

MSc thesis

Capacity building for
health promotion
among vulnerable
families: what works?
– a realist approach

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Capacity building for health promotion among vulnerable families: what works? - *a realist approach*

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Abstract

Introduction: In the Netherlands, lower SES groups often have a lower health status compared to higher SES groups. It is important to engage in health promotion for the low SES groups, but this is often difficult for health professionals. Insight is needed into effective ways to support health professionals, but studies on this subject often focus on the intervention as a whole, while detailed information is missing on the role of the professional and how the professional can be supported in this role. A possible way to support professionals is by capacity building: enhancing professionals' knowledge, skills, commitment and resources in order to increase their ability to address certain health issues. This research aimed to identify supportive and restraining factors in capacity building for health professionals' practices for health promotion among vulnerable families in the Netherlands. The study used a realist approach: combinations of context, interventions, and mechanisms were identified that lead to the outcome effective capacity building.

Methods: Two realist informed case studies were performed. By using a realist approach, context-intervention-mechanism-outcome (CIMO-) configurations are identified to gain an in-depth understanding of the effectiveness of certain interventions. Two projects of the Healthy Futures Nearby program were examined, making use of existing data from the overall evaluation study. This data consisted of interviews with the project coordinators, focus groups and progress reports. The data analysis was stepwise, data driven and thematic: (1) The progress reports were coded for assumptions (together forming the program theory), (2) data was coded in terms of outcome and context, intervention and mechanism, (3) the coded quotes were categorized according to the elements of capacity building and (4) the initial assumptions and configurations were analysed and compared, resulting in a revised program theory. In addition to the existing data, for both of the projects a semi-structured interview was conducted with a researcher involved in the overall evaluation study to discuss the preliminary results.

Results: The program theory is presented and CIMO-configurations are identified. By using the configurations, relevant nuances could be made to the program theory, resulting in a revised program theory. Several supportive and restraining factors are identified. Supportive contextual factors are existing tools, expertise of institutions, and motivation of (some) professionals. Restraining contextual factors are a lack of time and motivation among (some) professionals, a low entry (knowledge and skill) level and that professionals have their own way of thinking, so that new ideas need time to ground. To respond to this, projects should fit with the professionals' needs and with their entry level and should respond to the lack of time and motivation and the pressure professionals can experience. Supportive mechanisms are becoming aware of the vulnerable families and their challenges and of the health promotion principles, realising the importance of the project, learning from experience, being supported by concrete knowledge, being supported in cooperation, feeling heard and valued, feeling that the project fits your needs, being motivated and inspired, experiencing equality and patience and less taboo, feeling positive about tools and trainings and gaining confidence. Restraining mechanisms are not having the feeling that the project fits your needs, not being motivated and experiencing pressure from the project or from factors outside the project.

Conclusion: The revised program theory gave an in-depth insight into how capacity building interventions can effectively support professionals. The capacity building elements knowledge, skills, commitment and resources were all shown to be effective in supporting professionals, although it differs per intervention to what extent the different elements play a role. To give a more complete insight into the process of capacity building, the factors 'insight into the professionals' needs and preferences' and 'institutional support' were added to the concept. This research adds to the existing literature, because of its focus on the professional and on the details of interventions. The results can be used for designing effective capacity building interventions to support health professionals in health promotion among vulnerable families. The focus on the projects' assumptions gives the current projects and future projects useful insights for shaping their projects. Finally, it shows the importance for future research and practice to take into account the assumptions that are present in the projects and among professionals.

Preface

Dear reader,

First of all, thank you for reading my MSc thesis. This thesis has been written for my study program Communication, Health and Life Science, within the specialization Health and Society. During the process of writing this thesis I have learned very much, and it was nice to see how at some point things suddenly became clear and how I gained new insights. Of course, I could not have written this thesis without the help and support of several persons, which I would like to thank them for.

First of all, I would like to thank my supervisors for their indispensable support. Lette Hogeling, my first supervisor, was always supportive and took the time to help me in my research and writing process. Her enthusiasm motivated me to keep working and gave me new energy. Lenneke Vaandrager, my second supervisor, helped me with her critical, constructive feedback to dig just that little deeper and to keep looking for the underlying explanations.

During my thesis I have worked together a lot with my 'thesis buddy' Kirstin, and I would like to thank her for the enjoyable thesis meetings and lunch breaks and for all the support.

Finally, I would like to express my thanks to my family and friends for their support, especially for all the coffee breaks and lunch walks we had during the months that I wrote on this thesis.

I hope you enjoy reading this thesis,

Anne van Wijk

Gouda, April 2nd, 2020

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1 Introduction

Over the past years, (healthy) life expectancy in the Netherlands has increased (Worldbank, 2019), but health inequalities still exist. An example of such an inequality is that people with a low socioeconomic status (SES) often perform poorer health behaviours compared to people with a higher SES (Filc, Davidovich, Novack & Balicer, 2014; Hiscock, Bauld, Amos, Fidler & Munafò, 2012), leading to a lower health status for people with a low SES (CBS, 2019; Kim and Rosenberg, 2018; SCP, 2018; Volksgezondheid en Zorg, 2019).

It is important to improve the health of people with a low SES and to reduce their health backlog. In reaching these people and in promoting their health, the (health) professional, for example a general practitioner or midwife, is shown to be important. Cokkinides, Ward, Jemal and Thun (2005) state that advice from health professionals to quit smoking is shown to be effective in increasing the use of effective smoking cessation therapies. The importance of the professional is also shown by Secker-Walker, Dana, Solomon, Flynn and Geller (2000), who show that health professionals are a credible source of lifestyle advice, and by Lawlor, Keen and Neal (2000), who state that lifestyle advice by health professionals has been shown to have a positive effect on population health.

The professional has different tasks in health promotion, such as signalling risk groups (Garg et al., 2018), giving lifestyle advice (Cokkinides et al., 2005; Lawlor, Keen and Neal, 2000), or referring patients if needed (Secker-Walker et al., 2000). Several methods (such as motivational interviewing) and tools (an overview of possible professionals to refer patients to) can support the professional in executing these tasks (Cokkinides et al., 2005). It is important that health professionals know which tools and methods they can implement and when and how to implement them effectively.

However, in practice professionals often lack knowledge and skills, making it difficult to execute their tasks effectively (Cokkinides et al., 2005; Secker-Walker et al., 2000). Garg et al. (2018) indicate a lack of awareness and knowledge among health professionals of practices that are possible for health promotion. Brotons et al. (2005) studied the knowledge and attitudes of general practitioners in Europe, and found that, although general practitioners see the importance of preventive and health promotion activities (such as giving lifestyle advice), they are not very likely to engage in these activities, because the activities are perceived as difficult to carry out. Wechsler, Levine, Idelson, Rohman and Taylor (1983) studied physician's attitudes towards health promotion. They found that most of the physicians they interviewed believe that health promotion is important and that they should play an important part in health promotion. However, only 3 to 8 percent thought themselves to be "very successful" in bringing about behavioural changes. The authors suggest that in order to increase the physicians' confidence in their ability to help patients, provision of information on successful intervention strategies and support services is needed (Wechsler et al., 1983).

Insight is needed into effective interventions to support health professionals' practices. However, studies on this subject often focus on the intervention as a whole, while detailed information is missing on the role of the professional and how the professional can be supported in this role. An example of this is the study by Secker-Walker et al. (2000), who advice to offer a broad range of smoking cessation

support systems, however, no detailed description is given about such a support system and how to implement it.

Thus, in-depth study into this subject is needed, in order to overcome the barriers (health) professionals experience health promotion among vulnerable families. Therefore, the aim of this research is to gain insight into ways (health) professionals can be effectively supported in practices for health promotion among vulnerable families.

A possible way to support health professionals' practices is through capacity building, a concept which will be explained in the theoretical framework in chapter 2. The research question will be answered using a realist approach, this approach will also be explained in chapter 2.

2 Theoretical framework

2.1 Definition of concepts

(Health) professional

In this research, a (health) professional encompasses a broad range of professionals. A (health) professional is someone who works in the field of health or well-being, or who can influence people's health or well-being through his or her job. This can be for example a general practitioner, midwife or social worker. In this report, the (health) professional will be referred to as 'general practitioner (GP)' or 'midwife' if it is specifically about the professionals in one of the projects or 'professional' if it is not about one of the projects specifically.

Practices

The (health) professional can have many different tasks. In this research the focus is specifically on their practices among vulnerable families, for example registration of low literacy, discussing smoking-cessation or implementing a tool for improving communication. Here, the term 'practices' does not include health professionals' other activities such as getting in contact with vulnerable families, signalling persons at risk for specific health problems, etc.

Vulnerable families

In this research vulnerable families are households 'where at least one parent and one child live together, experiencing multiple problems in the field of finances, education, work or well-being and who have a health disadvantage due to, among other things, smoking, heavy alcohol consumption and obesity in combination with a worse perceived health' (FNO, 2015). In this research, the vulnerable families will be referred to as 'people with low literacy' or 'vulnerable pregnant women' if it is specifically about one of the projects and 'vulnerable families' if it is not about one of the projects specifically. In the projects, sometimes the term 'client' is being used instead of 'patient', but to keep the terminology clear in this report only the term 'patient' will be used. If the term 'patient' is being used, in this research this is always about patients from vulnerable groups.

2.2 Capacity building

In order to answer the research question, this research applied and explored the concept of 'capacity building'. Capacity building (or capacity development) can be defined as 'the process by which individuals and organizations obtain, improve, and retain the skills, knowledge, tools, equipment and other resources needed to do their jobs competently or to a greater capacity (larger scale, larger audience, larger impact, etc)' (Macfadyen & Huntington, 2004). The concept of capacity building goes back to the 1970s, when terms like 'institution building' and 'community development' were being used, but the term 'capacity building' is being used since the 1990s (Crisp, Swerissen & Duckett, 2000). The end goal of capacity building is that the ability of an organisation, community or professional to

address certain (health) issues is changed, by focusing on the creation of for example new approaches or structures (Crisp, Swerissen and Duckett, 2000).

Capacity building is more in depth explained by McLean, Feather and Butler-Jones (2011) in their book 'Building health promotion capacity: action for learning, learning from action'. To be able to engage in health promotion effectively, a professional needs individual capacity, which is composed of four elements: knowledge, skills, commitment and resources. By enhancing these four elements, a professional's individual capacity for health promotion can be increased. The process of enhancing these elements is called capacity building. The four elements knowledge, skills, commitment and resources can each be described by a list of basic elements, as can be found in the following paragraphs (McLean, Feather and Butler-Jones, 2011). An overview of the concept of capacity building can be found in Figure 1.

Knowledge

At the basis of health promotion by professionals is knowledge, and on this knowledge effective health promotion is constructed. It consists of the following basic elements:

- A holistic understanding of health and its determinants;
- An awareness of population health promotion principles (e.g. meaningful participation of those whose health is being promoted, collaboration and partnerships beyond the health sector);
- An understanding of the different strategies and processes for health promotion and how to use them;
- A recognition that the strengths and weaknesses of different approaches make them more or less appropriate in different circumstances;
- An understanding of the context within which the principles and strategies will be applied (e.g. target populations' conditions, aspirations, and culture).

Skills

Health professionals do not only need knowledge, they also need skills, to be able to take action:

- Program planning (needs assessment, design, implementation, and evaluation);
- Communication across sectors, disciplines, and socioeconomic or community boundaries;
- Working with others (e.g., nurturing relationships and participation; conflict mediation);
- Integrating research and practice (both in the program planning cycle and as a means of critically reflective practice);
- Capacity building (both within one's own organization and with external communities and organizations);
- Being strategic and selective in making decisions about what to do and how to do it.

Commitment

Commitment gives health professionals ways to promote health, also when the circumstances are adverse. Commitment consists of the following basic elements:

- Personal energy, enthusiasm, patience, and persistence;
- Values of population health promotion (e.g. equity and social justice, empowerment and participation, etc.);
- Willingness to be flexible, to innovate, and to take thoughtful risks;
- Learning from experience of oneself and others;
- Self-confidence and credibility (both rooted in past actions and causally linked to future actions);
- Believing in and advocating for health promotion.

Resources

In order to put the elements of knowledge, skills and commitment into practice, certain resources are needed:

- Time to engage in health promotion activities and in personal and professional development;
- Tools for more efficient and effective practice (e.g. resource inventories and repertoires of good ideas and best practices);
- Infrastructure (e.g. office space, capital equipment and effective communication means);
- Supportive managers, colleagues and allies with whom to work and learn;
- Access to adequate funding.

These elements together constitute individual capacity, and through capacity building individual capacity is increased (McLean, Feather & Butler-Jones, 2011). The theory also contains the cyclical learning process, a process that consists of three steps (continuing education, practical experience and critical reflection) that nurture the process of capacity building (McLean, Feather & Butler-Jones, 2011). However, considering the feasibility, the cyclical learning process will not be taken into account in this research.

The concept of capacity building is very useful in this research. By building capacity among the health professionals, their practices for health promotion among vulnerable families can be improved. In capacity building for health professionals, some factors might be supportive, and others might be restraining. By gaining an insight into supportive and restraining factors in capacity building, effective ways of capacity building can be identified, in order to support the health professionals' practices for health promotion. Therefore, this research tries to find an answer to the following research question:

What are supportive and restraining factors in capacity building for health professionals' practices for health promotion among vulnerable families in the Netherlands?

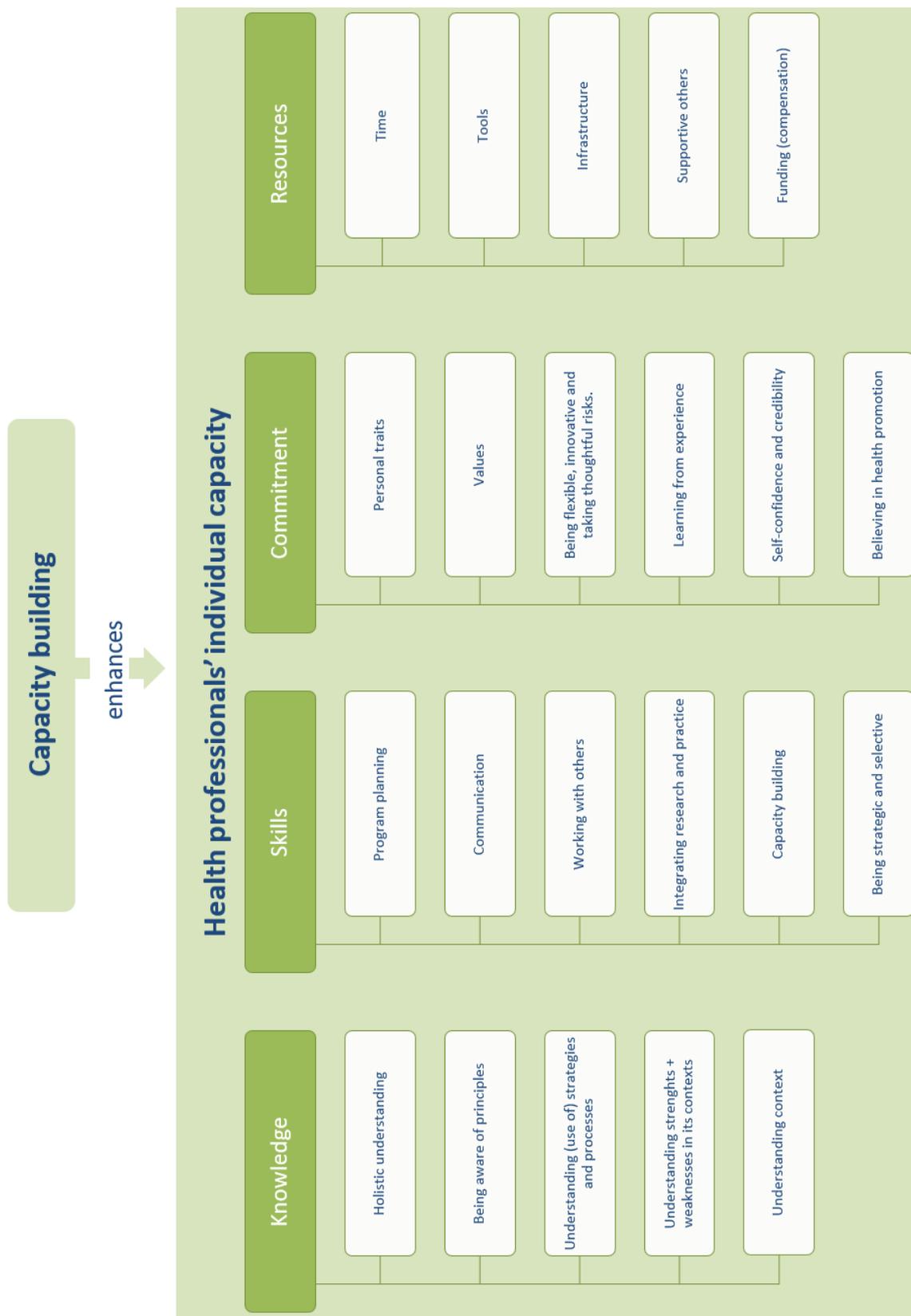


Figure 1. Overview of the concept of capacity building (based on capacity building as described in McLean, Feather and Butler-Jones (2011)).

2.3 Realist approach

In order to gain insight into supportive and restraining factors for capacity building for (health) professionals, an insight is needed into what works for whom and in what context, and an effective way to gain this insight, is using a realist approach. This approach can be described as a theory driven evaluation approach (Wong, 2018). A realist approach gives an in-depth understanding of the effectiveness of approaches or elements of approaches, by identifying context-intervention-mechanism-outcome (CIMO) configurations. When using this approach for evaluating interventions, the focus is not just on which intervention is effective, but on what is effective for whom, under what circumstances, and why and how is a specific intervention effective (Jagosh et al., 2015). With the realist approach this study aims 'to identify key combinations of contextual factors and mechanisms that trigger outcomes of interest' (Herens et al., 2017), in this case that are key combinations of contextual factors and mechanisms that contribute to effective capacity building for health professionals' practices for health promotion among vulnerable families in the Netherlands.

A certain intervention is carried out (in a project), and in reaction to this, certain mechanisms can occur. Mechanisms can be defined as something (an emotion or attitude) that people (participants of an intervention) experience, through which an activity does or does not have the specific, desired outcome. Mechanisms are responsible for the relationship between contexts and outcome (Jagosh et al., 2015).

However, mechanisms do not occur in a vacuum. Mechanisms are triggered to different degrees in different contexts and can therefore lead to different outcomes (Jagosh et al., 2015). A context is either something (a situation or condition) that existed prior to the introduction of the intervention or something that happens that is not within the control of the program. Examples of contexts are cultural norms of the target group of an intervention but also for example trust-building processes (Herens et al., 2017).

To explain which key combinations of contextual factors and mechanisms related to an intervention contribute to the outcome effective capacity building, context-intervention-mechanism-outcome configurations are used. These configurations are certain hypotheses about how mechanisms cause an intervention to work or not in a certain context, leading to specific outcomes (Punton, Vogel & Lloyd, 2016). Through a mechanism, an intervention leads to an outcome, but only within a certain context, as Wong (2018) explains, so Context + Intervention + Mechanism = Outcome. The realist approach tries to identify the key combinations of mechanisms and contexts to reach the desired outcome. The relevance of the realist approach lies in the fact that it studies not just the outcomes of interventions, but both outcomes, mechanisms and contexts. As Jagosh et al. (2015) state, programs work differently in different contexts: a certain mechanism might be successful in one context but might fail in another, because the mechanism is influenced by the context, and so the outcome will also be different in different contexts.

3 Methods

3.1 Study design

To answer the research question, two realist informed case studies were performed. This study examined supportive and restraining factors in capacity building for (health) professionals' practices for health promotion among vulnerable families in two projects of the overall evaluation study of the Healthy Futures Nearby program (Hogeling, Vaandrager & Koelen, 2019). The Healthy Futures Nearby (HFN) program consists of 46 small-scale projects funded by the private funding organization FNO. The projects aim to reduce vulnerable families' health deprivation by triggering lifestyle changes. Since 2016, the Healthy Futures Nearby program has been subject to a comprehensive overall evaluation study (Hogeling, Vaandrager & Koelen, 2019). Several of the projects in this program aim to build capacity to promote healthy lifestyles amongst (health) professionals, and therefore two projects of the HFN program were selected purposively on the basis of the extent to which the (health) professional plays a role and based on whether or not (health) professionals attended the project's focus groups (in which the stakeholders of the project reflected on the project).

3.2 Data collection

Existing data from the HFN program

This study used the data which has been already collected within the overall evaluation study of Healthy Futures Nearby. This data exists of interviews with the project coordinators, focus groups and progress reports.

The interviews were held via telephone once a year (in total 4 times) with the project coordinators. In these interviews among others the results of the project were discussed and the underlying mechanisms that played a role in these results. The interviews were semi-structured, an interview guide was prepared for the interview. The interviews were recorded and transcribed.

The focus groups were conducted at the start of the program, halfway through the program (end 2017/early 2018) and at the end of the program in 2019, and participants of the focus group were the professionals and volunteers who carry out the project, as well as other relevant stakeholders: the vulnerable families, professionals working with these families and municipality. The focus group was a dialogue with the purpose of (1) giving the project groups a moment of reflection on their work and (2) retrieving information about the situation and developments. A checklist was used with questions about the approach, research, theoretical framework, ambition, the actors and key figures, the organization, resources and context. When relevant, changes in the physical environment were discussed. The starting point of the focus group was an arrow scheme based on earlier group interviews in the project. Each focus group was conducted by two researchers with experience in the field of research, policy and practice. The audits were recorded and transcribed.

Twice a year the project coordinators reported the progress of their project. In these progress reports, project coordinators answered questions about activities within the project, number of

participants per activity, local cooperation, participation of the vulnerable families, effective mechanisms and barriers.

Interview

In addition to the use of secondary data, for both projects a semi-structured interview was conducted with the researcher who was responsible for the data collection in the overall evaluation study of the HFN program. In this interview, the preliminary results of the CIMO configurations were discussed with the researcher, who had the possibility to react on the preliminary findings, for example to indicate whether or not he agreed and/or missed information based on what he/she found during the evaluation study up until the moment the interview was held.

3.3 Analysis

The data analysis was stepwise, data driven and thematic and focused on identifying context–mechanism–outcome (CIMO) configurations. The analysis of interview transcripts was done by using coding in terms of ‘outcomes as observed by respondents’, ‘context conditions’, and ‘description of underlying mechanisms in the actual intervention’ (Marchal et al., 2012). The following steps were followed for coding the data:

Step 1. The interviews, focus groups and project documents were coded for assumptions of the projects as they are expressed by the respondents. These assumptions together form the program theory.

Step 2. All transcripts were first coded in terms of outcomes (O). After this, contexts (C), Intervention (I) and mechanisms (M) were identified. Information on contexts, intervention and mechanisms were entered in a table, linked to the outcome they related to. If a source provided evidence on only part of a CIMO, cells were left blank. Information about the outcome was always given, because insights into mechanisms or contexts always relate to an outcome (Herens et al., 2017). Each CIMO-configuration was labelled as supportive or restraining (-), in order to find evidence on positive and negative CIMO configurations (Pawson, 2002). A simplified example of what this coding spreadsheet looked like can be found in Table 1.

Step 3. The coded quotes were categorized according to the elements from the concept of capacity building (knowledge, skills, commitment and resources, or a combination of these elements).

Step 4. After identifying all the CIMO configurations, the configurations were read through in order to determine how the evidence was related (Punton, Vogel & Lloyd, 2016). The theoretical framework was applied to the assumptions and the CIMO-configurations in order to further analyse and explain the results. The initial program theory and the CIMO-configurations were compared and reflected upon, which resulted in a revised program theory.

In the interview with the researcher who had originally collected the data the preliminary results of step 1-3 were discussed and reflected upon. Results of this interview were used to revise and complete the CIMO-configurations if needed. After conducting step 1-4 and the interview, the result

is a list of assumptions and CIMO configurations and an analysis of these results. These results give an insight into supportive and restraining factors in capacity building for health professionals' practices for health promotion among vulnerable groups in the Netherlands.

Table 1. *Simplified example of the coding spreadsheet.*

Document	Context	Intervention	Mechanism	Outcome
E.g.: progress report project <i>'number and name of the project'</i>				

4 Results

4.1 Introduction to the results

This chapter contains the results of this research. First, in paragraph 4.2 an introduction is given to the two projects that were studied. In paragraph 4.3 and 4.4, an overview can be found of respectively the assumptions at the start of the project and an overview of the CIMO-configurations that are identified in this research. In paragraph 4.5, the assumptions from the initial program theory will be reflected upon by using the findings from the CIMO-configurations, leading to a revised program theory. Paragraph 4.6 gives a comprehensive overview of the restraining and supportive factors that are identified in the configurations.

The aim of this research was to gain insight into the supportive and restraining factors in capacity building for health professionals' practices for health promotion among vulnerable families in the Netherlands. A realist approach was used, following the steps as described in the methodology section. First, the outcomes were identified and then for every outcome the intervention and contextual factors and mechanisms are identified. The realist approach gives an insight into the underlying processes that lead to the outcome that is identified. This approach resulted in a list of project outcomes that related to this research's topic, together with a detailed insight into the contexts, interventions and mechanisms underlying these outcomes. This list of CIMO-configurations is used for reflection on the initial program theory, resulting in a revised program theory.

4.2 Description of the projects

Two projects within the Healthy Futures Nearby program were selected. For privacy considerations the projects (including names, titles, etc.) are anonymised. The selected projects will be referred to as project 1 and project 2.

4.2.1 Project 1

The aim of project 1 was to implement interventions available to the general practitioners that are suitable for the vulnerable families and to help the general practitioner to effectively support self-management of his/her patients. The aim of this was to promote self-efficacy and self-management skills, to increase exercise, decrease BMI and increase perceived health amongst people with overweight and low literacy from vulnerable families. Per general practice a project group was involved, which consisted of GPs, people of the vulnerable families and other important stakeholders. The GPs were supported by professional institutions X and Y, who for example facilitated the group meetings. The project also used and explored a guide that contains a step-by-step plan for recognizing people with low literacy, communication guidelines and tools for promoting self-management. The guide was adapted based on experiences from GPs collected at three general practices located in three cities, with at least 5,000 patients. These general practitioners were intensively supported in improving self-management support for families with low literacy and overweight from disadvantaged families.

4.2.2 Project 2

Project 2 aimed to support midwives who work with pregnant women or women who just gave birth and who are vulnerable due to low (health) literacy and who want to stop smoking and remain smoke-free. Prior to this project, program A existed, aimed at supporting midwives in addressing smoking cessation among pregnant women or women who just gave birth. Program A contains a step-by-step plan that guides midwives in supporting pregnant women in smoking cessation and is obligatory to use for all midwives. However, the step-by-step plan was often not fully implemented, and besides, program A was not sensitive to women with a low (health) literacy. Therefore, in this project a more sensitive and optimised program B was developed, based on program A. As part of program B a training is developed for midwives on how to recognize low (health) literacy among their patients, how to use visual stories and a CO measuring device in the consultation with pregnant women, and how to make use of motivational interviewing. To ensure that pregnant women will not start smoking again after pregnancy, the project has also developed a training especially for maternity assistants and JGZ professionals (abbreviation for '*jeugdgezondheidszorg*', which is 'youth healthcare'). The training and materials have been developed in cooperation with both midwives and (expectant) mothers. The project has trained 97 obstetricians / gynaecologists, 33 maternity assistants and 23 JGZ professionals in three pilot regions in the Netherlands. Materials and methodologies from the project training are included in an existing multidisciplinary e-learning training. This training is also supplemented with communication techniques for midwives to discuss smoking cessation with (expectant) mothers with a low SES background.

4.3 Program Theory

In this paragraph an overview of the assumptions is presented. The projects have (implicit) assumptions about how their project works towards their goal and about what conditions there are in order to make the projects successful, and these assumptions/theories together are the programme theory of the projects (Roger, 2008). Some of the assumptions are assumptions extracted from one of the projects specifically and some from both projects. In total the program theory contains 18 assumptions.

The assumptions are categorised according to (combinations of) the elements of capacity building as described in paragraph 2.2: Knowledge, skills, commitment and resources. Some assumptions are about both knowledge and skills, these are categorised in a joint category, named 'knowledge and skills'. A number of assumptions cannot be categorised in one of the four elements, these assumptions are about gaining insight into the professionals' needs and preferences in order to fit the project to their daily practice, which can be seen more as a step before the actual process of capacity building. These assumptions are listed after the assumptions about knowledge, skills, commitment and resources. In brackets, for each assumption is indicated whether the assumption was extracted from project 1, project 2 or both projects.

Knowledge and skills

These assumptions are about various topics: knowledge about the vulnerable families' background, signalling and registration, experience with the vulnerable families, specific skills and peer-to-peer learning activities (*intervisie*).

- The GPs learn from the contact with the people with low literacy who are involved in the project group. (project 1)
- Training can increase midwives' knowledge on the background of the vulnerable pregnant women and can teach midwives how to work with program B. (project 2)
- Training can instruct GPs how to signal and register the people with low literacy faster and more accurately. (project 1)
- Improved registration and signalling leads to better tailored health promotion practices for people with low literacy. (project 1)
- Peer-to-peer learning activities ensure that the knowledge and skills acquired by the GPs are retained in daily practice. (project 1)

Skills

The two assumptions categorised under skills are about improving the professionals' communication with the vulnerable families.

- Training improves the professionals' ability to communicate effectively with people from vulnerable families. (projects 1 and 2)
- To improve communication between GPs and people with low literacy, the GPs should learn how to create room and safety for people to ask questions. (project 1)

Commitment

Four assumptions relate to commitment. The assumptions stress that professionals should be enthusiastic and motivated for the project and for health promotion among the vulnerable families. The assumptions are also about institutions X and Y supporting the GPs in adjusting their practices and about giving the professionals the patience and (self-)confidence that is needed to engage in the project and in health promotion among the vulnerable families.

- The projects make professionals enthusiastic about participating in the project and implementing the interventions of the project. (projects 1 and 2)
- Institutional support (from the institutions X and Y) helps GPs tailor their practices for patients with low literacy. (project 1)
- GPs need to be patient in order to maintain the participative, bottom-up approach of the project throughout the three years of the project and should not follow the tendency to look for quick answers and solutions. (project 1)

- Professionals need enough confidence to guide the vulnerable families and/or do so until they are referred to another professional. (project 1 and 2)

Resources

Several resources are deemed to be important according to the project, such as tools to support the professional's daily practice and possibilities for the professionals to work together (e.g. project group meetings). Professionals also need to invest a resource: a time investment is needed according to one of the assumptions.

- Tools (CO measuring device, visual stories and guide) that can be applied in practice can support the midwives in addressing smoking cessation among vulnerable pregnant women or women who just gave birth. (project 2)
- A time investment from the midwives is needed to implement program B. (project 2)
- The project group meets regularly and is also involved in activities outside these meetings, because it is important to facilitate enough possibilities for the GPs to work together actively. (project 1)
- Better coordination of care provision in the neighbourhood is needed, so that community team (*wijkteam*), GPs and welfare are able to find each other and can support the patient from an integral perspective. This is time-effective and is important to better monitor the status of the patients with low literacy. (project 1)
- Project 2 ensures better cooperation and transfer between the Midwifery Partnerships (*VSV*). (project 2)

Insight into professionals' needs and preferences

Two assumptions are categorised in a category that was not included in the theoretical framework, as was explained at the start of this subchapter. These assumptions address the insight into the professionals' needs and preferences that is needed before starting the projects, in order to give the professionals the support they need.

- Project 2 involves different midwives in the project from the beginning, so that the project meets the wishes and needs of the midwives. (project 2)
- The projects investigate what the needs and preferences of the professionals are and take this into account in the development of the projects, in order to give the professionals the support they need and to increase the possibilities for securing the project's effects once it is completed. (projects 1 and 2)

4.4 CIMO-configurations

In this subchapter an overview is provided of the CIMO-configurations that were extracted from the two projects. The results of the two projects are presented together. For each configuration is indicated if it is extracted from project 1, project 2 or both projects (indicated by the number between brackets).

Each configuration consists of one or more contextual factors, interventions, mechanisms and outcomes. As is described in the theoretical framework:

- **A contextual factor** is either something (a situation or condition) that existed prior to the introduction of the intervention (e.g. low entry level) or something that happens that is not within the control of the program (e.g. other health promotion projects that require the professionals' time and energy);
- **The intervention** is something that is implemented in the context of the project, for example a training or material that is developed and implemented;
- **A mechanism** can be defined as something (an emotion or attitude) that people experience, through which an intervention does or does not have a specific desired outcome;
- **The outcome** of interest in this research is effective capacity building for health professionals' practices for health promotion among vulnerable families in the Netherlands. In the CIMO-configurations, both positive and negative outcomes are identified. Negative outcomes are in the result marked with an '-'.

The configurations will be presented according to the four elements of the theoretical framework: knowledge, skills, commitment and resources. Knowledge and skills are taken as one category, because most of the CIMO-configurations that are about knowledge are also about skills and the other way around. Knowledge is at the basis of health promotion. Health professionals also need skills to be able to take action. Commitment gives health professionals ways to promote health, also when the circumstances are adverse. And finally, professionals need certain resources to put the elements of knowledge, skills and commitment into practice.

Often, the configurations can be categorised in more than one of the elements, so configurations are classified in categories of one to four elements. The categories are ordered according to the theoretical framework, so first the categories with knowledge as main element will be discussed, secondly skills, then commitment and finally resources. Within this order, the categories with the most elements are mentioned first, then the categories consisting of less elements. Each category ends with a short analysis of the configurations in that category.

4.4.1 Knowledge and skills

Knowledge and skills

Entry level training too high - (2)	
Context	In current education for midwives there is no special attention for vulnerable groups. Midwives are trained in using program A, but this program is not sensitive to vulnerable women, and besides, many midwives do not (fully) implement the program. Therefore, there is little (accurate) knowledge about supporting vulnerable pregnant women among midwives.
Intervention	The project provides a training for midwives. This training helps the midwives to recognize low (health) literacy, to make use of the CO measuring device and visual stories and trains the midwives in motivational interviewing. However, the training is given at a high (theoretical) level that requires prior knowledge of smoking cessation among the vulnerable women. During the training there is not much time for practicing.
Mechanism	The midwives did not have the feeling that the training fits with their needs, the theoretical level is too high for many of them.
Outcome	The midwives were not trained as effectively as was intended by the project, and therefore did not or did only partly receive the knowledge and skills they need.

Training adjusted - (2)	
Context	The midwives receive a training to recognize low (health) literacy and to make use of the visual stories, CO measuring device and motivational interviewing. However, the training was given at a (too) high (theoretical) level and there was not much time for practicing. Therefore, the training in the original setup did not fit the needs of the midwives and did not provide them with the needed knowledge and skills.
Intervention	The training is slightly adjusted: the theoretical part of the training is more adapted to the midwives' level and is shortened to have more time for practicing.
Mechanism	The midwives have the feeling that the training fits with their needs. The midwives appreciate the opportunities for practicing and find the training educational and useful. Because the training fits better with the midwives' needs, their commitment for the training increases.
Outcome	The adapted training is better able to support the midwives, because it fits in with the midwives' needs, especially because there is more room for practicing. Therefore, the midwives receive the knowledge and skills they need, and their commitment increases.

E-learning prior to the training (2)

Context	<ul style="list-style-type: none"> • The midwives receive a training to recognize low (health) literacy and to make use of the visual stories, CO measuring device and motivational interviewing. However, the training was given at a (too) high (theoretical) level and there was not much time for practicing. Therefore, the training in the original setup did not fit the needs of the midwives and did not provide them with the needed knowledge and skills. • There is an e-learning about decreasing smoking among (expectant) parents available free of charge for all midwives, which provides them with a good knowledge base. • New methods need time to 'ground' in the daily practice of the midwives.
Intervention	The CO measuring device and visual stories about smoking and pregnancy, that can be used to discuss smoking cessation with the (vulnerable) pregnant women, are being incorporated in the e-learning. Prior to the training this e-learning is sent to the participating midwives in preparation for the training, consisting of a theoretical background on the topics that will be addressed in the training.
Mechanism	The e-learning is well received by midwives. Because more theoretical background is given in advance instead of during the training, less pressure is experienced during the training.
Outcome	The training supports the midwives better (compared to training without using the e-learning), because there is more time for practice during the training. Therefore, the midwives receive the knowledge and skills they need.

Analysis

The level of knowledge and skills of midwives is often low, among others because of a lack of special attention for smoking cessation (among vulnerable women) in the midwives' education. If a training is than given at a (too) high and theoretical level it does not fit the needs of the midwives and does not provide them with the needed knowledge and skills. More attention has to be paid to practicing during the training (thereby increasing skills) and to improving knowledge prior to the training, by using an (existing) e-learning. Then interventions such as a training are well received by the midwives and give midwives the feeling that the project fits their needs, besides, the stress they experience decreases. The combination of e-learning and (adjusted) training together provide the midwives with better knowledge and skills.

Knowledge, skills and commitment

Meetings lead to understanding for the people with low literacy (1)	
Context	Insufficient insight among GPs into the people with low literacy makes it difficult for GPs to reach people with low literacy and to understand them. For example, people

	with low literacy are often sent away if they visit a general practice without an appointment or at another time than was planned.
Intervention	During the project there are regular meetings with the project groups, in which both GPs, people with low literacy and other stakeholders participate. In these meetings the progress of the project is discussed, and the stakeholders share their experiences with the project. The meetings are facilitated by institutions X and Y and both professionals and vulnerable families have the chance to give their input and explain their perspective.
Mechanism	<ul style="list-style-type: none"> • GPs experience the challenges patients can have regarding visiting a health professional and they experience what is and is not effective in communication with people with low literacy. • The GPs experience equality with the people with low literacy and start to see them more as an 'equal partner' in creating good care. • GPs become inspired to adjust their practices.
Outcome	<ul style="list-style-type: none"> • The GPs get to know the people with low literacy and gain insight into the challenges of and communication with people with low literacy. • GPs develop a sense of (self-)confidence regarding their knowledge and skills. • The GPs' awareness for the people with low literacy is increased. • GPs learn how they can adjust their practices to the people with low literacy.

'Talking with' instead of 'talking about' people with low literacy (1)

Context	<ul style="list-style-type: none"> • The GPs often have little insight into and understanding for people with low literacy. • Among the GPs participating in the project, there is a lot of enthusiasm to improve care and support for the vulnerable families.
Intervention	During the project there are regular meetings with the project groups, in which both GPs, people with low literacy and other stakeholders participate. During these meetings, GPs meet the people with low literacy. They are supported by institutions X and Y, who make the conversation possible and share concrete knowledge. Institutions X and Y help the GPs to realise that the pace they have during the meetings (which is often slower than their usual pace at work), is the pace that they need to have when working with the patients with low literacy.
Mechanism	<ul style="list-style-type: none"> • The concrete knowledge on (working with) vulnerable families offered by institutions X and Y supports the GPs' process of learning to communicate effectively. • The GPs experience equality with the people with low literacy and start to see them more as an 'equal partner' in health promotion. • Professionals can feel impatient, then it takes effort to listen carefully to what a patient wants to say.

Outcome	<ul style="list-style-type: none"> • The support of Institutions X and Y offers GPs the possibility to learn to talk <i>with</i> instead of talk <i>about</i> people with low literacy. • GPs are motivated to involve patients more often. • Mutual commitment and cooperation arise between GPs and patients.
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Teach-back method (1)	
Context	<ul style="list-style-type: none"> • The GPs have insufficient insight into (communication with) the people with low literacy. • GPs lack access to/insight in tools and strategies for effective health promotion among the vulnerable families.
Intervention	The GPs learn to use the teach-back method. This method can be used to check if the patient has understood what the professional explains. If a patient understands the information, he/she is able to accurately “teach-back” the information.
Mechanism	<ul style="list-style-type: none"> • The teach-back method is experienced as valuable by the GPs. • GPs become aware of the way they talk with patients and experience what is or is not effective in communication with people with vulnerable patients. • GPs are realising that patients often see things very differently than GPs think, so they realise it is important to check if the patients understand what the GPs means.
Outcome	<ul style="list-style-type: none"> • GPs learn to use the teach-back method, which supports them in health promotion practices for vulnerable families. • GPs start to understand how patients see things (differently than GPs think).

Training (1)	
Context	<ul style="list-style-type: none"> • The GPs have insufficient insight into (communication with) the people with low literacy. • Due to insufficient insight, GPs sometimes have little understanding for people with low literacy. • GPs lack access to/insight in tools and strategies for effective health promotion among the vulnerable families.
Intervention	GPs are trained in recognizing and communicating with people with low literacy and in working with the self-management support tools from the guide that existed prior to the project. All GPs who are connected to the general practices involved in the project are invited, and GPs can register themselves.

Mechanism	<ul style="list-style-type: none"> • The GPs become enthusiastic about the training and the project. • GPs become aware of the way in which they communicate and deal with the people with low literacy. They discover that patients often see things differently than GPs think and that simplifying language is a real challenge. • The GPs become more confident regarding their knowledge and skills.
Outcome	<ul style="list-style-type: none"> • The GPs: <ul style="list-style-type: none"> ○ become more aware of low literacy among their patients; ○ gain insight into communication with people with low literacy; ○ receive specific tools (e.g. teach-back method) from the training; ○ learn how this communication and the use of tools influences the contact with the people with low literacy.

Training (2)	
Context	<ul style="list-style-type: none"> • Midwives have little knowledge on motivating pregnant women to stop smoking. Many midwives do not use existing program A or only use it partially. • Midwives lack access to / insight in tools and strategies for effective health promotion among the vulnerable families.
Intervention	The midwives receive a training that is developed together with the midwives. It contains a small piece of theory, but is mainly focused on practicing communication skills and the use of program B.
Mechanism	The training appeals to the midwives, because it fits in well with their thinking and practical approach. In particular motivational interviewing was appreciated by the midwives.
Outcome	Midwives are trained and supported in developing their skills. 64% of the participating midwives believes that the training has increased their skills and that they are able to explain their patients why smoking cessation is important.

Signalling (1)	
Context	<ul style="list-style-type: none"> • GPs recognize the people with low literacy insufficiently. • GPs intuitively signal low-literate patients, but there are no official guidelines for signalling available. • Institutions X and Y are experienced in working with the people with low literacy. • GPs lack access to / insight in tools and strategies for effective health promotion among the vulnerable families.
Intervention	The GPs receive training in signalling the people with low literacy. They are supported by institutions X and Y (e.g. by evaluation of professional-patient conversations).
Mechanism	GPs become aware of the phenomenon of low literacy and the importance of good signalling.

Outcome	<ul style="list-style-type: none"> • The GPs develop the awareness, knowledge and confidence they need for good signalling. • More GPs assess if a patient is low literate (100% after the project compared to 58% before the project). All participating GPs indicate that participation contributed positively to their ability to recognize low literacy.
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Registration (1)	
Context	<ul style="list-style-type: none"> • Mostly, (health) professionals do not work together in registering low literacy; each discipline has its own (or no) registration system. • GPs experience taboo towards registering low literacy. • Institutions X and Y are experienced in working with vulnerable families.
Intervention	<ul style="list-style-type: none"> • The GPs receive training in registering people with low literacy. • With the support of institutions X and Y, the GPs draw up an action plan that includes plans for improving registration.
Mechanism	<ul style="list-style-type: none"> • In group meetings and by drawing up a team plan, GPs start to see the importance of improved registration. • The GPs become more confident about registration of low literacy. They experience less taboo. • The GPs feel encouraged to coordinate registration better within general practices and between different (health) professionals.
Outcome	<ul style="list-style-type: none"> • The GPs develop skills needed for better registration. • More GPs register if a patient is low literate (92% after the project compared to 57% before the project). • The GPs are encouraged to coordinate registration better between different professionals and within general practices. For example, a code has been agreed with which professionals make low literacy visible in their registration system.

Analysis

GPs often have insufficient insight into the people with low literacy and into ways of communicating and working with them, they lack access to and/or insight in useful tools and strategies. Besides, GPs experience several barriers to signalling and registering people with low literacy. These factors make it hard for GPs to effectively promote the health of this group of patients. This can be addressed by group meetings where GPs and vulnerable patients work together. Professional institutions can support the professionals during these meetings. Training and institutional support can help professionals in improving signalling and registration, using new methods (teach back method) and improving skills (e.g. communication).

In all these interventions, knowledge plays a role: the GPs' understanding of the people with low literacy and their challenges increases and they gain an understanding of the different strategies

for health promotion. Skills also play a role: registration, effective communication and working together with the people with low literacy and with other GPs. Commitment plays a role mainly in the mechanisms through which the interventions are effective: the GPs learn from experiences of oneself and others, for example, in the group meetings the GPs learn from the experience of people with low literacy and the professional institutions. Besides, the GPs start to believe (more) in health promotion and they become enthusiastic and committed. Also, their self-confidence increases. Training for the midwives, in response to their low level of knowledge on (strategies and tools for) supporting vulnerable pregnant women, increases their skills and knowledge, if the training fits the midwives' practical approach.

4.4.2 Commitment

Institutions X and Y facilitates the project group meetings (1)	
Context	Institutions X and Y have expertise regarding facilitating contact between GPs and vulnerable groups.
Intervention	Institutions X and Y facilitate the project group meetings and the contact between GPs and patients during these meetings.
Mechanism	The GPs experience a sense of confidence and a safe environment when the institutions facilitate the meetings. The meetings are conducted in a confidential way, everyone understands what is being said and everyone's input is heard. The GPs experience room to learn.
Outcome	GPs develop a sense of (self)confidence regarding their knowledge and skills.

Training given by experts from institutions X and Y (1)	
Context	<ul style="list-style-type: none"> • Not all GPs are motivated for the training. • Institutions X and Y have expertise on health promotion among vulnerable families. • The trainers from institution X and Y have experience working with unmotivated GPs. • The trainers from institution X and Y show perseverance.
Intervention	<ul style="list-style-type: none"> • The trainings are given by people from institutions X and Y. Their expertise is making it possible to transfer the information energetically. • The trainer responds well to participants with low motivation: he/she is understanding, takes into account what participants think and knows how to involve the participants.
Mechanism	The GPs are motivated by the energetic training, which they evaluate as fun, useful and educational.
Outcome	The GPs receive a training which supports them both in terms of commitment (motivation) and knowledge/skills (learn from expertise of trainers).

Midwives involved in the project (2)	
Context	<ul style="list-style-type: none"> • Prior to the project, it is not clear what the midwives' needs are regarding capacity building • A part of the participating midwives is willing to think along with the project • Not all midwives are equally motivated for the project
Intervention	Preliminary research is done by interviewing the midwives about what they encounter in their work and what their needs for support are. The outcomes of this research are used in developing the training and materials.

Mechanism	<ul style="list-style-type: none"> • Midwives feel that they are being heard and valued in the project and that they can express their needs and desires. • Midwives become motivated for the project because they are involved from the start.
Outcome	<ul style="list-style-type: none"> • Midwives contribute to the development of the training. • Midwives are from the start involved in the project. • The interventions in the project are tailored to the needs of the midwives, so they receive the support they need.

Analysis

GPs' and midwives' willingness to innovate and to work along differs, some professionals are motivated for capacity building projects, but they also value their own way of thinking and working. The extent to which commitment can be sustained or increased differs. Institutional support for the GPs and the involvement of the GPs and midwives from the start of the project are able to positively influence motivation and willingness: the professionals' confidence and motivation increases, and they feel heard and valued. If a project is tailored to the GPs' and midwives' needs, participating motivates them and gives them confidence.

Commitment and knowledge

Participation of low-literate people inspires (1)	
Context	<ul style="list-style-type: none"> • The people with low literacy were not (well) known to the GPs. • GPs are open to how institutions X and Y involve the people with low literacy.
Intervention	The people with low literacy participate in the project groups and share their experiences with the GPs, for example in an interview between the project leader and someone from a vulnerable family.
Mechanism	The input of experts by experience touches and inspires the GPs, mainly because the story is about that person's own experiences, and personally makes the GPs understand what issues the people with low literacy face. The GPs learn by experience from the people with low literacy.
Outcome	<ul style="list-style-type: none"> • The GPs are inspired to adjust their practices. • GPs learn more about the challenges the people with low literacy encounter in daily life and how GPs can deal with this.

Analysis

People with low literacy are to a large extent unknown to the GPs. When the people with low literacy participate in the project (-group meetings), the GPs gain insight into this group and their commitment increases. In the first place, the stories of experts by experience inspire the GPs to adjust their practices. In the second place, the GPs learn by experience from the people with low literacy: it gives them insight into the challenges that this group experiences. The positive outcomes of this intervention are supported when the GPs are open to the involvement of the people with low literacy in the project.

Commitment, knowledge and skills

Institutions X and Y are an example in communication (1)	
Context	<ul style="list-style-type: none"> • GPs have insufficient insight into (effective) communication with the people with low literacy. • Institutions X and Y are experienced in working with the people with low literacy. • GPs are open to how institutions X and Y involve the people with low literacy.
Intervention	Institutions X and Y effectively communicate with the people with low literacy, and during meetings the GPs observe this communication.
Mechanism	The GPs experience how institutions X and Y communicate with the people with low literacy and they experience what makes this way of communication effective. The GPs learn from this, are inspired by it, and the confidence in their own knowledge and skills increases.
Outcome	The GPs learn how to communicate easily and effectively with the people with low literacy and are inspired to change their communication.

Institutional support in conversations with the people with low literacy (1)	
Context	<ul style="list-style-type: none"> • The people with low literacy were not yet known to/recognized by the GPs. • Due to insufficient insight into the issue of low literacy, GPs sometimes have little understanding for people with low literacy. An example is that people with low literacy are send away if they visit the general practice without an appointment or at another time than was planned. • GPs are open to how institutions X and Y involve the people with low literacy.
Intervention	GPs are having conversations with people with low literacy. In these conversations they are supported by institutions X and Y, for example by receiving feedback and advice for improving their communication.
Mechanism	<ul style="list-style-type: none"> • The GPs feel supported by the institutions and start to feel more confident. • The GPs are happy when they begin to understand how they can effectively reach the people with low literacy.

	<ul style="list-style-type: none"> • The GPs become more motivated to reach the people with low literacy when they begin to understand how they can do this.
Outcome	<ul style="list-style-type: none"> • GPs get the support they need to reach the people with low literacy. • The GPs' awareness for the people with low literacy is increased. • GPs develop a sense of (self-)confidence regarding their knowledge and skills.

Analysis

GPs are to a large extent unfamiliar with people with low literacy. Professional institutions serve as an example for involving the people with low literacy and communicating with them effectively. Besides, they can support the GPs in conversations with the people with low literacy. By experiencing the positive effects of involving and communicating with the people with low literacy, the GPs start to believe (more) in health promotion and they become enthusiastic. The institutional support they receive, gives them confidence and motivation to put their knowledge and skills into practice. Two contextual factors contribute to the positive outcomes of the institutional support: the institutions' expertise on working with the people with low literacy and the willingness of GPs regarding the involvement of the people with low literacy in the project.

4.4.3 Resources

Resources and commitment

A 4-hour training is demanding – (2)	
Context	<ul style="list-style-type: none"> • Midwives are often busy. • Some midwifery practices consist of only a few midwives.
Intervention	A 4-hour training is offered to all midwives.
Mechanism	The training is experienced as (too) demanding by some midwives, because it would take too much time and/or a general practice would have to close for 4 hours or more.
Outcome	The midwives' participation in the training is lower, and therefore less midwives receive the needed knowledge and skills.

Shortening the training for maternity care and JGZ (2)	
Context	Maternity care and JGZ employees indicated that they wanted to be able to make a maximum of 2.5 hours available for the training. If the training were to last 4 hours, the inclusion would be significantly lower.
Intervention	The training for maternity care and JGZ employees has been shortened from 4 hours to 2.5 hours and has been substantively changed in order to fit in 2.5 hours.
Mechanism	The adjusted training is (experienced as) less demanding for the maternity care and JGZ professionals.
Outcome	Maternity care and JGZ professionals are able to participate in the training and are able to receive the knowledge and skills they need.

Accreditation of the training (2)	
Context	<ul style="list-style-type: none"> • Midwives are often busy • Not all midwives are motivated for the training. • Midwives are involved in several projects around health promotion themes. • For most midwives it is obligatory to participate in a certain amount of accredited trainings per year/number of years.
Intervention	The training is accredited, so midwives receive credit for participating and participation in the training is free.
Mechanism	More midwives are motivated to participate in the training, because they receive credits by participating and participation in the training is free.
Outcome	The midwives' participation in the training is higher and thus more midwives are able to receive the knowledge and skills they need.

Midwives participate in different trainings - (2)	
Context	<ul style="list-style-type: none"> • Midwives are involved in trainings on multiple themes regarding health promotion/care, this training is one of many training courses. • Midwives lack time. • Not all midwives are equally motivated for this topic.
Intervention	Midwives receive training on the theme of smoking, pregnancy and low literacy.
Mechanism	The professional experience pressure because of the multitude of projects, and because of this, fully participating in this project is (experienced as) (too) demanding to the midwives.
Outcome	The midwives' participation in and motivation for the training is lower.

Analysis

The main barrier for participation for midwives and maternity care and JGZ employees is that they lack time, and in addition to this, some midwifery practices consist of only a few midwives. Besides, not all professionals are equally motivated for participating in a project. Finally, midwives are often involved in several projects around health promotion themes. This can have both negative and positive outcomes. Professionals are willing to receive training, but this should be not too demanding (for example in terms of time investment) and professionals should receive an incentive for participating, such as a compensation. Projects can partly anticipate on the barriers of time and motivation, through the mechanisms of motivating the professionals and making it less demanding and/or more rewarding to participate in the project. However, it is difficult to fully anticipate on this, even with a shorter training and incentives, some professionals still experience pressure from other projects and/or are not fully motivated for the training.

Resources, knowledge, skills and commitment

Time considerations (2)	
Context	<ul style="list-style-type: none"> • Midwives experience a barrier to discuss smoking cessation with people with low literacy, because of a lack of time during consultation and/or because they are not sure how to start the conversation on this topic. • Midwives are involved in trainings for multiple themes regarding health promotion/care, this training is one of many trainings.
Intervention	Materials (a guide, visual stores and CO measuring device) are developed and the midwives are trained in the use of these materials. The training and materials are aimed at supporting the midwives in promoting health of vulnerable families as timesaving as possible.

Mechanism	Midwives experience more self-confidence and increased self-efficacy and therefore experience a lower barrier to discussing smoking cessation, because they have access to materials and know how to use them.
Outcome	The barrier to discuss smoking cessation is lower, because the midwives know how to address smoking cessation and have more confidence.

Time considerations - (2)	
Context	<ul style="list-style-type: none"> • Midwives experience a barrier to discuss smoking cessation with people with low literacy, because of a lack of time during consultation and/or because they are not sure how to start the conversation on this topic. • Midwives are involved in trainings for multiple themes regarding health promotion/care, this training is one of many trainings.
Intervention	Materials (a guide, visual stores and CO measuring device) are developed and the midwives are trained in the use of these materials. The training and materials are aimed at supporting the midwives in promoting health of vulnerable families as timesaving as possible.
Mechanism	The midwives still experience time as a barrier to discuss smoking cessation,
Outcome	A lack of time is still experienced as a barrier to discuss smoking cessation, because the midwives have to make a choice between different themes they can address during consultation.

Developing a social map (1)	
Context	There is little cooperation between (health) professionals with regard to health promotion among vulnerable families. GPs often do not know how the other professionals deal with low-literate patients, how to reach other professionals and how to organize cooperation between different professionals.
Intervention	A social map is being developed together with the GPs, that aims to keep all professionals up to date about what is happening in the neighbourhood with regard to care for vulnerable families.
Mechanism	<ul style="list-style-type: none"> • Working together on the social map and on improving cooperation contributes to the commitment of GPs. • GPs feel the urgency to improve cooperation. • Because GPs have an overview of the network, they feel more confident about the decisions they make, for example about when and to who they should refer vulnerable patients.
Outcome	<ul style="list-style-type: none"> • GPs get to know their network better. • GPs are encouraged to collaborate more.

- GPs become more aware of the health promotion interventions that are available for people with low literacy.

Cooperation between professionals (1)

Context There is little cooperation between professionals with regard to health promotion among people with low literacy. GPs often do not know how the other professionals deal with people with low literacy.

Intervention Different professionals are involved in the project group, and these professionals meet regularly.

Mechanism

- Professionals become aware of their own actions, the way professionals are linked to each other and of each other's activities.
- The professionals become aware of the value of good cooperation, among others through positive experiences in cooperation, such as examples of successful referral.

Outcome GPs cooperate more with other professionals, because they are better able to make use of their resources in the form of colleagues (other professionals) with whom to work:

- GPs get to know their responsibilities and the responsibilities of other professionals.
- GPs learn how they can cooperate with other professionals to improve health promotion among people with low literacy.
- The professionals are eager to learn from each other, they ask each other more questions and make agreements about working together.

Cooperation between municipality and community team (1)

Context There is little cooperation between professionals and other parties with regard to health promotion among vulnerable families.

Intervention In addition to the GPs and other professionals, the municipality and community team are also part of the project groups. There are regular meetings and contact moments with the project group.

Mechanism

- The GPs become more aware of the value of good cooperation.
- The positive cooperation with the municipality and community team gives the GPs energy to keep improving health promotion among vulnerable groups.

Outcome GPs are better able to make use of their resources such as allies (municipality and community team) with whom to work; professionals learn to collaborate with the

municipality and community team and refer low-literate people to activities organised by municipality and community team. In this way, GPs have something to offer to people with low literacy, because the GPs know where and how patients can get good care. GPs can outsource tasks that require a lot of time to colleagues who are more experienced with those tasks and/or have more resources and time at their disposal.

Difficulties in establishing cooperation - (1)

Context	GPs have their own way of thinking and their own opinion regarding health promotion among people with low literacy.
Intervention	The project pays attention to improving cooperation in general practices and sometimes puts extra pressure on this.
Mechanism	Putting pressure on improving cooperation is not always experienced positively by the GPs, they sometimes prefer to hold on to their own pattern.
Outcome	GPs do not always go along easily with changes proposed during the project.

Analysis

Two resources play an important role in capacity building projects: time and supportive colleagues/allies. Working conditions, such as a lack of time, often do not allow to pay attention to health promotion. Besides, midwives often lack the skills to effectively address smoking cessation in a good way, because they lack the skills. Materials and training aim to support midwives in addressing smoking cessation during consults in an as time-saving way as possible. This can have two outcomes: the intervention can increase the midwives' self-confidence, making it easier for them to address smoking cessation. It is also possible that despite the intervention, time is still a too high barrier for midwives, for example because they have to address several topics during the consult.

With regard to supportive colleagues, GPs do not work together actively and are often not aware of the work of other professionals and how they can support each other. Project group meetings can motivate (health) professionals, municipality and community team to work together and get to know each other. This gives GPs positive experiences with good cooperation and makes them aware of the value and importance of cooperation. Professionals start to share their responsibilities and are cooperating better, besides, they can make more efficient use of the resource time (e.g. outsourcing tasks). (Working on) a social map contributes to the GPs' commitment, their feeling of urgency of cooperation and their self-confidence, and provides the GPs with knowledge.

Resources, knowledge, skills and commitment

Implementation of guide project 1	
Context	<ul style="list-style-type: none"> • GPs are not aware of which tools are available and how they can use available tools. • GPs make insufficient use of available communication tools for the people with low literacy.
Intervention	The project group goes through the nine steps of the guide for supporting GPs, to explore which interventions for promoting a healthy lifestyle are or can be made accessible for the people with low literacy.
Mechanism	<ul style="list-style-type: none"> • The guide appears to work in a very positive way: project leaders feel that the guide supports them to get an overview of all the available tools and activities. • GPs gain more confidence in their own knowledge and skills, because they are better informed about the tools and materials that are available.
Outcome	The substantive knowledge on health promotion among the people with low literacy that the guide contains, supports the GPs by giving them insight into how they can support the people with low literacy in improving self-management.

Development and implementation of guide project 2	
Context	Existing program A is not or only partially used by many midwives. This is partly due to a lack of time and skills.
Intervention	<ul style="list-style-type: none"> • A guide has been developed that describes the protocol for midwives in detail. Midwifery practices have received this guide. It addresses both smoking cessation during pregnancy and relapse prevention after pregnancy. It contains a script in which concrete conversation examples are given to support midwives in communication with the vulnerable pregnant women. • The midwives are involved in the development of the guide. Based on their input, some nuances are made in the text to ensure that the guide fits in well with the midwives' daily practice.
Mechanism	<ul style="list-style-type: none"> • The midwives feel heard and are being motivated because of their involvement in the development of the guide. • Because it fits the professionals' daily practice, the guide is appealing for all professionals, also for maternity care and JGZ. • The midwives find it pleasant and useful to have this guide.
Outcome	The midwives (and maternity care and JGZ professionals) can easily apply the guide in their daily practice and are supported by the guide to effectively refer the pregnant women. The first midwives have already referred a number of women to professional help. They also indicate: "These are women that I otherwise would not have further supported in terms of smoking cessation, because I just don't know what to do. Now I know I can refer them."

CO measuring device (2)	
Context	<ul style="list-style-type: none"> • There is high demand for information materials to support midwives, even before the materials were finished. • Midwives often lack time. • Different themes play a role among the vulnerable pregnant women and the midwives have to address all those themes (not only smoking cessation, but also for example physical exercise). • The CO measuring device was unknown to most of the midwives prior to the study.
Intervention	A CO measuring device and accompanying explanation card is developed and distributed, to support the midwives in addressing smoking cessation with their patients in an accessible way.
Mechanism	<ul style="list-style-type: none"> • The device appeals to the midwives and their challenges with regard to discussing smoking cessation. • The midwives who use the device are mainly positive about it. They think it is easy to use in consultation (75%) and to implement (88%) and that it contributes to discussing smoking (88%). • Midwives gain more confidence in their own knowledge and skills, because they are supported by the device.
Outcome	53% of the midwives make use of the CO measuring device, the midwives are mostly positive. The midwives that use the device are supported in discussing smoking cessation by the CO measuring device that can be applied in practice.

CO measuring device - (2)	
Context	<ul style="list-style-type: none"> • There is high demand for information materials to support midwives, even before the materials were finished. • Midwives often lack time. • Different themes play a role among the vulnerable pregnant women and the midwives have to address all those themes (not only smoking cessation, but also for example physical exercise). • The CO measuring device was unknown to most of the midwives prior to the study.
Intervention	A CO measuring device and accompanying card explaining the use of the device are developed and distributed, to support the midwives in addressing smoking cessation with their patients in an accessible way.
Mechanism	<ul style="list-style-type: none"> • 17% of the professional using the device feels uncomfortable when taking measurements. • Not all midwives know how to use the CO measuring device.

	<ul style="list-style-type: none"> • Because other projects also require time and attention, the CO measuring device sometimes does not get full attention.
Outcome	Implementation of the device differs per midwifery practice.

Visual stories (2)	
Context	<ul style="list-style-type: none"> • There is a high demand for the information materials to support midwives, even before the materials were finished. • In practice, little is being done to help pregnant women stop smoking.
Intervention	Visual stories are developed and implemented, containing visuals accompanied by narrative information that is accessible and comprehensible for the vulnerable pregnant women. These stories can support the midwives in discussing smoking cessation with their (vulnerable) patients. Midwives are trained in using the stories.
Mechanism	<ul style="list-style-type: none"> • The midwives who used the visual stories are somewhat ambivalent about the visual stories: <ul style="list-style-type: none"> ○ 69% found the stories easy to hand out, 23% was neutral. ○ 68% thought it was a nice story. ○ 46% could easily use the stories in the consultation, 46% was neutral. ○ 31% thought the stories contributed well to the discussion of smoking, 62% was neutral. • Midwives gain more confidence in their own knowledge and skills with regard to discussing smoking cessation, because they are supported by the visual stories.
Outcome	<ul style="list-style-type: none"> • The midwives have access to the visual stories that supports them in addressing smoking cessation with their patients. • 32% of the midwives has used the visual stories. • The positive reactions of those who have implemented the methodologies and materials in their daily practice show that the methodologies and materials were of good quality.

Visual stories - (2)	
Context	<ul style="list-style-type: none"> • The initial knowledge and skill level of midwives with regard to low literacy is low. For example, not everyone was (recently) trained in the use of the program A. In practice, not much happens to motivate pregnant women to stop smoking. • The midwives have their own way in which they usually implement new methods, methodologies or materials in their daily work. • The whole project (including the research activities that the midwives are involved in, such as filling in questionnaires) takes a lot of time.
Intervention	The visual stories are implemented, and the midwives are trained in using them.

Mechanism	<ul style="list-style-type: none"> • Midwives experience a high barrier to use visual stories, because in practice still little is being done to help pregnant women stop smoking. • Midwives need time to adjust to new methods of working. The project leaders did not have as much influence on this as they had hoped and needed. • It was for some midwives (experienced as) too demanding to invest time in implementing the visual stories in addition to the research activities of the project.
Outcome	The extent to which midwives make use of the visual stories or feel supported by the use of the stories differs per midwifery practice. Not all midwives (immediately) use the visual stories.

Insufficient guidance in use of visual stories - (2)	
Context	The initial knowledge and skill level of midwives with regard to low literacy is low. For example, not everyone was (recently) trained in the use of the program A. In practice, not much is being done to motivate pregnant women to stop smoking.
Intervention	Midwives are trained for using the visual stories. However, much has to be discussed during these trainings, so there were only five minutes time available to introduce the visual stories.
Mechanism	The midwives received little additional explanation and practical examples for using the stories, so the training did not fit their needs.
Outcome	The midwives did not get as much guidance as they needed.

Analysis

Professionals often do not recognize their patients as vulnerable. There is a high demand for materials to support professionals, and professionals make insufficient use of existing tools, because they are not aware of the tools or because the tools do not fit their daily practice. Therefore, a useful intervention is providing the professionals with resources and training them in using the resources. Examples are guides for GPs and midwives and a CO measuring device and visual stories for midwives. If the tools fit the professionals' daily practice, the professionals feel appealed by the tools and gain confidence in their own skills and knowledge. This leads to positive outcomes among the professionals: the professionals are supported in health promotion among vulnerable families in a way that fits their daily practice, they have access to useful tools and know when and how to use them.

However, there are also some factors that restrain the positive outcomes of capacity building: a low initial level of knowledge and skills among professionals, a lack of attention for smoking cessation in practice and the midwives' preference for their own way of working. To respond to the professionals' low initial level of knowledge and skills, more guidance is needed. Other mechanisms that can restrain capacity building are the barrier that is experienced to discussing smoking cessation, the time needed to adjust to new ways of working, the pressure experienced from other health

promotion projects, insufficient knowledge on how to use the tools and feeling uncomfortable about using the tools. Because of these mechanisms, the extent to which professionals implemented the tools is sometimes low.

4.5 Revision of the program theory

In this paragraph, the assumptions from the initial program theory will be reflected upon by using the findings from the CIMO-configurations. By using the configurations, it is possible to gain an insight into the extent to which assumptions were met and to make nuances to the assumptions. This leads to a revised programme theory that shows which combinations of context, intervention and mechanisms lead to effective capacity building for professionals.

This subchapter is structured according to the assumptions, so it consists of the following categories: knowledge and skills, skills, commitment, resources, and insight into professionals' needs and preferences.

Knowledge and skills

“The GPs learn from the contact with the people with low literacy who are involved in the project group.”

Professionals have often insufficient insight into the vulnerable families and their challenges. GPs indeed learn from the contact with the people with low literacy, provided that they are **enthusiastic** for improving care for the vulnerable families and that they **learn by experience**: in the project group meetings, GPs personally experience the challenges the people with low literacy face, and they gain an understanding in (how to support) this group. Other mechanisms that support learning from the people with low literacy are that the GPs **experience equality** with the patients and start to see them more as an equal partner in health promotion, that they become **aware of the importance** of health promotion and are **inspired** to change their practices.

“Training can provide midwives with knowledge about the background of the vulnerable pregnant women and can teach midwives how to work with program B.”

Many midwives are not trained in using program A and are not aware of existing tools (such as the step-by-step plan from program A). Training can provide midwives with knowledge about the vulnerable pregnant women's background and is a good way to teach midwives how to work with program B, but only if (1) the training **fits the midwives' needs and preferences** and is **adjusted to their entry level** and if (2) the **limited time investment** midwives can make is taken into account. If the training is adjusted to the midwives' level, the training is appreciated and experienced as **educational and useful**. However, if the training **does not fit** the midwives' needs or is **too short to give them enough guidance**, it is difficult for the midwives to incorporate program B into their daily practice. Sending the e-learning to the participants prior to the training provides the midwives with **knowledge** and thereby **decreases the pressure** they experience during the training.

“Training can teach GPs how to signal and register the people with low literacy faster and more accurately.”

GPs often signal people with low literacy insufficiently, and registration is difficult due to taboo and a lack of cooperation. Training can have a positive effect on the outcome skills (signalling and

registration), but the results show that the expertise of institutions X and Y plays an important role in this (by creating a safe learning environment), as well as the contact with the people with low literacy in the group meetings. The training mainly works because the GPs are being **motivated to cooperate** with other professionals, because they realise the **importance** of fast and accurate signalling and registration and become more **aware** of the people with low literacy. The training and the contact with the people with low literacy gives the GPs **confidence** in their ability to signal and register, and the level of **taboo decreases**.

“Improved registration and signalling leads to better tailored health promotion practices for people with low literacy.”

Registration and signalling have improved, but the data does not give insight into the extent to which improved registration and signalling actually leads to better tailored practices. More GPs make an assessment if a patient is low literate and all participants indicated that their ability to recognize low literacy increased. It is assumed by the project that this improvement leads to better tailored health promotion practices.

“Peer-to-peer learning activities ensure that the knowledge and skills acquired are retained better in daily implementation.”

It is not clear from the data that is analysed to what extent the projects paid attention to the peer-to-peer learning activities.

Skills

“Training improves the professionals’ ability to communicate effectively with people from vulnerable families.”

Most professionals have insufficient insight into communication with vulnerable families. Training is an effective way to improve communication, provided that the training fits with the professionals’ daily practice, because then the training **appeals** to the professionals and makes them **aware** of what works and what not in communication with vulnerable families. If in the training the professionals are provided with tools and if they have the chance to practice the use of these tools, the training increases the professionals’ **confidence** in their own communication skills. Besides, professionals become **enthusiastic** when they begin to understand how they can communicate effectively and are **inspired** to change their practices.

In addition to the training, the group meetings are also positively related to effective communication, mainly because the GPs **learn from experience** of oneself and from the vulnerable families and institutions X and Y, provided that the GPs are **open to the involvement of the people with low literacy** by institutions X and Y.

“To improve communication between GPs and people with low literacy, the GPs should create room and safety for the people with low literacy to ask questions.”

The professionals often have insufficient insight into the vulnerable families and their needs, making it difficult to create room and safety for patients to ask questions. Training and group meetings are effective ways to learn the GPs how to create room and safety, on the condition that the GPs are **open to the involvement of the people with low literacy** and that the GPs can **learn from experience** of institutions that are experienced in creating room and safety for the people with low literacy. Training and group meetings mainly work if they make GPs **aware** of what works and what not in creating a safe environment for the people with low literacy.

Commitment

“The projects make professionals enthusiastic about participating in the project and implementing the interventions of the project.”

The level of motivation of professionals for capacity building projects differs, some professionals are **not motivated**, some are and are **willing to think along** and are **open to how the vulnerable families are involved**. The projects are able to make or keep professionals enthusiastic on the condition that the following factors are taken into account: the **expertise** and **motivation** of trainers **motivates** the professionals and makes them feel **supported, involving** the midwives and GPs from the start increases the professionals’ **motivation** and makes them feel **valued and heard**. Besides, it makes it easier to develop a project that **fits the needs** of the professionals and this in turn contributes strongly to their **commitment**. If the professionals’ **self-confidence** increases due to for example institutional support or training, their motivation also increases.

“Institutional support (from the institutions X and Y) helps GPs tailor their practices for people with low literacy.”

The institutional support helps GPs tailor their practices if the GPs **learn by experience** by observing institutions X and Y and by bringing this into practice themselves. The support mainly works because it helps the GPs to **persevere**, makes them feel **supported, motivates** them to adjust their practices and gives them **confidence**. A prerequisite for this is that the **institutions have expertise** on health promotion among people with low literacy and have **experience** with less motivated participants.

“GPs need to be patient in order to maintain the participative, bottom-up approach of the project throughout the three years of the project and should not follow the tendency to look for quick answers and solutions.”

GPs often have little understanding for people with low literacy, this can lead to a lack of patience with the people with low literacy. The GPs can maintain the participative, bottom-up approach if they are supported by institutions X and Y, because then they **realise** that patience and a slower pace (than they are used to) is needed when working with vulnerable families. The institutional support helps the GPs to **persevere** and gives them **motivation** and **confidence** for health promotion among the people with low literacy.

“Professionals need enough confidence to guide the vulnerable families and/or do so until they are referred to another professional.”

The lack of insight into and experience with vulnerable families often leads to a lack of self-confidence among professionals, making it hard for them to address certain health promotion issues among these vulnerable families. A combination of participation of the vulnerable families and the support of institutions can increase the professionals’ **confidence**, provided that the professionals are **open to the involvement of the vulnerable families** and provided that the institutions have expertise on involving vulnerable groups. These interventions are mainly effective in increasing the professionals’ confidence because the participation and support increases the professionals’ **knowledge and skills** and because the professionals **experience** working with vulnerable families.

Resources

“Tools that can be applied in practice can support the midwives in addressing smoking cessation among vulnerable pregnant women or women who just gave birth.”

Midwives often make insufficient use of available communication tools for the vulnerable pregnant women, among others because they are not aware of which tools are available and how they can use these tools. Besides, midwives have their **own way of thinking**, and projects are not always able to fully influence this thinking. Providing midwives with tools such as a guide, CO measurement device and visual stories can be effective in supporting them, but on the condition that the midwives are involved in the development of these tools as much as possible, so that the tools **fit** the midwives’ daily practice, making them feel **valued** and more **motivated** to implement the tools. Besides, the tools should be **easy to implement** and should give midwives **confidence** for engaging in health promotion during consultation.

“A time investment from the midwives is needed to implement program B.”

A time investment is needed for implementation of program B, but several factors can restrain this investment: not all midwives are **willing to invest time**, their level of **commitment** differs and not all midwives have the **possibility to attend** the trainings. These challenges can be anticipated upon by making trainings short and accredited, because the training is experienced as **less demanding** when it is shorter, and midwives are better **motivated** if they receive credits for participation. However, the **pressure** that midwives experience is partly caused by the multitude of topics they have to address. Providing the midwives with skills and knowledge to increase their **confidence** can **lower the barrier** that midwives experience towards discussing smoking cessation, but nevertheless, the multitude of topics remains a factor outside projects’ control, and projects can only partially address this.

“The project group meets regularly and is also involved in activities outside these meetings, because it is important to facilitate enough possibilities for the GPs to work together actively.”

“Better coordination of care provision in the neighbourhood is needed, so that community team, GPs and welfare are able to find each other and can support the patient from an integral perspective. This is time-effective and is important to better monitor the status of the patients with low literacy.”

Group meetings can contribute to cooperation between different professionals, municipality and community teams, if these meetings show the GPs the **importance** of good cooperation and if the GPs have **positive experiences** with cooperation during the meetings, because these experiences give them **energy** to keep working on health promotion and make them **aware** of the responsibilities of themselves and other professionals. Working together on developing the social map can improve cooperation, mainly because the GPs’ **commitment** increases, because they start to **feel the urgency** of working together and because the map gives the GPs **confidence** for their daily practice. However, putting too much focus on cooperation can be experienced as **pressure** by the GPs.

“Project 2 ensures better cooperation and transfer between the Midwifery Partnerships (VSV).”

It is not clear from the configurations to what extent project 2 paid attention to improving cooperation and transfer between the Midwifery Partnerships.

Insight into professionals’ needs and preferences

“Project 2 involves different midwives in the project from the beginning, so that the project meets the wishes and needs of the midwives.”

“The projects investigate what the needs and preferences of the professionals are and take this into account in the development of the projects, in order to give the professionals the support they need and to increase the possibilities for securing the project’s effects once it is completed.”

Involving the professionals indeed is important for making a project **fit** the needs of the professionals. If a project fits the professionals’ needs and daily practice, it is easier for the professionals to implement the projects’ changes. Besides, it **motivates** them and makes them feel **valued** and **heard**. The results show that a lack of insight leads to a project that does not (fully) fit the professionals’ needs and daily practice, which is related to the professionals feeling **less valued and motivated** to implement the interventions.

4.6 Overview of the restraining and supportive factors

This research aimed to gain insight into the supportive and restraining factors in capacity building for health professionals' practices for health promotion among vulnerable families in the Netherlands. In table 3 and 4, an overview of these supportive and restraining factors is given. For a comprehensive insight into factors supporting and restraining capacity building, the contextual factors and mechanisms should of course be viewed in relation to the interventions and outcomes as presented in the CIMO-configurations (paragraph 4.4).

Table 3. *Overview of the restraining and contextual factors identified in this research.*

Contextual factors		
	Restraining	Supportive
Knowledge and	<ul style="list-style-type: none"> No attention for smoking cessation among vulnerable groups in current education Professionals' entry level is low Professionals have their own way of thinking about care In practice, little is being done to help pregnant women stop smoking 	<ul style="list-style-type: none"> Expertise of institutions X and Y on working with people with low literacy
Commitment	<ul style="list-style-type: none"> New methods need time to ground Not all professionals are equally motivated for this project and for health promotion among vulnerable families Maternity care and JGZ employees want to make max. 2.5 hours available for training 	<ul style="list-style-type: none"> Expertise of institutions X and Y on working with low motivated participants Enthusiasm among professionals to improve care for vulnerable families Willingness to think along among professionals Openness to involvement of the people with low literacy
Resources	<ul style="list-style-type: none"> Some midwifery practices consist of only few midwives Professionals are busy and have a lack of time Midwives are involved in trainings on multiple health promotion themes The CO measuring device was unknown to most of the midwives prior to the project 	<ul style="list-style-type: none"> High demand for supporting information materials, even before the materials were finished E-learning existed prior to the project A guide to support professionals working with patients with low literacy existed prior to the project

Table 4. *Overview of the restraining and contextual mechanisms identified in this research.*

Mechanisms		
	Restraining	Supportive
Knowledge and skills	<ul style="list-style-type: none"> Not having the feeling that the training fits your needs and therefore not feeling reached It takes effort to listen carefully to the patient and to be patient 	<ul style="list-style-type: none"> Understanding the importance of health promotion Understanding health promotion principles Understanding the importance of clear communication Understanding the importance of signalling and registration Awareness of (communication with) the vulnerable families Having the feeling that training fits their needs. Experiencing training as educational and useful Supported by concrete knowledge

Commitment	<ul style="list-style-type: none"> • No motivation to invest time • Experiencing the training as (too) demanding • Experiencing pressure because of involvement in several topics/projects • Experiencing pressure from the project's demands 	<ul style="list-style-type: none"> • Feeling heard and valued and able to express needs and desires. • Learning from experience from oneself and others (institutions X and Y and people with low literacy) • Experiencing equality with people with low literacy • Experiencing less taboo • Being inspired • Enthusiastic about and motivated for the project • Motivated for adjusting practices • Happy and motivated when starting to understand how to reach the people with low literacy • Feeling supported, safe and confident by support institutions X and Y • Confident about own knowledge and skills • Learning to be patient
Resources	<ul style="list-style-type: none"> • Experiencing time as a barrier to discuss smoking cessation 	<ul style="list-style-type: none"> • Feeling the urgency to improve cooperation • Feeling encouraged to cooperate with other professionals, municipality and community team • Positively evaluating tools and methods, feeling supported by the tools and methods • Motivated by accreditation • Awareness of responsibilities of oneself and other professionals

5 Discussion

5.1 Main findings

This study contributes to a clearer, more detailed understanding of ways to support the professionals in health promotion among vulnerable families by answering the research question: ‘What are supportive and restraining factors in capacity building for health professionals’ practices for health promotion among vulnerable families in the Netherlands?’. This research gives an overview of the restraining and supportive factors, but furthermore, it shows that in the process of capacity building among professionals the complete picture is important. Capacity building interventions exist in a complex ‘configuration’ in which both context and mechanisms play a crucial role. An intervention can lead to different outcomes, because different mechanisms can occur in different situations, for specific contexts. The findings of this research emphasize the importance of taking into account the full configuration when studying capacity building interventions for health promotion, not just the intervention.

Nevertheless, when it comes to supportive and restraining factors, some main findings are worth mentioning. Professionals often do not recognize the vulnerable families and/or do not know how to communicate and work with them. Besides, although most professionals are or become motivated to change their practices, they often do not have the skills or knowledge for this, and because of this, they also lack confidence, as was also recognized by Garg et al. (2018) and Wechsler et al. (1983).

Several interventions were shown to be effective in supporting GPs and midwives, when taking into account the context of the professional. For example giving training, if the training fits the professionals’ needs and if their limited time investment is taken into account. Training provides the professionals with knowledge and skills, but moreover, professionals start to see the importance of health promotion among vulnerable families and become more motivated and confident for this. Tremblay, Cournoyer, and O’Loughlin (2009) confirm the importance of increasing the professional’s knowledge, confidence and awareness of their responsibilities and several of the interventions they suggest for achieving this are in line with our findings. Tremblay et al. (2009) suggest giving trainings with room for practicing, providing instructions on the internet (such as the e-learning in our study) and developing interventions to increase awareness of resources available in the community (such as the social map in our findings).

The motivation and confidence of GPs increase also during the project group meetings, mainly because they learn from experience from the institutions and vulnerable families. GPs learn how they can work with the vulnerable families in an equal and effective way, provided that the GPs are open to the involvement of the vulnerable families. It is interesting to note that in several other studies on capacity building for health professionals, there was little or no attention for contact with the patients (Robins, 2007; Tremblay et al., 2009). Whereas in our study, the contact with and learning from the vulnerable families was shown to play an important role. An explanation for this might be that the cited studies are not focused on capacity building for professionals’ practices for vulnerable families

but are focused on the professionals' practices in general. Our findings add to existing literature by showing how positive outcomes can be achieved by bringing together the professionals and patients.

Another positive outcome of the group meetings is that GPs learn to cooperate with other professionals and that they start to value this cooperation. Similar results were found by Robins (2007), who reviewed about 70 studies on capacity building in health care. Robins shows that when professionals are brought together in so-called 'learning collaboratives' and have access to evidence and ideas for improving care (in our study this is provided by institutions X and Y), they are able to work together to effectively improve an aspect of their care.

Another lesson of our study is the importance of involving the professionals in the capacity building interventions, this makes them feel heard and valued and motivates them, and besides, it is easier to make the interventions fit the professionals' needs and preferences.

The institutional support was shown to play an important role in capacity building. Firstly, the institutions form an important connection between professionals and vulnerable families. Secondly, with their expertise and perseverance, the institutions are able to motivate the professionals, provide them with knowledge and skills and with self-confidence and perseverance. Robins (2007) confirms the positive effects that institutional support can have, in the form of a 'mentor'. This mentor is defined as for example 'a wise, experienced, and trusted counsellor' (Wiles, 2005) and supports the professional in developing, among others, improved thinking, skills and self-reflection (Robins, 2007). This could be compared to the role of institutions X and Y. In addition to our study, it is interesting that Robins (2007) found that this mentor can also be a more senior and experienced colleague or even an 'equal' colleague. This might be a feasible way of securing capacity building interventions, so that more professionals can be supported.

5.2 Capacity building

When looking at the results from the perspective of the theoretical framework, it is shown that the elements knowledge, skills, commitment and resources all play a role in the configurations. Furthermore, all four elements are shown to be related and reinforcing each other in the capacity building process. For example, commitment helps the professionals to acquire knowledge and skills, but knowledge and skills in turn also increase the professionals' commitment. This was also shown by Wechsler et al. (1983): in order to increase the health professionals' confidence in their ability to help patients, they need knowledge on successful intervention strategies and support services. This knowledge increases the professionals' confidence in their own ability to support the patients from vulnerable families.

The interconnectedness between the elements shows how effective capacity building can be: improving one of the elements can also improve other elements. However, it also shows the complexity of the capacity building process. This is also emphasized by McLean, Feather and Butler-Jones (2011) in their explanation of capacity building. They state that, although the list of elements can make it seem like the process of capacity building is a simple linear process, it is a complex process,

among others because all professionals are unique and have their own needs and preferences for capacity building.

Possible adjustments to the concept of capacity building

The results from this research show that it could be useful to make some adjustments to the concept of capacity building as defined by McLean, Feather and Butler-Jones (2011). This will be discussed in the following paragraphs. An adjusted overview of the concept of capacity building can be found in figure 2, the adjustments can be recognized by the blue colour.

Possible additions to the concept

When analysing the results, two factors appeared to be important in the process of capacity building that are not included in the theoretical framework. These two factors are added in figure 2.

The first factor is 'insight into the professionals' needs and preferences'. As was described in the revised program theory, for capacity building interventions to be really effective, they should be tailored to the professional's need. In order to do this, it is important to gain insight into the needs of the professionals. Hence, it would be useful to add this element to the framework as a step to execute before working on the four elements of individual capacity.

A second relevant factor is 'institutional support'. The results show that support from institutions with expertise is leading to several positive outcomes, working through mechanisms such as feeling supported and motivated, gaining confidence, learning by experience and learning to persevere. It would be useful to add this factor to the theory of capacity building, as a factor that strengthens the process of building capacity by enhancing knowledge, skills, commitment and resources. Of course, institutions should have the expertise that is needed to effectively support the participants in the projects. A study by Robins (2007) also mentioned institutional support as a supportive factor in capacity building, this substantiates the choice to add this factor to the theoretical framework.

Other observations

Several other interesting observations can be made when looking at the results in relation to the concept of capacity building. These observations will be discussed in the following paragraphs. The adjustments are also depicted in figure 2.

Knowledge and skills 'work' together

Knowledge and skills are often linked to each other. For example, the training in project 2 aims, among others, at improving communication between professional and vulnerable patient, for example by implementing the visual stories. According to the theoretical framework, this is part of the element knowledge: 'an understanding of different strategies and processes for health promotion and how to use them'. However, communication is also a skill according to the theoretical framework: 'communication across (...) socioeconomic boundaries'. So, in some cases knowledge and skills cannot

be seen as two separate elements but are related to each other. Therefore, several assumptions and configurations were presented in a joint category of knowledge and skills. In figure 2, the link between knowledge and skills is indicated with a dotted line.

Knowledge and understanding

When applying the theory of capacity building to this research, knowledge was also interpreted as ‘understanding’, which is an important element in both of the projects. In the theoretical framework, knowledge is among others described as ‘an understanding of the context (...), e.g. target populations’ conditions’ (McLean, Feather and Butler-Jones, 2011). Health professionals need to know the target populations’ condition more than just knowing the facts: they need a thorough understanding of the challenges the vulnerable families faces and how to connect with them. In figure 2, ‘knowledge’ is changed in ‘knowledge and understanding’.

Funding

One of the sub elements of resources is ‘funding’, this concept is not specifically mentioned in the interventions. However, funding is strongly related to the concept of (a lack of) time: Professionals need to invest time in the project and in health promotion, and this can be difficult if they are not compensated for this investment, which is often the case. So when working with the concept of capacity building in future research or projects, it is good to take into account that funding is often linked to time (investment). Researchers or projects might consider making this explicit when applying the concept of capacity building.

Working together: resource or skill

According to the theory, working together is both a skill (‘working with others’) and a resource (‘supportive managers, colleagues, and allies with whom to work and learn’). However, it is not necessarily the case that GPs did not know how to work together prior to the project, but they often were not aware of the resource ‘supportive others’ or did not know how to make use of it. The GPs should have access to these resources and should be aware of the supportive others and of the possibilities for working and learning with them. This is also what the projects focused on mainly with regard to working together: on providing the professionals with an overview of supportive others (social map) and on making them aware of the possibilities of working together with those supportive others (e.g. during the group meetings).

5.3 Strengths and limitations

Some strengths and limitations of this research can be mentioned, in general and with regard to the concept of capacity building and the realist approach.

Strengths

This research adds to existing literature by taking the assumptions of the project as a starting point. By doing this, the research focuses on the perspective of the projects and the professional, whereas existing literature often does not focus on the perspective of the (health) professional. As was shown in the revised program theory, overall, the assumptions are good, and most of the projects' interventions turned out to be effective in capacity building for professionals. Some interventions turned out to be less effective or in need of adjustments. By providing the restraining and supportive contextual factors and mechanisms that are identified in this research, relevant nuances could be made to the assumptions.

In this research, a realist approach was used. The added value of using this approach was that an insight could be gained into the underlying processes that lead to desired or undesired outcomes. Often, providing an intervention and studying the outcome(s) of the intervention is not sufficient for fully understanding how a specific outcome was achieved. For example, Secker-Walker et al. (2000) described an intervention for capacity building for health professionals, but detailed information on the intervention was missing. In the current study, outcomes were identified, but also context, interventions and mechanisms were identified. By taking context and mechanisms into account, a more thorough understanding can be reached on why and how a certain intervention does or does not lead to the desired outcome.

The realist approach has also shown itself useful in the complexity of the capacity building process. It helps to understand which elements of individual capacity play a role in a configuration and in which part of the configuration these elements play a role. For example, in a configuration the context might be a lack of resources, and providing resources is the intervention leading to a mechanism related to commitment. This combination of capacity building and realist approach gives a thorough insight into effective capacity building interventions.

Limitations

Using a realist approach also brought along some challenges. CIMO configurations are not fixed, on the contrary, as Herens et al. (2017) also state, 'time, place, and actor perspective define CMO configurations and therefore are dynamic by nature'. Therefore, it was sometimes difficult to define the contextual factors and mechanisms and its outcomes. Moreover, mechanisms or outcomes can in turn also become context (of another configuration), as was also stated by Herens et al. (2017). For example, involving the professionals in the project increases their motivation (mechanism), and this motivation can in turn be a contextual factor for another configuration. It is then difficult to distinguish if a professional's motivation existed prior to the project or arose because of involving the professionals. In addition, although the data was collected with a realist approach in mind, it was sometimes still difficult to gain an insight into the underlying factors, among others because the data was collected by different researchers who have different ways of working, so that in practice the focus was not always on the realist approach. Therefore, the insight into the underlying factors was

sometimes limited, making it difficult to decide for example if a factor is context or mechanism. This decision was then made by the student writing this thesis; this is a possible limitation to this research.

Another limitation is that the majority of the data was collected among the project leaders and not among the professionals. Interviewing professionals might give a more thorough understanding of the underlying contextual factors and mechanisms, because it is than possible to directly ask professionals what they experienced in reaction to an intervention and what contextual factors played a role according to them.

A limitation is that the data was not collected by the student writing this thesis, but by the researchers involved in the overall evaluation study of Healthy Futures Nearby. It is possible that certain nuances in the data were missed that I would not have missed if I attended the interviews and focus groups. However, it can be expected that the impact of this point is limited, because the progress reports were written by the respondents themselves and the interviews and focus groups were transcribed and/or summarised in detail. Besides, interviews were conducted in this study with researchers who attended the focus groups and interviews and with the results of these interviews the configurations could be revised when needed.

5.4 Implications for practice and future research

Implications for future research

In future research it would be interesting to collect more data among professionals in addition to the data collected among project leaders. Interviewing professionals might give additional insights into the underlying factors that play a role for the professionals.

It would be interesting to compare the two projects to each other in future research. For example, project 1 focused strongly on the project group meetings, whereas project 2 focused more on providing the midwives with materials, such as visual stories, a comparison might give interesting insights. In this research, the projects were taken together in the analysis of the findings, mainly because the aim of this research was not to compare the two projects and a comparison was beyond the scope of the research.

It is important that future research takes into account the complexity of the process of capacity building among (health) professionals. As was explained, building capacity is not a simple linear process or a matter of improving one of the elements, but all the elements are related. This complexity should be kept in mind when studying capacity building. The realist approach is shown to be a useful approach for studying this complexity.

This research shows the importance of using the assumptions that are present in practice and in the projects as starting point for research. These assumptions played a big role in (the design of) the projects and the assumptions were shown to be to a large extent correct and relevant. Besides, by

using the assumptions of projects as a starting point, it is more likely that research fits the daily practice of professionals and projects. Therefore, in future research existing assumptions should be taken into account and should be given a key role.

Implications for practice

This research provides useful insights for practice. Because insight is gained into supportive factors, interventions can be designed that make use of key combinations of contextual factors and mechanisms to achieve a desired outcome. Besides, projects can anticipate on known restraining contextual factors and mechanisms, in order to prevent undesired outcomes. In short, projects can use these insights for designing effective capacity building interventions.

Not only in future research, also in practice the complexity of capacity building should be taken into account. Projects cannot simply focus on one of the elements skills, knowledge, commitment or resources, because all elements are related to each other, so for an effective intervention all four elements should be taken into account.

In this research, the program theory, consisting of the assumptions made by the projects, played a big role. Based on the findings of this research, the program theory is revised. This revision shows if assumptions were met or not and what nuances to the assumptions are needed. This gives useful insights into what works in projects, both for the projects studied in this research and for other projects. Based on the insights of this research, the two projects can adjust their assumptions and interventions to make their projects more effective. Future projects can take the insights into account to steer their projects more towards their desired outcomes.

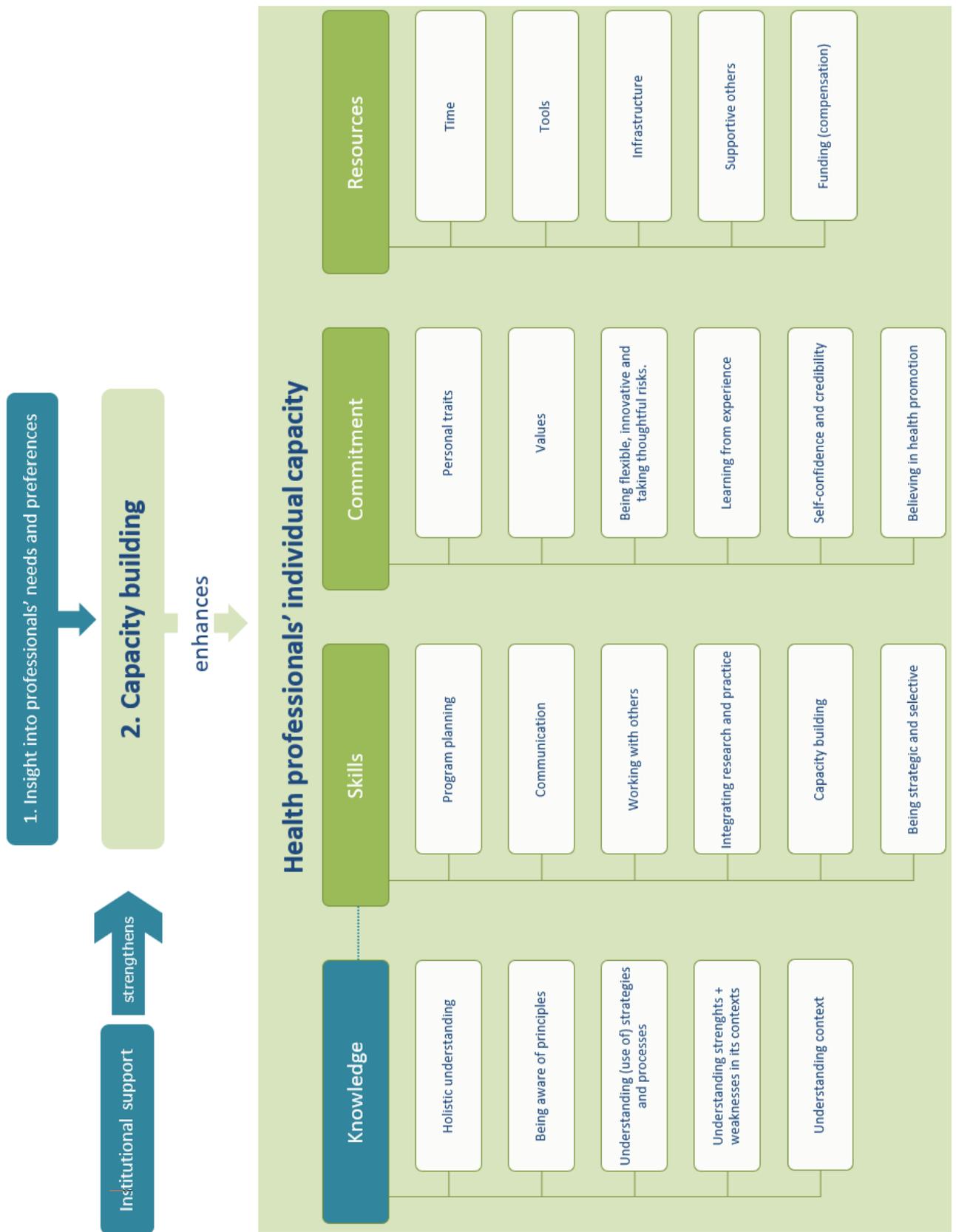


Figure 2. Adjusted overview of the concept of capacity building as visualised in figure 1.

6 Conclusion

This research aimed to identify supportive and restraining factors in capacity building for health professionals' practices for health promotion among vulnerable families in the Netherlands. The supportive and restraining factors were identified, and with these factors, relevant nuances could be made to the initial program theory, resulting in a revised program theory.

In this research the concept of capacity building was applied and explored. This concept was useful in categorizing and analysing the findings and helped to keep a clear focus amidst the large amount of data available. It can be concluded that the elements knowledge, skills, commitment and resources all work together in capacity building for (health) professionals working with vulnerable families. To give a more complete insight into the process of capacity building, the factors 'insight into the professionals' needs and preferences' and 'institutional support' were added to the concept.

This research adds to the existing literature, because it focuses on the professional and gives detailed, in-depth insight into how through capacity building professionals can be effectively supported. Besides, the insight into supportive and restraining factors for capacity building can be used in practice for designing effective capacity building interventions in order to support health professionals in health promotion among vulnerable families.

7 References

Brotans, C., Björkelund, C., Bulc, M., Ciurana, R., Godycki-Cwirko, M., Jurgova, E., ... & Pullerits, L. (2005). Prevention and health promotion in clinical practice: the views of general practitioners in Europe. *Preventive medicine*, 40(5), 595-601.

CBS (2019). *Wider life expectancy gap between high and low-educated*. Retrieved on September 10th, 2019 from <https://www.cbs.nl/en-gb/news/2019/33/wider-life-expectancy-gap-between-high-and-low-educated>

Cokkinides, V. E., Ward, E., Jemal, A., & Thun, M. J. (2005). Under-use of smoking cessation treatments: results from the National Health Interview Survey, 2000. *American journal of preventive medicine*, 28(1), 119-122.

Crisp, B. R., Swerissen, H., & Duckett, S. J. (2000). Four approaches to capacity building in health: consequences for measurement and accountability. *Health promotion international*, 15(2), 99-107.

Filc, D., Davidovich, N., Novack, L., & Balicer, R. D. (2014). Is socioeconomic status associated with utilization of health care services in a single-payer universal health care system?. *International journal for equity in health*, 13(1), 115.

FNO (2015). *Call "Gebiedsgerichte gezondheidsaanpakken – fase 1" voor Programma Gezonde Toekomst Dichterbij*. Retrieved on October 4th, 2019 from https://www.fnozorgvoorkansen.nl/wp-content/uploads/2015/02/Calltekst-Gebiedsgerichte-gezondheidsaanpakken-FASE-1_def.pdf

Garg, P., Ha, M. T., Eastwood, J., Harvey, S., Woolfenden, S., Murphy, E., ... & Einfeld, S. (2018). Health professional perceptions regarding screening tools for developmental surveillance for children in a multicultural part of Sydney, Australia. *BMC family practice*, 19(1), 42.

Herens, M., Wagemakers, A., Vaandrager, L., van Ophem, J., & Koelen, M. (2017). Contexts, mechanisms, and outcomes that matter in Dutch community-based physical activity programs targeting socially vulnerable groups. *Evaluation & the health professions*, 40(3), 294-331.

Hiscock, R., Bauld, L., Amos, A., Fidler, J. A., & Munafò, M. (2012). Socioeconomic status and smoking: a review. *Annals of the New York Academy of Sciences*, 1248(1), 107-123.

Hogeling, L., Vaandrager, L., & Koelen, M. (2019). Evaluating the Healthy Futures Nearby Program: Protocol for Unraveling Mechanisms in Health-Related Behavior Change and Improving Perceived Health Among Socially Vulnerable Families in the Netherlands. *JMIR research protocols*, 8(4), e11305.

Jagosh, J., Bush, P. L., Salsberg, J., Macaulay, A. C., Greenhalgh, T., Wong, G., ... & Pluye, P. (2015). A realist evaluation of community-based participatory research: partnership synergy, trust building and related ripple effects. *BMC public health*, 15(1), 725.

Kim, K., & Rosenberg, M. A. (2018). The Role of Unhealthy Behaviors on an Individual's Self-Reported Perceived Health Status. *North American Actuarial Journal*, 22(2), 252-269.

Lawlor, D. A., Keen, S., & Neal, R. D. (2000). Can general practitioners influence the nation's health through a population approach to provision of lifestyle advice?. *Br J Gen Pract*, 50(455), 455-459.

Macfadyen, G., & Huntington, T. (2004). *Human capacity development in fisheries*. Food and Agriculture Organization of the United Nations.

Marchal, B., Van Belle, S., Van Olmen, J., Hoerée, T., & Kegels, G. (2012). Is realist evaluation keeping its promise? A review of published empirical studies in the field of health systems research. *Evaluation*, 18(2), 192-212.

McLean, S., Feather, J., & Butler-Jones, D. (2011). *Building health promotion capacity: action for learning, learning from action*. UBC Press.

Pawson, R. (2002). Evidence-based policy: The promise of realist synthesis'. *Evaluation*, 8(3), 340-358.

Punton, M., Vogel, I., & Lloyd, R. (2016). Reflections from a realist evaluation in progress: scaling ladders and stitching theory.

Robins, L. (2007). Capacity-building for natural resource management: Lessons from the health sector. *EcoHealth*, 4(3), 247-263. doi:<http://dx.doi.org/10.1007/s10393-007-0121-5>

SCP (2018). *Opleidingsverschillen in gezondheidsgedrag*. Retrieved on September 9th, 2019 from https://www.scp.nl/Nieuws/Opleidingsverschillen_in_gezondheidsgedrag

Secker-Walker, R. H., Dana, G. S., Solomon, L. J., Flynn, B. S., & Geller, B. M. (2000). The role of health professionals in a community-based program to help women quit smoking. *Preventive Medicine, 30*(2), 126-137.

Tremblay, M., Cournoyer, D., & O'Loughlin, J. (2009). Do the correlates of smoking cessation counseling differ across health professional groups?. *Nicotine & Tobacco Research, 11*(11), 1330-1338.

Volksgezondheid en zorg (2019). *Ervaren gezondheid naar opleiding*. Retrieved on September 9th, 2019 from <https://www.volksgezondheidenzorg.info/onderwerp/ervaren-gezondheid/cijfers-context/trends>

Wechsler, H., Levine, S., Idelson, R. K., Rohman, M., & Taylor, J. O. (1983). The physician's role in health promotion—a survey of primary-care practitioners. *New England Journal of Medicine, 308*(2), 97-100.

Wong, G. (2018). Getting to grips with context and complexity— the case for realist approaches.

Worldbank (2019). *Life expectancy at birth, total (years)*. Retrieved on September 10th, 2019 from <https://data.worldbank.org/indicator/SP.DYN.LE00.IN?locations=NL&display=graph>