumptions that relate to methods, indicating *how* they work in the different projects.

1. Pre-defined health-related activities

This cluster (present in 40 of 46 projects) includes more 'traditional' or pre-defined approaches to health promotion interventions. Two different aspects are combined within this cluster: project teams organising and offering one or more pre-defined activities to families in a specific setting, often related to lifestyle (exercise/sports, food, help to quit smoking and/or drink less alcohol), or project teams offering more targeted trajectories to specific families (individual) or groups of families. Those trajectories also often relate to lifestyle changes or to improved wellbeing.

> "*(...) The intervention consists of thematic sessions on health-related skills for the families, a buddy system and motivational interviewing by the social workers*"
> "*Easy accessible programmes for smoking cessation are offered in the community centre*"

2. Active family involvement

Thirty-eight of the 46 projects mention the active involvement of the family in the project, with involvement being defined as anything more than family members being 'only' participants in pre-defined project activities. Within this category, we distinguish three main types of involvement: (1) following family-defined priorities in the design and organisation of activities by the project team; (2) various forms of the involvement of

family members in the design, organisation and/or execution of activities; and (3) the recruitment and training of volunteers from the target population (ambassadors strategy). These three forms of involvement are outlined below.

2.1. Following family defined health priorities

In 25 projects, the stakeholders mentioned that the project activities were not yet clear, and would be designed based on the needs of the families involved. Some project teams stated they were first collecting data among the target populations then choosing activities based on the needs of those groups. Other projects targeted families individually and, together with the family, drafted a tailored plan based on the family's needs. Project teams mentioned multiple reasons for basing the activities on family-defined health priorities, stating that it could raise support (ownership) among families for a specific plan or set of activities, enabled activities to be tailored to a specific context, and may yield more participants for the activities. The following quote illustrate how some projects take families' needs into account:

> "*Each school has or organises a children's council. This council discusses and decides which activities will be organised. Specific activities are thus not yet clear*"

2.2. Active family involvement

The active involvement of families ranges from highly participatory strategies, in which working groups of family members, neighbourhood inhabitants or patients design, organise and execute activities, to 'participation light' projects, in which focus groups or co-creation sessions are used to inform the subsequent work of the project teams. This is illustrated by the following quote from a group interview:

> *"Together, the initiator and the inhabitants [of a specific neighbourhood] will independently implement their ideas and initiate activities but will be supported by the project if needed"*

2.3. Recruitment and training of volunteers: ambassadors strategy

A somewhat different strategy in this category is the involvement of ambassadors or community workers, central figures in a specific setting (a neighbourhood, a school, an cultural/ethnic community) that may be trained by the project and play an important role in getting families involved in the project and the organisation and execution of activities.

In some projects, ambassadors are trained to become trainers in a specific activity. In others, ambassadors are used merely for their networks in the community or to execute the lifestyle activities designed by professionals. The different roles and responsibilities that these central figures have are illustrated in the following quotes from the group interviews:

> "*Community builders have an important role in the recruitment of possible participants*"
> "*The ambassadors have a crucial role. As inhabitants of the neighbourhood, their faces are familiar, which increases their chances of reaching vulnerable families, thinking about health-related goals with them, and involving them in activities*"

3. First things first

Out of the 46 projects, 32 involved assumptions that focussed on issues not directly related to health-related behaviour or perceived health. This is often presented as a 'first things first' approach, and includes the prioritisation of problems that need to be solved before any other issues may be addressed, such as debt and other financial problems, housing issues and unemployment. It can also incorporate a focus on solving issues very close to but not directly associated with health, such as stress, loneliness and social isolation. This cluster also includes the implementation of a different, more positive perspective by working from or looking for talents, dreams and fun instead of taking problems as a starting point. In the projects included in this cluster, health is often a more implicit outcome, especially for participating families. The improvement of healthful behaviour is seen as a long-term outcome by the project teams. The quote below illustrates these findings:

> "*The idea for this course lies in the observation that discussions around health often focus on survival: surviving poverty, poor housing conditions, or family problems. The target group needs control over their lives, and their fundamental needs must be met. Only then can one take the step to a healthier life*"

4. Using and strengthening the local context

Of the 46 projects, 42 explicitly mentioned assumptions that involve the use or strengthening of existing professional networks, facilities and organisations already located in the community, or the use of existing organised activities. Many projects

therefore use these existing elements, but the way in which they are incorporated differs. Often, project activities are embedded in schools, (neighbourhood) community centres, health centres, and so on. One stakeholder said:

> "*To reach the intended participant numbers, a collaboration was set up with an existing re-integration programme run by the municipality. Some people in this programme will be obliged to take part in the intervention*"

In some cases, the main approach is to create ways for families and professionals to better find existing activities and facilities. This includes improving the visibility of relevant activities and organisations and creating awareness about those activities among families. In other projects, the focus is more on improving networks of professionals and the health (care) and welfare organisations in a certain neighbourhood or community. Often, such projects include a central coordinator or similar figure.

> "*Using what already exists is the basic idea of our project. The problems of the existing activities are the limited number of activities on offer related to physical activity and the affordability of these activities. We will not make existing activities cheaper, but can add extra activities and direct people to resources such as available funds for children and sports* [het Jeugdsportfonds]"
> "*The community worker's role is to map the practitioners in the neighbourhood and their role. This will enable a better match between the family's initiatives and professional organisations*"

5. Tailoring practices of (health) professionals

Over half (27) of the 46 project teams hold assumptions that are related to a change in practices of health professionals. These projects often include the training of involved professionals, either by offering official training/workshops, organising peer learning groups with colleagues, learning by doing (training on the job) or learning by experience (co-operating with families to change professional practices). What these professionals should learn varies between the projects. Some focus on recognising vulnerability (low-literacy, social isolation) among families, while others focus on changing their approach, for instance working through appreciative inquiry. Often, projects aim to make professionals aware of a certain health-related topic, resulting in a change of practices.

> "*Professionals need support, for example training in motivational interviewing. How should you discuss the issue of smoking (and quitting smoking) with families?*"

Additional assumptions: the pre-condition of establishing contact with vulnerable families

In our analysis, we found a category of assumptions is not specifically about 'what works in health promotion for vulnerable families', but which does seem important. Many (21) projects mentioned specific assumptions related to establishing contact with families encouraging participants to remain involved and/or to participate. Some project teams have originated from or work together with, a professional sports club, such as a soccer team. The teams assume that the connection between the sports club and the project activities will attract families and may convince them to participate. Other projects have included specific incentives in their plans to get families to participate and/or to stay involved, or seem to rely on professionals working in the neighbourhood for recruitment. Whatever the (underlying) assumption for successfully establishing contact may be, it may very much influence the success of the project activities.

> "*The team is thinking of ways to reduce barriers for participation and about what appears to work well already, such as personal contact with possible participants and offering a €50 reimbursement for participation*"
>
> "*The involvement of well-known soccer players is seen as an important motivation for the families to participate*"

> "*The involved practitioner will check whether the woman meets the criteria for inclusion in the project. If this is the case, she will be informed about the project and invited for an introduction to the project by the practitioner*"

Project teams vary in how and to what extent attention is paid to the issue of establishing contact with families. Some projects have clearly discussed, or are still thinking of, the most effective ways to involve vulnerable families, whereas others do not mention any specific assumptions about this. Some seem to rely strongly on collaboration with (local) professionals and other intermediaries for involving families. Successful strategies to reach those families can be considered a prerequisite for the further implementation of the projects.

In Figure 3.1 the results are summarised.

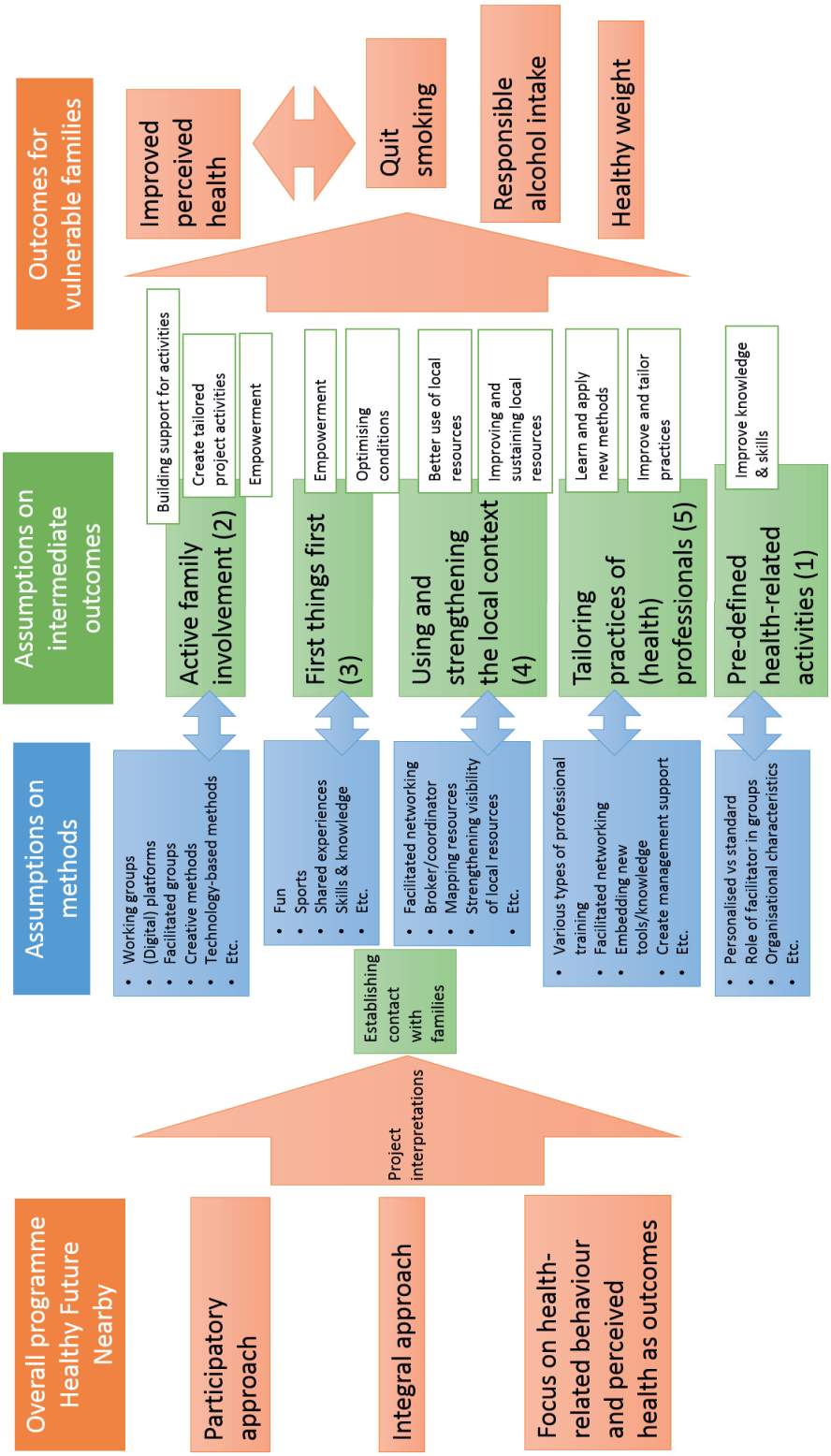

Figure 3.1 Summary of results.

3.4 Discussion

The main aim of this study was 'to provide input for the development of a programme theory that can serve as a framework for the overall evaluation of the HFN programme'. We were able to unravel the complexity of the programme and its context and to identify the areas on which we should focus the evaluation, which was identified as a first challenge for the research. This enables us to optimise the practical and scientific relevance of the evaluation. A wide variety of ideas about perceived effective health promotion among vulnerable families was collected from the stakeholders of the projects, with ideas ranging from a series of pre-defined health-related activities leading back to behaviour change theories to projects advocating participatory approaches. This is in line with what Davidoff *et al.* (2015) mention; that inspiration for the design of projects most likely comes from academic sources as well as practice, personal experience and intuition. This shows the value of involving stakeholders (and their ideas) in the creation of a programme theory.

Our results show that integration of practitioners and families' opinions and experiences – besides only expert opinions - provides a much wider and probably more realistic framework for the design and evaluation of health promotion programmes. Moreover, the specific themes addressed by practitioners and families, may help future programmes to overcome implementation difficulties.

A second challenge lies in the local contextual differences that influence the implementation and results of MPPs. This was addressed by incorporating a structured and ongoing process of collecting, analysing and using both practice-based and scientific input for development of the programme theory for the evaluation. The ideas that were collected among stakeholders are translated into a programme theory, but this must be seen as a flexible and dynamic base. Over the course of the evaluation, inputs will be collected from stakeholders and used to adjust and improve the initial programme theory where necessary. Others have argued that making (theoretical) assumptions among stakeholders explicit at the start of projects may also enhance learning and effectiveness (Huebner, 2000, Rogers, Petrosino, Huebner and Hacsi, 2000).

All assumptions could be summarized into five clusters, which provide clear priorities for the further evaluation of the programme. In the rest of this study, we will focus our evaluation on exploring what works and how it works, in the context of the projects, when

(1) offering pre-defined health (behaviour)-related activities, (2) actively involving families in the initiative (participatory strategies), (3) having a wider focus that includes non-health topics, (4) building on facilities and structures present in the local context, and (5) when changing the role of the (health) professional to promote health among vulnerable families. These clusters serve as input for the evaluation, but are not seen and used as *success indicators* in the evaluation. Rather, they are seen as focus points, that were used in the evaluation to decide which strategies and themes should have priority in a more in-depth investigation of processes and mechanisms. Also, they provide information on which health promotion strategies and themes are perceived as important and/or promising by project stakeholders.

Analysing program theory can provide evaluators and funders with useful information. Mayne (2017) explains that if one finds that a set of assumptions is not very robust, this might be supporting in explaining a less than successful intervention. In case of the HFN programme, analysis of the project assumptions has helped identifying issues that evaluation should focus on and has provided the funder with a framework of realistic expectations about results. Moreover, the results of our analysis supported the funder to retain a flexible attitude when assessing project development. We have experienced over the years that the results of this study have been very informative for the evaluation, and moreover, has supported the funder in understanding and explaining unexpected results.

An integral or multi-sectoral approach was promoted as being favourable by the funder, together with a focus on (community) participation; however, neither concept was very clearly defined by funder at the outset. All projects appear to rely on combinations of assumptions. Some combine an offer of pre-defined health-related activities with building stronger networks and facilities by building on pre-existing initiatives, some have a community participation phase followed by health-related activities, some combine a focus on non-health topics with pre-defined health-related activities, and so on. Harting *et al.* (2017) described such integrated interventions as an intervention mix. Given the range of ideas and combinations, and the somewhat flexible instructions provided by the funder on this matter, it remains challenging to conclude whether projects have adopted a desired approach.

It was often difficult for project leaders to involve (vulnerable) families or project participants in the groups interviews. This may be partially due to the timing of the

sessions, which took place at the start of the programme, when the actual involvement of participants may not yet have been on the agenda of some projects. However, establishing and maintaining contact with vulnerable families appeared to be a more general challenge in the projects. In the group sessions, the foreseen or encountered difficulties in reaching and involving vulnerable families or the vulnerable inhabitants of the neighbourhoods were often perceived as a matter of concern. Reaching and involving vulnerable families is a prerequisite for effective health promotion. What we take from this in our evaluation is that, next to a focus on the five idea clusters, an additional priority for our research should be to collect information about effective strategies for involving vulnerable families.

Strengths and limitations

The first strength of this study is that we have succeeded in making explicit and categorising the (underlying) assumptions of the very diverse group of projects. The list of assumptions and the five identified clusters offer usable guidance for the programme evaluation. We believe that another valuable aspect is that, in clarifying and summarizing project interpretations, we remained close to actual project practices. Related to that, we believe that another strength lies in the design of this study; conducting 46 group interviews instead of simply coding the initial project proposals. This has provided a lot of valuable information on the underlying and often implicit assumptions.

One limitation of our study is the range and diversity of the projects in the programme. The programme potentially holds so much information that it is impossible to study everything in-depth in one overall evaluation. Of course, this is first and foremost an advantage of this research. By identifying what the projects teams want and actually achieve in the first year (this study), and building our programme theory on that information, we were able to prioritise topics for the later evaluation. The programme and projects hold more project-specific information, however, in our study, we decided to focus on the overall, programme level and cross-projects analysis.

The second, related, limitation concerns flexibility. Not working from a highly structured, pre-defined or more experimental set-up will yield results that could be perceived as vague and not fit for generalization. A challenge for the research team thus lies in the very careful, accurate and precise interpretation and dissemination of research findings.

3.5 Conclusion

The main aim of this paper was to provide practice-based inputs for the development of a programme theory that can serve as a framework for the subsequent evaluation of a Dutch health-promotion programme. We were able to identify five clusters of ideas for health promotion among vulnerable families. These ideas form the core of our flexible programme theory, which will be refined and adjusted during the remaining years of the evaluation. A theory-based approach thus enabled us to identify common strategies and themes (Dunn, van der Meulen, O'Campo and Muntaner, 2013) across what first seemed to be a collection of very diverse and different projects. It also enabled us to identify priorities (Moore, Evans, Hawkins, Littlecott, Melendez-Torres, Bonell and Murphy, 2019) for the shaping of the overall evaluation. Furthermore, it became clear that most HFN projects combine multiple strategies. The overall evaluation will be framed by the results of this study in at least two ways; the identified strategies will be used as directions for in-depth multiple case studies and as factors for explaining effectiveness in MPPs. In other words, the results of this study can be used to deal with the complexity encountered in the overall evaluation of the HFN programme (Brousselle and Buregeya, 2018, Elliott *et al.*, 2014).

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Chapter 4

Community engagement in health promotion: results from a realist multiple case study

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This chapter is submitted and under revision.

Abstract

Community engagement (CE) has long been endorsed by policy makers and health practitioners. However, uncertainties remain about the workings and outcomes of CE. This study aims to provide in-depth insights into them.

In a multiple case study, we investigated three participatory health promotion projects for vulnerable families in the Netherlands. We adopted a realist approach combined with a Theory of Change (ToC) model. We then analysed the qualitative data for context-mechanism-outcome (CMO) configurations to refine this ToC.

Results show that CE can strengthen social networks, empower families and increase perceived health. However, specific contexts in combination with CE project approaches may or may not trigger positive responses. Participants may feel that they matter when asked to actively contribute to a project, which in turn can enhance their self-confidence. In another context, we found that vulnerable families were overwhelmed by the responsibilities given to them in the project, leading to feelings of stress and withdrawal from the project. We present a list of CMO-configurations and refine the ToC accordingly.

Our main conclusion is that flexibility is key when CE is implemented in health promotion. Also, our findings question physical health outcomes as a realistic ambition for CE projects with vulnerable groups.

4.1 Introduction

Despite multiple efforts in line with public health policy in the Netherlands, health inequalities are persistent and specifically affect vulnerable groups. Community engagement (CE) has long been endorsed by (public) health practitioners, policymakers and researchers as a method for inclusive health promotion (Milton et al., 2011; Popay, 2006). CE revolves around 'involving communities in decision-making and in the planning, design, governance and/or delivery of services' (O'Mara-Eves et al., 2013). The active engagement of societal groups can take many forms: online or offline, from consultation to community-led or volunteer-driven services, from projects inspired and organised by professionals or community members, or a combination of these.

It is assumed that citizens' active participation will encourage positive changes at the community level, such as improving and tailoring (health) services to the needs of the community (De Weger, Van Vooren, Luijkx, Baan, & Drewes, 2018). In turn, such tailored services could improve community health. It is also assumed that CE will affect the health *behaviours* of community members (O'Mara-Eves et al., 2015). However, many uncertainties remain about the precise workings and outcomes of CE when it comes to health and well-being (Adhikari et al., 2019). It is still unclear *how* active participation works to improve health, especially for vulnerable groups (De Weger et al., 2018).

Models for CE often seem to imply that there is a hierarchy in the forms of participation, in which consultation is seen as the least desirable form and community-led projects are seen as the most desirable. Such a 'framed' perspective on CE could unnecessarily narrow findings of studies using CE models, in the sense that it could lead researchers to overlook the positive outcomes of forms of CE perceived as less desirable or the side effects of community-led initiatives (Dempsey, 2010). So far, studies have not been able to show which routes link active participation in CE activities to improvement in health outcomes (Milton et al., 2011; O'Mara-Eves et al., 2013; O'Mara-Eves et al., 2015).

Another important uncertainty lies in the knowledge gap around outcomes of CE for vulnerable groups (De Weger et al., 2018). While members of those groups (i.e., ethnically diverse, lower socioeconomic position, elderly, less-abled citizens) should benefit from health promotion activities, there is a lack of knowledge about what works (or not) for them (De Weger et al., 2018). Finally, it is quite challenging to design and implement

evaluations of CE initiatives (Wallerstein, Minkler, Carter-Edwards, Avila, & Sanchez, 2015).

The aim of this study is to further unravel the relationships between CE activities and individual and community-level health-related outcomes, including social determinants of health. By conducting a (realist) multiple case study of three Dutch health promotion projects that engage with local communities, we aim to provide in-depth insights into the workings and outcomes of CE for vulnerable community members. The main research question is: *What works and how (and what does not and why) regarding community engagement for health promotion among vulnerable families in the Netherlands?*

The health promotion activities we investigate include health outcomes related to the three dimensions of health: mental health, physical health, and indicators of changes in social health (WHO, 2022). Also, we define 'community' as the social, geographical and/or cultural context of the target groups for the three projects. The projects were embedded in the Healthy Futures Nearby (HFN) Programme funded by FNO, a Dutch non-profit organisation that works to promote health among vulnerable members of society (FNO, 2015b). FNO defined vulnerable families as: 'households in which at least one adult and one child live together, who experience multiple problems with finances, education, work, or well-being and who suffer health deprivation caused by smoking, heavy consumption of alcohol or unhealthy weight, combined with a lower perceived health' (FNO, 2015a).

4.2 Materials and methods

This study is part of the bigger, overall evaluation of the HFN programme, which consists of 46 small-scale projects that focus on health promotion among vulnerable families (FNO, 2015b). More information on the HFN programme and its overall evaluation, conducted by a consortium, can be found in the study protocol (Hogeling, Vaandrager, & Koelen, 2019). Previous steps in the evaluation also included a study to determine assumptions in each of the programme's 46 projects. Following these assumptions, 38 projects prioritised CE as a strategy (Hogeling, Lammers, Vaandrager, & Koelen, 2021).

To unravel what works in complex community settings (South et al., 2020), this study uses a multiple case study design. It was guided by principles of realist evaluation combined with Theory of Change (ToC) (Kabongo, Mukumbang, Delobelle, & Nicol, 2020; Rolfe, 2019). A realist approach ensures that existing assumptions about CE can be refined while

adding valuable information about the mechanisms at play in these specific contexts. Furthermore, a combined ToC and realist approach allows us to focus on those parts of CE that matter (Rolfe, 2019) to the projects themselves, since the ToC is based on their assumptions. A ToC also provides a solid theoretical foundation for refinement (Rolfe, 2019) and a ToC can help unravel the interrelationships between the different activities, mechanisms, and outcomes (Judge & Bauld, 2001). The Rameses reporting standards for realist evaluations (Wong et al., 2016) were used as overall guidelines to report the available information, whereas the structure and order of information draws mostly upon the steps in the research design.

Research design

Table 4.1 shows the 5 steps taken in this research and the methods, sources, who did what and outputs of each step. As a first step, we selected three cases (Step 1) from the 46 and collected four years' worth of data about them (Step 2). Sources are telephone interviews (3 per project), group interviews (3 per project) and project documents. From this data, we extracted assumptions about CE to build a combined ToC for the three cases (Step 3). We used the ToC to make a code list to guide a thematic analysis based on realist principles (Step 4). Finally, we used the findings from the thematic analysis to draft a refined ToC (Step 5).

Steps 1 and 2 are described in this Methods section, complemented by a description of the analyses.

Table 4.1 Research steps, methods, sources and primary outputs.

step	what	methods and by whom	sources	primary outputs
1	Case selection	Purposive sampling; selection based on 4 criteria - LH, LV, MK	(1) Categorization of projects (previous study) (2) Project proposals (3) Group interviews round 1	Selected cases, 3 from 46: Project A Project B Project C
2	Data collection	**Multiple telephone interviews** and **group sessions** (see also Table 3 and Table 4) Collection of available **project documents** and reports. *LH, LV, CL& and other researchers from the research consortium of the overall evaluation.		
3	Identifying a combined ToC	Analysis of data using interpretive content analysis and primarily deductive coding of texts. *LH	(1) Project proposals (2) Groups interviews round 1	(1) Visual representation of ToC (2) list with main assumptions.
4	Thematic analysis based on realist principles	Analysis of data based on realist principles and guided by the ToC: identifying (related) mechanisms, context, outcomes and inputs (ICMO-configurations) that can be linked to parts of the ToC. *LH & LV	(1) Group interviews round 2-3 (2) Telephone interviews round 1-3 (3) Progress reports (4) Final evaluation report by project	List of identified (i)cmo configurations.
5	Creating a refined ToC	Linking identified (I)CMO configurations to the ToC when possible, to create the refined ToC. *LH	List of identified (I)CMO-configurations	Visual representation of parts of the refined ToC.

* LH, LV, MK are authors and worked as researcher or project leader in the overall evaluation team. CL worked as a research assistant in the research consortium of the overall evaluation.

Step 1: Selection of projects

In the first year of the programme, all projects were sorted into categories based on project strategies and assumptions (Hogeling et al., 2021). Thirty-eight projects were categorised as using CE as a (primary) strategy for health promotion. We then used purposive sampling (Campbell et al., 2020; Etikan, Musa, & Alkassim, 2016) to select 3 of these 38 projects to further investigate CE in health promotion. Selection was based on: (1) belonging to the group of projects that work with a CE strategy, (2) participating in all the data collection methods used in the overall evaluation, (3) showing that they clearly implement (elements of) CE, and (4) displaying variation in the types of CE implemented (i.e., maximum variation sampling (Etikan et al., 2016). Such purposive sampling of cases, or more specifically, purposefully defining what is a meaningful case in a specific situation, resonates well with a realist perspective (Byrne, 2018).

Table 2 summarises the main characteristics of each project, which have been anonymised and will be referred to as Projects A, B and C in this study. CE is defined broadly in our paper as involving communities (individuals from those communities) in decision-making and in the planning, design, governance and/or delivery/implementation of health promotion related activities and services. Projects under the umbrella of the HFN programme were asked to include participatory elements in their proposals. The extent to which individual projects included active involvement of communities differed, as well as the project phase in which such participatory elements were planned. Often, projects designed a preparatory project start, such as creating a participatory inventory of community assets and needs, basing the design of the actual intervention on this inventory. The three projects selected all incorporated participatory elements in the implementation phase of their project proposals. What these elements look like for each project is summarized in Table 4.2.

Table 4.2 Project characteristics.

Project	**Intervention/activities**	**Scale/target group**	**Relevant project characteristics**
Project A	Working groups of families organising activities/events (assumed) CE elements: - Families working together with project team to create a plan (based on evidence-based-interventions) - Setting project goals together with project team - Cooperation in working groups to organise and implement interventions	Vulnerable families (as defined) Specific neighbourhoods	The project consists of multiple parts, one of which is a CE project. The project was initiated by a consortium from the municipality and the local university. Health and community workers are also represented in the project team.

Project B	Groups of single parents organising activities/events
	
	(assumed) CE elements:
	- Participation in a working group of parents, which will
	  o Think of relevant activities and facilities for the single parents in the neighbourhood
	  o Organise/implement such activities
	- Actively participate in the activities in the neighbourhood
	- (mentally) support other parents in similar situations.
		Single parents (vulnerable, as defined)
		
		Specific neighbourhoods
			The project began as a primarily community-driven project directed by working groups of families/parents. After one year, project leaders shifted towards a professional-driven strategy.

Project C	Families' initiatives are supported in design and implementation. CE elements: - Participation in creating an 'infrastructure' for neighbourhood inhabitants to realize their (so far not realised) initiatives - The intervention is based on trust in families' taking responsibility for the activities.	Vulnerable families (as defined), also, more specifically children Specific neighbourhoods	The entire project is based on CE.

Step 2: Data collection

Data was collected through three telephone interviews per project with project leaders and three group interviews per project with project stakeholders. In addition, we reviewed progress reports written by project leaders that were sent to the funder three times a year; these provided information about wider processes around and within the projects. Analysis was primarily based on the verbatim transcripts of the nine telephone interviews and the comprehensive reports of the nine group interviews. The project progress reports were used as additional sources of information.

Telephone interviews. Three telephone interviews were conducted with leaders from the three projects. The telephone interviews, which each lasted around one hour, were semi-structured, guided by a topic guide. The topic guide for each round was constructed by LH and LV. A verbatim transcript was made of the recordings of each interview.

The topics discussed in each round are summarized in Table 4.3. For the 2017 interviews (the projects had started a year before), the topic guide was based mainly on the funder's requirements for projects and on results of the first group interview. During the last round of telephone interviews, most projects had officially ended.

Table 4.3 Topics covered in telephone interviews with project leaders.

Interview round	**Topics**
I – 2017	o Funder-defined outcomes o Community/family participation o Main project strategies o Project specific evaluation designs o Other developments
II – 2018	(additional to round I:) o Project sustainability (embedding) o Outputs, outcomes and mechanisms o Perceptions of funder communication activities
III – 2019/2020	(additional to round II:) o In-depth reflection on mechanisms and outcomes o Clarification of gaps in data

Group interviews. Three group interviews were held with participants from the selected projects. Participation in the group interviews was based on convenience sampling; the project leaders were asked to invite all stakeholders or representatives. This resulted in a variety of stakeholders taking part, including project leaders, health care and welfare professionals, educators, members of sports clubs and neighbourhood organisations, family members, researchers and volunteers. Participants varied between projects and between interview rounds. In total, 62 people participated in the group interviews, with a mean group size of 7 (range 5-11, see Table 4.44). All interviews lasted 2-3 hours and took place at a location chosen by the project leaders, often close to where the projects were implemented.

Table 4.4 Participants in group sessions and number of project participants from family members present.

	Project A		**Project B**		**Project C**		**Mean**
Group sessions and methods	**N**	**Participants from families**	**N**	**Participants from families**	**N**	**Participants from families**	
First round (EffectenArena approach)	7	-	5	-	5	-	5.7
Second round (timeline)	5	-	8	3	8	1	7
Final round (outputs, outcomes and mechanisms)	5	-	11	4	8	2	8

Each group interview was facilitated by one researcher, while another took detailed notes. The second and third round of group interviews were also recorded. The notes and audio files were used afterwards to write a comprehensive report (3-5 pages) of the interview. In addition, for the first round, the researchers drafted a flow diagram representing the main elements, processes and expected results of each project. Both the comprehensive report and – after the first round – the diagram were presented to the project leader, who was asked to reflect on the accuracy of the documents. Table 4.5 summarizes the methods, topics discussed and goals of each round.

Table 4.5 Methods and topics in group interviews.

Interview round	Methods	Goal	Topics
I – at the start of each project	Effectenarena approach (Deuten, 2009) - facilitates an open, informative discussion between stakeholders and thereby promotes learning and dialogue within teams.	Identify main strategies to create a ToC.	(assumed) activities, outcomes, conditions, investors and beneficiaries.
II – approximately mid-term	Timeline method (Adriansen, 2012; Herens, Wagemakers, Vaandrager, van Ophem, & Koelen, 2016)	Keep track of developments, (changing) perspectives and strategies, as well as (preliminary) outputs and outcomes.	Reflection on project specific ToC Perceived highs and lows over the first year(s)
III – projects finished subsidized activities	Semi-structured interview guide, additional project-specific preparation by researcher based on available data.	Identify project outputs and outcomes, related mechanisms. Reflect on initial assumptions in ToC.	Projects perspectives on outputs and outcomes Possible mechanisms Reflection on ToC

At the start of each project, group interviews were held using the EffectenArena approach (Deuten, 2009), which is a semi-structured approach to group interviews that focusses on activities, outcomes, conditions, investors and beneficiaries. It facilitates an open, informative discussion between stakeholders and thereby promotes learning and dialogue within teams. A second round of group interviews was conducted approximately mid-term. The creation of a project timeline with participants provided insight into what project stakeholders perceived as important highs and lows over the first year(s) of the project (Adriansen, 2012; Herens et al., 2016). The timeline method has the advantage that 'various individual experiences emerge and have a place, quickly and clearly.

Everyone's story matters' (Wielinga et al., 2008). The last part of the interviews was a facilitated discussion about the elements of the timeline. What differences in perceived highs and lows were present among participants? During the final round of group interviews, most projects had either finished their subsidised activities or were finalizing them.

Analysis

Two thematic analyses were performed. Both were conducted as iterative processes: data and findings were discussed and refined multiple times among the authors.

Identifying a combined ToC. In a first (inductive) analysis data from the first round of group interviews was analysed to look for all explicit and implicit assumptions related to CE. The focus was on assumptions about how CE works, including what is needed to make it work and what it could lead to. This was done in two rounds, where the first list of assumptions (by LH) was discussed with MK and LV before completing the list in a second round. The complete list of assumptions related to CE was then categorised and again discussed and summarised to be able to build a comprehensive ToC and related code list.

Identifying mechanisms at play. In a second, more deductive thematic analysis, a summary of that ToC was used as a code list. The code list also included the realist concepts of mechanisms ('a "causal force" that makes an outcome happen' (Wong, 2018, p. 109)) and context. Using this list, group session reports and verbatim transcripts of telephone interviews were analysed to create CMO configurations. Again, the resulting list of CMO configurations (by LH) was first discussed among the team (LV, MK and LH) to further clarify and refine gaps where possible. The list of CMO configurations was shortened further by leaving out all configurations with severe gaps. For the sake of clarity, we then selected those CMOs that were mentioned more often than others or that we perceived as more relevant for future design and implementation of health promotion.

4.3 Results

Step 3: Combined ToC

We identified six categories of intended (positive) effects of CE on vulnerable families, as illustrated in the combined ToC in Figure 1. The local projects assumed that CE would (1) promote healthy lifestyles, (2) improve self-management (and affect related individual

concepts), (3) improve control over one's own/family life, (4) promote community involvement, (5) create supportive environments and (6) directly influence health. There were many mentions of *what* CE was assumed to lead to, but less data on *how* CE was to inspire all these changes.

(1) Promote healthy lifestyles includes assumptions about engagement leading directly or indirectly to being less overweight, more aware of healthy lifestyles and more engaged in exercise:

> *'A successful CE project (in the described design by project X) will lead to less obesity among residents, more awareness of a healthy lifestyle, more exercise (...)'*

(2) Improve self-management (and affect related individual concepts) or *control over personal circumstances* includes assumptions about the benefits of CE for strengthening the 'power to solve', self-reliance, self-control, self-directedness and (cognitive) flexibility.

> *'A participatory process involving vulnerable families can create more "self-power" and self-directedness among the target group.'*

(3) Control over one's own/family life includes assumptions about how CE can reduce stress related to social, financial and child-rearing issues, which in turn creates space to focus on health. Moreover, we found assumptions about CE positively affecting control over finances, child-rearing issues, social networks and the physical environment.

(4) *Promote community involvement* includes assumptions that families involved in CE would strengthen their ties with the (local) community, also beyond that specific project.

> *'more involvement of residents in their neighbourhood and with neighbours (...)'*

(5) *Create supportive environments* includes assumptions that CE will benefit the physical and social environment of a community:

> *'(...) can change the context in which children grow up'*
>
> *'(...) creates a context in which it becomes and remains easier to live healthily'*

(6) Finally, *directly influence health* assumes that CE will have a direct influence on the health status of vulnerable families.

In turn, we found that more indirect effects of CE were assumed, relating social determinants to health indicators or social determinants to other (also social) determinants: (1) healthy lifestyles will lead to better health, (2) improved self-control will lead to healthier lifestyles and better health, (3) more control over one's own/family life will lead to healthier lifestyles and better health, (4) community involvement will lead to healthier lifestyles and better health, and (5) the creation of supportive environments will lead to healthier lifestyles and better health. All assumptions are laid out in the combined ToC (Figure 4.1).

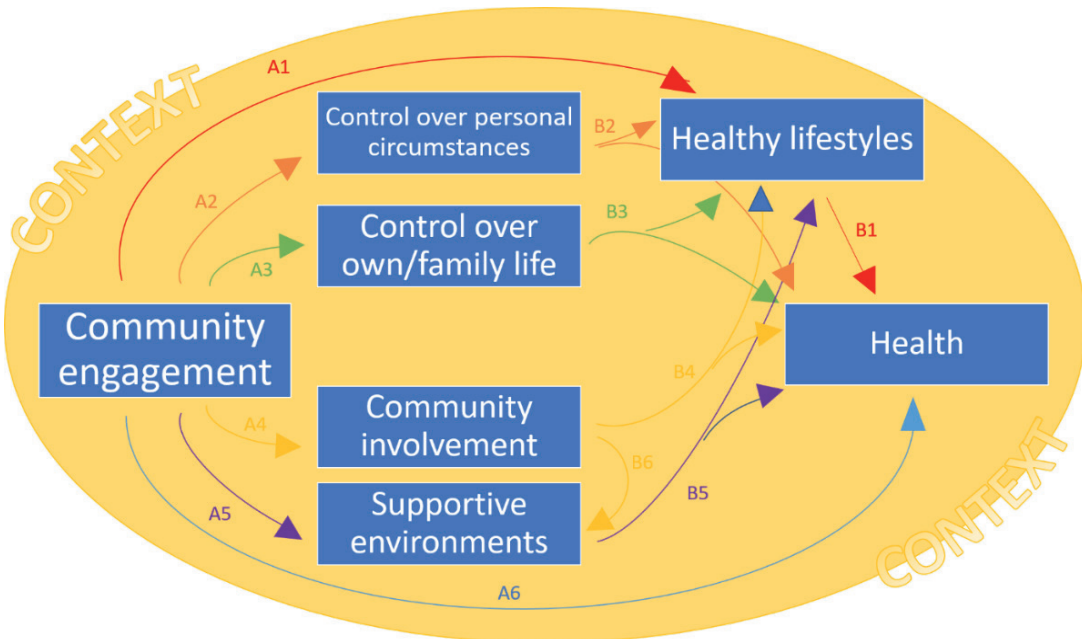

Figure 4.1 Combined ToC from three CE projects.

Note: A1,A2, etc. Codes and colours refer to the concepts and assumed relations operationalised in the code list (Appendix A).

Step 4: Realist thematic analysis: Context-Mechanism-Outcome configurations

Hereafter, we list all the complete Context-Mechanism-Outcome (C(I)MO) configurations found per project. Also, we describe how these project-specific CMOs change or nuance the combined ToC.

Context-(Intervention)-Mechanism-Outcome configurations for project A

Nine complete (C, I, M and O were identified) configurations were found for project A. Each configuration is presented here as a short structured narrative. The (causal) relations between the C(I)MO elements are clearer for some configuration than in others. Within the project context, interventions or activities may fire positive (configurations I, III, IV, V, VI, VII, IX) and/or negative reactions (configurations II and VIII) among participants, translated as mechanisms in the narratives.

In project A, a core intervention element is the construction and implementation of a working-group of project participants, supported and coordinated by a member of the project team. Two configurations (I and II) relate directly to the processes of the working-group, including positive and negative outcomes.

C(I)MO A – I Two-sided configuration

(C) Participants are neighbourhood inhabitants with varying backgrounds. What they have in common, is most lack experience in organising activities or events in a more or less professional setting, in cooperation with the municipality and with others. Also, some have negative experiences with support/help from the municipality and/or social work. While some have gone through drastic changes or events in their personal lives.

(I) Participants helped researching the needs of the neighbourhood community, in a previous phase of the project. Based on those needs, a working group of participants, coordinated by a member of the project team - organises activities and changes in the neighbourhood. The coordinator tries to structure the process where needed, and helps the participants in finding how they can individually contribute best (as they all have different skills and knowledge). The composition of the working group is random, participants were 'recruited' through a previous phase of the research and via-via among neighbourhood inhabitants.

(M - positive) Overall, several participants have **felt that they had something they can contribute** (M1) to the project, which motivates them to be/stay involved and help organise activities and events. Two participants **are (even) more motivated** (M2) than the rest, and thereby help motivate others to make a contribution. These two seem to use the knowledge from experience gained by drastic changes in their lives (C). Also, they seem to know a bit better that it takes a few preparatory steps to organise something (C). These two participants also act as motivators for the rest of the group in their enthusiasm, in turn creating a positive context (C). Participants have also **felt responsible** (M3) for the actions needed to organise the things they want and need.

(M – negative) In the context of lacking experience with organisation of activities in community or more professional setting, participants have **felt frustrated** that organisation of activities takes preparation and time (and thus feel that 'nothing is happening') (M4). This has also led participants to feel **they don't have the skills/power** to initiate and organise activities (M5). Participants have also not **felt responsible** for the organisation or implementation of ideas (M6).

(O) Participants are involved in community activities (community involvement, O1) and supportive environments for community inhabitants are created (O2). On the other hand, participants who had previous negative experiences with the municipality or social work, felt further confirmed in their attitudes (O3). This has somewhat hindered the creation of supportive environments for other neighbourhood inhabitants (O4).

C(I)MO A – II Facing multiple issues

(C) Participants are neighbourhood inhabitants with varying backgrounds. What they have in common, is most lack experience in organising activities or events in a more or less professional setting, in cooperation with the municipality and with others. Also, some have negative experiences with support/help from the municipality and/or social work. While some have gone through drastic changes or events in their personal lives. Others still face multiple problems in their personal lives.

(I) Participants helped researching the needs of the neighbourhood community, in a previous phase of the project. Based on those needs, a working group of participants, coordinated by a member of the project team - organises activities and changes in the neighbourhood. The coordinator tries to structure the process where needed, and helps the participants in finding how they can individually contribute best (as they all have different skills and knowledge). The composition of the working group is random, participants were 'recruited' through a previous phase of the research and via-via among neighbourhood inhabitants.

(M) Given the context of ongoing multiple issues participants face in their (personal) lives, participants **have felt that they don't have the time and/or energy to** be actively involved in the working group.

(O) Participants have dropped out of the project working group. For them, no community involvement has been established.

One of the activities initiated by the working-group and the project team is the organisation of a swap-shop in the municipality. Configuration III and IV both relate to the processes in this initiative.

C(I)MO A – III Gaining experience and self-esteem

(C) Participants are neighbourhood inhabitants with varying backgrounds. What they have in common, **is most lack experience in organising activities or events in a more or less professional setting, in cooperation with the municipality and with others**. Also, some have negative experiences with support/help from the municipality and/or social work. While some have gone through drastic changes or events in their personal lives. Others still face multiple problems in their personal lives.

(I) Participants helped researching the needs of the neighbourhood community, in a previous phase of the project. Based on those needs, a working group of participants, coordinated by a member of the project team - organises activities and changes in the neighbourhood. **One of the initiatives is setting-up and running a 'swap shop', where neighbourhood inhabitants can come and swap stuff or skills for items in the shop, brought in by others. Participants are supported (a lot) by professionals from the municipality. Also, the municipality uses the swap shop as a place for gaining work-experience for people who don't have a job because of personal problems.**

(M) By heavily supported and facilitated participation in the 'swap-shop' initiative, participants have been able to **gain experience and through that self-esteem** (M1). Also, participants have **discovered how they can contribute** (M2) to the initiative, which has made them **feel able to make a tangible contribution** (M3).

(O) **Community involvement**, specifically in various ways in the swap-shop initiative is the main outcome identified. An outcome at the municipal level is that a place is created for inhabitants to (formally) gain work-experience. Some dropped out of the project working group. For them, no community involvement has been established.

C(I)MO A – IV Another role

(C) Participants are neighbourhood inhabitants with varying backgrounds. What they have in common, is most have them lack experience in organising things in a more or less professional setting, with the municipality, in cooperation with others etc. Also, some have previous negative experiences with support/help from the municipality and/or social work. While some have gone through drastic changes or events in their personal lives. Others still face multiple problems in their personal lives. **Some seem to be 'stuck' in the same role (victim, not being responsible) with regard to support/help from municipality.**

(I) Participants helped researching the needs of the neighbourhood community, in a previous phase of the project. Based on those needs, a working group of participants, coordinated by a member of the project team - organises activities and changes in the neighbourhood. One of the initiatives is setting-up and running a 'swap shop', where neighbourhood inhabitants can come and swap stuff or skills for items in the shop, brought in by others. Participants are supported (a lot) by professionals from the municipality. Also, the municipality uses the swap shop as a place for gaining work-experience for people who don't have a job because of personal problems. **There are several types of tasks offered in the shop (administrative, as a host/hostess, logistics, etc.).**

(M) Participants **discovered and felt how they can contribute** to the initiative, and **discovered the possibility to take on another 'role'** in the community.

(O) Community involvement, specifically in various ways in the swap-shop initiative is the main outcome identified.

In some configurations, mechanisms were identified that led to healthier lifestyles of project participants, such as C(I)MO V.

C(I)MO A – V Inspiration for healthier lifestyles

(C) Participants are neighbourhood inhabitants with varying backgrounds. What they have in common, is most have them lack experience in organising things in a more or less professional setting, with the municipality, in cooperation with others etc. Also, some have previous negative experiences with support/help from the municipality and/or social work. While some have gone through drastic changes or events in their personal lives. Others still face multiple problems in their personal lives. Some seem to be 'stuck' in the same role (victim, not being responsible) with regard to support/help from municipality.

(I) In the project, participants **work together** (in working groups) to organise and implement various activities.

(M) By working together with participants who share similar backgrounds and possibly face the same issues in their personal lives, participants **have seen and heard how others** have managed to maintain sports participation or how other parents have been able to organise sports for their children.

(O) Inspired by others, participants have started to organise sports participation for themselves, and have thus taken up a healthier lifestyle.

Multiple configurations are about making a contribution, experiencing successes and feeling that each contribution is recognised and valuable (configurations VI and VII).

C(I)MO A – VI Recognition of skills and knowledge

(C) Participants are neighbourhood inhabitants with varying backgrounds. What they have in common, is most have them lack experience in organising things in a more or less professional setting, with the municipality, in cooperation with others etc. Also, some have previous negative experiences with support/help from the municipality and/or social work. While some have gone through drastic changes or events in their personal lives. Others still face multiple problems in their personal lives. Some seem to be 'stuck' in the same role (victim, not being responsible) with regard to support/help from municipality.

(I) In the project, participants work together to organise and implement activities. They are supported by a (professional) coordinator.

(M) Participants **experienced what they can do/contribute based on their own experiences**. They have also felt able to serve as an example for others with similar backgrounds and situations.

(O) Participants have gained more control over their own/family lives by learning about what others do as well as gaining self-esteem through recognising their own knowledge and skills.

C(I)MO A – VII Feeling seen

(C) Participants are neighbourhood inhabitants with varying backgrounds. What they have in common, is most have them lack experience in organising things in a more or less professional setting, with the municipality, in cooperation with others etc. Also, some have previous negative experiences with support/help from the municipality and/or social work. While some have gone through drastic changes or events in their personal lives. Others still face multiple problems in their personal lives. Some seem to be 'stuck' in the same role (victim, not being responsible) with regard to support/help from municipality. **On the other hand, professionals may be 'stuck' in their role: taking full responsibility. There is a perceived 'culture' in which professionals and inhabitants seem to speak another language, when it comes to initiating and organising change, seeing success and taking up responsibilities.**

(I) In the project, participants work together (in working groups) to organise and implement activities. They are supported by a (professional) coordinator. One of the initiatives is a swap shop, in which participants take on different tasks, matching their individual skills and knowledge. The professionals supporting the swap shop purposely signal and show their appreciation for the contribution of participants, and 'celebrate' success, big and small. Extra effort is made to recognise what success means, to participants and to professionals.

(M) Participants **have felt that their contribution is appreciated and recognised.**

(O) Participants are and remain involved in a community initiative.

While configurations VI and VII include positive reactions on the intervention-elements provided by the project, the same intervention-elements may lead other participants feeling frustrated, due to their negative experiences with municipal support and perceived possibilities for initiating change (configuration VIII).

C(I)MO A – VIII Frustration

(C) Participants are neighbourhood inhabitants with varying backgrounds. What they have in common, is most have them lack experience in organising things in a more or less professional setting, with the municipality, in cooperation with others etc. Also, some have previous negative experiences with support/help from the municipality and/or social work. While some have gone through drastic changes or events in their personal lives. Others still face multiple problems in their personal lives. Some seem to be 'stuck' in the same role (victim, not being responsible) with regard to support/help from municipality. On the other hand, professionals may be 'stuck' in their role: taking full responsibility. There is a perceived 'culture' in which professionals and inhabitants seem to speak another language, when it comes to initiating and organising change, seeing success and taking up responsibilities.

(I) In the project, participants work together (in working groups) to organise and implement activities. They are supported by a (professional) coordinator. Activities are based on the needs and wishes of the participants/target group.

(M) Participants **feel frustrated,** feel that nothing is changing and that they cannot do what they want

(O) Participants drop out of a community initiative.

In project A, both practical and moral support (such as celebrating successes) by a dedicated professional has led participants to feel able to make change happen, in turn leading to community involvement and supportive environments (configuration IX).

C(I)MO A – IX Achieving change – small successes

(C) Participants are neighbourhood inhabitants with varying backgrounds. What they have in common, is most have them lack experience in organising things in a more or less professional setting, with the municipality, in cooperation with others etc. Also, some have previous negative experiences with support/help from the municipality and/or social work. While some have gone through drastic changes or events in their personal lives. Others still face multiple problems in their personal lives. Some seem to be 'stuck' in the same role (victim, not being responsible) with regard to support/help from municipality. On the other hand, professionals may be 'stuck' in their role: taking full responsibility. There is a perceived 'culture' in which professionals and inhabitants seem to speak another language, when it comes to initiating and organising change, seeing success and taking up responsibilities.

(I) In the project, participants work together (in working groups) to organise and implement activities. They are supported by a (professional) coordinator, who **also helps participants to see (small) successes and take the (small) steps needed to organise the things they want**. Activities are based on the needs and wishes of the participants/target group.

(M) Participants **feel that they have really achieved something**

(O) Participants successfully organise changes in their environment, there is community involvement and supportive environments for involvement and (lifestyle) change are created.

Context-(Intervention)-Mechanism-Outcome configurations for project B

Fourteen complete (C, I, M and O were identified) configurations were found for project B. Similar to project A, each configuration is presented here as a short structured narrative. Again, the (causal) relations between the C(I)MO elements are clearer for some configuration than in others. Depending on context, interventions or activities may fire different reactions among participants, translated as mechanisms in the narratives, which in turn lead to multiple positive or negative outcomes.

The core target group of project B are single parents. The project uses various strategies to invite those parents to participate, either very actively in a working group, or more passive in one of the activities initiated and organised by the working group. Already at the start of the project, it becomes clear that active and 'successful' participation as a result of the projects' interventions is not self-evident (C(I)MO B -I and C(I)MO B -II).

C(I)MO B – I Stress and frustration

(C) Participants are single parents that often experience stress in their (personal) lives, due to personal circumstances, stressful events, etc. At times when stress is high, drop-out occurs. While at times when there is less stress, they decided to participate.

(I) **Active participation** in a core/working group of single-parents organising activities for the target group (single parents). The focus is on collective action by the working group, single parents working together and receiving support – *as a group* – in that to organise the things they need.

(M) Participants (single parents) **experienced no 'room' for participation** in the project (M1). Participants **feel they need to prioritise dealing with the stressors** at home. Also, participants (and professionals) **feel frustrated** (M2): when is the project really starting (while professionals wait for parents taking initiative)

(O) Because of the experienced lack of 'space' to take on new things and the frustration felt among participants, participants do not initiate new activities and do not help in organising new activities. In turn, participants may drop out of the project, which can be translated as less community involvement.

C(I)MO B – II Tailored support

(C) Participants are single parents that often experience stress in their (personal) lives, due to personal circumstances, stressful events, etc. At times when stress is high, drop-out occurs. While at times when there is less stress, they decided to participate.

(I) Active participation in a core/working group of single-parents organising activities for the target group (single parents). The focus is on collective action by the working group, single parents working together and **receiving support – *as a group* –** in that to organise the things they need.

(M) Participants (single parents) experience no 'room' for participation in the project. Participants feel they need to prioritise dealing with the stressors at home. The collective support for the working group is **not experienced as fitting or what they need**.

(O) Because of the experienced lack of 'space' to take on new things and the frustration felt among participants, participants do not initiate new activities and do not help in organising new activities. Also, the support provided by the project does not fit their needs. In turn, participants may drop out of the project, which can be translated as less community involvement.

Once involved in the working-group, participants work together. The project team has designed the working-group in a relatively professional matter, with regular meetings, a chair, division of tasks etc. This works out differently for different participants (nested C(I)MO B – III and B – IV).

C(I)MO B – III and B – IV (nested)

B – III

(C) Participants are single parents that often experience stress in their (personal) lives. They often don't have much time for personal development of activities to learn and practice skills.

(I) Active participation in a core/working group of single-parents organising activities for the target group (single parents). The core/working group has a **professional setup**, with meetings, a chair etc.

(M) Single parents **have felt responsible** for the project and for the other parents participating in the project

(O) Single parents take up the responsibility to organise the things they need as a group, which led to better control over personal circumstances for group members and other single parents, and community involvement for group members.

B – IV

(C) Participants are single parents that often experience stress in their (personal) lives. During participation, Single-parents feel very responsible for the project and other participants (due to the professional setup of the working-group, **this is the MECHANISM in CMO B - III**).

(I) Active participation in a core/working group of single-parents organising activities for the target group (single parents). The core/working group has a **professional setup**, with meetings, a chair etc. that works because the parents themselves are to initiate and organise activities around their needs.

(M) Single parents **feel overwhelmed** by the responsibilities in the project and for the other parents participating in the project.

(O) Participants dropped out of the project because of the experienced overwhelming responsibility.

Configuration B – V shows that positive contextual factors can also create less involvement in the projects activities.

C(I)MO B – V Positive changes

(C) Participants are single parents that often experience stress in their (personal) lives, **but personal circumstances can also change in a positive way**: they may find a job, find a partner, have a stronger network etc.

(I) General participation in the project, a core/working group of single-parents organising activities for the target group (single parents). The focus is on the initiative of and action by the working group, single parents working together to organise the things they need.

(M) Participants (single parents) experience that they **no longer need** the project, that they **do not have time** to participate in the project because of a job or that they simply **do not fit the project target group** anymore (because no longer single).

(O) Participants stopped being involved in the project.

The narratives of nested configurations B – VI and B – VII show that, in steps, participation that is designed to fit the specific context can lead to big changes in personal lives of participants, such as gaining the confidence to find a job.

C(I)MO B – VI and VII (nested)

B – VI

(C) Participants are single parents that experience stress in their (personal) lives. **Because of that experience they often lack self-confidence and feel no room for personal development**.

(I) Active participation in a core/working group of single-parents organising activities for the target group (single parents). The core/working group has a **professional setup**, with a chair etc. and **the focus is on the initiative of and action by the working group**, single parents **working together** to organise the things they need.

(M) Single parents feel that **they have something (skills, talents) to bring to the group**, that they can make a tangible **contribution** to the process and activities.

(O) Participants have experienced personal growth, gained self-confidence.

B – VII

(C) Participants are single parents that often experience stress in their (personal) lives, which makes it difficult for them to find room for growth. Also, the participants often lack control over their own life in fields such as employment, education, finances, social relations etc. During participation in the project (core group), single parents can experience personal growth and gain self-confidence **(this is the outcome of CMO B - VI)**.

(I) Active participation in a core/working group of single-parents organising activities for the target group (single parents). The core/working group has a **professional setup**, with a chair etc. that works because the **parents themselves are to initiate and organise** activities around their needs. This can give the single parent the opportunity for personal growth and for gaining self-confidence.

(M) Single parents **gain the self-confidence** to **take control** over the circumstances (such as employment) in their lives.

(O) Participants (single parents) gain control over personal circumstances (e.g. employment: feel the confidence to go to a job interview and find a job).

Configuration B – II described that participants did not feel that their needs were met by the collective support (to the parents as a group) offered by the project. Later, two

professionals specifically provided personal/tailored support to each individual parent involved. This fired positive mechanisms among participants, in turn leading to more community involvement (C(I)MO B – VIII). The following narrative (C(I)MO B - IX) describes another way these professionals successfully support parents in their participation in the project.

C(I)MO B – VIII

(C) Participants are single parents that often have an unstable personal life, circumstances can change (get better or worse).

(I) General participation in the project, a core/working group of single-parents organising activities for the target group (single parents). The focus is on the initiative of and action by the working group. **However, support is given to the parents by two professionals** (social workers). The support is both practical (how to organise etc.) and moral (personal attention for individual parents).

(M) Participants (single parents) **experience support**, **feel that they can do things** (with help of professionals). Feel a **shared responsibility**. The personal attention and support given by the professional **gives energy** to the participants.

(O) Participants start taking initiatives and organising activities more and more, which means more community involvement.

C(I)MO B – IX contributions and responsibility

(C) Relatively many single-parent families live in this neighbourhood. Often, they experience stress and negative personal circumstances, leaving no room for personal growth, relaxing or working on improvement of their own health. Participants are single parents that often have an unstable personal life, circumstances can change (get better or worse).

(I) General **participation** in the project, a core/working group of single-parents organising activities for the target group (single parents). The focus is on the initiative of and action by the working group. However, support is given to the parents by two professionals (social workers). The support is both practical (how to organise etc.) and moral (personal attention for individual parents). The professionals also **signal what everyone might be able to contribute**, what (individual) talents are.

(M) Participants (single parents) experienced support, **felt that they can do things** (with help of professionals). Felt a **shared responsibility**.

(O) Participants become and stay involved in the project, which translates as community involvement.

The configurations below (C(I)MO B – X and B – XI) about helping other and growing social networks shows amongst others how a single intervention, designed in a specific way can fire multiple mechanisms and lead to various outcomes.

C(I)MO B – X and B – XI (nested) Growing social networks and gaining control

B – X

(C) Relatively many single-parent families live in this neighbourhood. Often, they experience stress and negative personal circumstances, leaving no room for personal growth, relaxing or working on improvement of their own health. Social networks are small or non-existing. Participants are single parents that often have an unstable personal life, circumstances can change (get better or worse).

(I) General **participation** in the project, a core/working group of single-parents organising activities for the target group (single parents). The focus is on the initiative of and action by the working group. However, support is given to the parents by two professionals (social workers). The support is both practical (how to organise etc.) and moral (personal attention for individual parents). The professionals also signal what everyone might be able to contribute, what (individual) talents are.

(M) Participants (single parents) experience support, **feel that they can do things** (with help of professionals) and what it is they can do. **They experience that they can help others in the way that they have received help/support themselves**. Also, they feel that the **experiences they've gone through include lessons and knowledge that lets them help others** that may go through similar situations.

(O) Participants grow their social networks and in turn have more control over their own lives.

B – XI

(C) Relatively many single-parent families live in this neighbourhood. Often, they experience stress and negative personal circumstances, leaving no room for personal growth, relaxing or working on improvement of their own health. Social networks are small or non-existing. Participants are single parents that often have an unstable personal life, circumstances can change (get better or worse). Through participation in the projects' activities, single-parents can grow their social networks and gain more control over their lives **(this is C(I)MO B – X)**.

(I) General **participation** in the project, a core/working group of single-parents organising activities for the target group (single parents). The focus is on the initiative of and action by the working group. However, support is given to the parents by two professionals (social workers). The support is both practical (how to organise etc.) and moral (personal attention for individual parents). The professionals also signal what everyone might be able to contribute, what (individual) talents are.

(M) Participants **experience a growth in their social networks**, and **know what they can do for others**.

(O) Single parents grow their social networks, **which in turn leads to more happiness, less loneliness and more self-reliance.**

A few configurations include the tangible outcome of participants adopting a (more) healthy lifestyle. The nested C(I)MOs B – XII and B – XIII are (combined) one of those. The configuration in C(I)MO B – XIV adds a personal narrative about how participation has led to a healthy lifestyle.

C(I)MO B – XII and B – XIII (nested) Towards healthy lifestyles

B – XII

(C) Relatively many single-parent families live in this neighbourhood. Often, they experience stress and negative personal circumstances, leaving no room for personal growth, relaxing or working on improvement of their own health. Social networks are small or non-existing. Participants are single parents that often have an unstable personal life, circumstances can change (get better or worse).

(I) General **participation** in the project, a core/working group of single-parents organising activities for the target group (single parents). The focus is on the initiative of and action by the working group. However, support is given to the parents by two professionals (social workers). The support is both practical (how to organise etc.) and moral (personal attention for individual parents). The professionals also signal what everyone might be able to contribute, what (individual) talents are.

(M) Participants (single parents) experience that they can do things (with help of professionals) and **what it is they can do**.

(O) Single parents have more control over their personal circumstances, they feel more self-esteem.

B – XIII

(C) Relatively many single-parent families live in this neighbourhood. Often, they experience stress and negative personal circumstances, leaving no room for personal growth, relaxing or working on improvement of their own health. Social networks are small or non-existing. Participants are single parents that often have an unstable personal life, circumstances can change (get better or worse).

(I) General **participation** in the project, a core/working group of single-parents organising activities for the target group (single parents). The focus is on the initiative of and action by the working group. However, support is given to the parents by two professionals (social workers). The support is both practical (how to organise etc.) and moral (personal attention for individual parents). The professionals also signal what everyone might be able to contribute, what (individual) talents are. This grows self-esteem among participants **(OUTCOME B - XII)**.

(O) Single parents/participants decide to adopt a more healthy lifestyle (e.g. to lose weight)

C(I)MO B – XIV A different perspective

(C) Relatively many single-parent families live in this neighbourhood. Often, they experience stress and negative personal circumstances, leaving no room for personal growth, relaxing or working on improvement of their own health. Participants are single parents that often have an unstable personal life, circumstances can change (get better or worse). **Also, the possibilities to relax and for (personal) development are often unknown, too expensive or not perceived as available or accessible for participants.**

(I) General **participation** in the project, a core/working group of single-parents organising activities for the target group (single parents). The focus is on the initiative of and action by the working group. However, support is given to the parents by two professionals (social workers). The support is both practical (how to organise etc.) and moral (personal attention for individual parents). The professionals also **signal what everyone might be able to contribute**, what (individual) talents are. For one of the participants, the professional signalled that she was already doing sports often and enjoying that.

(M) Participants (single parents) experience support, which enables them to have a different perspective on the (near) future.

(O) Participant was trained to be a sports instructor and now leads sports lessons for other single parents.

Context-(Intervention)-Mechanism-Outcome configurations for project C

For project C, six complete (C, I, M and O were identified) configurations were found. Again, each configuration is presented below as a short structured narrative.

The first configuration in project C (C - I) shows how one well-thought intervention element – a regular neighbourhood breakfast - reaching participants in specific contexts, can result in multiple positive outcomes: community involvement, (health) supportive environments and healthy lifestyles. The following C(I)MO adds that time/learning while doing' can be a key element in project to evoke such positive mechanisms and outcomes. In this case (C - II), participants initially felt frustrated by the responsibilities put on them to further develop their ideas for the neighbourhood, coming from a lack of knowledge about what already exists and a perception that such neighbourhood initiatives never

succeed. The project team then scaled-up support for participants, which motivated them and made them feel 'less lost'.

C(I)MO C – I Visibility and motivation

(C) People felt that they didn't have a proper breakfast or that children in the neighbourhood didn't have a proper breakfast. In the neighbourhood, professionals perceived the target group of inhabitants as difficult to activate or involve. Inhabitants didn't think that it is possible to organise support of activities in their neighbourhood. There is an offer of health-related initiatives in the neighbourhood, but is seems that this is not known among neighbourhood inhabitants.

(I) A regular neighbourhood breakfast, where ideas and knowledge (about what is happening in the neighbourhood) is being exchanged. Also, the breakfasts are a fun get-together, where people can relax and enjoy the contact with and company of others. Coordination is done by project professionals and/or project leader.

(M) People have seen for themselves what it possible or what is already on offer in the neighbourhood. People experience that initiatives in the neighbourhood (such as the breakfast initiative) can be successful, and in turn feel motivated to become actively involved.

(O) Participants in the project have organised swimming lessons (and swimming hours) for women only/neighbourhood inhabitants. This is translated as outcomes: community involvement, creating supportive environments and healthy lifestyles.

C(I)MO C – II Feeling lost or enabling participation

(C) People felt that they didn't have a proper breakfast or that children in the neighbourhood didn't have a proper breakfast. In the neighbourhood, professionals perceived the target group of inhabitants as difficult to activate or involve. Inhabitants didn't think that it is possible to organise support of activities in their neighbourhood. There is an offer of health-related initiatives in the neighbourhood, but is seems that this is not known among neighbourhood inhabitants. **During a previous preparatory phase in the project, all kinds of ideas and initiatives have been collected among inhabitants.**

(I) Inhabitants have been asked to further develop the ideas from the initial inventory. This required (professional) skills such as making a project plan/planning, finding network, monitoring etc. Over the course of this 'intervention', the project team has scaled up the support for participants.

(M) Participants **feel that it is difficult to organise something**, **feel that they lack the skills to contribute** (M1). However, with (more) support from the project team, inhabitants **are motivated** to further develop their initiatives and ideas. They **feel less 'lost'** (M2).

(O) Initially, the responsibilities put on inhabitants led to participants becoming inactive, less community involvement. Later, support by the project team created a more enabling environment for participants who then started to actively participate.

C(I)MO C – II and C – IV both show that given specific circumstances and with an tailored and open (accessible) approach, community engagement can contribute to positive changes at the individual level, such as gaining self-confidence and feeling free to express needs. In C(I)MO C – V, this is taken even further: participants have now gained the confidence to sign up as a volunteer in their community.

C(I)MO C – III Making a valuable contribution

(C) People felt that they didn't have a proper breakfast or that children in the neighbourhood didn't have a proper breakfast. In the neighbourhood, professionals perceived the target group of inhabitants as difficult to activate or involve. Inhabitants didn't think that it is possible to organise support of activities in their neighbourhood. There is an offer of health-related initiatives in the neighbourhood, but is seems that this is not known among neighbourhood inhabitants. During a previous preparatory phase in the project, all kinds of ideas and initiatives have been collected among inhabitants.

(I) During a previous phase in the project, all kinds of ideas and initiatives have been collected among inhabitants. Later, inhabitants have been asked to further develop these ideas. This requires (professional) skills such as making a project plan/planning, finding network, monitoring etc. **One of the things developed from that phase, is the neighbourhood breakfast, at which several participants (voluntarily) help. This is all very much accessible and low-key, small and sometimes simple activities. The coordinator from the project team tries to be open and accessible to everyone.**

(M) People feel that they are worthy, that they can contribute to something.

(O) Participants feel free to express what they need and what they would like to see happen in the neighbourhood.

C(I)MO C – IV Building confidence

(C) People felt that they didn't have a proper breakfast or that children in the neighbourhood didn't have a proper breakfast. In the neighbourhood, professionals perceived the target group of inhabitants as difficult to activate or involve. Inhabitants didn't think that it is possible to organise support of activities in their neighbourhood. There is an offer of health-related initiatives in the neighbourhood, but is seems that this is not known among neighbourhood inhabitants. During a previous preparatory phase in the project, all kinds of ideas and initiatives have been collected among inhabitants.

(I) During a previous phase in the project, all kinds of ideas and initiatives have been collected among inhabitants. Later, inhabitants have been asked to further develop these ideas. This requires (professional) skills such as making a project plan/planning, finding network, monitoring etc. One of the things developed from that phase, is the neighbourhood breakfast, at which several participants (voluntarily) help. This is all very much accessible and low-key, small and sometimes simple activities. The coordinator from the project team tries to be open and accessible to everyone. **People contribute as volunteers or take initiatives.**

(M) People **experience different possibilities to contribute**, experience that there is a network, experience an environment in which new initiatives are possible.

(O) Participants feel confident, more self-efficacy, and in turn have more control over personal circumstances.

C(I)MO C – V Confidence to become a volunteer

(C) People felt that they didn't have a proper breakfast or that children in the neighbourhood didn't have a proper breakfast. In the neighbourhood, professionals perceived the target group of inhabitants as difficult to activate or involve. Inhabitants didn't think that it is possible to organise support of activities in their neighbourhood. There is an offer of health-related initiatives in the neighbourhood, but is seems that this is not known among neighbourhood inhabitants. During a previous preparatory phase in the project, all kinds of ideas and initiatives have been collected among inhabitants.

(I) During a previous phase in the project, all kinds of ideas and initiatives have been collected among inhabitants. Later, inhabitants have been asked to further develop these ideas. This requires (professional) skills such as making a project plan/planning, finding network, monitoring etc. One of the things developed from that phase, is the neighbourhood breakfast, at which several participants (voluntarily) help. This is all very much accessible and low-key, small and sometimes simple activities (like serving coffee). **The coordinator tries to be open and accessible to everyone, creating a safe environment for everyone (a safe environment can be different things to different people).** People contribute as volunteers or take initiatives.

(M) Participants feel that they can contribute without being overwhelmed by the responsibilities given to them. This gives them the confidence to sign up for e.g. voluntary work later on. Participants get to know what is already offered in the neighbourhood. Participants feel worthy, confident.

(O) Inhabitants gain more control over personal circumstances and become a volunteer in the neighbourhood.

Lastly, C(I)MO C – VI is a combined configuration for project C. It narrates how, in a neighbourhood where the general perception was that it wasn't possible to organise specific support or activities in their neighbourhood, tailored and accessible community engagement has led to involvement, organising sports lessons and other activities, in turn enabling healthier lifestyles.

C(I)MO C – VI Community involvement leads to healthier lifestyles

(C) People felt that they didn't have a proper breakfast or that children in the neighbourhood didn't have a proper breakfast. In the neighbourhood, professionals perceived the target group of inhabitants as difficult to activate or involve. Inhabitants didn't think that it is possible to organise support of activities in their neighbourhood. There is an offer of health-related initiatives in the neighbourhood, but is seems that this is not known among neighbourhood inhabitants. During a previous preparatory phase in the project, all kinds of ideas and initiatives have been collected among inhabitants.

(I) During a previous phase in the project, all kinds of ideas and initiatives have been collected among inhabitants. Later, inhabitants have been asked to further develop these ideas. This requires (professional) skills such as making a project plan/planning, finding network, monitoring etc. One of the things developed from that phase, is the neighbourhood breakfast, at which several participants (voluntarily) help. This is all very much accessible and low-key, small and sometimes simple activities. The coordinator tries to be open and accessible to everyone. People contribute as volunteers or take initiatives.

(M) All previously identified outcomes that include community involvement

(O) : Participants (parents) participate in health-related activities (sports)

Mechanisms, outcomes and context

The main findings show that implementing CE projects could inspire feelings of self-worth, recognition, reward, a sense of being valuable or needed, a feeling of responsibility for something or someone, and self-esteem. In turn, the identified mechanisms can lead to the following outcomes: community involvement, more control over personal circumstances and own/family life, more supportive environments, and healthy lifestyles. On the other hand, CE projects have also been shown to trigger negative responses among participants, such as feeling frustrated, overwhelmed and stressed or feeling that individual needs are not being met. At the project level, such responses lead to participant dropout or project delays and inactivity.

Contextual factors that play a role are: families having no or ample experience in organising activities, participants rarely experiencing successes in their lives, participants

experiencing stress from multiple problems, and the tendency to define participants as a group based on their lifestyle/behavioural or medical characteristics, while they are very different in every other way. Such contextual factors can trigger positive responses, for instance when practitioners offer tailored support for CE to families who lack experience. Under the same circumstances, however, implementing CE that is neither flexible nor tailored may cause families to have negative feelings and drop out of CE projects. The main intervention elements that were related to identified mechanisms were working in groups, both tailored and flexible facilitation of CE projects, and offering multiple and different types of roles and responsibilities.

Step 5: Refined ToC

The last part of the results concern refining the ToC. Figure 4.2 shows which assumptions from the initial ToC can be refined. Those visualised with a thicker solid line represent positively assumptions that were positively refined (what does work, under which circumstances) and those with an added dashed line were (also) negatively refined (what doesn't work, under which circumstances).

The detailed C(I)MO narratives discussed before show the precise circumstances, intervention elements and mechanisms at play for both positive and negative outcomes. Below, we summarize the refinements and provide an example from the data for each. We found information on 'what works, under which circumstances' for:

- A1: Community engagement can lead to healthy lifestyles. This is, for instance, the case when in project B, in a nested C(I)MO, meaning this outcome was identified after several consequential steps in the project. Single parents were able to participate in a working group, where participation was tailored to the participants' possibilities and needs by a professional coordinator. This has made participants to experience they can actually do something within their own possibilities, leading to more self-esteem and control over personal circumstances. Following that, participants experienced that they are worth it to invest in a healthy lifestyle, and decide to take action to incorporate healthy behaviours in their lives.
- A2: Community engagement can lead to improved self-management and related concepts such as strengthening the 'power to solve', self-reliance, self-control, self-directedness and (cognitive) flexibility or control over personal circumstances. In project C, neighbourhood inhabitants were invited to show their own ideas or initiatives and to contribute to low-key, accessible activities, enabling them to

experience possibilities for initiative and participation *do* exist and can be successful. In turn, this has made participants feel more self-confident.

- A3: Community engagement can lead to control over one's own/family life. We've identified that, for instance in project B, when single parents were cooperating successfully in a working-group (which was when the group work made them feel responsible for the project and other parents), the working group was able to address the needs of the bigger population of single parents in the neighbourhood, such as providing childcare at activities. Thus leading to participants organising the things the group needs to gain control over ones own and/or family life.
- A4: Community engagement can lead to more community involvement, even beyond the current project. In project A, in a context were change was perceived as difficult by some participants, a swap-shop lets participants contribute in various ways. Such broad possibilities to participate show that changing roles (from 'asking for support' to 'valuable contributor') is possible. This can lead to community involvement by those who found their individual ways to contribute.
- A5: Community engagement can create supportive environments. Refinement of this assumption was found for instance in project C. In the concerning neighbourhood, a regular joint breakfast was organised for inhabitants to meet up, see what activities are organised, initiate their own activities and fund the support (for organising activities) to make them successful. This breakfast event showed inhabitants that initiatives *can* be successful, and that support is provided, which in turn motivated inhabitants to organise women's-only swimming lessons, thus creating a more healthy environment for (female) neighbourhood participants.
- A6: Community engagement can lead to improved health. In project B, participation of single parents in a working group has shown them that they can share valuable skills and experiences to help others, as well as gaining self-confidence. Such mechanisms have in turn led to bigger social networks for these single parents. In a successive C(I)MO, these bigger social networks have led to more happiness, less loneliness and more self-reliance among some participants.
- B4: Community involvement can lead to healthier lifestyles. Project A has provided refinement of this assumption. Neighbourhood inhabitants have been working together to organise activities. This cooperation has led to participants seeing and hearing how other neighbourhood inhabitants manage to do sports and/or how other parents have been able to organise participation in sports for their children.

Participants have now started to do sports themselves, thus creating a healthier lifestyle.

- B6: Community involvement can lead to more (health) supportive environments. In project C, project participants received tailored support to further develop their own initiatives for activities in the neighbourhood, including sports classes. This had increased the offer of accessible sports lessons for neighbourhood inhabitants including children, thereby creating a more healthy environment.

Furthermore, we found refinements on what doesn't work and under which circumstances for:

- A3: Community engagement can lead to control over one's own/family life. When, in project B, single parents participating in the working group received support *as a group*, they felt that this support did not fit their individual needs. They did not gain control over their own/family lives.
- A4: Community engagement can lead to community involvement. In project A, neighbourhood inhabitants with varying backgrounds work together in groups to organise activities. Most lack experience in organising activities in a municipal setting. Some participants are perceived by professionals as stuck in their role of 'victim', not seeing possibilities to take responsibility. In the working group, this leads to frustration (the feeling that nothing will change), in turn making participants drop-out of the project.
- A5: Community engagement can lead to (health) supportive environments. Following the example above (A4), the working groups were assumed to create healthier environments through the organisation of for instance sports lessons. However, the working groups processes have led (some) participants to feel frustrated, lacking skills and no responsibility. The result was an inactive working group, with no actual tangible outputs for a healthier environment.

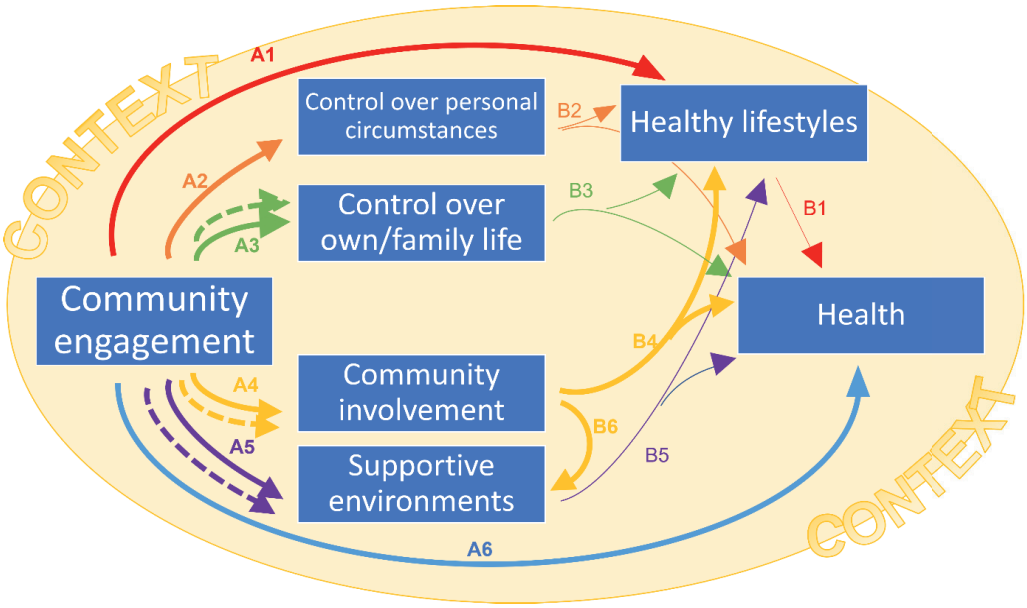

Figure 4.2 Refined and combined ToC from three projects. A thicker solid line represents assumptions that were positively refined (what *does* work, under which circumstances); a dashed line represents assumptions that were (also) negatively refined (what *doesn't* work, under which circumstances).

4.4 Discussion

The research question for this study is: *What works and how (and what does not and why) regarding community engagement for health promotion among vulnerable families in the Netherlands?* Our findings suggest that 'what works' in CE for vulnerable families – in the sense that it triggers positive feelings and experiences among participants – is, among other things, (1) *tailored* and (2) *flexible*. Such a tailored approach should ideally be combined with (3) a focus on (universal) mechanisms such as feeling worthy, experiencing self-esteem and receiving recognition for all contributions. Flexibility in terms of funding and types of CE allows for a focus on these mechanisms. We then argue that health promotion for vulnerable families should always start with an investigation of what people *have* (to contribute) and what they *need* (to be facilitated) when actively engaging and learning by doing. Also, (4) CE projects for vulnerable families may benefit from an experienced coordinator who pays attention to the 'people behind the problem'.

CE being tailored and flexible is in line with the 'fit for purpose' approach for CE that O'Mara-Eves et al. (2013) propose. Also, a recent review on family participation in health promotion stresses the importance of flexibility in the form of participation (Kuchler, Rauscher, Rangnow, & Quilling, 2022). Adhikari, Pell, and Cheah (2020) also found that recognition, or 'a sense of people being heard', is a mechanism in CE, while Caló, Roy, Donaldson, Teasdale, and Baglioni (2019) found that in (musical) engagement, 'a sense of accomplishment', a 'sense of connection and identification' and 'feelings of safety and protection' are crucial mechanisms in the promotion of health and well-being among disadvantaged adolescents. When it comes to the suggestion of an experienced professional to coordinate and implement CE, the crucial role of the type and intensity of support for vulnerable groups was also recognised by De Weger et al. (2018) in their review of successful CE.

CE or participation may also trigger negative processes and responses, leading people to dropout of projects or leading to more long-term effects, such as distrust of professionals or municipal/neighbourhood workers. Other researchers (e.g., (Dempsey, 2010)) have already illustrated the complicated processes that arise when working with communities. Using a realist approach in this study has offered detailed information on what specific contexts and intervention-elements may trigger such negative responses. In turn, these insights show the importance of continuous attention to changes in context. This is in line with the approach to context that, for interventions "(…) successful implementation requires a process of matching and adapting interventions to different evolving circumstances" (Greenhalgh & Manzano, 2022, pp. 592-593).

As regards the hierarchy assumed in some participation models, our findings suggest that a tailored approach may be more helpful than deciding beforehand that a specific type of participation is best or may be suitable for a group of participants in a specific project. This is in line with the conclusion of O'Mara-Eves et al. (2013), who state that they cannot 'conclude that one particular model of community engagement or theory of change is clearly more effective than any other'. It is also in line with other studies stressing flexibility and adaptation of involvement to personal circumstances (Kuchler et al., 2022). Our findings show that aiming for more intensive forms of participation in certain contexts may trigger negative responses, leading to resistance and drop-out.

We thus argue for flexibility and tailoring to circumstances, needs and skills. First, participants may be grouped by their medical problems or lifestyle (behaviour), but they are different in many more ways and thus need specific and varying approaches. Successful CE offers flexible levels of participation (at the start of and during the project) to ensure that the CE sustainably triggers positive responses among participants, such as fulfilment and self-esteem. Second, we found that participants responded positively to types of participation that some models categorise as 'low' or least desirable. Serving coffee that has already been made in a location that has been booked and setup for the event is the type of participation some people prefer.

So, what is 'good' participation for health promotion among vulnerable families? Based on our findings, we argue that there is no hierarchy: more participation is not necessarily better. In some cases, fully participatory initiatives trigger positive responses, while in others, it scares people off. The initially chosen type of participation can (only) be successful if it is flexible and stays flexible during the project; contexts change, needs change, knowledge and skills may change, etc. What's even more important: CE that triggers positive experiences requires the availability of support that is wise (i.e., can judge what participants need at any moment in the process) and that is tailored to individuals when needed but can also signal and steer/support group dynamics. However, such flexible CE can also mean that, in the end, the project is not really participatory. That in turn has consequences for professionals, volunteers, expectations about who does what, outcomes and budget.

Our findings provide evidence for a relationship between individual participation in CE activities and improvement in *mental* and *social* health outcomes, such as community engagement leading to control over personal circumstances and to community involvement. The results show that many other positive outcomes can also be achieved by CE, such as control over own/family life, more supportive environments, and healthy lifestyles. Such changes do require time and continuous attention from everyone involved. The programme under study here was too short to measure improved physical health outcomes. Moreover, both the overall evaluation and the project-specific evaluation did often not include measures of physical health outcomes. Therefore, our findings question the focus on measurable, more distal health outcomes as a realistic ambition for CE health promotion projects among vulnerable groups. Rather, we'd suggest to (co)identify proximal, more realistic outcomes for future programmes or design programmes and

evaluations that run longer (such as the 'Samen kansrijk en gezond' programme 2021-2030 (FNO, 2021)). This is in line with a recent review on family participation, in which the authors conclude that a participatory approach "has many effects that will, over time, trigger behaviour changes in the family and the respective environment or community" (Kuchler et al., 2022, p. 13). Future research could further determine how proximal outcomes may translate into measurable health outcomes in the long term. However, following Huber et al. (2011) a focus on proximal outcomes such as societal participation or self-control may be more realistic as well as relevant for prevention programmes.

With regard to the combined ToC and realist approach we took in this study, our experiences were positive overall. Finding the project's ToC as a first step was insightful and helped us find existing assumptions about CE. Also, because project strategies often entailed more activities than CE, creating a combined ToC was useful in narrowing the scope of this study. As Rolfe (2019) argues, particularly for complex interventions targeting multiple outcomes, this combined approach – realist and ToC– is helpful to focussing within an evaluation. Our findings were presented to the funder, and both project monitoring during the programme and the design of the new programme have been based on the learnings from this study. A theory-based approach 'can strengthen programme design and implementation, as well as promote policy and practice learning' (Judge & Bauld, 2001, p. 19).

The design of the (overall) evaluation aligned with crucial principles for evaluation of health promotion interventions as stated by the World Health Organization European Working Group on Health Promotion Evaluation (Koelen, Vaandrager, & Colomér, 2001; Rootman & Goodstadt, 2001); fit the complex nature of HP interventions, using a 'broad range of information-gathering procedures' from a 'variety of disciplines', designed appropriately participative and empowering (capacity-building). However, more radical use of the realist approach, for instance through the use of the realist interview technique, might have 'strengthened trustworthiness' (Mukumbang, Marchal, Van Belle, & van Wyk, 2020) of our study.

4.5 Conclusion

The aim of this study was to further unravel the relationships between CE activities and individual and community-level health-related outcomes, including social determinants of health. We succeeded in finding in-depth insights into the workings and outcomes of CE

for vulnerable community members. Our main conclusion is that flexibility is key when CE is implemented in health promotion. Also, our findings question health outcomes as a realistic ambition for CE projects with vulnerable groups. Context appears crucial, in combination with the types of activities implemented, for either positive or negative mechanisms to be 'fired'. By providing these insights, we add clarity to how active participation of community members may work in health promotion and what it can offer, especially for vulnerable families.

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Conflicts of interest

The Author(s) declare(s) that there is no conflict of interest.

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Chapter 5

Professional involvement in health promotion for vulnerable families: a realist informed case study

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This chapter is submitted.

Abstract

Families in vulnerable situations may benefit from engagement in community health promotion initiatives. Often, community health promotion for families relies on involvement of professionals such as (child) welfare workers, teachers and other community-based workers. Well-defined professional involvement can make a vital contribution to health promotion for such families. However, insights into the crucial mechanisms at play at the level of professionals involved in these initiatives often remain invisible or underreported. This is a realist multi-site case study in which we aim to provide insights into the mechanisms at play among professionals when involved in the implementation of health promotion for vulnerable families. Data – collected through telephone and group interviews and monitoring and evaluation reports - comes from two small-scale health promotion projects in the Netherlands, funded by the FNO Healthy Futures Nearby Programme. Constructing an initial programme theory and identifying C(I)MO configurations has led to valuable insights. Initial assumptions often differ from reality. Multiple, often hidden mechanisms among professionals were identified, such as feeling inspired and experiencing freedom to learn. Based on our findings, we also argue for visibility and recognition of the contribution of professionals in the design of future health promotion projects for families in vulnerable situations.

5.1 Background

Families in specific difficult situations, such as having no or a low income, suffering from (chronic) diseases, in poor housing conditions and/or having a risky lifestyle (alcohol use, smoking) – in this paper referred to as families in vulnerable situations - may benefit from engagement in health promotion (hp) initiatives (Kuchler, Rauscher, Rangnow, & Quilling, 2022). Health promotion for families in vulnerable situations comes in a range of approaches, including lifestyle/behavioural approaches and more participatory approaches like community engagement (Cyril, Smith, Possamai-Inesedy, & Renzaho, 2015; WHO, 2020), involving experts by experience (Bolam, Carr, & Gilbert, 2010), partnerships (Rossiter, Fowler, Hopwood, Lee, & Dunston, 2011) and participatory action research (Baum, MacDougall, & Smith, 2006; Wagemakers, Vaandrager, Koelen, Saan, & Leeuwis, 2010). What most health promotion approaches for families in vulnerable situations have in common is the involvement of (health) professionals in one or more of the phases of the health promotion initiative; the design, preparation, implementation, monitoring and/or evaluation. Professionals play a vital role in all five action areas for health promotion as stated in the WHO Ottawa Charter (WHO, 1986). Thus, such involvement of professionals in health promotion is not new (Bomar, 1990). In many cases, health promotion starts with a practitioner or professionals concerned about the health of clients, communities or specific groups. Health promotion for families outside the clinical/care setting, for instance, community health promotion in various forms and health promotion at schools, often involves nonmedical professionals such as community workers, (child) welfare workers, frontline workers, teachers and other school and community-based workers.

The involvement of professionals in health promotion for families can take many forms and is assumed in designs during varying stages of health promotion initiatives, such as in co-creation of a new intervention, contributing to the engagement and participation of participants/families, tailoring professional practices during implementation and contributing to the monitoring and evaluation of the initiative (Hogeling, Lammers, Vaandrager, & Koelen, 2022). In this previous study, we found that assumptions around the involvement of professionals in health promotion initiatives for families can be *explicit* – the project's design includes concrete ideas about what a specific professional is to contribute and who will be responsible – or rather *implicit*: the design mentions involvement of professionals summarily and in vague terms. Research also shows that specific and well-defined involvement of professionals during the implementation of

health promotion initiatives for families in vulnerable situations can make a crucial contribution to the 'successful' participation of families (Hogeling, Koelen & Vaandrager, 2023, manuscript under review). The role of local agencies and insights from frontline staff and coalition partners have been identified as key elements for the design of interventions for families (Eastwood et al., 2019). The 'right' involvement of professionals can thereby be a vital contribution to health promotion for families in vulnerable situations.

5.2 Aim of this study and research questions

The focus of evaluations of hp initiatives for families in vulnerable situations is most often on processes and outcomes at the level of beneficiaries. For example, do changes in lifestyle occur among families or participants representing families? From the perspective of impact-evaluation, this is a logical choice. Such evaluations provide insights on whether or not specific hp interventions result in specific outcomes (e.g. behavioural changes among family members) and which intervention (elements) have led to the desired outcomes. However, insights into the crucial mechanisms at play at the level of professionals involved in these initiatives often remain invisible or underreported. The details of professional involvement may be reported as barriers or facilitators for the evaluation's primary focus: changes among families. While carefully designed professional involvement can make or break the implementation of hp initiatives for families (Hogeling et al., 2023 manuscript under review), there is a lack of information on how such involvement actually works. The aim of this study is to provide in-depth insights into the mechanisms at play among professionals when involved in the implementation of health promotion initiatives for vulnerable families. Such insights can help in the design and planning of future programmes, feed effective allocation of available funds and can be valuable in setting realistic and comprehensible goals for specific interventions and evaluations.

We focus on the *implementation* phase of health promotion initiatives, because of the important contribution to effectiveness professionals' practices can make in that phase (Hogeling, Koelen & Vaandrager, 2023, manuscript in preparation). More specifically, this study focusses on assumptions concerning professionals' *practices*, i.e. their day-to-day work. In *hp initiatives* for families in vulnerable situations, we mean to include hp initiatives that have a clear focus on outcomes among beneficiaries, families or those representing families in vulnerable situations as described before.

Realist evaluation

This study consists of two phases: the construction of an initial programme theory (IPT), and a realist evaluation to refine this IPT. The IPT will serve as a theory-based starting point for realist evaluation (Pawson, Tilley, & Tilley, 1997) of professional practices when involved in hp for families in vulnerable situations. Both identifying the IPT and refining the IPT are investigations guided by realist principles (Fick & Muhajarine, 2019). In practice, this means we will (1) identify assumed Context-(Intervention)-Mechanism-Outcome configurations (C(I)MO) present at the start of hp initiatives to create the IPT, and (2) identify C(I)MO configurations during implementation to refine the IPT. In other words, we investigate what happens (mechanism), to whom (which professional), in a particular (historical, geographical, cultural etc.) context when confronted with (elements of) the project under study (intervention elements). And, following such mechanisms, the outcomes this may lead to. Box 5.1 provides a brief explanation of the use of Context, Intervention, Mechanism and Outcome from a realist perspective in our study.

Box 5.1 – Context, Mechanisms, Outcome and Intervention elements

In our analysis, we are guided by realist principles. **Mechanisms** are the reactions that are fired when an activity, intervention or other inputs are added in a specific situation. Mechanisms exist at various levels, for instance as individual responses to participation in a project or as community level responses to the presence of a project in the neighbourhood. Also, mechanisms can be positive or negative, and multiple and contradictory mechanisms can exist.

Context is defined broadly as all historical, cultural, geographical and (individual) psycho-social factors at play in the situation under study.

Mechanisms that are fired may (or may not) lead to specific **Outcomes** and more or less tangible results. Outcomes may be pre-defined or not, and again positive or negative. In our study, we include outcomes related to tailoring practices of professionals.

The **Intervention elements** that are assumed to fire mechanisms, and in turn lead to outcomes in specific contexts, are the project activities, approaches and other project characteristics.

To identify the IPT, we first explore the assumptions among project initiators about the contributions of professionals during the implementation of hp initiatives. The first research question in this study is the following:

1. *Which assumptions exist among project initiators about professionals' practices during implementation of health promotion initiatives for families in vulnerable situations?*

With *project initiators*, we refer to those actors, often health promotion professionals, scientists and (public) health workers who have (formally) initiated and designed a health promotion project for vulnerable families. Since families/family members themselves are possibly involved in the design of participant-oriented health promotion, they may also be included as project initiators in this study. The resulting initial programme theory (IPT) – a (visual) summary of these assumptions - provides more clarity on what is (knowingly or unknowingly) assumed on professionals' practices in hp initiatives (Marchal, Kegels, & Van Belle, 2018). We seek to provide a theoretical evaluation basis which describes project initiators' assumptions about what changes are assumed in the practices of professionals when involved in implementation of hp initiatives. The process of identifying an IPT is often underreported (Shearn, Allmark, Piercy, & Hirst, 2017). However, clarity about the process and the resulting IPT can be valuable in the future design and planning of programmes and interventions. The IPT will serve as a theory-based starting point for further realist evaluation (Pawson et al., 1997) of professionals' practices. With this second part of our study, we will provide in-depth insights into the mechanisms at play among professionals, which translates into the second research question:

2. *What works (and what doesn't), for whom, in which contexts, related to which intervention elements, related to professionals' practices when involved in the implementation of health promotion initiatives for families in vulnerable situations?*

5.3 Setting: The Healthy Futures Nearby programme

This study is part of the bigger, overall evaluation of the Healthy Futures Nearby Programme (HFN Programme), which consists of 46 small-scale local projects that focus on health promotion among vulnerable families in the Netherlands (FNO, 2015). More information on the HFN programme and its overall evaluation can be found in the study protocol of the evaluation (Hogeling, Vaandrager, & Koelen, 2019). The overall evaluation was conducted by a research consortium, consisting of a university and two research

institutes (Wageningen University & Research, Wageningen Economic Research and the Verwey-Jonker Institute). All researchers from this consortium were involved in the data collection. A previous step in the overall evaluation included a study to determine assumptions in each of the programme's 46 projects and to determine how these assumptions translate into relevant inputs for the overall evaluation (Hogeling, Lammers, Vaandrager, & Koelen, 2021). Following these assumptions, a substantial number of projects prioritised participant-oriented approaches as a strategy. FNO defined the target group for their projects as 'vulnerable families': 'households in which at least one adult and one child live together, who experience multiple problems with finances, education, work, or wellbeing and who suffer health deprivation caused by smoking, heavy consumption of alcohol or unhealthy weight, combined with a lower perceived health' (FNO, 2015; Hogeling et al., 2019).

5.4 Methods and procedure

This study is a multi-site longitudinal case study. Our case (tailoring professional practices during implementation) is investigated using data from two out of 46 small-scale health promotion projects in the Netherlands, both funded by the FNO Healthy Futures Nearby Programme.

The two projects under study

We used two different projects, at different locations, with different theoretical approaches to health promotion among families in vulnerable situations and ideas about the participation of professionals. The primary argument for choosing these specific projects is that both projects were previously identified by studying their project proposals and conducting interviews with project stakeholders (Hogeling et al., 2019), previously identified as involving professionals in their project design (during implementation) while also focussing on outcomes at the level of families. Secondly, data collected from these projects provides a lot of in-depth information about processes at the level of professionals' practices. In the overall evaluation, data was collected for all 46 projects. For other projects in the programme, however, data on professional involvement was not very detailed, or data was missing. Combining the two selected projects offers a good possibility to create a basis in the form of an initial programme theory, as well as to conduct a realist evaluation to refine this IPT. In this evaluation, we will need detail (what is underlying, which mechanisms are assumed and arise?) rather than overall assumptions on the topic. Furthermore, we do seek to broaden the investigation in such a way that we

may be able to look beyond location-specific processes. The two selected projects offer precisely the in-depth information and broad approach which may help us in this search.

Further information about the projects under study is provided in Table 5.1. This information is derived from the initial project proposals. It is important to note that during implementation of the projects, target groups, approaches or outcomes may have changed. Projects are anonymised, as are as the individuals participating in the projects and the people organising and implementing them. Projects are further referred to as Project A and Project B.

Both projects are relatively small-scale, being implemented in neighbourhoods in mid-sized towns in the Netherlands. The main focus of both projects is improving the health situation of families in vulnerable situations, following the criteria for funding by FNO. The main outcome indicators are thus related to the health and wellbeing of the family. However, both projects include clear ideas about the role of professional practices in health promotion for families in vulnerable situations. Project A initiated working together with families following the Happiness Route (*Geluksroute* in Dutch); a positive health approach based methodology (Weiss, Kedzia, Francissen, & Westerhof, 2015; Weiss & Westerhof, 2020). Project B worked amongst other things with the Family Plans method for professionals (Crone et al., 2021). Both projects involve different professionals in different ways. We refer mostly to professionals in general in this study, while welfare workers, youth workers, sports coaches, neighbourhood/community workers, health practitioners etc are all involved.

Table 5.1 Information on the two projects included in this study.

	Location	**Project target groups**	**Main approach/elements**
Project A	3 neighbourhoods in a mid-sized town (around 80,000 inhabitants)	Families in vulnerable situations	Working together with families based on a 'positive health approach'
Project B	Neighbourhoods in a mid-sized town (around 66,000 inhabitants)	Families in vulnerable situations	Working together with families based on a life-course approach

Procedure

This study is a multi-site longitudinal case study, in which the 'case' is a topic, 'professional practices', rather than a location or project. The main research steps taken were (1) identification of an initial programme theory, (2) realist evaluation of professional practices and (3) creating a refined programme theory. All three steps are described in more detail below (and summarised in Table 2).

Data collection

All data collection for the realist evaluation of professional practices involved in the implementation of health promotion for families was an integral part of the overall evaluation of the FNO Healthy Futures Nearby Programme. As data sources we used project proposals written for the funder, yearly group interviews, telephone interviews with project leaders (person representing project initiators) and written progress and project-specific evaluation reports. For the purpose of identifying an initial programme theory, we used the project proposals and the reports of the first round of group interviews. Data collected during the implementation of the projects was used to identify C(I)MOs and refine the programme theory.

Documents – project proposals

The project proposals were prepared by project stakeholders to be able to receive funding for their ideas. All proposals were written with the terms of reference provided by FNO in mind. Project proposals were made available to the research team by FNO. Written progress reports and project-specific evaluation reports were part of the monitoring and evaluation obligations required by the funder, and were written by project initiators for the funding agency. Regular discussions between the funder and researchers of the overall evaluation took place about the monitoring questions included in the progress reports. These documents were also made available to the research team by FNO.

Group interviews

Participation in the group interviews was based on convenience sampling; the project leaders were asked to invite stakeholders or representatives. This resulted in a variety of stakeholders taking part, including project leaders, health care and welfare professionals, educators, members of sports clubs and neighbourhood organisations, family members, researchers and volunteers. Six (Project A) and five (Project B) people participated in the first round of group interviews (Table 5.2). At this point, both projects did not invite

inhabitants for the interviews. All interviews lasted between two and three hours and took place at a location chosen by the project leaders.

Table 5.2 Participants in group interviews, Round A (*Effectenarena* method).

Project A		**Project B**	
N	**Who**	**N**	**Who**
6	• Project initiator and leader (municipality) • Rep. public health institute, epidemiologist • Municipality (rep. works with focus on debt counselling) • Member of neighbourhood social team, works directly with families • Rep housing association • Member of WMO council (support system for those who need support at home; elderly, chronically ill, etc.)	5	• University staff, project leader and researcher • University staff, project coordinator and researcher • Municipal representative, projects consortium partner • Public health institute representative, projects consortium partner • Centre for youth and families representative, projects consortium partner

The first group interview (Table 5,2 and 5.3) was guided by the Effectenarena approach (Deuten, 2009). This method of group interviews facilitates an open and informative discussion between stakeholders and, thus, promotes learning and dialogue within teams. It revolves around participants discussing (assumed) activities, outcomes, conditions, investors and beneficiaries. The second group interview was guided by the timeline method (Adriansen, 2012; Herens, Wagemakers, Vaandrager, van Ophem, & Koelen, 2016; Swan et al., 2018) and the third round of interviews was conducted following a semi-structured interview guide, including project-specific elements based on previously-collected data.

Each group interview was facilitated by one researcher from the research consortium, while another took detailed notes. The second and third rounds of interviews were also recorded. The notes and audio recordings were used afterwards to write a comprehensive report (three to five pages) of the interview. In addition, for the first round, the researchers drafted a flow diagram representing the main elements, processes and

expected results of each project. Both the comprehensive report and – after the first round – the diagram were presented to the project leader, who was asked to reflect on the accuracy of the documents.

Table 5.3 Methods and topics in group interviews.

Interview round	**Methods**	**Topics**
I – at the start of each project	Effectenarena approach (Deuten, 2009) - facilitates an open, informative discussion between stakeholders and thereby promotes learning and dialogue within teams	(assumed) activities, outcomes, conditions, investors and beneficiaries
II – approximately mid-term	Timeline method (Adriansen, 2012; Herens et al., 2016)	Reflection on project-specific theory of change Perceived highs and lows over the first year(s)
III – projects finished subsidised activities	Semi-structured interview guide, additional project-specific preparation by researcher based on available data	Projects perspectives on outputs and outcomes Possible mechanisms Reflection on theory of change

Telephone interviews with project leaders

Three telephone interviews were conducted with leaders from the projects: in 2017, 2018 and 2019-2020. The telephone interviews each lasted around one hour and were conducted by a researcher from the overall evaluation team. All interviews were semi-structured and guided by a topic guide, which was constructed by LH and LV. A verbatim transcript was made of the recordings of each interview. For the 2017 interviews (the projects had started a year before), the topic guide was based mainly on the funder's requirements for projects and on results of the first group interview. Successive interviews included the same initial topics and additional elements summarised in Table 5.4.

Table 5.4 Topics covered in telephone interviews with project leaders.

Interview round	Topics
I – 2017	o Funder-defined outcomes o Community/family participation o Main project strategies o Project-specific evaluation designs o Other developments
II – 2018	(and additional:) o Project sustainability (embedding) o Outputs, outcomes and mechanisms o Perceptions of funder communication activities
III – 2019/2020	(and additional:) o In-depth reflection on mechanisms and outcomes o Clarification of gaps in data

In Table 5.5 the research steps are summarised, including the data sources used. This table also provides information on which (co) authors contributed to the different steps and what outputs each step yields.

Table 5.5 Summary of research steps, data sources and outputs

	Research step	**How and by whom**	**Sources**	**Output**
1	Initial programme theory (IPT)	Analysis of data using interpretive content analysis and primarily deductive coding of texts. LH, LV & CL	(1) project proposals (2) reports of groups interviews round 1	(1) Complete C(I)MO configurations narrated (2) Visual representation of IPT.
2	Evaluation: tailoring professional practices	Analysis of data based on realist principles and guided by the IPT: identifying (related) mechanisms, context, outcomes and inputs (ICMO-configurations) that can be linked to parts of the IPT. LH	(1) Group interviews rounds 2-3 (2) Telephone interviews rounds 1-3 (3) Progress reports (4) Final evaluation report by project	List of identified C(I)MO configurations.
3	Creating refined programme theory	Linking identified (I)CMO configurations to the IPT, when possible, to create the refined PT. LH	Results; list of identified CMO configurations	Visual representation of the refined PT.

Analysis

Two analyses were performed, the first to identify the IPT on the practices of professionals within the projects and the second to identify which CMOs play a role during implementation. In turn, these CMO configurations are used to refine the initial programme theory.

To identify initial programme theory, we performed an interpretive content analysis (Drisko & Maschi, 2016) on the project proposals and the reports of the first round of group interviews. In other words, we scanned and deductively coded the texts, looking for both manifest and latent (Drisko & Maschi, 2016) assumptions related to professionals tailoring their practices. We coded assumed changes and/in practices, contexts, expected outcomes and possibly mechanisms present in the texts. When finding indications for assumptions or parts of assumptions (for instance, only a mention of an outcome), we then looked to create a complete assumption, including intervention/activity, outcome and possible underlying argumentation or theory, for the complete C(I)MO-configuration. Also, we coded contextual factors mentioned in the text and related to the assumption.

Many assumptions for the initial programme theory may not be complete C(I)MO configurations, possibly lacking details on context, outcomes, activities or assumed mechanisms. Often, project proposals are not written towards a complete programme theory, but instead with a focus on outcomes or other (funder-guided) elements. We therefore also included 'incomplete' assumptions in our list (not presented here), to show all underlying thinking and possible implicit beliefs and expectations. For sake of clarity, only practically complete assumptions on professional practices from the two projects were then integrated as an initial programme theory in thematical 'stories' and summarised per project in text boxes.

To identify context-mechanism-outcome configurations that relate to tailoring professional practices, we conducted a second interpretive content analysis based on realist principles and guided by the IPT: identifying (related) mechanisms, context, outcomes and inputs (C(I)MO configurations) that can be linked to parts of the IPT. Texts analysed were the reports of group interviews in rounds 2-3, verbatim reports of telephone interviews in rounds 1-3, written progress reports by projects and their final project-specific evaluation reports.

A draft manuscript including the main findings was send to the two (former) project leaders, who were asked to check whether the anonymity of project participants and professionals was protected sufficiently in the text. Moreover, both project leaders provided valuable feedback on context of the C(I)Mos.

5.5 Results Part I: Identification of an initial programme theory

Appendix 5.1 contains all complete assumed CIMOs for Projects A and B. These assumptions are then summarised for clarity below (Boxes 5.2 and 5.3), and combined in a visual representation of the initial programme theory (Figure 5.1) of what is expected from professional practices in these participant-oriented projects.

Project summaries and combined initial programme theory

Both the assumed CIMOs for Project A and Project B were summarised to draft an initial programme theory. Below, Box 5.2 and Box 5.3 provide these programme theory summaries for each project about what is expected from professional practices.

Box 5.2 - Summarised assumed C(I)MOs Project A

In this neighbourhood, a lot is already available for vulnerable families who need support (C). However, there is a shared feeling that practices should be more oriented towards a positive health approach to be able to work together with families more effectively and to effectively address problems in all the life domains relevant to the families situation (including housing, financial situation etc.) (C). Many different professionals work in the neighbourhood, and some feel restrained by changing policies and/or their respective organisations priorities (C).

(I) The project offers professionals

- Knowledge and skills → through training and interdisciplinary meetings
- Tools (geluksroute) to work together with families on health and wellbeing issues

(M) It is assumed that professionals will

- feel inspired and
- be sufficiently equipped to change their practices

(O) By using the newly introduced approach and tool in their daily practice, professionals should be able to change their signalling (O1), change how and when they redirect families for more specific support (O2) and change their own support to vulnerable families (O). This will in turn lead to professional practices guided by a positive health approach and will be more tailored to the needs of families in the neighbourhood (O3).

Box 5.3 - Summarized assumed C(I)MOs Project B

Working with vulnerable families on health is so far not perceived as sufficiently effective by professionals in the neighbourhood (C). Professionals lack skills and knowledge on intergenerational influences among vulnerable families to tailor their practices (C). Neighbourhood facilities, services and structures don't enable family (intergenerational) centred practices (C).

(I) Project B offers to professionals:

- Knowledge and skills → through training and cooperating with families
- Tailored services and structures
- Tools (overview)

(M) It is assumed that professionals will feel:

- Better equipped (knowledge, skills)
- More supported (tailored services and structures)
- Better facilitated (improved overview)

(O) All in all, this will enable professionals to tailor their practices towards the needs of families in the neighbourhood.

To create a combined initial programme theory, the project summaries were visualised in one figure (Figure 5.1). The identified assumptions on what is expected from professionals and what is offered to them by the projects and context are presented. To sum up, desired outcomes include a broad range of changes in professional practices, such as working guided by new approaches, working with different tools and methods, tailoring practices to families' needs and changing and/or improving signalling and redirecting practices. To achieve these outcomes, projects offer five 'investments' to professionals: (1) training, (2) interdisciplinary meetings, (3) tools, (4) cooperation with families and (5) tailored services and structures. (1) through (4) seem aimed primarily at professionals *learning*, while (5) aims to *facilitate the working* according to new practices.

The assumed mechanisms (Figure 5.1) show what reactions from professionals will assumedly lead to the desired outcomes. These reactions may include feeling (more) support and feeling facilitated in their professional surroundings, mechanisms of learning (feeling better equipped with more knowledge and skills), as well as feeling inspired to

change their practices. Although mechanisms are crucial for an outcome – either desired or unexpected – they are often left implicit in project proposals.

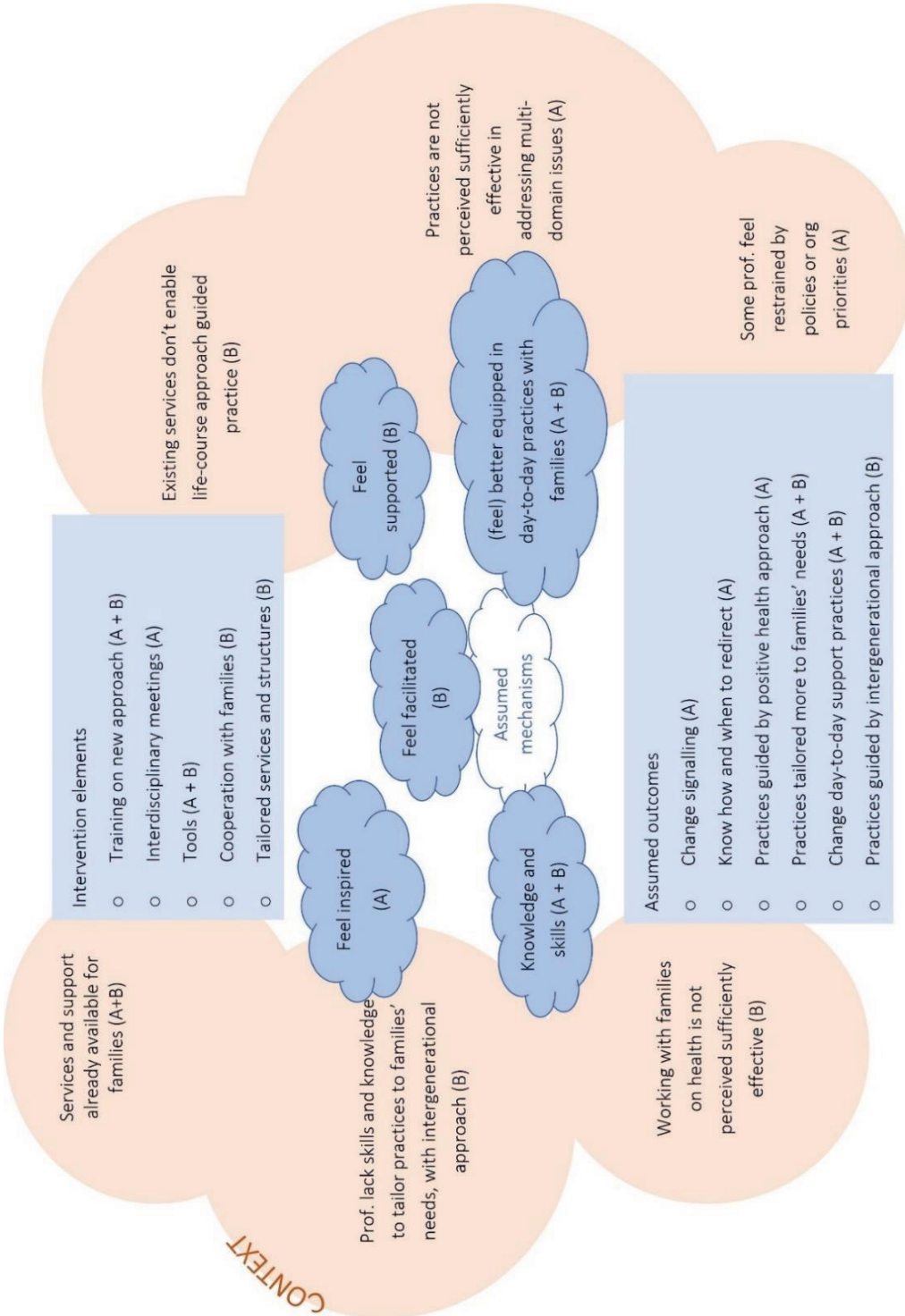

Figure 5.1 – Combined initial programme theory visualised.

5.6 Results Part II: Refining the IPT

This second part of the results section presents the C(I)MOs identified during the implementation of the project proposals. For both Projects A and B, respectively, four complete C(I)MO configurations were identified. For the C(I)MOs identified in Project A, the general context applies, as given with the presentation of the assumed C(I)MOs for Project A. Similarly, the general context given for the assumed C(I)MOs of Project B before applies to the C(I)MOs of Project B below. Additional relevant contextual factors identified for the C(I)MOs are included in the description of the C(I)MOs below.

Identified C(I)MOs Project A

C(I)MO A- I: Building stronger professional networks

The project appointed a professional who worked as a connector and initiator of network building. This connector approached professionals and kept them involved in the project and with other professionals (I). Professionals were now facilitated to connect with all those who work with families in the neighbourhood. The appointed connector made the involved professionals feel inspired to also connect (M). In the end, this has led to stronger professional networks in the neighbourhood (O).

C(I)MO A - II: Signalling families in need

The project offered – in training - tangible tools and examples to professionals to identify families in need in the neighbourhood (I). When learning about these tools, professionals felt recognition when specific situations in their day-to-day practices with families occur (M1). Also, professionals felt that there are real possibilities for action (M2). In the end, professionals were better equipped with knowledge and skills to signal families in need (O).

C(I)MO A - III: Professionals identifying families in need of support

To those professionals who are not in the health and wellbeing team, but who are in contact with families through their work (housing services, financial professionals etc.) a short training was offered. In this training, knowledge about the issues families might be facing is offered (I). Also, the training was used to motivate professionals to identify families in need of support (I). Throughout the course of the project, these 'signalling professionals' were kept up-to-date with the approach and progress of the projects with families (I). Through their knowledge of the broader situation families are in, and the regular updates, the

'signalling professionals' saw what participating in the project can mean to families (M). In the end, the professionals were better equipped with knowledge and skills to identify families in need of support (O). Also, some professionals changed their attitude about families when it comes to the possibilities to grow for families facing multiple issues (O).

C(I)MO A - IV: Learning

The project was organised in such a way that learning was facilitated. Regular meetings were organised between professionals to explicitly discuss experiences with the approach and tools so far (I). This enabled professionals to implement the approach and tools in their daily practice, and to reflect on the implementation during those meetings (M1). Professionals felt free to learn using the new approach and tools, step by step (M2). Professionals experienced successes when learning to implement parts of the new approach and tools (M3). In the end, this led to professionals who have the skills to implement the new approach and tools successfully (O).

Identified C(I)MOs Project B

C(I)MO B - I: Meaningful connections

The project organised, alongside many other activities, 'cooking cafés' where professionals meet up with youth from the neighbourhood. Cooking together gives opportunities to discuss all kinds of things relevant to the youngsters and professionals (I). Professionals experienced that, while it can be difficult, maintaining contact with youngsters is possible (M). The assumed result of the projects of these cooking cafés is with the children (raising awareness of the importance of a healthy lifestyle). However, professionals experienced successful contact with youngsters through these activities, which in the end changed their attitude towards possibilities to connect with youth (O1). Also, the contact provided them with more knowledge about issues relevant to youth in the neighbourhood (O2).

C(I)MO B - II: People come and leave

Many professionals already work with families in the neighbourhood around health and wellbeing (C). The project included various activities and structures to enable a change in professional practices towards a life-course approach, such as communities of practice and tailoring of existing services and structures to the

approach (I). These proposed 'interventions' lean on existing structures and networks of professionals (I). Over the course of the project, several involved municipal and social welfare staff and professionals left their positions. Also, many families involved in the project moved because of restructuring of the neighbourhood. Buildings were demolished so people moved elsewhere (C). This has led to weaker networks within the neighbourhood (M). As a result, the project needed to re-invest time and budget in involving new professionals and families (O).

C(I)MO B - III: Continuous care for professionals

Municipal policies are supportive of strengthening collaboration among professionals in the neighbourhood (C). The project builds (also) on the idea that to enable a life-course approach in the neighbourhood, collaboration among professional neighbourhood teams/professionals needs to be strengthened (I). It therefore initiated new collaborations and invested in sustained collaboration in the neighbourhood, for instance by facilitating regular meetings around the life-course approach (I). The project leader and 'neighbourhood coordinator' both invested continuously in facilitating and sustaining such collaborations (I). Also, the structural organisation of professionals in the neighbourhood was changed by the welfare organisation. In the first period, a central coordinator was the stable organisational professional in the neighbourhood. Halfway the project, a core team of welfare professionals such as the sports coach, youth worker was assigned this central role (I/C). The sustained investment in strong collaborations made visible for professionals what such collaborations can contribute (M1). In turn, professionals felt inspired to reflect more broadly on their practices (M2). In the end, professionals were better equipped, with more knowledge, to work with families in the neighbourhood as initiated by the project and to work together with different disciplines (O).

C(I)MO B - IV: Openness and tailoring

Many connections and structures already exist in the neighbourhood between professionals. These structures entail commitments for professionals involved, such as regular meetings (C). Professionals are used to working in specific ways in their day-to-day practices (C). The project initiated the writing of 'family plans' to map the situation families are in, their needs, and provide information about who is involved professionally (I). Drafting the family plans created accessible opportunities for professionals to learn about each other's expertise (M1),learn

about how to take into account the family as a whole (M2) and to reflect on that in their own practices (M3). Also, the broad focus on the family made it easier to create tailored support matching the family's needs (M4). Professionals were more aware of the family's situation and needs (O). In turn, professionals were better equipped to tailor their work to the family's needs (O).

Summarising CMOs and refining Programme Theory

The contexts, mechanisms, intervention elements and outcomes identified in our analysis are summarised per project in Box 5.4 and Box 5.5 below. It is important to note that the C(I)MOs identified are not representing *all* the processes regarding professionals' practices present during implementation of the project. They are a selection based on what was captured in our data collection methods and analysis framework.

Box 5.4 - Summarised C(I)MOs Project A

In this neighbourhood, a lot is already available for vulnerable families who need support (C). However, there is a shared feeling that practices should be more oriented towards a positive health approach to be able to work together with families more effectively and to effectively address problems in all the life domains relevant to the families situation (including housing, financial situation etc.) (C). Many different professionals work in the neighbourhood, and some feel restrained by changing policies and/or their respective organisations priorities (C).

(I) The project offers professionals:

- an appointed network 'builder' who facilitates connection between professionals
- a short training with tangible tools and examples regarding the project's approach
- training focussing on knowledge of the project's approach and motivational content
- participation in facilitated meetings with other professionals

(M) Professionals:

- feel inspired
- experience recognition of own practices
- see 'real' possibilities for action with regard to families
- see added value of the project's approach
- experience the possibility to reflect on their own practices
- experience the freedom to learn, step by step
- experience successes in learning

(O) By participating in what the project has offered, stronger professionals networks have been established (O1), professionals are better equipped to identify/signal families in need (O2), professionals have positively changed their attitudes towards the possibilities for families in need (O3) and have gained skills to work with families following the project's positive health approach (O4).

Box 5.5 - Summarised C(I)MOs Project B

Working with vulnerable families on health by professionals is (so far) not perceived as sufficiently effective by professionals in the neighbourhood (C). Professionals lack skills and knowledge on intergenerational influences among families to tailor their practices (C). Neighbourhood facilities, services and structures don't enable family (intergenerational) centred practices (C).

(I) The project offers professionals

- participation in facilitated cooking cafés with neighbourhood youth
- intervention leaning on/embedded in existing professionals structures and networks, while professionals come and leave
- ongoing participation in facilitated meetings with other professionals
- a project leader and a neighbourhood coordinator who invest in sustained professional collaboration
- participation in collaboratively drafting family plans with other professionals

(M) Professionals

- experience successes in connecting with neighbourhood youth
- feel less involved because of unstable involvement of others
- see the value of continuous professional collaboration for their work
- feel inspired to reflect on their own practices
- experience room to learn about other professionals' expertise
- experience possibilities to tailor work to families' needs

(O) By participating in what the project has offered, professionals have changed their attitude towards neighbourhood youth and have gained knowledge about neighbourhood youth (O1), professionals are better equipped to work following the project approach, interdisciplinary (O2), are more aware of the families situation (O3) and better equipped to tailor their practices to families' needs (O4). However, unstable involvement has led professionals to restrain themselves from the project, in turn forcing project initiators to re-invest time and budget in involving (new) professionals (O5).

The first thing that is striking when comparing the visualised C(I)MOs (Figure 2) with the initial PT is the diverse range of mechanisms identified among professionals during implementation: feelings of inspiration and motivation, experiencing room to learn,

experiencing successes, feeling facilitated (in changing practices, in collaborations), seeing the value of specific actions and approaches, feeling real possibilities for action. There is little overlap in mechanisms identified in the different C(I)MOs. Two configurations include professionals who have felt inspired – although about different things – and two configurations include professionals who have had the experience of success.

Furthermore, many outcomes are mentioned. Most outcomes relate to skills, knowledge and attitudes of professionals involved. Other outcomes are more tangible project results. In Project A, there was evidence that stronger professional networks were established. In Project B, changes in professionals and families involved lead to forced and unforeseen time and budget investments in involving new professionals. It is important to note here that these findings do not include all the outcomes (nor all the activities or mechanisms) in the individual projects. Presented here are the C(I)MOs that were identified in the data and could be related to each other in our data.

The identified C(I)MOs include various intervention elements as initiated by both projects: training, facilitation of meetings and collaboration, an appointed networker and tools such as drafting family plan and embedding the project in existing structures and networks. These intervention elements do not cover all the actions and activities initiated and implemented by the projects, but represent what was found to lead to identifiable C(I)MO configurations.

The goal of our C(I)MO analysis is to refine the initial programme theory. However, in our data, the themes in the C(I)MOs identified during implementation of the projects differ substantially from those in the initial assumptions. Also, the intervention elements included in the C(I)MOs are not one-on-one comparable to those in the initial programme theory. We therefore choose to create a new figure altogether for these 'new' C(I)MOs (Figure 5.2), instead of adding and/or refining elements to the original IPT (Figure 5.1). That said, there are still crucial elements in the identified C(I)MOs that can contribute to refining the IPT:

- Many of the assumed mechanisms described in the IPT have also been identified as mechanisms in the C(I)MO configurations. Professionals have stated that they have felt inspired and motivated and have experienced the opportunity to learn (step by step) by the projects offered to them. Also, they have mentioned that

they were facilitated or supported, for instance, to collaborate professionally or implement a newly-learnt approach in their work.

- When comparing the outcomes in the identified C(I)MOs to those in the initial programme theory, we notice that the identified outcomes differ from the assumed outcomes. The assumed outcomes mostly relate to professionals actually changing the way they signal and redirect, implement a new approach and change their practices accordingly for the networks being built. These are often crucial steps towards the outcomes for project beneficiaries. While there are mentions of professionals changing their day-to-day practice, identified outcomes at the professional level *in our data* are a lot about professionals acquiring knowledge and learning skills and changing their attitudes, including motivation.

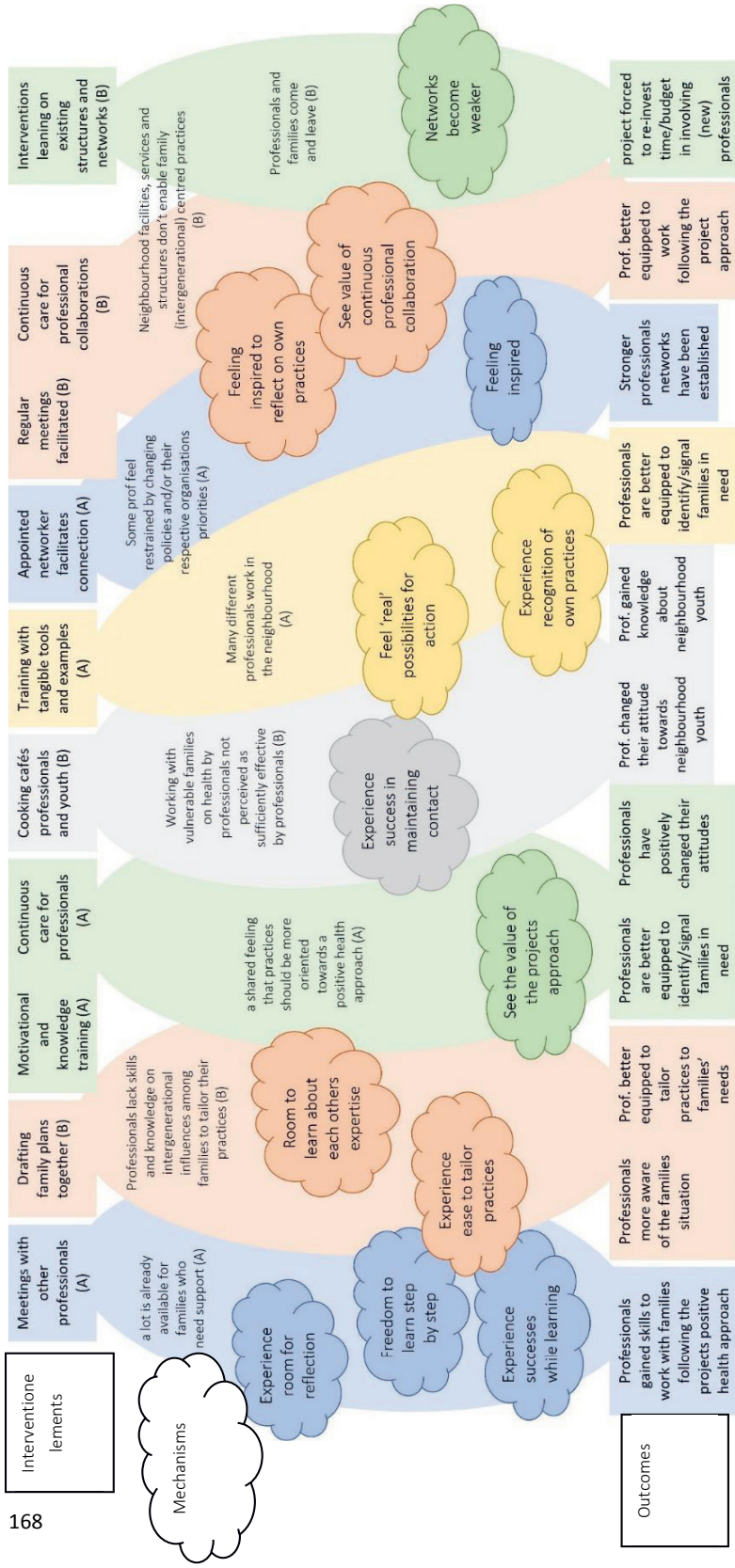

Figure 5.2 CMOs for Project A and B visualised. * All context for A or B goes with all of the CMOs for, respectively, A or B

5.7 Discussion

The initial programme theory

An initial programme theory was constructed in the form of short C(I)MO-guided stories based on the assumed changes in professional practices when implementing health promotion for families in vulnerable situations. The IPT constructed in this study has been an informative basis for further evaluation of what happens when professionals are involved in the implementation of health promotion for families in vulnerable situations. Identifying explicit and implicit assumptions and summarising them in an IPT shows the many 'hidden' assumed changes that are present at the start of a project. Explicitly listing such assumptions can create more realistic investments and planning of health promotion projects. This is even more valuable in projects where the focus is on outcomes among beneficiaries such as vulnerable families, specific communities, neighbourhood inhabitants, etc. Although professionals may not be the core target group of such projects, their contribution is often crucial for the successful implementation of intervention elements, let alone outcomes at the beneficiary level. Information on the assumed changes among professionals can also contribute to better, more realistic design of future project proposals.

The results indicate substantial involvement and changes in how professionals are expected to work by hp project initiators. Assumed outcomes are many: professionals are to learn new skills and acquire new knowledge, which they are to implement successfully in their day-to-day practices. Professionals are assumed to intensify their collaborations in the neighbourhood, both with other professionals and with families. All in all, this paints a picture that the two projects rely heavily on professional involvement for (parts of) their community health promotion strategies. Strong involvement of professionals in health promotion efforts for vulnerable groups is in line with both national policy (Sport, 2018) and international policies; the responsibility of (health) professionals was already stressed in the Ottawa Charter (WHO, 1986) and has not been off the international agenda since then, as shown in the WHO Shanghai Declaration on promoting health in the 2030 Agenda for Sustainable Development (World Health Organization, 2017). ('re-orient health and social services to optimise fair access and put people and communities at the centre'). A growing body of literature shows which (health) professional practices may be effective when it comes to tackling health inequities (Andermann, 2016), specifically focussing on vulnerable groups.

In contrast, the mentions of what is *offered* to professionals by the projects under study (the intervention elements in our C(I)MOs) are relatively scarce, and, when there is mention of a training or activity for professionals, these are described very briefly. In both projects, the introduction of the approaches is offered as a training and is accompanied by facilitated meetings and by professional networks. Further information about what such a training will actually entail is not available in the initial plans (yet). Based on our findings, we see a discrepancy between the assumed contribution of professionals and the possible lack of awareness about crucial investments in terms of attention and time within health promotion for families in vulnerable situations. Although it seems evident to include (health) professionals as change-makers in project proposals, their change-making role is not made explicit at the start of a project. Tangible outcomes, which are supported by theories such as the positive health approach or working with intergenerational influences, are often only made explicit for beneficiaries: families, neighbourhood inhabitants, etc. Incorporating a framework such as the partnership approach (Rossiter et al., 2011) might help projects to start with a more comprehensive idea of who will contribute to the project and what each partner (both families and professionals) needs in order to effectively make that contribution.

When constructing the initial programme theory, we noticed that there was almost no information available on assumed *mechanisms*. The two project initiators (teams) wrote extensive project proposals to acquire funding that included details on proposed intervention elements and desired outcomes. Such intervention elements are often based on scientifically evidenced effective interventions and/or the input of neighbourhood inhabitants and professionals in the neighbourhood. In the first round of group interviews, the focus was on the ideas and plans of the projects and on how these would work. However, this has not yet given many assumed mechanisms to use in the construction of the IPT. During the interview, which lasted two to three hours, not only possible mechanisms but also getting to know each other better, further clarification of the project proposals, changes in plans after acquiring the funding, etc. were discussed and took time (and proved very valuable as first steps of the overall evaluation). Creating an initial programme theory that is based primarily on project initiators' ideas would have required a much bigger time and budget-wise investment of the evaluation, which was designed to involve and use all 46 projects under the umbrella of the Healthy Futures Nearby Programme. For future evaluations, however, taking more time for a joint effort between project initiators and evaluators, to construct a more comprehensive initial programme theory, might be a valuable investment. Similarly, we suggest that it could be valuable to

do the IPT exercise before the project actually starts. Future work is required to elaborate our IPT in similar settings where different projects are introduced.

Identified C(I)MOs

By identifying the contexts, interventions elements, mechanisms and outcomes that play a role in the practices of professionals during the implementation of health promotion initiatives for families, we were able to provide in-depth insight into what actually happens with respect to the assumptions made by the project initiators. The results show that on the one hand many mechanisms – reactions among professionals - are 'fired' by the projects actions and activities for professionals, such as feeling inspired, motivated and supported, and experiencing room to reflect, to learn and to collaborate. Additionally, these processes, mainly among professionals, have in turn led to multiple positive outcomes. Professionals involved have actually learnt new skills and acquired knowledge, they have had room to make new professional connections and use them, and they were inspired to reflect on their practices from the perspective of the projects approach.

From the results of this study, it is not possible to say that projects interventions have led professionals to actually – measurably - change their day-to-day practices, beyond the time of implementation. However, the insights in often implicit mechanisms and unexpected outcomes provided by identifying the C(I)MO configurations is of great value. It shows the rich and diverse processes that are beneath the surface of project implementation but are crucial to understand why specific intervention elements work, for whom, and in which circumstances. Health promotion for families in vulnerable situations is implemented in a complex reality, and future health promotion efforts are shaped by such 'beneath the surface' insights that do justice to the complexity of health inequities.

Conclusion

In this study, both constructing an initial programme theory and identifying C(I)MO configurations to refine this IPT have led to valuable insights into what works and how when health promotion efforts for families require changes in professionals' practices. The biggest yield lies in the identification of multiple mechanisms among professionals, such as feeling inspired and experiencing freedom to learn, and in explicitly identifying the outcomes that such mechanisms can result in. Based on our findings, we also argue for visibility and recognition of the contribution of professionals in the design of future health

promotion projects and more refined project proposals for families in vulnerable situations.

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Appendix 5.1 – Complete assumed C(I)MO configurations for initial programme theory

Assumed C(I)MOs Project A

Below, the four assumed complete C(I)MOs identified for Project A are described (AI-AIV). As the context for each of these assumed C(I)MOs is roughly the same, this general context is first given here. Whenever there are mentions found of factors relating to one specific assumed C(I)MO, these are included in the descriptions of the C(I)MOs below.

Relevant general context for all assumed C(I)MOs identified in Project A.

In the neighbourhoods in the project, professionals already work together and are organised in a multidisciplinary organisation (C). Many professionals working with vulnerable families in the neighbourhood know each other (C). Signalling – which needs attention - is done by all kinds of professionals in the neighbourhood, including those from Organisation X1 (organisation offering a broad spectrum of supportive services related to wellbeing for inhabitants) (C). Professionals are used to approaching and working with families based on signals from other professionals and institutions (C). Some professionals already work with methods similar to the one introduced by this project (C). Professionals mention having difficulties finding vulnerable families in need of support (C). The current offer of professional practices is not perceived by professionals as tailored towards the situation of vulnerable families (C). Professionals often signal that there are multiple issues in a household, but lack the expertise to address these (C). The Wijkteams (diverse professional teams on wellbeing) already have a lot of expertise and have a good connection with health professionals outside the team (C). Professionals struggle to work under changing policies and regulations in the municipality and their respective organisations (C). Professionals take into account their own organisations priorities in their practices and work within the boundaries of their roles and responsibilities (C). A lot of initiatives, policies, developments and activities currently exist in the health and wellbeing domain and in the neighbourhood (C). Families in the neighbourhood often feel resistance towards governmental organisations (C).

Assumed C(I)MO A-I: Two-day training

Professionals will be offered a two-day training in the projects 'positive health' approach, using the 'Geluksroute' methodology; a method for discussing and cooperating with vulnerable families in jointly identifying the route to a happier and healthier life, focussing on multiple life domains (I). With the training,

professionals will feel that their experiences of insufficient expertise are addressed by learning about the positive health approach/Geluksroute (M1). The training will make professionals more knowledgeable and skilled when working with vulnerable families on issues related to health and wellbeing (M2).

Professionals will then be able to work with the Geluksroute method and sustain this approach in their practices (O1), be able to draft a plan together with families based on their knowledge of the Geluksroute (O2), be able to adopt a more 'general' approach in their work and change from specialists to generalists (O3). Professionals have a broader view to assess what a family needs in terms of support (O4). Professionals will be able to judge when to redirect a family for more specific support (O5). Professionals will be able to take into account the influence of the financial situation of a vulnerable family upon starting their support (O6). Professionals will signal possibilities for reciprocity: both professionals and families may contribute to the process to health and wellbeing (O7). Professionals will support the family in where to go to with specific questions (redirecting) (O8). Professionals will follow-up the support and keep in contact with the family. At least once a year, a progress talk (following the positive health approach) will be scheduled (O9). All in all, professionals' practices will be tailored to families' situations by using a positive health approach (O10).

Assumed C(I)MO A-II: Short training for professionals responsible for signalling
Professionals responsible for signalling families in need of support will be offered a short training on the positive health approach (I). The training will make these professionals feel better equipped to signal families in need of support, assessing life domains broader than their own professional expertise and following the positive health approach (M). The practice of signalling by all professionals in contact with vulnerable families will be implemented more effectively, tailored to all aspects of a family situation (O).

Assumed C(I)MO A-III: A contribution from sport-care connectors
The sport-care connector will be involved in the project through active contributions to Wijkteam meetings and within the network of professionals by providing knowledge on sports and physical activity (I1). Professionals in Wijkteams will become more knowledgeable about sports and physical activity (M1). Professionals will feel better equipped to work with families on sports and physical activity (O1).

The sport-care connector will signal where the current offer of sports and physical activity facilities is lacking or where better cooperation on the topic among professionals is needed (I2). Professionals will feel better equipped to work with families on sports and physical activity (M2). Professionals will redirect families more effectively to sports and physical activity services (O2).

Assumed C(I)MO A-IV: Interdisciplinary meetings

Interdisciplinary meetings for professionals will be used to share information and experiences related to the project. Possibly, the Kennisteams (existing professional teams) will serve as a platform for such meetings (I). Professionals attending the meetings will be able to and will feel space to learn from each other on working with families following the project approach (M). All involved professionals will be able to profit in their learning from experiences by other professionals when implementing the positive health approach in their practices (O1). Professionals will be able to solve future issues in their own practices when working with the positive health approach by learning from what other professionals shared (O2).

Assumed C(I)MOs Project B

Below, the six complete assumed C(I)MOs identified for Project B are described (BI-BVI). As the context for each of these assumed C(I)MOs is roughly the same, this general context is first given here. Whenever there are mentions found of factors relating to one specific assumed C(I)MO, these are included in the descriptions of the C(I)MOs below.

Relevant general context for all assumed C(I)MOs identified in Project B.

Professionals working on health and prevention in the neighbourhood are already familiar with the neighbourhood and inhabitants (C). Professionals believe existing practices and neighbourhood structures are insufficient to help vulnerable families change health-related behaviour (C). Also, professionals in the neighbourhood lack the skills to work from a life-course approach (C) and lack insight in how to tailor activities to families' participation and needs (C).

Assumed C(I)MO B-I: Communities of practice

During the project, professionals will be involved in 'communities of practice'; groups including various professionals and youngsters who will be developing activities for the neighbourhood (I). Cooperating within such communities of practice provides space for professionals to learn about families' needs (M) and

makes the project feel as a joint investment/initiative by and for inhabitants and professionals (M). Such experiences will enable professionals to become more knowledgeable about and competent in tailoring practices to families' needs (O).

Assumed C(I)MO B-II: Training

Professionals working on health and prevention in the neighbourhood are already familiar with the neighbourhood and inhabitants (C). Professionals believe existing practices and neighbourhood structures are insufficient to help vulnerable families change health-related behaviour (C). Furthermore, the professionals in the neighbourhood lack the skills to work from a life-course approach (C) and lack knowledge of how to tailor activities to the participation and needs of families (C). During the project, professionals will be offered a training in the life-course approach, in which they will learn to be sensitive in their daily practices for the cumulative and longitudinal (generational) influence of protective and risk factors on family health (I). Professionals feel that their experiences of insufficient skills and knowledge about intergenerational influences on health issues are addressed by the training offered to them (M). Professionals will be able to better tailor their practices towards the families influenced by intergenerational factors (O).

Assumed C(I)MO B-III: Improved mapping of services

Professionals working on health and prevention in the neighbourhood are already familiar with the neighbourhood and inhabitants (C). Professionals believe existing practices and neighbourhood structures are insufficient to help vulnerable families change health-related behaviour (C). Also, professionals in the neighbourhood lack the skills to work from a life-course approach (C) and lack insight in how to tailor activities to families' participation and needs (C). Professionals will be working with services and interventions already available in the neighbourhood for families (C). The project will provide professionals with a new overview of existing interventions (family-centred and life-course approach oriented) in the neighbourhood (I). Professionals will feel better equipped to work according to a family-centred approach (M). Professionals will start working more from a family-centred approach (O).

Assumed C(I)MO B-IV: Community centres

Professionals working on health and prevention in the neighbourhood are already familiar with the neighbourhood and inhabitants (C). Professionals believe existing practices and neighbourhood structures are insufficient to help

vulnerable families change health-related behaviour (C). Also, professionals in the neighbourhood lack the skills to work from a life-course approach (C) and lack insight in how to tailor activities to families' participation and needs (C). Professionals will be working with services and interventions already available in the neighbourhood for families (C). In the project, professionals will also work together with a community centre while approaching and working with vulnerable families (I). Offering professionals' practices while working together with a community centre will increase the (perceived) accessibility for vulnerable families and address negative perceptions of 'needing help' (M). Professional practices will have a better reach among vulnerable families in the neighbourhood (O).

Assumed C(I)MO B-V: Extended learning

Professionals working on health and prevention in the neighbourhood are already familiar with the neighbourhood and inhabitants (C). Professionals believe existing practices and neighbourhood structures are insufficient to help vulnerable families change health-related behaviour (C). Also, professionals in the neighbourhood lack the skills to work from a life-course approach (C) and lack insight in how to tailor activities to families' participation and needs (C). Professionals will be working with services and interventions already available in the neighbourhood for families (C). In the project, half of all professionals in the neighbourhood will receive training on integrating the life-course approach in their daily practices (I). Trained professionals will influence those who did not receive training in the project in tailoring practices to the needs of intergenerationally influenced vulnerable families (O).

Assumed C(I)MO B-VI: Changing services

Professionals working on health and prevention in the neighbourhood are already familiar with the neighbourhood and inhabitants (C). Professionals believe existing practices and neighbourhood structures are insufficient to help vulnerable families change health-related behaviour (C). Also, professionals in the neighbourhood lack the skills to work from a life-course approach (C) and lack insight in how to tailor activities to families' participation and needs (C). Professionals will be working with services and interventions already available in the neighbourhood for families (C). During the project, existing services and interventions will be adjusted to enable the life-course approach in professional practices (I). Professionals will experience fewer barriers to work with a life-

course approach in mind (M). Professional practices will be tailored more towards the needs of vulnerable families (O).

Chapter 6

Strategic approaches in health promotion and health-related outcomes: An exploration using fuzzy-set qualitative comparative analysis

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This chapter is to be submitted.

Abstract

Various approaches are seen as promising in improving health outcomes for vulnerable groups, including behavioural approaches and health education, participatory approaches, a focus on the practices of professionals, and integrated or network approaches. Multi-strategy approaches have also been gaining attention. Evidence on changes in health-related outcomes in response to such combinations of approaches is scarce. We examine the FNO Healthy Futures Nearby programme to generate insight into the relationships between the various approaches and the health-related outcomes of families experiencing vulnerability. According to the results of a fuzzy set Qualitative Comparative Analysis, when designing health-promotion initiatives for families experiencing vulnerability, no single approach alone will be sufficient to achieve change. At the same time, however, all the approaches could potentially contribute to positive changes in health-related outcomes.

6.1 Introduction

Within the field of health promotion, various theories and models are seen as promising for improving health outcomes amongst vulnerable groups. Examples include behavioural (lifestyle) approaches (Glanz, Rimer, & Viswanath, 2008), socioecological approaches (Bronfenbrenner, 1977; McLeroy, Bibeau, Steckler, & Glanz, 1988), participatory approaches (Kuchler, Rauscher, Rangnow, & Quilling, 2022; World Health WHO, 2020), settings-based approaches (Dooris, 2009; Dooris et al., 2007) and social (or other) network approaches (Latkin & Knowlton, 2015; Pilisuk, Parks, Kelly, & Turner, 1982; Smith & Christakis, 2008). Moreover, it has been argued that a combination of approaches (Van Den Broucke, 2014a) and a much broader focus on all determinants of health—as reflected in a whole-systems approach (Bagnall et al., 2019)—could make a difference in the health of groups experiencing vulnerability. As reported by Busch and Van der Lucht (2012), preventive (behavioural) interventions alone do not reduce health inequalities with regard to socioeconomic status. Evidence is also scarce concerning changes in health-related outcomes due to multi-strategy approaches. Insight into the relationship between health-related outcomes and health-promotion approaches is needed, as (1) such insights may clarify relationships between proximal and distal health (or other) outcomes, and build a case for longer-term health-promotion policy. In addition, (2) this information could help shape future health-promotion efforts for groups experiencing vulnerability.

Potential and complexity of health promotion

Multi-strategy programmes for health promotion can be regarded as complex interventions, which have been characterised as having many interacting components, multiple actors, discretionary behaviours by stakeholders and changing social contexts and environments (Dubois et al., 2012; Hawe, Shiell, & Riley, 2009; Jolley, 2014). Despite the challenges that they pose with regard to evaluation (Carvalho, Bodstein, Hartz, & Matida, 2004; Douthwaite, Mayne, McDougall, & Paz-Ybarnegaray, 2017; Dubois et al., 2012; Jolley, 2014), complex programmes potentially offer a wealth of information on relationships between project approaches and possible health outcomes, especially if these programmes are relatively long-term. Several different theoretical approaches may co-exist under the umbrella of a single programme. A shared overarching programme could provide a similar base for each project, whether in the form of shared outcomes, strategies, target groups, regions or other aspects. The combination of such a shared base and variation in strategies offers possibilities for evaluating project approaches.

Evaluation poses many challenges. A complex programme may contain a wide diversity of projects or elements. Moreover, such programmes are almost certain to face variations and changes in context (e.g. geographic, cultural, historical) for each project or strategy they include. Finally, the organisation and implementation of pre-defined, standardised measurements across many local projects requires time and energy from both researchers and participants, even though the results of such measurement designs are unlikely to be worth the time invested. Such considerations pose a challenge to the use of quantitative evaluation methodology, for which standardised measures and equal circumstances for implementation are crucial. Qualitative comparative analysis (QCA) is increasingly being used as a method for evaluating complex programmes, in addition to being integrated into mixed-method designs (Hanckel, Petticrew, Thomas, & Green, 2021; Harting et al., 2017; Kahwati & Kane, 2018). It has also been identified as a promising method for evaluating health interventions (Kien, Grillich, Nussbaumer-Streit, & Schoberberger, 2018; Warren, Wistow, & Bambra, 2013). In a systematic review of research on public health interventions using QCA, Hanckel et al. (2021, p. 1) conclude that the methodology is a 'promising approach for addressing the role of context in complex interventions, and for identifying causal configurations of conditions that predict implementation and/or outcomes when there is sufficiently detailed understanding of a series of comparable cases'.

Aim and research question

With this study, we aim to identify and explore the causal (or other) relationships between specific health-promotion approaches and health-related outcomes amongst families experiencing vulnerability. This translates into the following research question:

Which approaches—community engagement/participation, changes in professional practices, strengthening neighbourhood networks, a behavioural approach—or combinations of approaches can contribute to improvements in the perceived health and/or weight or level of physical activity of families experiencing vulnerability?

In our study, we adopted the definition of families experiencing vulnerability as formulated by FNO: households (1) in which at least one parent and one child were living together; (2) who were experiencing multiple problems with regard to finances, education, work or well-being; and (3) who were experiencing health disparities related to smoking, alcohol use, overweight or underlying psychosocial issues. The approaches addressed were identified as the most prominent project approaches in a previous study

(Hogeling, Lammers, Vaandrager, & Koelen, 2021). All projects were categorised as proceeding from at least one of these approaches. The identified approaches are not mutually exclusive and, in fact, most projects contain theoretical or practical elements of more than one approach. First, they are approaches that are assumed to work through participatory, community-engagement processes; engaging families experiencing vulnerability in the design, organisation and/or implementation of project activities. Second, an approach in which the project aimed to change and, more specifically, customise professional practices either through the involvement or training of professionals and practitioners or through the development of methods for professional practice. A third approach was identified as strengthening the professional (or other) social networks of families, specifically in targeted areas or neighbourhoods. The fourth approach concerned the promotion of individual behavioural and attitudinal changes (smoking, alcohol, overweight and perceived health) primarily through lifestyle interventions and activities, as well as through health education.

6.2 Design and methods

Setting

In this study, we explore relationships between four health-promotion approaches and the health-related outcomes of *perceived health* and/or *overweight and indicators of physical activity.* We collected and analysed data from 46 small-scale health-promotion projects conducted under the umbrella of the Healthy Future Nearby (HFN) programme (FNO, 2015a, 2015b). In this programme, which was conducted in the period 2016–2020, FNO funded 46 small-scale projects in the Netherlands with the aim of improving the health of families experiencing vulnerability (FNO, 2021). All projects were expected to focus on improving the perceived health and/or promoting healthy weight and lifestyle (reducing alcohol intake, quitting smoking) amongst families experiencing vulnerability, as defined above. The broad definition applied by the funders resulted in highly diverse target groups within the programme. The design of the overall evaluation is explained in the previously published study protocol (Hogeling, Vaandrager, & Koelen, 2019), and resulted in a research report (Vaandrager et al., 2020). Initial analysis of project approaches (Hogeling et al., 2021) indicated that, in general, all projects used one or two of the aforementioned approaches to pursue health-related goals amongst families: (1) a participatory approach, (2) a focus on the practices of professionals, (3) an approach from/through neighbourhood networks and/or (4) a focus on individual behavioural

changes. These approaches were used as a theoretical base for guiding the further overall evaluation of the programme (Hogeling et al., 2019). The diversity of projects in the HFN programme provides opportunities for exploring the effects of various approaches on the health of families experiencing vulnerability.

All 46 projects under the umbrella of the HFN programme were implemented in the Netherlands in the period 2016–2020, some in particular cities or neighbourhoods, and others involving families in specific regions or in two or more cities. About half (20) of these projects received funding for an additional preparatory phase, in which the project initiators researched, contacted and consulted the neighbourhoods and residents while preparing their initial proposals and used these findings to write their final proposals. We refer to these projects as 'Type 1' projects. Another 13 'Type 2' projects received funding for the implementation of their proposals without a preparatory phase. These projects were assumed to take an integrated approach to the target area or groups. Another 13 projects were funded for the period 2017–2020 and were assumed to have a specific focus on the reduction of alcohol use/abuse and smoking. A focus on perceived health as an outcome was a precondition for all projects. A list of projects is provided in Appendix 6.1. Throughout this article, projects are referred to according to their location.

Study design

The focus of this study is on changes in the perceived health, weight and/or activity-related indicators of families experiencing vulnerability and participating in projects included in the HFN programme. We applied fuzzy set qualitative comparative analysis (fsQCA) to multiple case studies, taking the projects as cases. This enabled us to explore project characteristics that might explain differences in health-related outcomes amongst families experiencing vulnerability. For the analysis, we selected projects that specifically targeted the outcomes of perceived health and/or the weight or activity status of participating family members. In all, 32 projects were included in the analyses on weight or activity status, and 45 were included in the analyses on perceived health. One project was excluded from both analyses because it did not provide relevant and useful data for the evaluation.

We used fsQCA because it can help to unravel complex causal (or associative) relationships (Janse van Rensburg et al., 2021), as in the health-promotion programme under study. The method also allowed us to make comprehensive use of both quantitative and qualitative data from the mixed-method design of the overall evaluation on the developments in and outcomes of 45 local-scale projects (Kahwati & Kane, 2018). We used

a fuzzy-set (as opposed to a crisp-set) approach in our analysis, as we sought to maintain and capture the richness of the information in the mostly qualitative data contained in the results (Rihoux, Ragin, Yamasaki, & Bol, 2009; van Kessel et al., 2021). The fuzzy-set approach allows for non-dichotomous (multiple degrees, up to continuous) scores on the outcome and factors of interest (Legewie, 2013).

Data collection and measurement, selection of conditions and outcomes

The data used for this study were collected through the following (for each project): (1) three group interviews with project stakeholders, (2) three telephone interviews with projects leaders and (3) written progress and project-specific evaluation reports made available by project leaders.

(1) **Telephone interviews.** Three telephone interviews were conducted with leaders from the three projects: in 2017, 2018 and 2019–2020. The telephone interviews, which each lasted around one hour, were conducted by a researcher from the overall evaluation team, and they were semi-structured and guided by a topic guide. The topic guide for each round was constructed by LH and LV. All guides included questions on developments related to funder-defined outcomes, principles, such as community/family participation, main project strategies (including project-specific evaluation designs) and processes related to the main strategies. A verbatim transcript was made of the recordings of each interview.

(2) **Group interviews**. Three group interviews were held with participants from the selected projects. Participation in the group interviews was based on convenience sampling; the project leaders were asked to invite all stakeholders or representatives. This resulted in the participation of a variety of stakeholders, including project leaders, healthcare and welfare professionals, educators, members of sports clubs and neighbourhood organisations, family members, researchers and volunteers. Each interview lasted 2–3 hours and was held at a location chosen by the project leaders, often close to where the projects were implemented.

(3) **Project proposals, progress and evaluation reports.** The funder required each project to conduct a project-specific evaluation focusing on the funder-defined outcomes, but also allowing room for outcomes and processes that the projects perceived as relevant. The absence of strict requirements concerning the methods used in these evaluations led to a highly diverse set of evaluation designs and reports from 46 projects.

A team of six researchers was involved in the overall evaluation of the HFN programme. Within this structure, each researcher was assigned to a randomly selected group of

projects from the 46 that had received funding. The researchers worked as primary contacts of the overall evaluation for project stakeholders, and they performed as much of the data collection (group interviews, telephone interviews) with the project as possible. The research team for the overall evaluation also included LH and LV, who were thus also involved in the data collection.

Four approaches identified in a previous study (Hogeling et al., 2021) were taken as conditions (the 'influencing variables' in the fsQCA) in our analysis. Additional conditions included the type of project (Type 1 and Type 2), as categorised according to the funding scheme. Two outcomes were selected: weight and indicators of physical activity, and the perceived health of members of families experiencing vulnerability. The outcomes related to smoking and alcohol use were included in the preparatory steps of the procedure, but descriptive statistics showed little or no differentiation in scores between projects. We then decided to exclude these variables. An overview of the information extracted from the various data sources for those conditions and outcomes is presented in Table 6.1.

Table 6.1 Description of variables.

Variable [abbr.]*	Description	Measurement
Approach: community participation [comm_part]	Works through participatory, community-engagement processes; families engage in designing, organising and/or implementing activities	Project proposals; group interviews; telephone interviews (Hogeling et al., 2021)
Approach: customised professional practices [prof_prac]	Aimed at changing and, more specifically, customising professional practices through the involvement/training of professionals or the development of methods for professional practice	Project proposals; group interviews; telephone interviews (Hogeling et al., 2021)
Approach: strengthening networks [networks]	Aimed at strengthening the professional (or other) social networks of families, specifically in targeted areas or neighbourhoods	Project proposals; group interviews; telephone interviews (Hogeling et al., 2021)
Approach: promoting lifestyle changes [lifestyle]	Targeting individual behavioural and attitudinal changes (smoking, alcohol use, overweight and perceived health), primarily through lifestyle interventions and activities. Includes health education	Project proposals; group interviews; telephone interviews (Hogeling et al., 2021)
Project Type 1 [type_1]	Type 1 projects were funded two parts: a preparatory phase in which the projects researched and consulted the neighbourhoods included in their proposals, and an implementation phase in which further project activities—shaped by the first phase—were implemented.	Based on funding scheme by programme
Project Type 2 [type_2]	Type 2 projects were funded for the implementation of their project proposals (without a preparatory phase, as in Type 1 projects)	Based on funding scheme by programme
Outcomes		
Overweight/physical activity [phys]	Indicators related to healthy diet, weight loss, healthier weight; waist-size reduction; BMI reduction; (increased) physical activity	(1) measurements by project (e.g. questionnaires, measuring sessions, reports) or (2) qualitative indications in group interviews (with all project stakeholders) or telephone interviews (with project leaders)
Perceived health [per_health]	Feelings of health, including all dimensions of health or well-being	

* [...] = the abbreviated name of the variable as imported in the fs/qca software package and used in analysis.

Procedure

The fsQCA and its preparation were performed in steps. All authors and co-authors (LH, RL, LV and MK) were involved in the process, using existing literature (e.g. (Kahwati & Kane, 2018; Kien et al., 2018) to design the process and for purposes of reporting. Data were analysed using QCA software (fs/qca) (Ragin & Davey, 2009).

Step 1: Scoring project information and data calibration. RL created a raw data matrix involving all researchers (authors/co-authors and researchers in the overall evaluation team). This step was performed as an iterative process, in which data were extracted for each project and translated into a score on the relevant variables, going back and forth between interview reports, progress and evaluation reports and project-specific researchers. Initial scores were assigned using a scoring guide with anchor points specified in advance (Table 6.2). Projects were scored according to the four approaches and the two outcomes. In addition, the projects were categorised as either Type 1 or Type 2 based on the type and timing of funding. For each project, RL conducted an interview with project-designated researchers from the overall evaluation team, checking for adequacy of the initial scores. While updating the data matrix, the consistency of scoring between projects was checked using the scoring guide.

Table 6.2 Data calibration.

Variable *	**Anchor point**	
[lifestyle]	0	No behavioural activities targeting lifestyle change
	0.33	Some (‘*meer niet dan wel*’)
	0.67	Many/substantial (‘*meer wel dan niet*. *Een van de gezondheidsgedragingen*’)
	1	Predominantly behavioural activities targeting lifestyle change and more than one lifestyle element (smoking, alcohol abuse, overweight, inactivity)
[comm_part]	0	No form of participations/engagement
	0.33	Some (‘*meer niet dan wel*’) Some minor participatory activities in implementation or as advice, never as control or co-design
	0.67	Many/substantial (‘*meer wel dan niet*’)
	1	Predominantly participatory activities. Families in charge, co-creation, co-design.
[prof_prac]	0	No activities aimed at changing professional practices
	0.33	Some (‘*meer niet dan wel*’). Possibly some unintended changes of professional practices
	0.67	Many/substantial (‘*meer wel dan niet*’). Professional practices are targeted (not as a training), and professionals have been involved.
	1	Predominantly a focus on changing professional practices. Training. (learning) effects are clear.
[networks]	0	Networks are not a focus of the project
	0.33	Some (‘*meer niet dan wel*’). Some professionals involved, more occasionally than structurally.
	0.67	Many/substantial (‘*meer wel dan niet*’). Aimed at strengthening network and cooperation. Professionals see improvements.
	1	Predominantly aimed at strengthening networks. Effect is visible.
Outcomes		Evidence
[phys]	0	No evidence found of effects or indicator not measured in project
	0.33	Some participants have changed to a healthier diet. Evidence is mostly anecdotal. Minor effects, small numbers. Changes have stabilised, only minor reductions.
	0.67	Changes/effects are moderate (‘*redelijk effect*’) and visible
	1	Significant effects visible. Clear improvements. 75% of participants switched to a healthier diet. Weight loss, reduction of BMI, smaller waistlines, more participants with a healthier weight.
[per_health]	0	No evidence found of effects
	0.33	Some effect. Small, unintended effects, evidence in some anecdotes.
	0.67	Clear improvements, but no quantitative evidence. More anecdotes regarding several dimensions of health.
	1	Statistically significant effects, substantial improvements. Effects visible for at least half of all project participants

* For a detailed explanation of abbreviations, see Table 6.1.

Step 2: Creating the truth tables. The data matrix resulting from Step 1 was rearranged into two matrices—one for each outcome—and both were imported in the fs/qca software package for analysis. The data matrices are included in Appendix 6.2. From these data matrices, the truth tables were constructed in the software. Truth tables present all possible solutions: configurations of conditions that exist in the data and absence or presence of the outcome with this configuration. A truth table can also show limited diversity in datasets (Kahwati & Kane, 2018).

Step 3: Necessity analysis. A necessity analysis for both outcomes was performed in the fsQCA software package, identifying conditions or combinations of conditions that are *necessary* for the outcome to occur (Kahwati & Kane, 2018). In QCA, necessity means that the identified condition or combination of conditions 'is always present or absent when the outcome is present or absent' (Janse van Rensburg et al., 2021, p. 3). For example, a network approach is regarded as a necessary condition if all evidence of improved perceived health is accompanied by a network approach, but a network approach alone is not enough to constitute evidence of improved perceived health (Legewie, 2013).

Step 4: Sufficiency analysis. The truth tables resulting from Step 2 were used to perform an analysis was performed by truth table minimisation in fs/QCA to identify the sufficient conditions and combinations of conditions. In other words, the solutions presented in the truth tables were analysed further to identify conditions or combinations of conditions that are in themselves sufficient for the specific outcome to occur.

Step 5: Returning to the projects. The relevant solutions resulting from the previous steps were connected to the initial cases (projects). In fsQCA, returning to the initial cases is considered crucial (Kahwati & Kane, 2018; Legewie, 2013) to making sense of the solutions, to providing depth from the qualitative data sources and to finding further explanations for the condition-outcome relationships found in the dataset.

6.3 Results

In this section, we discuss the results from Steps 1–5. The findings are presented following the suggestions for reporting on fsQCA by Kahwati and Kane (2018) and by Rihoux et al. (2009). The calibrated data files (one for each outcome) are presented in Appendix 6.2.

For the outcome of weight status/physical activity, 32 cases were included in the analysis. For the outcome of perceived health, 38 cases were included (Table 6.3). On average, scores on the outcome of perceived health were higher than scores on the outcome of weight status/physical activity.

On the outcome related to weight/physical activity, some anecdotal evidence of changes on the outcome was identified in most projects (21). Two projects provided significant effects or substantial improvements on the outcome, one in Rotterdam (#44, '*Samen gezond eten en bewegen*') and one in The Hague (#45, '*Voel je goed*'). In six projects, no evidence was found of changes in weight/physical activity.

For perceived health, we identified clear positive changes in the outcome in 20 of the 38 projects included in the analysis. Moreover, four projects reported significant effects or similar substantial improvements: Enschede (#2 '*Supporter van elkaar*'), Hoogezand-Sappemeer (#11 '*Blijvend gezond en sociaal actief*'), Tiel (#40 '*Tiel aan de gezonde zijde*') and Rotterdam (#44, '*Samen gezond eten en bewegen*'). In four cases, no evidence of changes was reported in relation to perceived health.

Table 6.3 Descriptive statistics for each outcome.

			Score on outcome (Number of cases)			
Outcome	Number of cases in analysis	Mean score on outcome	0 'no evidence'	0.33 'some, anecdotal evidence, small effects'	0.67 'clear changes, but no significant quantitative evidence'	1 'significant effects, substantial improvements'
Weight and indicators of physical activity	32	0.34	6	21	3	2
Perceived health	38	0.54	4	10	20	4

Truth tables

For the outcome of weight/physical activity, 17 of the 64 logically possible combinations of conditions (2^k, in which k is the number of conditions) can be found in the dataset (Kien et al., 2018). The truth table (Appendix 6.2) shows five configurations of conditions that occur together with a positive outcome: positive changes have been reported by or about the weight, diet or physical activity of family members (Rows 1–5). These five configurations of conditions all meet the minimum consistency threshold of 0.80.
For the outcome of perceived health, the truth table (Appendix Table 6.2) shows 20 of the 64 logically possible combinations of conditions occurring in the data. Of these combinations, 17 configurations of conditions occur together with a positive score (1) on this outcome, and meet the minimum threshold for row consistency of 0.80. Altogether, these solutions cover 21 cases. The remaining 10 are covered in the solutions appearing in Rows 17–20.

Necessary conditions

The results of the necessity analysis of individual conditions for both outcomes are presented in Table 6.4. For a condition to be classified as necessary, the consistency should be above .9 (Legewie, 2013). A lifestyle approach has a consistency of .96 on the outcome of weight/physical activity. The coverage of this condition is however low (below .5), meaning that this approach cannot be identified as necessary. Given that none of the other conditions has a consistency score above the threshold of .9, these results indicate that none of the individual conditions is necessary for the outcomes of weight/physical activity or perceived health of family members to occur. In other words, none of the individual approaches *must* be present for the outcomes of weight/physical activity or perceived health of family members to occur.

Table 6.4 Analysis of necessary conditions for the outcomes (1) weight/physical activity and (2) perceived health of family members.

	Outcome: phys		***Outcome: per_health***	
Conditions tested	**Consistency**	**Coverage**	**Consistency**	**Coverage**
Lifestyle	0.969835	0.460903	0.869565	0.562149
comm_part	0.664534	0.560957	0.578744	0.707202
prof_prac	0.697441	0.572823	0.578744	0.599600
networks	0.574040	0.508502	0.546860	0.707058
type_1	0.514625	0.331176	0.532850	0.580526
type_2	0.485375	0.354000	0.467150	0.371923

Abbreviations: [lifestyle]: project targets individual behaviour and attitudes. [comm_part]: project works through community-engagement processes. [prof_prac]: projects work to customise professional practices. [networks]: projects work to strengthen professional (or other) social networks of families. [per_health]: Outcome indicator related to feelings of health, including all dimensions of health or well-being. [phys]: Outcome indicator related to healthy diet, weight loss, healthier weight; waist-size reduction; BMI reduction and (increased) physical activity.

Combinations of conditions that occur with the outcome

First, we look at the findings (Table 6.5 shows the *intermediate* solution) for the weight-related health indicators (weight, diet, physical activity). A positive change in weight-related health indicators occurs (1) when a behavioural approach—activities promoting lifestyle changes—is present, together with a funded preparatory phase, but in the absence of a community-engagement and network approach. Given that the project-funding types are mutually exclusive, any time the presence of a funding condition occurs along with the outcome, it logically means that the other funding type condition is indicated as 'absent' in this configuration. Second, positive changes in weight-related health indicators occur with (2) the presence of an approach promoting behavioural/lifestyle changes, in combination with the presence of a focus on customising professional practices and funding for a preparatory phase, but in the absence of a community-engagement approach.

Two additional solutions are presented in Table 5, but both have a low raw coverage; Configurations 3 and 4 are each present in one case/project. Configuration 3 indicates that changes in weight-related indicators occur with the presence of a network approach and Type 1 funding, but in the absence of community participation and a focus on professional practices. Finally, positive changes in weight-related indicators occur when all four of the

approaches are present, in combination with Type 2 project funding (implementation phase only).

The unique consistency of the four solutions is above the threshold of .8, but their individual coverage is low. In addition, the overall solution coverage is .576, which indicates that the extent to which the outcome is explained by the four solutions is small.

Table 6.5 Results of the truth-table analysis for the outcome weight/activity-related indicators.

	Solution			
	1	2	3	4
Project approach				
Promoting lifestyle changes	●	●		●
Community participation	⊗	⊗	⊗	●
Customising professional practices		●	⊗	●
Strengthening networks	⊗		●	●
Project type				
Type 1: funding for preparatory phase and implementation	●	●	●	⊗
Type 2: funding for implementation only	⊗	⊗	⊗	●
Consistency	0.83	0.86	0.83	1.00
Raw Coverage	0.45	0.36	015	0.12
Unique Coverage	0.06	0.01	0’.00	0.12
Overall Solution Consistency	0.788			
Overall Solution Coverage	0.576			

Note: A black circle (●) indicates the presence of a condition, and a circled ‘X’ (⊗) indicates the absence of a condition. A blank space indicates that the condition is not included in the configuration (the ‘don’t care’ condition).

The findings of the sufficiency analyses for the outcome of (positive changes in) perceived health are presented in Table 6.6 (*intermediate solution*). Five possible configurations are identified as occurring with improvements in perceived health. First, promoting lifestyle

changes in combination with Type 1 funding. occurs with improvements in perceived health. A second configuration shows that the outcome also occurs when a network-strengthening approach is combined with Type 1 funding.

The last three configurations (3–5) in this solution indicate that the presence of Type 2 funding can also occur together with a positive change in perceived health. This occurs: in combination with a community-participation project approach (Configuration 3); with a focus on customising professional practices and the absence of strengthening networks (Configuration 4); or with the combination of promoting lifestyle change and strengthening networks present (Configuration 5). Once again, the project-funding types are mutually exclusive.

The 'raw coverage' relates to the number of cases in which a specific combination of conditions (one of the presented configurations) is found. The raw coverage is relatively low for Configurations 3 and 5: Configuration 3 is present in two cases, and Configuration 5 is present in three cases (the number of cases is not listed in Table). In comparison, Configuration 1 is present in 13 cases, Configuration 2 is present in 11 cases, and Configuration 4 is present in six cases.

The overall solution coverage is .870, which indicates that a substantial proportion of changes in the outcome are covered by the five solutions altogether. The overall solution consistency (indicating the strength of the connection between the solution and the outcome) is .737.

Table 6.6 Results of the truth-table analysis for the outcome perceived health.

	Solution				
	1	2	3	4	5
Project approach					
Promoting lifestyle changes	●				●
Community participation			●		
Customising professional practices				●	
Strengthening networks		●		⊗	●
Project type					
Type 1: funding for preparatory phase and implementation	●	●	⊗	⊗	⊗
Type 2: funding for implementation only	⊗	⊗	●	●	●
Consistency	0.80	0.86	0.77	0.73	0.81
Raw Coverage	0.45	0.39	0.21	0.27	0.14
Unique Coverage	0.15	0.08	0.03	0.09	0.00
Overall Solution Consistency	0.737				
Overall Solution Coverage	0.870				

Note: A black circle (●) indicates the presence of a condition, and a circled 'X' (⊗) indicates the absence of a condition. A blank space indicates that the condition is not included in the configuration (the 'don't care' condition).

Interpretation of the results

The results of the necessity analysis indicate that none of the individual conditions is necessary for the weight/activity-related outcomes or the perceived health of family members to occur. Further analysis of the truth table nevertheless reveals that various combinations of conditions *do* occur together with changes in weight/activity-related outcomes or perceived health. The project approach combined with one of the funding schemes can thus contribute to improving perceived health amongst families experiencing vulnerability and to changes in weight/activity-related health indicators. On its own,

however, none of the individual project approaches or funding schemes can 'guarantee' positive changes in one of the outcomes.

For changes in weight/activity-related health indicators, the fsQCA identified four solutions. In three of these solutions, promoting lifestyle changes is identified as a condition that contributes to positive change in combination with other conditions. Three of the four configurations include Type 1 funding. These findings suggest that projects might adopt an approach focused on lifestyle and should have funding for a preparatory phase in combination with one of the other approaches for changes in weight/activity related outcomes to occur. These results should nevertheless be interpreted with caution. the overall 'explanatory power' of the four solutions is low. Factors or combinations of factors other than those included in our analysis are important in explaining changes in this outcome.

The overall solution coverage of the analysis of the outcome of perceived health is higher than that of the analysis of weight/activity-related outcomes. The identified solutions make a substantial contribution to improvement in the perceived health of family members. This obviously does not mean that factors other than those included in our analysis are not also crucial for achieving changes in perceived health.

In contrast to the analysis of weight/activity-related outcomes (as discussed above), there is no single condition that is present more than others in the identified combinations. In other words, various combinations of approaches and funding schemes within projects can contribute to successful change. Three solutions occur in relatively many cases, two of which include Type 1 funding. In those cases, the funded preparatory phase was combined with either a focus on lifestyle changes or on strengthening networks. The first combination—a lifestyle focus combined with a preparatory phase—is similar to Solution 1 in the weight/activity analysis. Returning to the projects, this makes sense. Various projects used the preparatory phase to collect information on the needs of participants and/or to create activities customised to the needs and wishes of prospective participants.

6.4 Conclusion and discussion

One of the main messages that can be derived from this study is that, in the design of health-promotion initiatives for families experiencing vulnerability, no single approach alone will be sufficient to achieve change. This is in line with a multi-strategy approach (Van Den Broucke, 2014a) and an integrated or systems approach (Bagnall et al., 2019; McLeroy et al., 1988; Wold & Mittelmark, 2018). A project focus on behavioural changes

can contribute to health-related change, when combined with accurate and thorough preparation. Another important conclusion, however, is that the different approaches may all contribute to positive changes in health.

The findings further suggest that combining a funded preparatory phase with a behavioural approach may enable positive change in the health-related outcomes of families experiencing vulnerability. In the Netherlands, policymakers and funding institutions often encourage health-promotion initiatives to implement evidence-based interventions, such as those collected in the RIVM database LoketGezondLeven.nl (RIVM, 2023). Projects in the programme under study often used the funded preparatory phase to collect information, needs and wishes from current or future participants and to adjust or customise their intervention designs according to that information (FNO, 2015a, 2015b). We thus argue that the implementation of such interventions (which are often behavioural) may benefit from including funded, preparatory time in each project dedicated to researching the needs and wishes of current or future participants. The inclusion of a needs assessment as the foundation for behavioural interventions is in line with the arguments of previous scholars, also including with regard to people experiencing vulnerability (Barker et al., 2017; Richards, 2007). Moreover, an integration of approaches, including a behavioural approach, could be crucial to the effectiveness of health-promotion efforts (Van Den Broucke, 2014b). Needs assessment is nevertheless not amongst the six principles for adapting behavioural health-promotion interventions to minority ethnic communities, as provided in a review by Netto, Bhopal, Lederle, Khatoon, and Jackson (2010).

The use of fsQCA was a valuable component of our overall evaluation of a multi-project programme. First, it allowed us to perform a comprehensible investigation of the rich but diverse information collected from the 46 projects of the HFN programme altogether. Previous authors (Kneale, Rojas-García, & Thomas, 2018; Thygeson et al., 2012) have demonstrated the value of QCA in the exploration of relationships and possible patterns existing within large volumes of qualitative data. As identified in a previous study (Hogeling et al., 2021), fsQCA also provided an analytical framework that enabled the inclusion of approaches in our analysis.

When using fsQCA, however, we also encountered the crucial need to reflect on the various steps in the analysis and the findings based on our knowledge of the projects and programme. The qualitative nature of the findings may at some point seem to imply conclusions that are too straightforward or simplistic. This resonates with existing criticism of QCA, which argues that following any method in scientific research (including fsQCA)

can create excessively mechanistic practices (Kahwati & Kane, 2018). In light of the explorative nature of our research question and the depth of information beneath the actual fsQCA, however, all findings require cautious and precise interpretation.

As an alternative design, conducting a review of the project-specific evaluations might have provided more detailed information on the types and elements of the approaches included in the programme. This is similar to the procedure followed by Bagnall et al. (2019) in a systematic review of whole-systems approaches for complex public-health issues. Such a review would however not allow the comparison of combinations of approaches, which is one of the primary advantages of QCA. Future research could explore the combination of a systematic review with QCA (L. Kahwati et al., 2016) to conduct further investigation of the relative effectiveness of approaches in health promotion, either in combination or as separate approaches.

As a final note, this study was conducted during the last phase of the overall evaluation, thereby providing the authors with four years' worth of in-depth knowledge on the projects under study.

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Appendix 6.1 Projects, location (reference) and project titles

Case #	Location / reference	Project name
1	Meppel	De Geweldige Wijk
2	Enschede	Supporter van Elkaar
3	Zoetermeer A	Zoetermeer Samen Sterk & Gezond
4	Landelijk	Stress- en rookvrije zwangerschap
5	Zeeland	Ik ben het zat!
6	Hengelo	Gezonde Toekomst Dichterbij Hengelo
7	Helmond	Op eigen kracht naar een gezonde toekomst
8	Katwijk	Wijk in Beweging
9	Nieuw-Lekkerland	Gezond Nieuw-Lekkerland
10	Vaals	Vaals Ontmoet
11	Hoogezand Sappemeer	Blijvend Gezond en Sociaal Actief
12	Nijmegen	Samen Happie
13	Utrecht A	Laaggeletterheid is van gewicht - de huisarts helpt
14	Apeldoorn	Back2Balance
15	Geleen	Superfit
16	Tilburg/Rotterdam	Betere gezondheid voor Somalische en Afghaanse Nederlanders
17	Rotterdam A	Een integrale aanpak van armoede: meer ruimte voor stoppen met roken?
18	Rotterdam B	Grip & Gezondheid: een integrale aanpak van armoede
19	Amsterdam B	Een gezonde omgeving
20	Den Haag A	Wijkchallenge stoppen met roken: wie gaan de uitdaging aan?
21	Amsterdam A	Kids in Aktie
22	Amsterdam E	Family Project
23	Deventer	Voorstad beweegt
24	Ijsselmonde	Gezond in IJsselmonde
25	Rotterdam D	Goed bezig!
26	Wijchen	SameNoord
27	Goes	Goes Gezond, Samen in Beweging
28	Utrecht B	Nieuw Welgelegen zet gezinnen in hun kracht
29	Zaanstad	Gezond gewicht kansrijk in Zaanstad
30	Venlo	De wijk in topvorm
31	Amsterdam C	Fit @ Weekendacademie
32	Haarlem	Rookvrij Opgroeien Haarlem Oost
33	Nijmegen	Applied gaming voor een rookvrije generatie
34	Landelijk	Family Check-Up
35	Zoetermeer B	SAFER Pregnancy Study

36	Almere	Nieuwe wegen naar gezond leven in Almere Poort
37	Didam	Samen lekker lang leven
38	Leiden	Go Noord
39	Rotterdam E	KLIK Rotterdam
40	Tiel	Tiel aan de gezonde zijde
41	Eindhoven	KEIGAAF
42	Amsterdam D	Voorzorg verder
43	Amersfoort	PROMISE
44	Rotterdam C	Samen gezond eten en bewegen
45	Den Haag B	Voel Je Goed!

Appendix 6.2 Data files

Table 6.2.1 (calibrated) data for outcome weight status/physical activity.

case_num	lifestyle	comm_part	prof_prac	networks	type_1	type_2	phys
1	0	0.33	0.67	0.33	0	1	0
2	1	0.33	0	0.33	0	1	0.67
6	0.67	0	1	0.33	1	0	0.67
7	1	0.33	0.33	0.67	1	0	0.33
8	0.67	0.33	1	0.67	1	0	0
9	1	0.33	0.33	0.67	1	0	0.33
10	0.67	0.67	0.67	0.67	1	0	0.33
11	1	0	0.67	0.33	1	0	0.67
13	0	0.33	1	0.67	0	1	0
14	0.67	0.33	0.33	0	0	1	0.33
15	1	0	1	0.33	0	1	0.33
16	0.33	1	0	0	0	1	0.33
17	1	0	0.33	0	0	1	0
21	0.33	0.33	0.33	0.67	1	0	0.33
22	0.33	0.33	0.67	0.67	1	0	0.33
24	1	0.33	0	0	1	0	0.33
25	0.67	0.67	0.33	0.33	1	0	0.33
26	0.33	1	0.33	0.67	1	0	0
27	0.67	0.67	0	0	1	0	0.33
28	0	1	0.33	0.67	1	0	0.33
29	1	0.33	0.67	0.67	0	1	0.33
30	1	0	0	0	0	1	0.33
31	1	0	0	0	0	1	0.33
35	1	0.33	0.33	0	0	1	0.33
36	0.67	0.33	0	0.33	1	0	0.33
37	1	0.33	0.33	0.67	1	0	0.33
38	0.67	1	0.33	0.67	1	0	0.33
40	1	0.67	0.33	0.67	1	0	0.33
41	0.67	0.33	0	0.33	0	1	0
42	0.67	0.33	0.67	0	0	1	0.33
44	1	0.67	0.67	0.67	0	1	1
45	1	0.33	0.67	0.33	0	1	1

Table 6.2.2 (calibrated) data for outcome perceived health.

case_num	lifestyle	comm_part	prof_prac	networks	type_1	type_2	per_health
1	0	0.33	0.67	0.33	0	1	0.67
2	1	0.33	0	0.33	0	1	1
3	1	0	0.33	0.33	0	1	0.67
4	0	0.33	0	0	0	1	0
5	1	0	0.67	0.33	0	1	0.67
6	0.67	0	1	0.33	1	0	0.67
7	1	0.33	0.33	0.67	1	0	0.67
8	0.67	0.33	1	0.67	1	0	0
10	0.67	0.67	0.67	0.67	1	0	0.67
11	1	0	0.67	0.33	1	0	1
12	1	0.33	0.33	0	0	1	0.33
13	0	0.33	1	0.67	0	1	0
14	0.67	0.33	0.33	0	0	1	0.33
16	0.33	1	0	0	0	1	0.67
17	1	0	0.33	0	0	1	0.33
18	1	0.33	0.33	0.33	0	1	0.67
19	1	0.33	1	0	0	1	0
20	0.67	0.33	0.33	0.67	0	1	0.33
21	0.33	0.33	0.33	0.67	1	0	0.33
22	0.33	0.33	0.67	0.67	1	0	0.67
23	0.33	0.67	0.67	1	1	0	0.67
24	1	0.33	0	0	1	0	0.33
25	0.67	0.67	0.33	0.33	1	0	0.67
26	0.33	1	0.33	0.67	1	0	0.67
27	0.67	0.67	0	0	1	0	0.33
28	0	1	0.33	0.67	1	0	0.67
29	1	0.33	0.67	0.67	0	1	0.33
30	1	0	0	0	0	1	0.67
31	1	0	0	0	0	1	0.33
34	0.67	0	1	0	0	1	0.67
36	0.67	0.33	0	0.33	1	0	0.67
37	1	0.33	0.33	0.67	1	0	0.67
38	0.67	1	0.33	0.67	1	0	0.67
39	0.67	0.67	0	0.33	1	0	0.67
40	1	0.67	0.33	0.67	1	0	1

42	0.67	0.33	0.67	0	0	1	0.33
44	1	0.67	0.67	0.67	0	1	1
45	1	0.33	0.67	0.33	0	1	0.67

Table 6.2.3 Truth table for outcome weight/physical activity.

	Conditions								
Row #	lifestyle	comm_part	prof_prac	Networks	type_1	type_2	Consistency	Outcome value phys	Cases
1	1	1	1	1	0	1	1	1	Rotterdam (#44)
2	1	0	1	0	1	0	0.92	1	Hengelo (#6), Hoogezand-Sappemeer (#11)
3	1	0	0	0	1	0	0.85	1	IJsselmonde (#24), Almere (#36)
4	1	0	1	1	1	0	0.83	1	Katwijk (#8)
5	0	0	0	1	1	0	0.83	1	Amsterdam A (#21)
6	1	1	0	0	1	0	0.80	0	25, 27
7	1	0	1	1	0	1	0.80	0	29
8	1	1	0	1	1	0	0.78	0	10
9	1	0	0	1	1	0	0.76	0	7,9,37
10	1	1	1	1	1	0	0.75	0	10
11	1	0	1	0	0	1	0.72	0	15, 42, 45
12	0	0	1	1	1	0	0.71	0	22
13	0	1	0	1	1	0	0.70	0	26, 28
14	0	1	0	0	0	1	0.50	0	16
15	1	0	0	0	0	1	0.50	0	2, 14, 17, 30, 31, 35, 41
16	0	0	1	0	0	1	0.40	0	1
17	0	0	1	1	0	1	0	0	13

For each condition, 0 = absent, 1 = present. Abbreviations: [lifestyle]: project targets individual behaviour and attitudes. [comm_part]: project works via community engagement processes. [prof_prac]: projects work to tailor professional practices. [networks]: projects work to strengthen (professional) social networks of families. [phys]: Outcome indicator related to healthy diets, weight loss, healthier weight; waist size reduction; BMI reduction and (more) physical activity. For more detailed explanation of variables included, please see Table 6.1.

Table 6.2.4 Truth table for outcome perceived health.

	Conditions								
row #	lifestyle	comm_part	prof_prac	networks	type_1	type_2	consistency	Outcome value per_health	cases
1	1	0	0	1	1	0	1	1	Helmond (#7), Didam (#37)
2	0	1	0	1	1	0	1	1	Wijchen (#26), Utrecht B (#28)
3	1	1	0	1	1	0	1	1	Leiden (#38), Tiel (#40)
4	1	1	1	1	0	1	1	1	Rotterdam C (#44)
5	1	1	0	0	1	0	0,94	1	Rotterdam D (#25), Goes (#27), Rotterdam E (#39)
6	1	0	0	0	1	0	0,93	1	IJsselmonde (#24), Almere (#36)
7	1	0	1	0	1	0	0,92	1	Hengelo (#6), Hoogezand-Sappemeer (#11)
8	1	1	1	1	1	0	0,92	1	Vaals (#10)
9	0	1	1	1	1	0	0,90	1	Deventer (#23)
10	1	0	0	1	0	1	0,89	1	Den Haag A (#20)
11	0	0	1	1	1	0	0,88	1	Amsterdam E (#22)
12	0	0	0	1	1	0	0,87	1	Amsterdam A (#21)
13	1	0	1	1	0	1	0,87	1	Zaanstad (#29)
14	0	1	0	0	0	1	0,86	1	Tilburg/Rotterdam (#16)
15	0	0	1	0	0	1	0,86	1	Meppel (#1)
16	1	0	1	1	1	0	0,83	1	Katwijk (#8)
17	1	0	1	0	0	1	0,82	1	Zeeland (#5), Amsterdam B (#19), Nationwide (#34), Amsterdam D (#42), Den Haag B (#45)
18	1	0	0	0	0	1	0,75	0	#2, #3, #12, #14, #17, #18, #30, #31
19	0	0	0	0	0	1	0,66	0	#4
20	0	0	1	1	0	1	0,50	0	#13

For each condition, 0 = absent, 1 = present. Abbreviations: [lifestyle]: project targets individual behaviour and attitudes. [comm_part]: project works via community engagement processes. [prof_prac]: projects work to tailor professional practices. [networks]: projects work to strengthen (professional) social networks of families. [per_health]: Outcome indicator related to Feelings of health, including all dimensions of health, or wellbeing. for more detailed explanation of variables included, please see Table 6.1.

Chapter 7

General Discussion

7.1 Introduction

The central aim of the studies in this thesis is as follows: *to generate insight into the effectiveness of and mechanisms at play in various approaches to health promotion for families experiencing vulnerability.* In this general discussion I reflect on how these thesis studies contribute to this objective. The overall evaluation of the Healthy Futures Nearby (HFN) programme was conducted by a research consortium, as explained in Chapter 1. A final evaluation report on the overall evaluation was published in 2020 (Vaandrager et al., 2020). The studies collected in this thesis contributed to the overall evaluation by using multiple perspectives - both explorative and in-depth - on the evaluation of multi-project health promotion programmes. This thesis is therefore both a part of and an in-depth addition to the overall evaluation.

Based on (a) our understanding of the main objective of the HFN programme, questions and principles as described in Chapter 1, (b) an explorative study on strategies and underlying assumptions (Chapter 3); and (c) existing literature on reducing health inequalities amongst families experiencing vulnerability, we identified knowledge gaps and more in depth research opportunities. While designing and conducting the research, we were guided by three design principles: (1) the overall evaluation of the HFN programme in itself, including the project-specific evaluations each project was to conduct, should offer a wealth of useful information for in-depth study; (2) our investigations should respect the plans and priorities of the programme and each individual project; and (3) the planned and any additional research load of our investigations for projects and individuals should be minimized as much as possible. The main research questions addressed in this thesis are as follows:

1. Which interpretations of effective ways to promote change in health-related behaviours and to improve perceived health amongst families experiencing vulnerability exist within the HFN programme?

2. What works and how (and what does work not and why) regarding community engagement for health promotion amongst families experiencing vulnerability?

3. Which mechanisms play a role in the involvement of professionals during the implementation of health-promotion initiatives for families experiencing vulnerability?

4. Which approaches — community engagement/participation, change in professional practices, neighbourhood networks and a behavioural approach — or combinations of approaches could contribute to improvements in the perceived health and/or weight or activity status of families experiencing vulnerability?

The combined findings on each of these research questions and the experiences and challenges encountered during the overall evaluation of the HFN programme are also used to reflect on the process of conducting such an evaluation within a context of complexity. The research questions provided guidance for the investigations included in this thesis. I begin this chapter with a summary of the findings of all studies included in this thesis (Section 7.2) as presented in each chapter (2-6) followed by an integrated discussion of the main findings in Section 7.3, in which I answer the four research questions. I then present methodological and other reflections (Sections 7.4-7.5), along with the implications of the investigation for future research, policy and health-promotion practice (Section 7.6). Section 7.7 includes concluding remarks.

7.2 Summary of main findings

In this section, I describe the main findings for each research question and objective, according to their respective chapters. A summary of the research objectives and questions, methods and main findings of each chapter is presented in Table 7.1.

Chapter 2 outlines and justifies the protocol for the overall evaluation of the HFN programme. In turn, the overall evaluation (which was commissioned by the FNO) was intended to determine the extent to which the small-scale projects and approaches within the programme did (or did not) affect health-related behaviours and improve perceived health, as well as how they did this (or why they did not). The framework for the design of the overall evaluation included the requirements of funders (e.g. regarding the inclusion of outcome measures for each individual project withing the program me). The protocol for the overall evaluation was also shaped by the persistent prevalence of health inequalities in the Netherlands and the ways in which these inequalities are embedded within a context of complexity. We aimed to do justice to the complexity of the topic by designing an evaluation that builds on three models: theory-based evaluation, realist-informed in-depth studies and the use of mixed methods. The methods applied in the overall evaluation were qualitative comparative analysis of evaluative project data; various forms of document analysis; focus groups and group interviews, as well as telephone interviews with project leaders. The resulting design of the evaluation protocol

included at least four different research parts: (1) building and defining theories of change in the practice of health promotion; (2) mechanisms at work in the promotion of healthy behaviour amongst families experiencing vulnerability; (3) what works and what does not work in the practices of professionals with regard to the promotion of health amongst this target group; and (4) what works and what does not work in health-promotion projects involving a participatory approach.

The study presented in **Chapter 3** pursues two objectives. First, it was intended to provide a theoretical base to complement the evaluation framework (as described in the protocol in Chapter 2). Second, this theoretical base was intended to guide the in-depth investigations that were to constitute the studies included in this thesis. Identifying strategies and assumptions that are perceived as relevant by local project stakeholders provided information on what health promotion for families experiencing vulnerability should look like in practice. Information from 46 semi-structured group interviews with local project stakeholders and project staff following the *Effectenarena* method (J. Deuten & Aedes, 2009) yielded insight into explicit and implicit assumptions about effective health-promotion approaches for achieving change in health-related behaviour and perceived health. Amongst all projects in the HFN programme, we identified five main, non-exclusive clusters of assumptions concerning what works for families experiencing vulnerability: (1) strategies of offering families pre-defined activities relating to health (and health behaviour); (2) active involvement of families experiencing vulnerability in the initiative; (3) assumptions about how health promotion should start with or include non-health-related topics; (4) assumptions about how to build on what already exists within the local context of the families; and (5) assumptions about the role of health professionals in health promotion amongst families experiencing vulnerability. These clusters and the underlying assumptions were translated into topics for further investigations in subsequent chapters.

'Active involvement of families experiencing vulnerability in the initiative' is one of the main strategies identified amongst the projects of the HFN Programme. For this reason, **Chapter 4** includes an in-depth multiple-case study of community engagement in health promotion for families experiencing vulnerability. For our case families, definitions of beneficiary engagement vary widely, as is also the case for the similar concepts of participation and involvement. Despite a substantial volume of research on the topic of engagement in health-promotion interventions in recent decades, considerable uncertainty remains with regard to how and for whom such participation works, as well as to how, when and for whom it does not work. This was the main objective of the multiple-

case study. From the 46 projects, a selection was made of three small-scale health-promotion projects involving the implementation of community engagements (or elements thereof) amongst families experiencing vulnerability. The study design combined a realist approach with a Theory of Change (ToC) model. Data were collected in three rounds of group interviews: I–using the *Effectenarena* method (J. Deuten & Aedes, 2009); II–using the Timeline method (Adriansen, 2012; Herens, Wagemakers, Vaandrager, van Ophem, & Koelen, 2017); III–using a semi-structured interview guide, telephone interviews with project leaders and project-specific progress reports. Following an initial inductive analysis and discussions to identify the ToC, a thematic deductive analysis was conducted to identify context-mechanism-outcome (CMO) configurations to refine this ToC. The results indicate that community engagement can strengthen social networks, empower families and increase perceived health. Within some contexts, however, community-engagement project approaches may or may not trigger positive responses. Within other contexts (e.g. the presence of many stressors in personal lives and a history of experiences with community or municipal workers) CE can lead to distrust and other negative responses. Contexts that generate positive mechanisms include supportive lived experiences on the part of empowered participants. Flexibility in ambitions and the implementation of community also appear to be crucial to success.

Similar to the previous chapter, the study presented in **Chapter 5** focuses on one of the identified main health-promotion strategies for families experiencing vulnerability: the role of the professional in such projects. More specifically, in a realist-inspired multiple-case study, the 'case' under investigation consisted of the mechanisms at play amongst health professionals involved in the implementation of health promotion for families experiencing vulnerability. Such involvement often called for the customisation of professional practices to the needs of project beneficiaries. Comparable to the design of the previous study, this process included two steps: constructing an initial programme theory and identifying context-mechanism-outcome configurations to refine the initial theory. This yielded in-depth insight into the mechanisms amongst professionals. According to main findings of this study, initial assumptions about professional involvement often differ from reality. The analysis revealed multiple, often hidden mechanisms amongst professionals, including feeling inspired and experiencing freedom to learn. Based on our findings, I argue for better visibility and recognition of the contribution of professionals to the design of future health-promotion projects for families experiencing vulnerability.

Chapter 6 reports on an exploration of whether the main approaches identified in Chapter 3—community engagement/participation, changes in professional practices, neighbourhood networks and a behavioural approach—or combinations of these approaches can contribute to improvements in the perceived health and/or weight or activity status of families experiencing vulnerability. Such explorations can provide insight into the causal (or associative) relationships between specific health-promotion project approaches and health outcomes. Fuzzy-set qualitative comparative analysis (fsQCA) was performed using (for each project), data from (1) three group interviews with project stakeholders, (2) three telephone interviews with project leaders and (3) written progress and project-specific evaluation reports made available by project leaders. Based on programme and funding structures, additional 'factors' were included in the fsQCA concerning whether projects did or did not include funding for a preparatory phase. The results indicate that, when designing health-promotion initiatives for families experiencing vulnerability, no single approach (of those included) alone is sufficient to achieve change in the perceived health and/or weight or activity status of families experiencing vulnerability. One important conclusion is nevertheless that the different approaches may all *contribute* to positive changes in health.

Table 7.1 Research questions and objectives, methods and main findings of each chapter.

Chapter	Research objectives, methods and main findings
2	**Objective:** To outline and justify the protocol for the overall evaluation of the programme. The evaluation was intended to identify the extent to which and how the small-scale projects and approaches within the programme did or did not affect health-related behaviours and improve perceived health. **Methods:** The approach to the overall evaluation of the 46 projects builds on a combination of three frequently used evaluation models: it is theory-based, realist-informed and uses a mixed methodology design. Methods include analysis of quantitative project data, document analysis, focus groups and interviews. **Main findings:** This study protocol included the design of at least four different studies. The results thus provide information on (1) building and defining theories of change in health-promotion practice; (2) mechanisms at work in the promotion of healthy behaviour amongst families experiencing vulnerability; (3) what works and what does not work in the practices of professionals with regard to health promotion amongst this target group; and

	(4) what works and what does not work in health-promotion projects involving a participatory approach.
3	1. <u>Which interpretations of effective ways to promote change in health-related behaviours and improve perceived health amongst families experiencing vulnerability exist within the HFN programme?</u>
	Objective: To provide input for the development of a programme theory that can serve as a framework for the overall evaluation of the HFN programme, and to determine the interpretations of each project and how they translate into relevant inputs for the overall evaluation of the programme. **Methods:** Based on 46 semi-structured group interviews with local project stakeholders, we produced a list of assumptions about what health promotion for families experiencing vulnerability should look like. **Main findings:** We identified five main clusters of assumptions about what works for families experiencing vulnerability: (1) strategies of offering families pre-defined activities relating to health (and health behaviour); (2) active involvement of families experiencing vulnerability in the initiative,; (3) assumptions about how health promotion should start with or include non-health-related topics; (4) assumptions about how to build on what already exists within the local context of the families; and (5) assumptions about the role of health professionals in health promotion amongst families experiencing vulnerability.
4	2. <u>What works and how (and what does not work and why) regarding community engagement for health promotion amongst families experiencing vulnerability?</u>
	Objective. Provide in-depth insights into the workings and outcomes of community engagement (CE) in health promotion for families in vulnerable situations. **Methods**. A realist multiple case study, using data from three small scale health promotion projects implementing CE or CE elements among families in vulnerable situations. **Main findings**. Many different mechanisms were identified in CE for health promotion among families experiencing vulnerability. Amongst these mechanisms, many relate to 'making a contribution' and to group dynamics or peer (group) support. Furthermore, I found that (1) tailoring CE and (2) flexibility in time and the

	intensity of CE are important for effectiveness for families experiencing vulnerability. With regard to outcomes, CE can strengthen social networks, empower families and increase perceived health. In other words, our findings show that CE can contribute to improving mental and social health. I did not find evidence in this study for improvements in physical health. Some results do suggest that improvements in physical health due to CE may be possible in the long term. Specific contexts in combination with CE project approaches and elements may or may not trigger positive responses. For instance, while the responsibilities put on participants led to enthusiasm and flourishing in one context, the same tasks triggered stress and drop-out in another context.
5	3. Which mechanisms play a role in the involvement of professionals during the implementation of health-promotion initiatives for families experiencing vulnerability?
	Objective: To provide insight into the mechanisms at play amongst professionals involved in the implementation of health promotion for families experiencing vulnerability. **Methods:** This is a realist multi-site case study. Data were collected through telephone and group interviews, along with monitoring and evaluation reports from two small-scale health-promotion projects in the Netherlands, funded by the FNO Healthy Futures Nearby programme. **Main findings:** Construction of an initial programme theory and identification of context-(intervention)-mechanism-outcome C(I)MO configurations yielded valuable insights. A comprehensive initial programme theory highlighted the many changes professionals are assumed to undertake in various roles and practices relating to health promotion. The results also demonstrate that initial assumptions about involvement often differ from reality. The second analysis identified multiple, often hidden mechanisms amongst professionals (e.g. feeling inspired and experiencing freedom to learn). Most, but not all of the C(I)MOs were positive. I also found professionals who felt less involved due to the unstable involvement of others. Based on our findings, I argue for greater visibility and recognition of the contribution of professionals to the design of future health-promotion projects for families experiencing vulnerability.

6	4. Which approaches—community engagement/participation, change in professional practices, neighbourhood networks and a behavioural approach—or combinations of approaches could contribute to improvements in the perceived health and/or weight or activity status of families experiencing vulnerability?
	Objective: To identify and explore the causal (or associative) relationships between specific health-promotion project approaches (as identified in a previous study; see Chapter 3) and health outcomes. **Methods:** A fuzzy set qualitative comparative analysis (FsQCA) was conducted using data from 46 projects. For each project, data were available from (1) three group interviews with project stakeholders, (2) three telephone interviews with projects leaders and (3) written progress and project-specific evaluation reports made available by project leaders. The outcomes included in the FsQCA were 'weight-related health indicators' and 'perceived health'. Conditions included were the four approaches: encouraging community participation, changes in professional practices, strengthening networks and promoting lifestyle changes. Additional conditions were: (1) projects that included funding for a preparatory phase and an implementation phase; and (2) projects that included funding only for the implementation phase. **Main findings:** When designing health-promotion initiatives for families experiencing vulnerability, no single approach alone will be sufficient to achieve change. All the various approaches may nevertheless contribute to positive changes in health.

7.3 Integration of findings

The focus of this thesis is bi-directional. To answer Research Questions 1–4, in-depth processes and mechanisms were investigated in relation to promoting health-related behaviours and improving the perceived health of families experiencing vulnerability. Two additional topics reflected upon in Section 8.6 (Methodological reflection) are the search for a suitable evaluation design for the evaluation of a multi-project programme, as well as the experiences and challenges encountered during the evaluation. The answers to each research question are discussed below.

Research question 1. Which interpretations of effective ways to promote change in health-related behaviours and to improve perceived health amongst families experiencing vulnerability exist within the HFN programme?

The evaluation of health-related multi-project programmes is often based on outcomes and strategies defined by funders. Within the specific context of the HFN programme, however, the implementation, outcomes and project strategies are also shaped by local knowledge and experiences. Ideas that are present in local communities, either explicitly or implicitly, also contribute to the design, implementation and evaluation of projects. It is thus crucial to ensure that evaluation outcomes reflect both the funder-defined framework and the local interpretations of 'what works'. Ignoring such local interpretations could result in more contingencies (whether actual or perceived): processes and outcomes that were not predicted by the theories and project designs of funders. Careful identification of as many 'theories' as possible at the start of a project could provide a more solid basis for evaluation, taking into account alternative implementation routes, as well as challenges and multiple outcomes.

Theory-based evaluation (Birckmayer & Weiss, 2000; Weiss, 1997) could facilitate the inclusion of a variety of interpretations/ideas in the evaluation by intentionally trying to identify the assumptions existing within a programme or project with regard to strategies, relationships and outcomes. Given the known fluidity and widely discussed notions of 'what is health' and 'what should health promotion look like' within the context of different individuals and groups (Huber et al., 2011; Leonardi, 2018), programmes aiming to promote health are likely to benefit substantially from the creation of a project-specific, inclusive evaluation theory. Such a theory should also entail considering assumptions from different stakeholders (or groups of stakeholders) in the project, including beneficiaries.

As mentioned before, we identified five main interpretations of health promotion theory in the projects of the HFN Programme. I will further discuss these interpretations below. It should be noted that they are not mutually-exclusive; a project may have for instance combined pre-defined health behaviour related activities with ideas about the role of (health) professionals.

Pre-defined activities relating to health (and health behaviour)

On a more general note, the main findings of the study on the identification of approaches (Chapter 3) indicate that the projects were ambitious in terms of both their goals and their strategies. Based on the objectives of the programme—to create approaches that would lead to changes in health-related behaviours—and notions on the inclusion of health-related skills and the physical and social environments of the families, many projects defined outcomes at the behavioural level (e.g. families changing their diets and/or physical activity levels, quit smoking or reduce alcohol intake). The approaches actually applied in the projects thus often included strategies and/or activities aimed directly at changing behaviour, in addition to including elements relating to the other notions mentioned in the programme's call for participation (e.g. participant involvement, the physical and social environments of the families). The application of an approach that includes multiple elements (e.g. teaching individual health-related skills combined with making adjustments to the physical and social environments of children) was also one of the suggestions mentioned in a preparatory review study commissioned by the FNO (Beenackers, Nusselder, Oude Groeniger, & Van Lenthe, 2015). Within the scope of a four-year programme, the setting of such health-related project outcomes could be called ambitious at the very least. Although many researchers have studied the health-related effects of various health-promotion efforts in past decades, evidence that such efforts, for example preventive interventions (M. Busch & Van der Lucht, 2012) lead to long-term change in health-related behaviour remains thin. Moreover, some have mentioned the difficulties that are inherently associated with reaching families experiencing vulnerability (Beenackers et al., 2015; Horowitz, Ladden, & Moriarty, 2002; Morris, 2013). The ambitious challenges facing the HFN projects are reflected in the combination of a target group that is known to be extremely challenging to access (Morris, 2013; Pote et al., 2019) with an approach involving multiple strategies and defining outcomes that are directly related to health for evaluation.

When discussing the ambitious challenges that these projects set for themselves in their proposals and strategies, it is important to note that the project proposals were examined

by a committee organised by the funder to decide upon the funding of the project. The call for proposals (FNO, 2015b) clearly states the assumed outcomes and conditions for the projects to be financed under the umbrella of the HFN programme. Although the calls were considered relatively flexible in terms of strict funding requirements (as compared to other funding organisations), they nevertheless included a substantive framework of ideas, approaches, outcomes and conditions that projects were expected to consider.

The notion that health-related behaviour can shape health, and that promoting behaviour change is a crucial point of entry for health promotion is widespread (Bull et al., 2020), including in the Netherlands (Kraaykamp, André, & Meuleman, 2018). There is nevertheless little clear evidence that behaviour-change approaches to health promotion effectively lead to improvements in health (Baum & Fisher, 2014; Laverack, 2017). Health-related behaviour was also one of the main elements in the set-up of the HFN programme, as reflected in the objective to implement interventions that would lead to healthier weight, less smoking and less use of alcohol (FNO, 2015b). This goal seems logical, in a time and place where the most obvious health related-behaviours (e.g. smoking, physical activity, alcohol use and diet) have been linked to non-communicable diseases, which are also counted amongst the leading causes of death (Traag & Hoogenboezem, 2021). The presence of socioeconomic inequalities in terms of these health-related behaviours provide further justification for the objective (Oude Groeniger, 2019): both risky behaviours and non-communicable diseases are more prevalent amongst people experiencing vulnerability. In the Netherlands, health policy and funding institutions have recently begun to emphasise the value of using evidence-based interventions (EBIs) (Boer et al., 2022; Kraaykamp et al., 2018). An online database of evidence-based health interventions (RIVM, 2023) has been established to facilitate health workers in the search for such EBIs. Such interventions often include pre-defined activities customised to a specific target group. Not surprisingly, a substantial number of projects include behaviour-related activities, in many cases, pre-defined. In addition, many of the projects translated the FNO's objective to reduce overweight into pre-defined activities for families relating to diet and physical activity. Parallel to the HFN programme's focus on health-related behaviours, the call for proposals mentioned elements from the socio-ecological approach (Bronfenbrenner, 1992; McLeroy, Bibeau, Steckler, & Glanz, 1988; Wold & Mittelmark, 2018). In other words, it stated that projects should ideally apply an 'integrated' approach, thus focusing on both behavioural aspects and factors in the social and physical environments of families. The outcomes were nevertheless specified at the individual, behavioural level and in terms of perceived health. The discrepancy between a combined

focus on wider social determinants of health with assumed outcomes on health-related behaviour at the individual level resonates with what is known as 'lifestyle drift' in policymaking: 'the tendency for policy to start off recognizing the need for action on upstream social determinants of health only to shift downstream to focus largely on lifestyle factors' (Popay, Whitehead, & Hunter, 2010; Rod et al., 2023).

Actively involving families

A second approach to health promotion for families experiencing vulnerability is identified in Chapter 3: the active involvement of families and/or family members in the initiatives. In addition to being in line with the requirements of the HFN programme (FNO, 2015b), such engagement in health promotion resonates with the 2020 WHO action plan on community engagement for universal health coverage (WHO, 2020). According to the WHO, universal health coverage includes "taking steps towards equity, development priorities, as well as social inclusion and cohesion" (WHO, 2020, p. 1). It is thus highly relevant to the promotion of health amongst people experiencing vulnerability. For the sake of clarity, involvement was defined in the study in Chapter 3 as anything beyond basic participation in project activities. Three 'types' of involvement could then be distinguished from this cluster of assumptions: (1) following family-defined priorities in the design and organisation of activities by the project team; (2) various forms of the involvement of family members in the design, organisation and/or execution of activities; and (3) the recruitment and training of volunteers from the target population (often known as 'ambassadors'). Brunton et al. (2017) provide a comprehensive overview of the many dimensions of beneficiary engagement, including as part of the intervention's main strategy, as a supporting yet non-crucial activity or according to hierarchical levels of engagement. All three types of involvement identified in Chapter 3 resonate with existing models of community engagement.

In addition to a focus on behavioural outcomes and perceived health, the HFN programme required projects to adopt a community-participatory and/or integral approach. The awards for 20 projects included funding for an additional preparatory phase. The reasoning for funding this phase specifically for projects focusing on a clearly defined geographical area was that the needs and health risks of families experiencing vulnerability should be known before an effective health-promotion approach could be designed (FNO, 2015b). In addition, project proposals for the preparatory phase were to be developed in cooperation with beneficiary communities (or representatives thereof).

Such requirements may have promoted the use of participatory elements in the design of the projects. This could explain the identification of many assumptions about the participation of family members in line with the requirements of funders.

Start with or include non-health related topics

Translated as 'first things first', a third project approach identified in Chapter 3 is based on the notion that priority should be assigned to resolving issues that are not directly related to health. Such issues could include debt and other financial problems, as well as housing issues and unemployment. In the literature, these factors are often referred to as 'social determinants of health' (WHO Commission on Social Determinants of Health, 2008) or the 'causes of the causes' (Braveman & Gottlieb, 2014) of health inequities.

This approach also incorporates a focus on resolving issues related to social and mental health, instead of physical health, such as stress, loneliness and social isolation. Finally, projects using this approach might implement a positive perspective in health promotion by taking talents, dreams and fun as a starting point. This resonates with the principles of positive psychology (Gable & Haidt, 2005), as well as with the concept of positive health in the Netherlands (Huber, 2013). The focus on strengths and talents also corresponds to an asset-based approach (Morgan, 2014). Projects applying this perspective often refer to changes in health-related behaviour as a long-term outcome. It is important to note, however, that none of the approaches identified is exclusive. Projects often included multiple approaches, such that none of the projects would focus solely on non-health-related topics.

Building on what already exists

Most projects (42 out of 46) in the study presented in Chapter 3 reflected assumptions about using or strengthening professional networks, facilities and organisations already existing within the community. Clustering these assumptions led to the identification of an approach labelled as 'building on what already exists'. In this approach, proposed project activities are often embedded in schools, (neighbourhood) community centres, health centres or similar facilities. The inclusion of existing services, structures and institutions resonates with the socio-ecological model of health promotion (Wold & Mittelmark, 2018).

The role of (health) professionals

The programme text for the HFN programme (FNO, 2015a, 2015b) contains many references to the importance of involvement on the part of professionals in the project proposals for health- promotion interventions. These roles include that of a necessary partner in the development of the proposals and the interventions or activities. Professionals are also mentioned as crucial contributors to the implementation of projects. Moreover, the guidelines called for the involvement of different types of professionals in the projects: municipal workers, health (and healthcare) professionals, local or neighbourhood community workers, and professionals from other sectors (e.g. from schools and housing organisations). The programme text (FNO, 2015b) mentions several ways in which professionals could be involved, including as ambassadors or key figures for the projects and interventions in their network; as contributors to the design and implementation of the projects; and as beneficiaries of activities aimed at improving competences.

The findings on the involvement of professionals from the study presented in Chapter 3 are in line with the assumptions of the programmes. More than half of the project proposals stated concrete assumptions about having professionals contribute to their projects. The assumed involvement of professionals relates to training (e.g. in courses, on the job, through experience) as well as to the role of professionals as key figures within the local or community network. Most, but not all proposals involving strategies concerning health-related outcomes amongst families experiencing vulnerability were based on theoretical frameworks or models of change, although they remained much more implicit than other foundations. The holistic nature of the programme, which adopts an integrated systems approach, is clearly reflected in the programme text, and it is subsequently found in many of the project proposals. Whereas strategies for change amongst families are often at the core of project assumptions, however, strategies for the crucial involvement of professionals are apparently much less likely to be based on theory. This observation raises questions concerning how the involvement of professionals in the promotion of health amongst families experiencing vulnerability actually works (see the findings reported in Chapter 3).

Research question 2. What works and how (and what does not work and why) regarding community engagement for health promotion amongst families experiencing vulnerability?

Our key findings indicate that engagement for health promotion 'works' when such involvement is (1) customised, (2) flexible and (3) includes a focus on universal (or specific) mechanisms. These three findings about working engagement in health-promotion interventions are discussed further below. Data from three projects provided the in-depth CIMO configurations concerning how and when community engagement worked in the interventions. The projects varied in terms of the type of community or participant engagement and design, thereby generating a rich array of CIMO configurations.

Customisation

One of the main findings in the study on the active engagement of families or members was that, for each individual, engagement triggered positive feelings when it met the needs of the individual. These needs were apparently shaped by the various dimensions of context and its cultural, historical, geographical and personal elements. Contextual elements include existing distrust based on previous experiences with community services, perceived lack of support, perceived lack of social connectedness or loneliness (e.g. 'no one else is like me/in the same situation'), and personal and family circumstances all played a crucial role in the ways in which project activities were received. Positive reactions were observed amongst participants when they were asked to serve coffee to fellow participants as a main responsibility. Others were quite pleased to take on the responsibility of initiating and/or leading complete community-centred activities (e.g. organising swimming lessons or becoming a sports instructor for others). These findings suggest that the design of engagement-related initiatives in health promotion should allow sufficient room to customise opportunities for participation to the individual needs of the future participants, including the need to work on recovery first. This means that project designs should include measures for identifying such needs and the detailed context within which the project will operate.

In a rapid realist review, De Weger, Van Vooren, Luijkx, Baan, and Drewes (2018) identify eight action-oriented principles for community engagement in health and care services. Although the authors do not explicitly mention the *customisation* of community engagement as described above, three of their principles clearly relate to the concept of customisation: 'acknowledge and address citizens' experiences of power imbalances

between citizens and professionals (…); invest in citizens who feel they lack the skills and confidence to engage (…); take into account both citizens' and organisations' motivations' (De Weger et al., 2018, pp. 6-15). The review on the role of community engagement in improving the health of disadvantaged populations conducted by Cyril, Smith, Possamai-Inesedy, and Renzaho (2015) is not a realist review, and it thus provides a list of effective components of community engagement. In other words, it describes what interventions should look like, instead of the mechanisms or principles of community engagement (i.e. how the intervention works, or is assumed to work). The authors nevertheless report that customisation is important, as reflected in their conclusion that identifying the needs of specific culturally diverse and tribal communities during the preparatory phase leads to positive outcomes of community engagement (Cyril et al., 2015). Examples of needs identified in the review include a 'lack of childcare' (Bender, Nader, Kennedy, & Gahagan, 2013) and 'traditional beliefs preventing healthcare utilisation' (Tripathy et al., 2010) which directly resonate with similar contextual influences observed amongst participants in several HFN projects (Vaandrager et al., 2020).

Flexibility

As a key principle of community engagement, flexibility relates both to the form of community engagement (described above as customisation to specific contexts) and to changes in community engagement over time. Within this context, time refers primarily to *project time*. The participants' needs for support from professionals may vary from more intense during the preparatory and starting phases of a project (e.g. to set up structures, as for a working group) to less intensive support in later phases of the intervention. Depending on the project's activities, professionals may need to take a step back at some point (e.g. to allow for the operation of positive group dynamics in community engagement; see Chapter 5). All cases involved in our study indicated that support should be flexible in terms of time, depending on project activities and, as always, context.

Flexibility in time also refers to *participant time*. While the responsibilities of participants as assumed by participatory project designs vary over the course of specific projects, individual participants may also have varying needs with regard to the type and intensity of participation over time. Data from one of the projects in the multiple-case study presented in Chapter 4 provide clear evidence of the importance of considering participant time. Some participants 'flourished' when directly assuming responsibilities for initiating and organising activities in the working group of a project, while simultaneously providing peer support to other participants. At the same time, other participants in the

same working group structure were overwhelmed by the same responsibilities, as they felt pressured by the combination of these responsibilities and their private lives. In another project, administrative tasks crucial to the organisation and implementation of activities acted as drivers for enthusiastic participation for some participants, while leading to frustration for other participants.

Our findings further demonstrate that flexibility in and customisation of community engagement are not one-way, hierarchical concepts. The type and intensity of 'successful' participation can vary in time, not necessarily starting 'low' and leading to more intense or different types of participation. Both flexibility in and customisation of participation can mean that 'merely' serving coffee is what a specific individual participant might need in order to realise the benefits of participation. Our findings concerning the need for flexibility and customisation in participatory health promotion are in line with those of recent studies. Other authors have argued for similar types of flexibility (e.g. with regard to creating effective processes in peer support; see (MacNeil & Mead, 2005). Within the context of family-health promotion, Kuchler, Rauscher, Rangnow, and Quilling (2022) highlight the need to have 'regular checks on how decision-making powers and responsibilities can be transferred to them and whether the opportunities for participation are being fully maximized' (Kuchler et al., 2022, p. 14).

Participation is a widely used but highly debated concept within the context of health promotion (Marent, Forster, & Nowak, 2012). Contrary to Cyril et al. (2015), whose findings are framed as 'levels' of community engagement (ranging from low to high), the findings reported in this thesis suggest that it may be more helpful to use non-hierarchical frames to investigate community engagement. More specifically, 'high' levels and types of engagement may not constitute an essential strategy for all individuals and communities. Our findings question the use of models—specifically for the design of future health-promotion interventions—that appear to suggest that high levels and intense forms of participation are the ultimate goal. Such models offer valuable typologies of participation, going back to Arnstein (1969) ladder of participation. They can also visualise urgent topics in participation, including attention to power balances (and imbalances; see (Arnstein, 1969) and the incorporation of human and child rights in principles for participatory health promotion (Shier, 2001). At the same time, however, the specific use of typologies and models of participation in the design of health-promotion interventions may push future projects to adopt a one-size-fits-all approach to participation. With further encouragement by policies and funding agencies to include a participatory approach in

proposals, higher levels of beneficiary participation may be assumed to benefit all parties involved in proposals.

Mechanisms

In an in-depth realist-inspired study, I identified many mechanisms that shape how the involvement of families experiencing vulnerability do or do not work within specific contexts. Positive mechanisms include the following: *feeling that one has something to contribute; being motivated; feeling responsible; experiencing learning; experiencing self-esteem; discovering talents/value/how one can contribute; feeling able to make a tangible contribution; discovering how to change 'roles' in a community/situation; learning how others manage (in similar situations); experiencing the value of one's own talents and experiences; feeling appreciated; feeling recognised for one's contributions; feeling that one has achieved something/experiencing success; no longer needing the support of the project; feeling that one has something of value to contribute; feeling able to take control over one's personal/life circumstances; experiencing support; feeling a shared responsibility; feeling energised; experiencing that one is able to help others; being aware of having valuable knowledge and experiences; experiencing a larger social network; feeling worthy; experiencing possibilities for taking up new initiatives; and feeling confident*. In contrast, projects may trigger more negative reactions within certain contexts. I identified the following negative mechanisms: *feeling frustrated; feeling powerless or unequipped; not feeling responsible/involved; not feeling energized; feeling short of time; feeling short of 'room (time/energy)' for involvement; feeling a need to constantly prioritise stressors (over involvement); experiencing a lack of support (e.g. 'what is offered does not fit my needs'); feeling overwhelmed (by responsibilities); and feeling ill equipped to contribute.*

Upon closer examination, many of these mechanisms seem to revolve around 'making a contribution'. Projects *enabled* participants to: (1) discover their talents and the value of their personal (lived) experiences and knowledge; (2) make a contribution that felt valuable and/or tangible for themselves; (3) feel recognised, seen and appreciated by others for the contributions they made; and (4) learn about new talents and skills, as well as about taking on new roles and sharing knowledge with others. In the literature, the concept of 'making a contribution' has been studied predominantly in relation to mental health. In its first report on the promotion of mental health, the WHO defines health as 'a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a

contribution to his or her community' (World Health Organization, 2004, p. 12). Despite later criticism of this definition, the concept of making a contribution remains a valuable topic for further research. Keyes (2014) identifies three components of mental health: social well-being, emotional well-being and psychological well-being. Social well-being refers to positive functioning and includes making a contribution to society. Other scholars have linked making a social contribution to attitudes regarding health (Miller & Iris, 2002), and yet others have investigated the concept for minorities (Paloma, Herrera, & García-Ramírez, 2009), the elderly (Thanakwang, Soonthorndhada, & Mongkolprasoet, 2012) and other specific groups. Whether defined as a part of health in general (Barry, 2019; Saxena, Funk, & Chisholm, 2013) or solely as an element of mental health, it is clear that making a contribution to society is an important element in health and health promotion. Our findings contribute to this body of evidence, adding the notion that 'making a contribution' can be a crucial principle in effective (participatory) health promotion.

In addition to 'making a contribution', our findings point to the concept of 'lived experience'. Contributions to health promotion (and health-related research) or healthcare from individuals with lived experience is an approach that has recently been gaining more attention (Raphael, 2000; Vojtila, Ashfaq, Ampofo, Dawson, & Selby, 2021). Lived experience refers to the ways in which people live through and respond to concrete, specific moments in their lives (Van Manen, 2023). Studies on lived experience have focused on what people with such experiences can contribute to health-promotion research and interventions (Frechette, Bitzas, Aubry, Kilpatrick, & Lavoie-Tremblay, 2020; Gregorio Jr, 2012; Smales et al., 2020; Yoosefi lebni, Ziapour, Khosravi, & Rahimi khalifeh kandi, 2021). Other studies have focused on the positive effects realised by those who share their own lived experiences, including empowerment (Alexander, Shareck, & Glenn, 2023; Vargas et al., 2023), strengthened social connections (Vargas et al., 2023) and sense of identity and belonging (Norton & Sliep, 2018). The findings reported in Chapter 4 are in line with these studies on lived experience for those who possess such experiences. Our findings also add depth to the empowerment that sharing and using such lived experience can bring, for instance discovering the value of one's own experiential knowledge and feeling recognised and appreciated by others for sharing these experiences.

Being offered activities or support in a group (in many cases, consisting of people in similar situations) can trigger both positive and negative mechanisms in family members. In our cases, being in a group of peers enabled participants to experience support, to discover

the value of their own experiences, and to experience their ability to support others. It also allowed them to see how others manage in disadvantaged conditions, for example to take control over personal circumstances, organise activities and day-to-day work, and school for themselves and/or children. These mechanisms echo what the literature says about the positive effects of peer (support) groups. More specifically, peers (people who have similar experiences) share their own stories and lived experiences, which can subsequently empower and create a sense of identity (Norton & Sliep, 2018). Focusing on characteristics of support relationships within peer-support groups, MacNeil and Mead (2005) identify 'standards' for such groups. Some of these standards closely resemble the mechanisms identified in our study, such as experiencing support whilst also supporting (teaching) others and taking on and experiencing responsibility. In a study on the role that support groups play after trauma, Aarten, van de Ven, and Ceulen (2020) point to the beneficial effects of this type of support, including increased feelings of agency (i.e. empowerment and well-being) and feeling empowered to help others. Within the context of trauma, peer-support groups are often related to sense-making and building (or rebuilding) identity (van de Ven, 2020). Furthermore, in a study on peer-support groups in mental health service programmes, Schutt and Rogers (2009) specifically identify the dual role of being both a receiver of support and a teacher as having beneficial effects on the empowerment of participants.

Based on the literature and our findings, I argue that investigating these in-depth processes—more specifically, the mechanisms in different contexts—could provide information that future programmes need in order to make peer-group support and community engagement work more in general, in addition to identifying scenarios that might hinder participants from benefitting from such support. This is consistent with Cyril et al. (2015, p. 9), who report that complex challenges within the context of community engagement in health promotion often result 'in unmet community needs, causing community partners and study participants to feel dispirited, thereby compromising the potential for community engagement'. Thorough research on community needs and contexts could promote the effectiveness of community engagement for families experiencing vulnerability.

Research question 3. Which mechanisms play a role in the involvement of professionals during the implementation of health-promotion for families experiencing vulnerability?

Similar to the study on community engagement in health promotion for families experiencing vulnerability (Chapter 4), the study presented in Chapter 5 is an in-depth investigation of the involvement of professionals in health promotion for these families, based on a realist approach. In this case as well, the main value of the study lies in the identification of the *mechanisms* that occur amongst professionals when they are involved in the implementation of such interventions. A second point for reflection concerns the extent to which and how theory-based (and other) strategies for professional involvement are included in proposals for and the implementation of health-promotion programmes for families experiencing vulnerability.

Mechanisms can be defined as the reactions that occur in response to activities or elements of the intervention in interaction with the context. Proceeding from this definition, it could be argued that mechanisms have value only when considered in interaction with the relevant context. In my opinion, however, mechanisms have an intrinsic added value for health-promotion research and intervention design, although they can be identified only in relation to elements of context and intervention. Section 8.4 provides a further reflection on the value of identifying mechanisms. The findings of the study on professional involvement (Chapter 5) provide an example of such added value.

The mechanisms identified in Chapter 5 are at the individual level of professionals involved in health-promotion projects. The occupations of these professionals were diverse (e.g. social workers, health workers, nurses, community workers, sports coaches, youth workers), as were the ways in which they were involved in the projects, for instance as project ambassadors, through daily health practices, within community networks. The main positive mechanisms identified were as follows: *feeling inspired; experiencing recognition of one's own practices; seeing 'real' possibilities for action with regard to families; seeing the added value of the project's approach; feeling inspired to and experiencing the possibility of reflecting on their own practices; experiencing the freedom to learn step by step; experiencing success in learning; experiencing success in connecting with the community (neighbourhood youth); seeing the value of continuous professional collaboration for their work; experiencing room to learn about the expertise of other professionals; and experiencing possibilities for customising their work to the needs of families.* One negative mechanism was *feeling less involved due to the unstable*

involvement of others. These mechanisms were identified in relation to largely positive outcomes amongst professionals, such as changes in attitudes; enhancing the ability of professionals to work with families, and stronger professional networks.

Upon further consideration of the mechanisms that led to positive changes amongst professionals, it is interesting to note the value of reflection and critical learning amongst professionals to achieving change. Related mechanisms in our study include: experiencing the possibility of reflecting on their own practices; experiencing the freedom to learn step by step; experiencing success in learning; and experiencing room to learn about the expertise of other professionals. The positive effects of reflection have been studied within the field of professional or adult learning. In a study on processes of reflection in an action learning programme for health-promotion practitioners aimed at empowering communities, Jacobs (2008) identifies a range of positive outcomes resulting from action learning amongst these professionals. For example, they started to question their practice, they became aware of personal and institutional obstacles and struggles, and they experimented with new approaches (Jacobs, 2008). Moreover, awareness and understanding — and thus reflection — concerning one's own beliefs provides a foundation for building stronger partnerships when working with families experiencing vulnerability (Kalyanpur & Harry, 2012; Spence et al., 2023).

The notion that reflection is an important element of adult learning is in line with various learning theories, including critical reflection and transformative learning (Kitchenham, 2008; Mezirow, 1991). Another interesting insight from the aforementioned study by Jacobs (2008) is that a comprehensive theoretical framework is needed in order to ensure the success and sustainability of changes in the practices of professionals in health promotion through reflection and leaning. In other words, careful design is crucial for change programmes aimed at professionals, as is the use of learning (or other) theory. As identified by Benzein, Hagberg, and Saveman (2008), a reflection approach can be used as a tool that practitioners can use to promote health amongst families. Reflection activities invoking conversations between nurses and families challenged nurses to 'build a co-creating partnership with families in order to acknowledge them as experts on how to lead their lives and to use their own expert knowledge in order to facilitate new meanings to surface' (Benzein et al., 2008, p. 1). The notions of partnership, equality and reflection that are discussed here resonate with the mechanisms identified in both Chapter 4 on engagement in health promotion and Chapter 5 on the involvement of professionals.

Other mechanisms identified in our study highlight the importance of the professional environment to processes of change. In themselves, the mechanisms of '*experiencing recognition of one's own practices; seeing the value of continuous professional collaboration for their work; experiencing room to learn about the expertise of other professionals; and experiencing the freedom to learn step by step* contain elements of the world existing outside the individual professional. These elements relate to the expertise of colleagues and other professionals, to learning step by step on the job, and to collaboration. Together with the realist concept of the context within which each mechanism has occurred, it becomes clear that change amongst professionals is inextricably linked to the context of the professional.

Research question 4. Which approaches—community engagement/participation, changes in professional practices, neighbourhood networks, a behavioural approach—or combinations of approaches can contribute to improvements in the perceived health and/or weight or activity status of families experiencing vulnerability?

One of the aims of the overall evaluation of the HFN programme, as shaped by the programme's call for evaluation research, was to find evidence on the effectiveness of specific interventions for families experiencing vulnerability. As stated in the programme text: 'preventive interventions do not reduce the health inequalities between people with a lower and higher socioeconomic status' (C. Busch, Koch, Clasen, Winkler, & Vowinkel, 2017). The programme thus aimed to gather insights about what works for this specific group. The findings from the project-specific evaluations are the primary source of such evidence. Many of the findings from the project evaluations were published in scientific journals and reports (see e.g. (Berends & van Heijst, 2019; de Jong, Houwer, Koelen, & Wagemakers; Shagiwala, Schop-Etmana, Erdemb, van den Boogaardb, & Denktaşa; Slagboom, Crone, & Reis, 2022; Verjans-Janssen et al., 2020).

The overall evaluation was designed to exclude comparison of individual projects, thereby aiming to foster a culture of equality and enable learning, instead of inciting competition within the overall evaluation. Moreover, cooperation from individual project teams was crucial to the success of the overall evaluation. Starting with what could be perceived as a competitive or 'comparative project' evaluation would have probably hindered cooperation in the overall evaluation. In addition, it was clear from the outset that the range of projects under the umbrella of the HFN programme was highly diverse, and thus that the type of information yielded by these projects would be similarly diverse. The overall evaluation nevertheless aimed to identify effective approaches for families

experiencing vulnerability, or at least to explore the relative effectiveness of the approaches applied within the programme. Efforts were made to identify the main approaches included in the project designs (see Chapter 3). A fuzzy-set qualitative comparative analysis (fsQCA) was then developed as an innovative analytic tool for exploring the effectiveness of approaches or combinations of approaches (see Chapter 6). This tool allows for diversity in the types of data, and it offers a means of exploring and comparing differences and relationships in cases using qualitative data.

The approaches included in the fsQCA were as follows: (1) an approach that is assumed to work through participatory, community-engagement processes; engaging families experiencing vulnerability in the design, organisation and/or implementation of project activities; (2) an approach in which the project aims to change and, more specifically, customise professional practices by involving or training of professionals and practitioners or by developing methods for professional practice; (3) strengthening the professional (or other) social networks of families, specifically in targeted areas or neighbourhoods; and (4) promoting individual behavioural and attitudinal changes in relation to smoking, alcohol, overweight and perceived health, primarily through behavioural interventions and activities, including health-education interventions. The approaches were not mutually exclusive. In fact, most projects contain theoretical or practical elements of more than one approach (see the reflection on the identification of the approaches in Section 8.X). In addition to these theoretical approaches, the type of funding (either with or without a preparatory phase) was included in the fsQCA exploration.

One of the main findings of the exploration reported in Chapter 6 is that no single approach alone will be sufficient to achieve change in health-related outcomes. This is in line with developments in health-promotion policy, which argue that effective approaches for reducing health inequalities require a whole-systems or integrated strategy (Jackson et al., 2006). In the Ottawa Charter (WHO, 1986), the WHO defines health promotion as a comprehensive, multi-strategy approach. The integration of approaches is seen as necessary to address the complexity inherent in the determinants of health (Van Den Broucke, 2014).

In its programme text, the HFN programme extensively frames the complexity of health inequalities and calls for project proposals (FNO, 2015a, 2021), discussing the various levels and dimensions of the determinants of health (and health inequalities). In doing so, it also shaped funding requirements that would promote such multi-strategy approaches. The result is visible in what projects have proposed and implemented over the course of the programme. Examples include projects that consider the social and physical

environment, participatory elements, existing professional and/or local community networks and a focus on behavioural outcomes and perceived health.

A second conclusion (Chapter 6) is that evidence for substantial change on behaviour-related outcomes was scarce. Very few (5) of 32 cases provided evidence of 'clear changes, but no significant quantitative evidence' or 'significant effects, substantial improvements' on indicators relating to weight or physical activity-related. Moreover, none of the individual approaches was found to be necessary for the outcomes of weight/ physical-activity or the perceived health of family members to occur. In other words, our analysis did not yield any evidence to support the effectiveness of any of the individual approaches in improving indicators of weight or physical activity or perceived health. Although the behavioural approach did occur together with changes in weight or physical activity when combined with a preparatory phase and/or a focus on professional practices, the combinations identified in our analysis explained only a small proportion of the outcomes.

All of these findings together are in line with, but not providing very convincing evidence for the multi strategy approach as suggested in the literature and discussed above. From our exploration, there is no evidence that individual approaches are effective, some combinations of approaches may work, but evidence is still weak. Including behavioural health indicators as outcomes of multi-strategy, short term health promotion projects hinders finding evidence on effectiveness of such strategies. A multi strategy or integrated approach to health promotion policy and research is inevitable. In the realist informed case study in Chapters 4, many situations were identified in which the participatory approach led to health related change among family members. However, these outcome were often not behavioural or physical health related. Most outcomes related to positive changes in mental and social health. In the exploration in Chapter 6, the evidence that combinations of approaches can contribute to changes in perceived health is stronger than for changes in weight or physical activity related indicators. Selecting more proximal indicators of health, or indicators of social and mental health, may provide more clarity on the relation between combinations of approaches in a multi strategy project and effectively reducing health inequalities for families experiencing vulnerability.

7.4 Reflection on mechanisms

The body of realist (and realist-inspired) evaluation and synthesis studies has grown steadily in recent decades. As an *approach* to research, realism can be pursued through a

wide range of methods (Wong et al., 2016). Despite the development of the Rameses standards (Wong et al., 2016) to promote best practices in conducting and reporting on research aligned with the principles of realism, current realist research practices still vary greatly in focus and reporting. The realist studies in this thesis were intended to add depth to the investigations of the overall evaluation. Given that mechanisms can be seen as underlying causal processes (Westhorp, 2018), the focus was mainly on mechanisms, logically in in relation to the elements, context and outcomes of interventions. This resulted in the identification of many positive and negative mechanisms amongst family members (Chapter 4) and professionals (Chapter 5). This section includes a reflection on the value of such mechanisms for research, practice and policy.

In themselves, mechanisms are a valuable addition to what is already known about the engagement of families experiencing vulnerability and the involvement of professionals in the promotion of health for such families. There are several reasons underlying the added value of these mechanisms.

First, mechanisms can provide insight into what is often referred to as the 'black box' of evaluation research. Although traditional approaches to evaluation can provide evidence of the effectiveness of specific interventions, they may lack information on *how* such interventions work: which processes (mechanisms) cause the intervention (or elements thereof) to result in positive or negative outcomes amongst beneficiaries? Mechanisms (i.e. reactions triggered by the elements of the intervention within a specific context) can fill this gap. At the individual level (as in Chapters 4 and 5), many mechanisms are feelings or experiences. Although such feelings often remain invisible and implicit in more standard evaluation designs, they are crucial to understanding why a specific intervention or intervention element works for some people and not for others.

Second, the value of identifying individual-level mechanisms in health-promotion interventions lies in what such mechanisms can bring as evaluation results. In other words, because mechanisms often consist of generic feelings and experiences, they have the potential to 'humanise' health-promotion projects. Feelings of dependence, distrust and being overwhelmed or stressed, as well as experiencing success, freedom to learn, making a contribution and being seen and valued for such contributions are highly relatable feelings and experiences for all. Mechanisms can thus contribute to the idea that the 'target groups' for health-promotion interventions are not very different from the researchers, health professionals or policymakers who design and implement such interventions. On the contrary, generic mechanisms demonstrate that families

experiencing vulnerability are often people with highly recognisable, human reactions to being confronted with specific ideas and requests in specific (and in many cases, stressful) contexts.

A third advantage of identifying mechanisms in health-promotion evaluations lies in the comparison of the findings of realist evaluations to those conducted in other fields of study. Such realist evaluations (in this case, focusing on the individual level) are likely to yield highly similar mechanisms in different disciplines (Salter & Kothari, 2014; Sorinola, Thistlethwaite, Davies, & Peile, 2015), thereby indicating that they are universal and potentially applicable as design principles in a variety of fields. This provides opportunities for professionals in the field of health promotion and those in other disciplines to learn from each other. The universality of mechanisms could thus broaden learning opportunities.

In addition to the aforementioned advantages of using mechanisms in realist (or other) evaluations, their use presents challenges as well. There is ambiguity in the definition of a mechanism within the realist literature and amongst researchers (Westhorp, 2018). Working with a concept that is defined in various ways could lead to misunderstandings with regard to study results. Efforts have been made to promote the debate on definitions and to provide clarity in the framing of mechanisms (and context, outcomes and other factors) from the realist perspective (Wong et al., 2016).

Mechanisms can be perceived as inherently vague, implicit and, in some cases, intangible. In practice, it can be much more attractive to rely on concrete activities or evidence-based interventions when developing future interventions. Working with mechanisms as guiding principles for intervention design requires more effort and time in order to identify the detailed context of a future intervention. Moreover, working with mechanisms requires substantial flexibility in the design and implementation of interventions, which in turn requires funding and time. Contexts change, and mechanisms are likely to change accordingly. This is in contrast to the largely standardised ways in which traditional evidence-based interventions proceed.

Another difficulty associated with working with mechanisms is that they cannot be seen independently of the contexts within which they emerge. Exploring the mechanisms that may apply in a future project thus calls for thorough investigation of the context within which the mechanisms were identified. As noted above, contexts change, and mechanisms are likely to change accordingly. Once again, this suggests that working with

mechanisms in the design and implementation of interventions requires a great deal of flexibility on the part of project staff.

A final note on working with mechanisms concerns the extent to which the health-promotion field/professionals are accustomed to, prepared for and willing to work according to mechanisms as principles of design and implementation. At present, most health professionals and research staff tend to focus on working with more traditional evidence-based interventions, thus looking for pre-defined, tangible outcomes and intervention elements that are suitable for standardised evaluation. This also is likely to apply to the communities involved as well. The perceived vagueness and abstract nature of mechanisms might cause confusion and lead to withdrawal from participation. As is the case with community engagement, working with mechanisms requires patience, adjustment and flexibility. This way of working can exist alongside elements of evidence-based interventions, as long as those involved are continuously alert to flexibility.

7.5 Methodological reflections

The studies included in this thesis are based on a mixed-method design, with three guided by a theory-based approach (Chapters 3, 4 and 5) and a realist approach (Chapters 5 and 6). All approaches and methods adopted in the studies aimed to do justice to the complexity of the evaluation of a multi-project programme for promoting health amongst families experiencing vulnerability. This section begins with a discussion of the perceived advantages of the various data-collection methodologies, as well as the challenges experienced when using them. This is followed by a reflection on more general methodological issues. These points provide information on how the design of the evaluation (as presented in Chapter 2) does justice to the dynamics and complexity of local, community health-promotion projects, resulting in relevant information on what works (or does not work) in the process of changing health-related behaviours and perceived health amongst families experiencing vulnerability.

Methodologies

The designs/approaches and methods used in each chapter are listed in Table 8.2. This thesis is part of the overall evaluation of the HFN programme. Data collection for the overall evaluation and for this thesis was either combined or conducted in parallel. Following the structure presented in Figure 1.1 (Chapter 1), the analyses for Chapters 4, 5 and 6 were performed separately from the analysis for the overall evaluation report,

although the analysis and findings from that report were used to inform the analysis for the studies included in this thesis. The analysis for identifying and clustering interpretations of health-promotion efforts served both the overall evaluation and the study presented in Chapter 3. Data collection for the overall evaluation was conducted by all members of the research consortium. During data collection, the work was divided amongst dedicated account holders for groups of projects.

The data-collection methods included in the various chapters of this thesis are listed in Table 7.2. Many of the perceived advantages and experienced challenges are self-evident. Examples include the time investment that some methods require from both project participants and researchers, as well as the type of data each method yields (detailed or more generic). Such characteristics are often two sides of the same coin. Below, I present a more elaborate reflection on methodological topics.

- The group interviews were organised in collaboration with project leaders from the individual projects. Project leaders were asked to find a location (often a community centre that was also a project location) and to invite the main partners and stakeholders for their project. The researchers provided information about the duration, content and preferred attendees of the interviews. In addition, the researchers prepared the interviews and led the sessions, including note-taking. These three-hour group-interview sessions at project locations proved quite valuable for the research process. The first group interviews were intended to discuss various aspects of the projects (e.g. aims, plans, activities, strategies). They also provided an opportunity to establish a connection between researchers and project partners, to experience group dynamics amongst project stakeholders and, of even more value, to discuss assumptions within the projects and concerns with regard to the strategies and aims stated in the project proposals. The two later group interviews allowed for reflection on the outputs and developments achieved up to that point, as well as for looking back on what had been discussed in the first session.
- Project leaders and key project stakeholders were asked to reflect on the first set of approaches identified amongst the projects (Chapter 3). In hindsight, it would have been beneficial to conduct an even more comprehensive and detailed feedback round with project leaders. Although the feedback I received helped us to refine the categorisation, more detailed discussions would have informed the identification of a more detailed theory of change for the projects. Moreover, it

might have supported the learning processes within the projects, as well as the monitoring and evaluation of their specific interventions.

Table 7.2 Data-collection methods adopted, main perceived advantages and challenges.

Data-collection methods		**Chapter**	**Advantages and Challenges**
Group interviews guided by	*Effectenarena* approach	3, 4, 5	• Group interviews contributed to cohesion within the project group • Opportunity to get to know project partners, possible locations, networks, etc. • Data resulting from group interviews are inclusive • Established connection between researcher and project • Allowed researcher to experience project culture or atmosphere • Allowed project stakeholders to learn from what researcher shares about the overall evaluation • Time intensive, for both researchers and project stakeholders • Too many objectives combined in one interview (funder-defined outcomes vs in-depth processes) • Resulting data were sometimes generic, lacking detail and approach-specific information
	Timeline method	4, 5	
	Semi-structured interview guide (outputs, outcomes, mechanisms, reflection)	4, 5	
Telephone interviews	Semi-structured	4, 5	• Allows collection of in-depth information • Less intensive for project leaders and researchers (including in terms of time) • Often subjective, perceptions of one or two key project stakeholders
Researcher discussions (consortium)		3, 4, 6	• Broadens expert input in analysis • Enables mutual learning amongst researchers

Project-specific documents			• Monitoring and evaluation forms provide room for actual numbers (reach, participation) • Proposals written according to funder requirements
Reflection by project stakeholders		3	• Stronger engagement of project stakeholders in overall evaluation • Nuancing and reflection on progress and findings in overall evaluation • Promotes learning amongst project stakeholders
Reflection in expert meeting of scientists		3	• Broadens expert input in analysis • Includes multiple perspectives in analysis

General methodological reflections

As discussed in Chapter 2 our goal was to design an evaluation that would be as informative as possible, that would study the processes and outcomes from various perspectives and that would find and create space for specific learning about the implementation and communication of more alternative and innovative approaches and designs. In this section, I discuss general methodological reflections.

Multi-project programmes for health promotion are inherently complex. In turn, the evaluation of such programmes should address such complexity in its design. The way in which I addressed complexity involved adopting a theory-based approach to evaluation, including two realist-informed case studies, combined with an alternative approach to exploring the effectiveness of health-promotion approaches.

The theory-based approach to evaluation resulted in the identification of assumptions within projects, which in turn provided the foundation for the evaluation. The identified 'theories' guided decisions about which approaches would be relevant for in-depth investigations, in addition to clarifying implicit assumptions within the projects. This is in line with what other scholars have mentioned as an advantage of theory-based evaluation (Birckmayer & Weiss, 2000; Weiss, 2000).

Another known advantage of using a theory-based approach is that the identification of a programmes main assumptions can increase the practical relevance of the evaluation findings (Belcher, Suryadarma, & Halimanjaya, 2017; Riley et al., 2018). From the start of the overall evaluation and the investigations for this thesis, the intention was to have such practical relevance as a guiding principle for the research. First, the assumptions identified in the projects provided the main directions for further research. Secondly, by constantly discussing preliminary findings with the funder, the relevance of the final findings was clear for funder and practice. Third, the project leaders were asked to reflect on the main assumptions, which also reassured them of the practical use of the research for their projects.

Although realist evaluation is often described as a method-neutral approach, I used primarily qualitative data. This is in line with Pawson and Sridharan (2009) who recommend analysis of programme documentation and interviews with programme architects, managers and/or practitioners when eliciting theories from programmes. The collection of data for Chapters 4 and 5 was conducted parallel for the 46 projects under the umbrella of the HFN programme, by account holders; consortium researchers assigned to a random group of projects for data collection and as a contact person. Such an organisation of the fieldwork ensured the collection of detailed and sufficient information on project specific approaches and developments.

The methods used for the group interviews – the *Effectenarena* approach (Deuten, 2009; Platform31, 2008), the Timeline method (Adriansen, 2012; Herens et al., 2017) and the use of a semi-structured interview guide - were chosen to provide data for both the overall evaluation and this thesis. In practice, the three methods provided ample information on the processes and outcomes in the projects. Others authors (Mukumbang, Marchal, Van Belle, & van Wyk, 2020) have argued for the use of a 'realist interviewing technique', as a realist approach to conducting interviews. Future research could include such a realist interviewing technique to test its use for health promotion research.

Flexibility was a guiding principle throughout all work in both the overall evaluation and this thesis. In other words, the evaluation was also an iterative process, in which adjustments and improvements were made over the course of the evaluation, based on developments in the projects and programme. One example is the use of quantitative data from the project-specific evaluations. The initial plans called for gathering quantitative data from all the projects (evaluations), which would be used to conduct an analysis of the shared outcomes of behavioural indicators or perceived health. In the first phases of the

overall evaluation, is became clear that, for a number of projects, this would be an unrealistic request, and the resulting integrated dataset would have been of poor quality. It was then decided to explore alternative approaches to studying effectiveness.

Each HFN project was linked to one of the consortium researchers for the duration of the programme. These 'account holders' were primarily responsible for data collection amongst their projects. The use of such account holders had two main advantages: (1) projects received a stable point of contact who was acquainted with the developments in the projects; (2) the analysis for both the overall evaluation and this thesis benefitted from the involvement of members of the consortium team, who followed their designated projects and were thus able to reflect upon project-specific developments and findings during analysis. Given the range and diversity of projects under the umbrella of the HFN programme, a single researcher would have probably not been able to reflect upon details and general contexts for all 46 projects. The system of account holders was thus experienced as effective within the research team.

7.6 Implications for policy and practice

The findings reported in this thesis support the idea that reducing health inequalities requires a whole-systems or multi-strategy approach. Both the crucial influence of context throughout the studies and the finding that none of the studied approaches alone is sufficient for achieving health-related outcomes highlights the need for an integrated approach. Policies should consider factors and developments at all levels and in all sectors.

With regard to translating multi-strategy policies into tangible programmes, the findings reported in this thesis suggest the following:

- Although a whole-systems perspective is necessary to research and design policies for reducing health inequalities, the findings question the translation of a whole systems approach into equally integrated, multi-strategy interventions. This places pressure on national and local health organisations to design and implement programmes that include multiple strategies. Although this is required at the policy level (including organisational policy), the practical implementation of such programmes may instead benefit from more focused and defined designs. Based on the findings reported in this chapter and experiences during the research, I would thus advocate for context and complexity-sensitive

initiatives instead of programmes that 'should address all levels and determinants'.

- Achieving change within complex systems takes time and effort from many parties. To address health inequalities, which are indisputably part of complex systems, designing multi-level, multi strategy programmes, whilst also defining individual-level health outcomes for such programme amounts to setting unrealistic goals. When calls for project proposals include funder-defined outcomes, such outcomes should be selected carefully to match the strategies and levels in the programme. Moreover, with regard to health outcomes, knowledge about the time needed to achieve change in health-related outcomes should be considered when specifying such outcomes for programmes and initiatives.
- The two aforementioned points indicate that the careful translation of whole-systems policies into local, focused initiatives is crucial.

With regard to the participation of families experiencing vulnerability in the design and implementation of health-promotion initiatives:

- Mechanisms identified in research could be translated into humanising principles (e.g. making a contribution, feeling seen and valued, experiencing support). As such, these principles should be adopted as core guiding principles for the process of engagement in health promotion. More research is required to identify the contexts that matter, and how they might possibly change in ways relevant to the intervention.
- Typologies and hierarchical models for participation mentioned in calls and programme texts may hinder the effective customisation and flexibility of participation in health-promotion efforts. I therefore argue that principles of participation (not how, but based on what) provide better guidance for participatory projects than models or typologies of participation do.
- The use of hierarchical models or typologies of participation could encourage a one-size-fits-all approach for participation in interventions. The findings suggest that a customised, flexible approach to participation is most effective. I therefore recommend the following:
  - Enable a preparatory funded research phase for health-promotion projects that aim to include participatory elements. Such a preparatory phase can be used to identify community needs and design the participatory processes accordingly.

- Create a knowledge base about how to incorporate context in exploring what participation means.
- Disseminate knowledge about mechanisms in participatory processes. Such mechanisms can then be used to design interventions instead of models for participation, being sure to consider flexibility at all times.

When designing health promotion for families experiencing vulnerability, the involvement of professionals is vital, but only if such involvement is implemented according to a carefully designed and theory-based approach (e.g. partnership).

In general**,** when creating policies and programmes for health promotion amongst specific groups or communities, it is important to make careful, informed decisions concerning the definition, framing and use of target groups, with thorough consideration of what such a definition could entail and how it might hinder effectiveness. Humanising policy should be the primary principle in such considerations.

7.7 Concluding remarks

This thesis has generated insights into the effectiveness of and mechanisms at play in different health-promotion approaches intended for families experiencing vulnerability.

Two promising approaches were studied more in depth to identify *how* health promotion works. With regard to a participatory approach such as community engagement (CE), the studies' findings implicate that CE elements can trigger a range of mechanisms among family members, of which many evolve primarily around 'making a contribution' and 'peer support'. In turn, in specific contexts, these mechanisms led to health related outcomes among family members. From the perspective of health as a three dimensional concept, the outcomes identified from community engagement lie more on the dimensions of mental health and social well-being than on physical health. Moreover, an important conclusion from the in depth research is that there is no 'one size fits all' approach for engagement of families in health promotion.

Changes in professionals practices are often assumed by and integrated in health promotion for families. The value of mechanisms relating to reflection and critical learning and the role of the professional environment stood out as enabling change among professionals. In turn, outcomes among professionals involved were changes in attitudes, knowledge and evidence of short term changes in practices.

With regard to effectiveness, the findings implicate that a multiple strategy approach might be effective. Evidence was stronger for the outcome of perceived health versus the outcome of weight or physical activity, but both have to be interpreted carefully. Both in the overall and in-depth study it became clear that a thorough preparation of any approach is very valuable for success. Multi strategy programmes are promising for achieving health related outcomes among families experiencing vulnerability, but further research is needed to explore which combinations of strategies are successful in implementation.

Both for a community engagement approach and an approach focused on professional practices, it became clear that the expectations of such approaches, with regard to the workings and to outcomes, are many. Professional involvement was found to serve many purposes in the projects, as did participation of family members in project design and implementation.

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Summary

Introduction

In the Netherlands, socioeconomic health inequalities can be observed in various indicators of physical health, including life expectancy, the prevalence of diabetes and years lived in good perceived health. Differences in health between people of different socioeconomic positions are not restricted to these indicators, but also occur in terms of indicators of both social well-being and mental health. Moreover, mental and social health can shape physical health, and vice versa. These inter-relationships underscore the need to consider all dimensions of health when attempting to unravel the complex interplay of factors associated with health inequalities. These factors include health-related behaviours, experiences in early life and the broader social determinants of health—system conditions that shape the ways in which people live, learn, work and age. National and local policies have addressed health inequalities in the Netherlands from a variety of approaches to health promotion. Regional and national institutes focus on promoting health amongst specific groups or targeting specific behavioural or health-related issues. Despite numerous efforts that have been taken to reduce health inequalities in recent decades, however, the gap persists and has even widened.

In recent decades, the family has been identified as a key entity for health-promotion efforts. First, as a social environment, the family plays an important role in shaping and sustaining health-related behaviours amongst all family members. Moreover, the behaviours of parents/caretakers play a crucial role in determining what children learn, as well as in what they do—both now and in the future. Intergenerational influences within families can develop into a cycle of adverse health-related behaviours and, consequently issues relating to health and well-being. Families may also have an impact on the communities in which they live, thereby potentially contributing to positive or adverse social (or other) environments for other members of the wider community. The concept of families as a crucial entry point and area of focus is increasingly being included in health-promotion approaches, including community and school-based health promotion. As the focus of health promotion, however, the family is generally underutilised.

There is no specific right way to address families who are experiencing one or more challenging conditions, such as unemployment, financial problems, difficulties with school or social relationships and physical, mental or social health issues. In this thesis, I refer to these families as ‘families experiencing vulnerability’ whenever possible.

Setting

This thesis is part of and in addition to the overall evaluation of the Healthy Futures Nearby (translated from Dutch: *Gezonde Toekomst Dichterbij*) programme. In the period 2016–2020, the FNO charitable organisation funded 46 projects under the umbrella of the national, multi-project programme entitled Healthy Futures Nearby (HFN). The programme was aimed at reducing health disparities amongst people with low socioeconomic status and, more specifically, amongst families experiencing vulnerability. The objective was to create 'approaches' (interventions) that would lead to reductions in smoking, alcohol use and overweight, as well as to improvements in perceived health amongst these families. All projects were designed to target at least one family member, and they were expected to include attention to improving the health-related skills and the physical and social environment of the family. The families to be included in the projects were further defined as households (1) in which at least one parent and one child were living together; (2) who were experiencing multiple problems with regard to finances, education, work or well-being; and (3) who were experiencing health disparities related to smoking, alcohol use, overweight or underlying psychosocial issues. The programme adopted two types of projects: area-specific ('*gebiedsgericht*') projects, which would receive funding for both a preparatory and an implementation phase; and integrated ('*integrale*') projects, which would receive funding for the implementation phase. An additional call was launched in 2016, with the aim of funding projects focusing specifically on the topics of smoking and alcohol use, which had been under-represented in the first two groups of proposals. The three calls resulted in funding for 46 projects.

Aim and research questions

There is a need for in-depth research on health-promotion approaches for families experiencing vulnerability. The central aim of this thesis is therefore *to generate insight into the effectiveness of and mechanisms at play in different health-promotion approaches intended for families experiencing vulnerability*.

My investigations were guided by four research questions:
1. Which interpretations of effective ways to promote change in health-related behaviours and to improve perceived health amongst families experiencing vulnerability are included within the Healthy Futures Nearby programme?
2. What works and how (and what does not work and why) with regard to community engagement for health promotion amongst families experiencing vulnerability?

3. Which mechanisms play a role in the involvement of professionals in the implementation of health-promotion initiatives for families experiencing vulnerability?
4. Which approaches—community engagement/participation, changes of professional practices, neighbourhood networks, a behavioural approach—or combinations of approaches can contribute to improvements in the perceived health and/or weight or activity status of families experiencing vulnerability?

Each of these research questions is used to guide the research for one of the chapters in this thesis.

Methods

This thesis is part of and an addition to the overall evaluation of the Healthy Futures Nearby programme. A study protocol presented and discussed the design of the overall evaluation of the programme. The design for this thesis, as well as the overall evaluation, was theory-based and realist-informed, complemented with an alternative approach using qualitative comparative analysis to explore effectiveness. These approaches were assumed to address the complexity encountered in complex social interventions, such as the HFN programme, for promoting health amongst families experiencing vulnerability. In addition, we decided to focus on cross-project analysis and in-depth study of specific, theory-based topics. In addition, this thesis is based on a multi-method design, combining data from various, mostly qualitative sources. Data for both the overall evaluation of the programme and this thesis were collected in parallel, and data collection was performed by all researchers from the overall evaluation-research consortium. Analysis was performed separately for three of the four empirical studies included in this thesis. Data sources included telephone or in-person interviews, group interviews, project documentation and project-specific monitoring and evaluation.

Results

Research Question 1: *Which interpretations of effective ways to promote change in health-related behaviours and to improve perceived health amongst families experiencing vulnerability are included within the Healthy Futures Nearby programme?* This question is addressed in Chapter 3. Using data from 46 project proposals and group interviews, a thematic analysis was performed. The main aim was to identify implicit assumptions in HFN projects concerning effective strategies for promoting the health of families experiencing vulnerability. The list of identified assumptions was further categorised,

resulting in five 'clusters' or 'project approaches': (1) strategies of offering families pre-defined activities relating to health (and health behaviour); (2) active involvement of families experiencing vulnerability in the initiative; (3) assumptions about how health promotion should start with or include non-health-related topics; (4) assumptions about how to build on what already exists within the local context of the families; and (5) assumptions about the role of health professionals in health promotion among families experiencing vulnerability. The clusters of assumptions were not mutually exclusive; most projects adopted multiple strategies. The clustered assumptions were translated into approaches and provided a framework for the subsequent overall evaluation of the HFN programme and the studies included in this thesis.

Chapter 4 addresses Research Question 2: *What works and how (and what does not work and why) with regard to community engagement for health promotion amongst families experiencing vulnerability in the Netherlands?* In a realist-informed case study combined with a Theory of Change (ToC) model, I explore mechanisms at work in health promotion amongst families based on community engagement. The focus is on the individual level of family members participating in one of the three projects selected for the case study. Using data from multiple qualitative sources, thematic analysis is used to identify Context-Mechanism-Outcome (CMO) configurations as part of realist research. Key findings from this study indicate that engagement for health promotion 'works' when such involvement is (1) customised, (2) flexible and (3) includes a focus on mechanisms. Many mechanisms were identified, with those related to 'making a contribution' and 'peer support' being particular prominent. The results indicate that community engagement can strengthen social networks, empower families and increase perceived health. In combination with some contexts, however, project approaches based on community engagement may or may not trigger positive responses. Negative contexts could include the presence of many stressors in personal lives and a history of experiences with community or municipal workers leading to distrust. Positive contexts could include the supportive lived experience of empowered participants.

Similar to Chapter 4, a realist-informed case study is presented in Chapter 5 to address Research Question 3: *Which mechanisms play a role in the involvement of professionals in the implementation of health-promotion initiatives for families experiencing vulnerability in the Netherlands?* Two projects from the HFN programme were included in this case study based on their approach: a non-exclusive focus on the involvement of professionals in the projects, and a more specific involvement with regard to the practices of

professionals. This study also involved a thematic analysis of qualitative data from group interviews, telephone interviews with project leaders and project documentation. The two-step analysis resulted in a combined programme theory with regard to the practices of professionals and a list of CMO configurations to refine the initial programme theory. As clearly reflected in the initial programme theory, the involvement of professionals in the projects was assumed to be important and intensive. The study also yields insight into the mechanisms at play amongst the professionals involved. The value of reflection and critical learning were particularly prominent in enabling change amongst professionals, as was the role of the professional environment.

Research Question 4: *Which approaches—community engagement/participation, changes in professional practices, neighbourhood networks, a behavioural approach—or combinations of approaches can contribute to improvements in the perceived health and/or weight or activity status of families experiencing vulnerability in the Netherlands?* This question is addressed in Chapter 6. Following the approaches identified in Chapter 3, the study presented in Chapter 6 explores the effectiveness of approaches (or combinations of approaches) for health promotion amongst families experiencing vulnerability. The study is based on fuzzy-set qualitative comparative analysis (fsQCA). The approaches (which are not mutually exclusive) included are as follows: (1) an approach that is assumed to work through participatory, community-engagement processes; engaging families experiencing vulnerability in the design, organisation and/or implementation of project activities; (2) an approach in which the project aims to change and, more specifically, customise professional practices through the involvement or training of professionals and practitioners or through the development of methods for professional practice; (3) strengthening the professional (and other) social networks of families, specifically in targeted areas or neighbourhoods; and (4) promoting individual behavioural and attitudinal changes primarily through behavioural interventions and activities, including health-education interventions. Evidence of substantial change on behaviour-related outcomes was scarce. However, I found that multi strategy programmes (combining multiple approaches) are promising for achieving health related outcomes among families experiencing vulnerability. It became clear that a thorough preparation of any approach is very valuable for success. No single approach alone was sufficient to achieve change in health-related outcomes, including perceived health, but combinations of approaches did occur together with the an improvement in perceived health.

Conclusions and recommendations

This thesis has generated insights into the effectiveness of and mechanisms at play in different health-promotion approaches intended for families experiencing vulnerability. With regard to community engagement (CE), the findings implicate that CE elements can trigger a range of mechanisms among family members, of which many evolve primarily around 'making a contribution' and 'peer support'. In turn, in specific contexts, these mechanisms led to health related outcomes among family members. Moreover, an important conclusion from the in depth research is that there is no 'one size fits all' approach for engagement of families in health promotion. The value of mechanisms relating to reflection and critical learning and the role of the professional environment stood out as enabling change among professionals. In turn, outcomes among professionals involved were changes in attitudes, knowledge and evidence of short term changes in practices. With regard to effectiveness, the findings implicate that an approach combining multiple strategies might be effective. Both in the overall and in-depth study it became clear that a thorough preparation of any approach is very valuable for success. Multi strategy programmes are promising for achieving health related outcomes among families experiencing vulnerability, but further research is needed to explore which combinations of strategies are successful in implementation.

Recommendations:

- Policies should include an integrated approach; consider factors and developments at all levels and in all sectors.
- The practical implementation of multi strategy health promotion programmes may instead benefit from more focused and defined designs. I would thus advocate for context and complexity-sensitive initiatives instead of programmes that 'should address all levels and determinants'.
- When calls for project proposals include funder-defined outcomes, such outcomes should be selected carefully to match the strategies and levels in the programme.
- Mechanisms identified in research could be translated into humanising principles (e.g. making a contribution, feeling seen and valued, experiencing support). As such, these principles should be adopted as core guiding principles for the process of engagement in health promotion.

- The findings suggest that a customised, flexible approach to participation is most effective. Enable a preparatory funded research phase for health-promotion projects that aim to include participatory elements.
- When designing health promotion for families experiencing vulnerability, the involvement of professionals is vital, but only if such involvement is implemented according to a carefully designed and theory-based approach (e.g. partnership).

Samenvatting

Inleiding

Sociaaleconomische gezondheidsverschillen in Nederland komen tot uitdrukking binnen verschillende indicatoren van fysieke gezondheid, waaronder in levensverwachting, het voorkomen van diabetes en levensjaren in goede ervaren gezondheid. Dergelijke aantoonbare verschillen blijven niet beperkt tot indicatoren van fysieke gezondheid, maar komen ook voor binnen indicatoren van sociale- en mentale gezondheid. Daarnaast beïnvloeden sociaal welzijn en mentale gezondheid de fysieke gezondheid, en vice versa. Deze relaties benadrukken het belang van alle dimensies van gezondheid bij het onderzoeken van het complexe samenspel van factoren rondom gezondheidsverschillen. Factoren zoals aan gezondheid gerelateerd gedrag, ervaringen in de eerste levensjaren en de brede sociale determinanten van gezondheid – systeemkenmerken die mede bepalen hoe mensen leven, leren, werken en ouder worden. Binnen Nederland bestaat landelijk en lokaal beleid ten behoeve van het verkleinen van gezondheidsverschillen. Dit beleid stoelt op verschillende benaderingen uit de gezondheidsbevordering. Regionale en landelijke instituten werken aan het bevorderen van de gezondheid van specifieke achtergestelde groepen of richten zich op aan gezondheid gerelateerd gedrag of specifieke gezondheidsproblemen. Ondanks talrijke inspanningen om gezondheidsverschillen te verkleinen wordt de gezondheidskloof tussen groepen niet kleiner. Sterker nog, de verschillen zijn groter geworden.

In de laatste decennia wordt de familie steeds vaker gezien als cruciaal binnen de gezondheidsbevordering. Ten eerste speelt het gezin, als sociale omgeving, een belangrijke rol bij het vormgeven en in stand houden van aan gezondheid gerelateerd gedrag bij alle gezinsleden. Bovendien speelt het gedrag van ouders/verzorgers een cruciale rol bij het bepalen van wat kinderen leren, en bij wat ze doen, zowel nu als in de toekomst. Intergenerationele invloeden binnen gezinnen kunnen zich ontwikkelen tot een cyclus van negatief aan gezondheid gerelateerd gedrag en, als gevolg daarvan, tot problemen met betrekking tot gezondheid en welzijn. Gezinnen kunnen ook impact hebben op de gemeenschappen waarin ze leven, en zo mogelijk bijdragen aan positieve of negatieve sociale omgevingen voor andere leden van die gemeenschap. Gezinnen als een cruciaal toegangspunt en aandachtsgebied wordt steeds meer opgenomen in de gezondheidsbevordering, inclusief in buurten en scholen. Als expliciete focus van gezondheidsbevordering is het gezin echter nog steeds relatief onderbenut.

Er is geen specifieke juiste manier om gezinnen aan te spreken die een of meer uitdagende omstandigheden ervaren, zoals werkloosheid, financiële problemen, moeilijkheden met school of sociale relaties en fysieke, mentale of sociale gezondheidsproblemen. In dit proefschrift noem ik deze gezinnen, waar mogelijk, 'gezinnen die kwetsbaarheid ervaren'.

Het programma Gezonde Toekomst Dichterbij

Dit proefschrift is onderdeel van en een aanvulling op de overkoepelende evaluatie van het programma Gezonde Toekomst Dichterbij (GTD). In de periode 2016-2020 heeft de charitatieve organisatie FNO 46 projecten gefinancierd onder dit programma, gericht op het verminderen van gezondheidsverschillen onder mensen met een lage sociaaleconomische status en, meer specifiek, onder gezinnen die kwetsbaarheid ervaren. Het doel was om 'aanpakken' (interventies) te creëren die zouden leiden tot een vermindering van roken, alcoholgebruik en overgewicht, evenals tot een verbetering van de ervaren gezondheid onder deze gezinnen te komen. Alle projecten waren gericht op minstens één gezinslid en er werd verwacht dat projecten aandacht zouden besteden aan de gezondheidsvaardigheden en de fysieke en sociale omgeving van het gezin. De gezinnen die deelnamen aan projecten werden gedefinieerd als huishoudens (1) waarin minstens één ouder en één kind samenwonen; (2) die meerdere problemen ervaren op het gebied van financiën, onderwijs, werk of welzijn; en (3) die gezondheidsachterstanden ervaren met betrekking tot roken, alcoholgebruik, overgewicht of onderliggende psychosociale problemen. Het programma heeft twee soorten projecten gefinancierd: gebiedsgerichte projecten, die financiering ontvingen voor zowel een voorbereidings- als een implementatiefase; en integrale projecten, die financiering ontvingen voor de implementatiefase. In 2016 werd een aanvullende oproep gepubliceerd om projecten te financieren die zich specifiek richten op de onderwerpen roken en alcoholgebruik, die ondervertegenwoordigd waren in de eerste twee groepen voorstellen. De drie oproepen resulteerden in de financiering van 46 projecten.

Doel en onderzoeksvragen

Er is behoefte aan verdiepend onderzoek naar benaderingen van gezondheidsbevordering voor gezinnen die kwetsbaarheid ervaren. Het centrale doel van dit proefschrift is daarom

om inzicht te verkrijgen in de effectiviteit van en de mechanismen die een rol spelen bij verschillende benaderingen die gericht zijn op deze gezinnen.

Het onderzoek omvat vier onderzoeksvragen:

1. *Welke interpretaties van effectieve manieren om verandering in gezondheid gerelateerd gedrag te bevorderen en de ervaren gezondheid te verbeteren bij gezinnen die kwetsbaarheid ervaren, bestaan in het programma Gezonde Toekomst Dichterbij?*
2. *Wat werkt en hoe (en wat werkt niet en waarom) met betrekking tot participatie bij gezondheidsbevordering onder gezinnen die kwetsbaarheid ervaren?*
3. *Welke mechanismen spelen een rol bij de betrokkenheid van professionals gedurende de uitvoering van initiatieven voor gezondheidsbevordering onder gezinnen die kwetsbaarheid ervaren?*
4. *Welke benaderingen—participatie van de gemeenschap, veranderingen in professionele werkwijzen, buurtnetwerken, een gedragsbenadering—of combinaties van benaderingen kunnen bijdragen aan verbeteringen in de ervaren gezondheid en/of het gewicht of bewegen van gezinnen die kwetsbaarheid ervaren?*

Methoden

Dit proefschrift is onderdeel van en een aanvulling op de overkoepelende evaluatie van het programma Gezonde Toekomst Dichterbij (GTD). In een studieprotocol werd het ontwerp van deze overkoepelende evaluatie gepresenteerd en besproken. Het ontwerp voor dit proefschrift, evenals voor de overkoepelende evaluatie, was *theory-based* en geïnspireerd op de *realist* benadering, aangevuld met kwalitatieve vergelijkende analyse (*Qualitative Comparative Analysis* (QCA)) om effectiviteit te onderzoeken. Sociale interventies zijn complex, ook die gericht op gezondheidsbevordering onder gezinnen die kwetsbaarheid ervaren. De gekozen benaderingen en methoden passen bij die complexiteit. Daarnaast concentreerden we ons op project overstijgende analyses en verdiepende studie van specifieke, relevante onderwerpen. Bovendien is dit proefschrift gebaseerd op een *multi-method* ontwerp, waarbij gegevens uit verschillende, voornamelijk kwalitatieve bronnen worden gecombineerd. Gegevens voor zowel de overkoepelende evaluatie van het programma als voor dit proefschrift werden parallel verzameld. De dataverzameling werd uitgevoerd door alle onderzoekers van het consortium voor de overkoepelende evaluatie. Analyse werd afzonderlijk uitgevoerd voor drie van de vier empirische studies die in dit proefschrift zijn opgenomen. Databronnen waren telefonische of persoonlijke interviews, groepsinterviews, projectdocumentatie en

projectgebonden (door projecten uitgevoerde en gerapporteerde) monitoring en evaluatie.

Bevindingen

Onderzoeksvraag 1: *Welke interpretaties van effectieve manieren om verandering in gezondheid gerelateerd gedrag te bevorderen en de ervaren gezondheid te verbeteren bij gezinnen die kwetsbaarheid ervaren, bestaan in het programma Gezonde Toekomst Dichterbij?* Deze vraag wordt behandeld in hoofdstuk 3. Met behulp van gegevens uit 46 projectvoorstellen en groepsinterviews werd een thematische analyse uitgevoerd. Het hoofddoel was om expliciete en impliciete assumpties in GTD-projecten te identificeren over effectieve strategieën voor gezondheidsbevordering onder gezinnen die kwetsbaarheid ervaren. De lijst met geïdentificeerde assumpties werd verder gecategoriseerd, wat resulteerde in vijf 'projectaanpakken': (1) strategieën om gezinnen vooraf gedefinieerde activiteiten aan te bieden met betrekking tot gezondheid (en gezondheidsgedrag); (2) actieve betrokkenheid van gezinnen die kwetsbaarheid ervaren bij het initiatief; (3) assumpties over hoe gezondheidsbevordering zou moeten beginnen met niet direct aan gezondheid gerelateerde onderwerpen; (4) assumpties over hoe verder te bouwen op wat al bestaat binnen de lokale context van de gezinnen; en (5) assumpties over de rol van zorgprofessionals in gezondheidsbevordering bij gezinnen die kwetsbaarheid ervaren. De clusters van aannames waren niet uitsluitend; de meeste projecten namen meerdere strategieën op. De geclusterde assumpties werden vertaald in benaderingen en vormden een kader voor de daaropvolgende overkoepelende evaluatie van het GTD-programma en de studies die in dit proefschrift zijn opgenomen.

Hoofdstuk 4 behandelt Onderzoeksvraag 2: *Wat werkt en hoe (en wat werkt niet en waarom) met betrekking tot participatie bij gezondheidsbevordering onder gezinnen die kwetsbaarheid ervaren?* In een realist-geïnspireerde casestudy gecombineerd met een *Theory of Change* (ToC)-model, verken ik mechanismen die een rol spelen in gezondheidsbevordering onder gezinnen op basis door participatie. De focus ligt hierbij op het individuele niveau van gezinsleden die deelnemen aan één van de drie projecten die zijn geïncludeerd in de casestudy. Met behulp van gegevens uit meerdere kwalitatieve bronnen wordt thematische analyse gebruikt om Context-Mechanism-Outcome (CMO)-configuraties te identificeren. Belangrijke bevindingen uit deze studie geven aan dat participatie van gezinsleden bij gezondheidsbevordering 'werkt' wanneer dergelijke betrokkenheid (1) op maat gemaakt is, (2) flexibel is en (3) een focus op mechanismen

omvat. Er werden daarnaast veel mechanismen geïdentificeerd, waarbij die met betrekking tot 'een bijdrage leveren' en 'peer support' sterk naar voren kwamen. De resultaten geven aan dat participatie sociale netwerken kan versterken, gezinnen kan *empoweren* en de ervaren gezondheid kan verbeteren. In sommige contexten kan participatie echter ook negatieve reacties uitlokken. Bijvoorbeeld in een context van veel stressoren in het persoonlijke leven van gezinsleven en bij een voorgeschiedenis waarbij gezinsleden ervaringen hebben opgedaan met sociale- of gemeentewerkers die tot wantrouwen hebben geleid. Een voorbeeld van een positieve context is de krachtige levenservaring van deelnemers.

Net als in hoofdstuk 4 wordt in hoofdstuk 5 een op realist evaluatie geïnspireerde casestudy gepresenteerd om Onderzoeksvraag 3 te beantwoorden: *Welke mechanismen spelen een rol bij de betrokkenheid van professionals gedurende de uitvoering van initiatieven voor gezondheidsbevordering onder gezinnen die kwetsbaarheid ervaren?* Twee projecten uit het GTD-programma werden geïncludeerd in deze casestudy op basis van hun aanpak: (ook) een focus op de betrokkenheid van professionals bij de projecten en meer specifieke de werkwijze van professionals. Deze studie omvatte een thematische analyse van kwalitatieve gegevens uit groepsinterviews, telefonische interviews met projectleiders en projectdocumentatie. De tweedelige analyse resulteerde in (1) een gecombineerde programmatheorie over de werkwijze van professionals, en (2) een lijst met CMO-configuraties om de initiële programmatheorie aan te scherpen. Uit de initiële programma-theorie blijkt dat werd verondersteld dat de betrokkenheid van professionals bij de projecten belangrijk en intensief was. De studie geeft ook inzicht in de mechanismen die een rol spelen bij de professionals. De waarde van reflectie en kritisch leren speelden een duidelijke rol in het mogelijk maken van verandering bij professionals, evenals de rol van de professionele omgeving.

Onderzoeksvraag 4: *Welke benaderingen—participatie van de gemeenschap, veranderingen in professionele werkwijzen, buurtnetwerken, een gedragsbenadering—of combinaties van benaderingen kunnen bijdragen aan verbeteringen in de ervaren gezondheid en/of het gewicht of bewegen van gezinnen die kwetsbaarheid ervaren?* Deze vraag wordt behandeld in hoofdstuk 6. Naar aanleiding van de in hoofdstuk 3 geïdentificeerde benaderingen exploreert de studie in hoofdstuk 6 de effectiviteit van deze benaderingen (of combinaties van benaderingen) voor gezondheidsbevordering onder gezinnen. De studie is gebaseerd op *fuzzy-set* kwalitatieve

vergelijkende analyse (fsQCA). De benaderingen, die niet uitsluitend zijn, zijn als volgt: (1) een benadering die geacht wordt te werken via participatieve processen; het betrekken van gezinnen die kwetsbaarheid ervaren bij het ontwerp, de organisatie en/of de uitvoering van projectactiviteiten; (2) een benadering waarbij het project tot doel heeft de werkwijze van professionals te veranderen en, meer specifiek, aan te passen door de betrokkenheid of training van professionals of door de ontwikkeling van methoden; (3) het versterken van de professionele en sociale netwerken van gezinnen, met name in specifieke gebieden of buurten; en (4) het bevorderen van individuele gedrags- en houdingsveranderingen primair door middel van gedragsinterventies en -activiteiten, inclusief gezondheidsvoorlichtingsprogramma's. Er was weinig bewijs voor substantiële verandering in aan gedrag gerelateerde uitkomsten. Ik vond echter dat programma's die meerdere benaderingen combineren veelbelovend zijn voor het bereiken van aan gezondheid gerelateerde uitkomsten bij gezinnen die kwetsbaarheid ervaren. Ook werd duidelijk dat een goede voorbereiding van elke benadering zeer waardevol is voor succes. Geen enkele benadering op zich was voldoende om verandering te bereiken in aan gezondheid gerelateerde uitkomsten, inclusief ervaren gezondheid, maar combinaties van benaderingen kwamen wel voor samen met een verbetering in ervaren gezondheid.

Conclusies en aanbevelingen

Dit proefschrift heeft inzichten gebracht in de effectiviteit en mechanismen van verschillende aanpakken voor gezondheidsbevordering voor kwetsbare gezinnen. Met betrekking tot participatie van gezinnen impliceren de bevindingen dat onderdelen van deze aanpak een scala aan mechanismen bij gezinsleden kunnen activeren, waarvan vele primair draaien om 'een bijdrage leveren' en 'peer support'. Deze mechanismen leidden vervolgens in specifieke contexten tot aan gezondheid gerelateerde uitkomsten bij gezinsleden. Bovendien is een belangrijke conclusie van het verdiepende onderzoek dat er geen '*one size fits all*'-aanpak is voor het betrekken van gezinnen bij gezondheidsbevordering. De waarde van mechanismen die gaan over reflectie en kritisch leren en de rol van de professionele omgeving sprongen eruit als voorwaarden voor veranderingen bij professionals. Dit leidde op zijn beurt tot uitkomsten bij professionals, zoals veranderingen in houding, kennis en bewijs van veranderingen in de praktijk op korte termijn. Met betrekking tot effectiviteit impliceren de bevindingen dat een aanpak die meerdere strategieën combineert effectief kan zijn. Zowel in de algemene als in de inhoudelijke studie werd duidelijk dat een grondige voorbereiding van elke aanpak essentieel is voor succes. Multi-strategische programma's zijn veelbelovend voor het

bereiken van aan gezondheid gerelateerde uitkomsten bij kwetsbare gezinnen, maar er is meer onderzoek nodig om te onderzoeken welke combinaties van strategieën succesvol zijn in de implementatie.

Aanbevelingen:

- Beleid voor gezondheidsbevordering moet een geïntegreerde aanpak omvatten, rekening houdend met factoren en ontwikkelingen op alle niveaus en in alle sectoren.
- De praktische uitvoering van gezondheidsbevorderingsprogramma's kan in plaats daarvan baat hebben bij meer gerichte en afgebakende ontwerpen. Ik pleit daarom voor context- en complexiteitsgevoelige initiatieven in plaats van programma's die 'alle niveaus en determinanten moeten aanpakken'.
- Wanneer *calls* voor projectaanvragen door financiers gedefinieerde uitkomsten bevatten, moeten de uitkomsten en maten zorgvuldig worden geselecteerd om aan te sluiten bij de strategieën en niveaus in het programma.
- Mechanismen die in onderzoek zijn geïdentificeerd, kunnen worden vertaald in *humanising* principes (bijv. een bijdrage leveren, zich gezien en gewaardeerd voelen, steun ervaren). Als zodanig zouden deze mechanismen kunnen worden opgenomen als kernprincipes voor participatie in gezondheidsbevordering.
- De bevindingen suggereren dat een op maat gemaakte, flexibele benadering van participatie het meest effectief is. Maak een voorbereidende gefinancierde onderzoeksfase mogelijk voor gezondheidsbevorderingsprojecten die participatieve elementen opnemen.
- Bij het ontwerpen van gezondheidsbevordering voor kwetsbare gezinnen is de betrokkenheid van professionals essentieel, maar alleen als deze betrokkenheid wordt geïmplementeerd volgens een zorgvuldig ontworpen en op theorie gebaseerde aanpak.

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