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Health Care Workers Experiences and Perceptions of the Pilot Phase of the Health Dialogue Intervention in the Scania region, Sweden:

A Qualitative Interview Study

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Abstract

Background: Cardiovascular disease and diabetes type 2 are among the largest public health issues in Sweden. Research indicates that a healthy lifestyle can prevent most cases. The Health Dialogue is a health promoting method for primary health care with good results in other regions of Sweden. A pilot phase of the intervention was implemented in the Scania region during the fall 2020.

Aim: To describe primary health care workers experiences and perceptions of health promotion through the Health Dialogue method during the pilot phase of the intervention in the Scania region.

Method: Individual interviews with 12 health care workers from the pilot phase of the intervention in Scania who were recruited through purposive and maximum variation sampling strategies. The data analysis was conducted with an inductive approach through the analytical method qualitative content analysis.

Result: The analysis resulted in five main categories and one overarching emerging theme; An increased health-promoting mindset would benefit primary health care; Empower individuals; Facilitate sustainable lifestyle changes; It is challenging to be part of a pilot; Tools and support ease the implementation of the Health Dialogue, with the overarching emerging theme of *"Hoping that the Health Dialogue is the start of a paradigm shift in Swedish primary health care"*.

Conclusion: Health care workers hoped for an increased focus on health promotion and primary prevention through the Health Dialogue method to make health promotion a natural part of primary health care in the future. The Health Dialogue is a well-structured method with several helpful tools. However, minor adjustments could further improve the intervention for the broader implementation in the Scania region. Lifestyle counselling is complex and an increased focus on self-efficacy could favour the participants' change process.

Keywords: content analysis, Health Dialogue, health promotion, primary health care, Sweden

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1. Introduction

In Sweden, as well as globally, a major public health challenge today is non-communicable diseases (NCDs) (1). Evidence suggests that lifestyle factors have a major impact on these conditions and that most cases of cardiovascular disease (CVD) and diabetes type 2 could be prevented by a healthy lifestyle (2-6). The four most important lifestyle factors for primary prevention of CVD and diabetes type 2 are tobacco use, diet, physical activity, and alcohol consumption (5). A recent public health survey showed that unhealthy lifestyle habits were common in Scania (7). One of the regional goals until 2030 is to improve public health and quality of life for all (8). The health-promoting primary health care method Health Dialogue has been implemented in other regions of Sweden since the 1980s with promising results (9-11). The method was inspired by the public health theory the Health Belief Model to facilitate individual health behaviour change (12). The method implies both low- and high-risk strategy by inviting whole population groups to participate in an individual Health Dialogue, independent of their health status (13). During fall 2020 a pilot phase of the Health Dialogue method was implemented in the Scania region (13). This study aimed at describing health care workers experiences and perceptions of health promotion through the method of Health Dialogue during the pilot phase in Scania.

2. Background

2.1 Non-communicable disease in Sweden, a public health concern

In Sweden NCDs cause about 90% of all deaths (14) and CVD is the most common cause, responsible for about 35% of all deaths in Sweden (14). CVD is also the most common cause of disability-adjusted life-years in the country (3, 15, 16). Diabetes is responsible for 3,7% of all deaths in Sweden and is among the most common causes of death and disability-adjusted life-years (16). Diabetes type 2 highly increases the risk of CVD (17). Evidence suggests that a healthy lifestyle can prevent a majority of CVD and diabetes cases (2-4, 17). The four most important lifestyle factors for prevention are tobacco use, diet, physical activity, and alcohol use (5). A large British prospective study found that people who do not smoke, eat healthily, are physically active and have a moderate consumption of alcohol, lived, on average, 14 years longer than those with an unhealthy lifestyle (18). It is suggested that social

determinants have a major impact on cardiovascular risk and outcomes (19). A government report shows that cardiovascular treatment is unequal among different population groups in Sweden (20). Recent Swedish public health reports show that health disparities were depending on the neighbourhood, educational level, and social conditions, resulting in poorer health and lower life expectancy among some population groups (21). In 2018, the Swedish government set the goal to *"reduce avoidable health inequalities within a generation (30 years)"* (22). The most recent public health report, conducted in 2019, showed that health equality has not improved, for example, health disparities regarding life expectancy had increased (23, 24). To reach the national goal of health equality before 2050, action is needed (25).

2.2 Lifestyle in the Scania region

Scania is the southernmost region of Sweden, consisting of 33 municipalities and about 1,4 million inhabitants (26). Through data from the national public health survey (23, 24), the Scania region made an extensive analysis of the public health in Scania (7). The result showed that Scania had similar lifestyle problems to Sweden as a whole, as well as health disparities among different population groups. Fruit and vegetable intake was severely low in Scania, only 7,6% reached the recommended daily intake. Regarding physical activity level, 64% reached the recommended minimum level. The percentage of daily smoking in Scania was 9,1% and 9,6% used snuff daily. 15,2% had a risk-consumption of alcohol in Scania (ibid.).

2.3 Health promotion to prevent cardiovascular disease

One large international case-control study (Interheart) found that nine lifestyle variables (smoking, history of hypertension, history of diabetes, blood lipids, waist-hip ratio, consumption of fruit and vegetables, physical activity level, alcohol consumption and psychosocial factors) accounted for 90% of CVD cases among men and 94% of cases among women, regardless of age and region of the world (6). The result suggests that there is a big potential to prevent CVD and that it can be done similarly all over the world (ibid.). Several Swedish studies also found correlations with several of the lifestyle variables mentioned above and CVD risk (27-29). A large study from the United States indicated that seven

healthy lifestyle factors (not smoking, having normal blood pressure, normal blood glucose, normal blood lipids, normal weight, being physically active and eating healthy) are protective against CVD and premature death, and several healthy behaviours combined was associated with an even lower risk (30). A review article has compared cardiovascular treatment cost and cardiovascular health promotion (31). CVD was both the leading cause of death and the leading health care expenditure per capita in the world, and the expenditure is predicted to rise in the coming years, although, it is suggested that more cardiovascular health promotion through life could prevent that development (31). During spring 2020 the Scania region set goals for regional development until 2030. One of the goals is to improve public health and quality of life for all, through increased health equality and interventions to promote a healthier lifestyle (8).

2.4 The Health Dialogue method

The Health Dialogue method invites specific age groups to individual health check-ups to prevent CVD, which includes testing blood lipids and fasting blood glucose, measurement of blood pressure, BMI and waist-hip ratio. The participants fill out an extensive questionnaire about their lifestyle, emphasizing dietary habits, physical activity, tobacco use, alcohol consumption and social factors such as family, friends, work situation, sleep and stress. There is also one section about the family history of CVD and diabetes. The answers to the questionnaire and the variables measured result in an individual health curve (see Appendix 4). The participant comes to the clinic to see a Health Dialogue practitioner for a health-promoting dialogue with their health curve as a foundation for the dialogue (13). The Health Dialogue practitioner uses motivational interviewing to conduct the dialogue (32). In the Health Dialogue method, everyone in specific age groups is invited to participate, independent of their health status, and the method, therefore, applies both low- and high-risk strategy. Those with a high risk shall be offered follow-up according to their specific needs (13). The Health Dialogue practitioner is encouraged to reach out to local stakeholders, for example, the municipality, grocery stores, pharmacies, and sports associations, for collaborations to facilitate health promotion on a community level.

2.5 The Health Belief Model

The Health Dialogue method was created in the 1980s inspired by the Health Belief Model (see appendix 5) (email H Lingfors 22 April 2021). The Health Belief Model is a long-established public health theory that explains individual health behaviour change (12, 33-35). According to the theory, individuals will take action to improve their health if they perceive themselves as susceptible to a condition, disease, or other health problem which they believe can have a serious impact on them. For them to act it is also important that they are aware of an action that they consider feasible, where the benefits exceed the barriers. In addition, they need to believe that the action can reduce their susceptibility. Those factors are the basis for deciding to act, but to take the step and act, self-efficacy is also needed (34). Self-efficacy means one's own perceived ability to carry out the act or change a certain behaviour (12, 33-35). Cues and reminders to act can help to push the individuals towards their tipping point of action. Those cues can both come from reliable sources, such as the advice given during a Health Dialogue, or through commercials or news articles about NCDs or healthy habits, for example (12).

2.6 Previous research on the Health Dialogue method

The Health Dialogue method has been implemented on a regional level in Sweden since the 1980s. The method aims to reduce CVD incidence and prevalence. The method was introduced in Skaraborg and Jönköping county 1985 and Västerbotten county 1990. The counties have made long-term follow-up studies. Skaraborg and Jönköping made a 12-year follow-up study where they looked at premature ischemic heart disease mortality (below the age of 75) in the municipality Habo, compared to 33 similar municipalities in Sweden. The decrease in mortality in Habo during the 12 years (1984-1996) was significant both among men and women, and it was more prominent than in other municipalities (10). A 22-27-year follow-up among men indicated that men who had been invited to participate had a 29% lower all-cause mortality compared to the national level and the subgroup of men who participated had a 43% lower all-cause mortality compared to the national level (9). Västerbotten county made a 25-year follow-up (1990-2006) where they looked at premature mortality and the study showed a 34% lower all-cause mortality among participants compared to the national level. The study also showed that the greatest effect was seen among participants with low educational level (11). Therefore, the method might be helpful to decrease health inequality in Sweden (20, 22). A cost-effectiveness analysis to evaluate the

method in Västerbotten 1990-2006 found that one quality-adjusted life-year (QALY) cost 650 SEK, the Swedish threshold value is 500 000 SEK per QALY, which makes the method extremely cost-effective (36). The National Board of Health and Welfare in Sweden mentioned in their report about prevention and treatment of unhealthy lifestyle factors that the Health Dialogue method is a good way to systematically work with health promotion in primary health care, for primary and secondary prevention of NCDs (37).

2.7 The knowledge gap

There are several quantitative scientific articles published about the Health Dialogue method in a primary health care setting in Sweden (9-11, 29, 36, 38). A large prospective cohort, which will collect data from the Health Dialogues in the Scania region for the coming 5 years and then do long-term follow-up, started with the pilot phase of the intervention (13, 39). To this day, there are few qualitative scientific articles published about the Health Dialogue method in a primary health care setting in Sweden and internationally. Therefore, many questions of a qualitative nature remain unanswered. In this case, the research topic originates from the Centre of Excellence on Lifestyle Factors and Disease Prevention in the Scania region, which are the method- and knowledge support for the Health Dialogue practitioners (13, 40). When this study was conducted the pilot phase of the intervention in Scania was recently finished and preparations for a broader implementation of the method in the whole region of Scania was being prepared. The health care workers perspectives and experiences of the method are important at this stage of the process as they can provide valuable feedback and inform high-level institutions working with the broader implementation of the method, which makes this study clinically relevant.

2.8 Aim and research questions

The aim was to describe primary health care workers experiences and perceptions of health promotion through the Health Dialogue method during the pilot phase of the intervention in the Scania region.

Specific research questions:

- How do primary health care workers perceive health promotion through the method of Health Dialogue?
- What barriers are there to the implementation of the Health Dialogue method in primary health care in the Scania region?
- What facilitators are there for the implementation of the Health Dialogue method in primary health care in the Scania region?

3. Method

3.1 Research design

This study used an inductive qualitative study design to investigate the research question. This approach was chosen because a qualitative study design is appropriate when the study aims to gain in-depth knowledge about the informants' perspectives on the central phenomenon under study (41, 42). Because the study aimed to understand the informants' subjective experiences and perceptions, it was not possible nor appropriate to start with a hypothesis, instead, an inductive approach was used (43, 44). Qualitative content analysis (45) was a well-suited method because the study aimed to gain an in-depth understanding of the health care workers experiences and perceptions of the central phenomenon. Qualitative content analysis facilitates an analysis of the meaning of the text, either close to the text on a manifest level or the more abstract, underlying meaning of what is said, on a latent level (41, 44-46).

3.2 Study setting

This study was conducted in the Scania region in Sweden, which consists of 33 municipalities and has a total population of 1 375 278 inhabitants (data from 31st of December 2019) (47). During fall 2020, a pilot phase of the intervention Health Dialogue was implemented in the region. Fifty primary health care clinics showed interest to participate and 11 of them were selected to participate depending on the geographical area in Scania, socioeconomic gradient and number of listed patients, to reach a maximum variation in participants (13, 40). The recommendation was to select two health care workers at each

clinic to work with the method. They needed to be either a nurse, physiotherapist, dietician, occupational therapist, or physician. If they did not have previous education in motivational interviewing, they got a three-day training during spring 2020. If they had previous knowledge, they got a one-day training to refresh their knowledge. Everyone got a two-day training in the Health Dialogue method. Day one focused on the latest evidence about the different lifestyle variables included in the method: physical activity, diet, weight, hip-waist ratio, alcohol consumption, tobacco use, psychosocial factors, blood pressure, blood lipids, blood glucose, heredity and chronic illness (13). Day two was a workshop on how to use the computer software which was built especially for the intervention in the Scania region (ibid.). Initially, the Health Dialogue practitioners invited everyone born in 1980 and listed at their clinic, to participate in the intervention. They invited the participants through an invitation letter, followed by a phone call where they explained the method and the purpose of the intervention (ibid.). The participants then got an appointment at the lab at the primary health care clinic to give blood samples. They also got access to the health questionnaire through the software. Participants with internet access, either on a smartphone, tablet, or a computer, could answer the questionnaire before their appointment and participants without internet access could answer the questionnaire at the primary health care clinic, either before or during the Health Dialogue (13, 40). The dialogue is described above under 2.4 “the Health Dialogue method”.

The primary health care clinics selected to participate in the pilot phase of the intervention Health Dialogue were geographically spread out in the region. Two municipalities, both situated in the western part of Scania, was selected to be fully covered during the pilot phase. One of them only have one primary health care clinic and the other one has three, which were all included in the pilot. Further on, two clinics were located in the Malmö area, one in the southern part of Scania, one in the northeast part and three more in the western part of Scania (ibid.). A broader implementation will include all primary health care clinics in the Scania region, which is a total of 158 clinics (48). During the pilot phase, all 40-year-olds listed at the 11-pilot clinics were invited to participate, in 2020 that was everyone born in 1980. In a broader implementation everyone turning 40 each year will be invited (13).

3.3 Sampling of informants

In qualitative research, the informants are purposively sampled to share their subjective reality about the phenomenon under study (41). Hence, the informants must have experience of the phenomenon under study. The inclusion criteria for this study were (1) primary health care workers (nurses, physiotherapists, or dieticians) (2) who had been working as a Health Dialogue practitioner within the pilot phase of the intervention Health Dialogue in Scania during fall 2020. The study population who met the inclusion criterion was very limited, a total of 21 health care workers at 11 primary health care clinics (13). To get a wide range of experiences and perceptions of the central phenomena it was decided to use maximum variation sampling (41). The sampling goal was to try to recruit informants from as many different clinics as possible, informants with different professions, to include both private and public primary health clinics, preferably from many different municipalities in all areas of Scania (west, Malmö, south and northeast).

The health care workers who met the inclusion criteria were identified through the gatekeeper the Centre of Excellence on Lifestyle Factors and Disease Prevention in the Scania region (40). An invitation email was sent out to all of them with information about the study. Initially, two informants signed up. One more email was sent out three days later, after that six informants signed up. Ten days after the first invitation was sent out the gatekeeper held a conference for all the health care workers within the project, the author of this study (SA) was invited to present the study at their virtual meeting. After that three more informants signed up. Four days after the presentation SA sent out personal invitation emails to three more Health Dialogue practitioners who would increase the variation among informants. That resulted in one more informant.

3.4 Data collection

Both an interview guide and a mind map were developed and used during the interviews (see appendix 2 and 3). A semi-structured interview guide was chosen because it gives a clear structure yet leaving space for emerging questions during the interviews (49). The interview guide was developed during fall 2020 to be included in the ethical application which was submitted to the Swedish Ethical Review Authority at the end of December 2020 (50).

During the development of the interview guide the author of this study (SA) red qualitative literature (41-46, 49) as well as got feedback from the supervisor and co-supervisors. The mind map was shown to the informants at the end of the interview to show them the intended key areas and to encourage them to add anything they thought was missed during the interview.

The data was collected between February and March 2021 through semi-structured individual in-depth interviews. There was a total of 12 informants. The informants received the informed consent form together with the invitation to participate (see appendix 1) (49). All participants printed the consent form, signed it, scanned it, and sent it by email to the researcher before their interview started. Initially, two pilot interviews with Health Dialogue practitioners were conducted which resulted in minor changes in the interview guide.

The interviews took place through the encrypted video conferencing platform Zoom due to the Covid-19 pandemic and the current societal restrictions (51). A video conference was chosen because it is as similar to an in-person meeting as possible, regarding the real-time face-to-face conversation, ability to see the informant's body language and rapport building, compared to telephone interviews, for example (52, 53). All interviews were conducted in Swedish and were audio-recorded with a mobile phone. The average length was 59 minutes and ranged from 43 to 83 minutes. The author of this study (SA) conducted all interviews. The key areas of the interview included; experiences and perceptions of health promotion, public health, the Health Dialogue method; the implementation of the pilot phase including the appointments with the participants and the experiences of the method; organizational aspects of the implementation and barriers and facilitating factors for the implementation; the broader implementation in Scania including what the informants considered important as well as ideas for development in the future; the community level including local collaborations, initiatives, resources, and ideas for future collaborations. Substantive, methodological, and analytical field notes were written during and after each interview (41). The recordings were transferred from the mobile phone to a computer after each interview and then deleted from the mobile phone. The audio recordings were used to transcribe the verbatim of each interview.

3.5 Analytical approach

Qualitative content analysis according to Graneheim and Lundman's article (2004) was used (45) and was chosen because the study aimed to understand and describe primary health care workers subjective, lived experiences and perceptions of health promotion through the Health Dialogue method. Qualitative content analysis was considered suitable because it focuses on subject and context, as well as allows the researcher to do interpretations on a manifest and latent level if the data is rich enough (44, 45). This study had an inductive, data-driven approach to allow the researcher to look for patterns, similarities and differences within the data (44). The unit of analysis was the verbatim transcribed individual interviews.

The analytical process started with dividing all the interview text related to the aim into meaning units from the transcribed verbatim of each interview. The meaning units were paragraphs with information relevant to the study's aim and research questions (45). The meaning units were then condensed, which means that the text of each meaning unit was shortened but the core of what was being said was preserved. After that, each condensed meaning unit was coded, where it was labelled with a code. These steps, dividing the text into meaning units, condensing meaning units and coding the condensed meaning units, was done for all interviews individually. Up to the process of coding, everything was conducted in Swedish, which is the mother tongue of the researcher and the informants. The coding and the following steps of the analysis were conducted in English. The quotes were translated into English with some minor grammatical corrections. See table 1 for examples of the analytical process.

When those steps were completed, the researcher looked for patterns, similarities, differences, and emerging latent meaning among all codes from all interviews. The codes were sorted into content areas, then into sub-categories, which were then grouped into categories. A category is a number of codes that reflect the same commonality (45, 54). In accordance with Graneheim and Lundman (2004), all codes should be suitable for one category and the categories shall include all data relevant to the aim of the study (45). The preliminary categories were repeatedly reconsidered and discussed with the supervisor and

the co-supervisors. Continuously, during the analysis, the study aim was in focus. In the final step, the categories were interpreted into one overarching theme.

3.6 Ethical considerations

An application for ethical approval was submitted to the Swedish Ethical Review Authority (dnr. 2020-07138) (55) and approved before the interviews were conducted (50, 56). This study was part of the large prospective cohort conducted by the Centre for Primary Health Care Research in the Scania region (39). Therefore, the ethical approval application could be sent in like an application for amendment of their ethical approval for the cohort (50). An ethical approval would not have been necessary for the thesis alone (57, 58), but the ethical application was done because of the endeavour to hopefully publish this study as a scientific article eventually.

This study was done in accordance with the Helsinki Declaration principles of autonomy, beneficence, non-maleficence, and justice (59). As well as in accordance with the Swedish Research Council's ethical principles for research within humanities- and social science, where four fundamental ethical requirements are presented: information, informed consent, confidentiality, and utilization (60). The researcher must inform the participants about the conditions of their participation and all other relevant information that can affect their willingness to participate (59, 60). This was ensured through the invitation and information letter sent out to the study population (see appendix 1). The letter included information about the aim of the study, that it was voluntary to participate, that they could withdraw their participation at any time during the study, how the data would be handled, how confidentiality would be assured and contact details if they had or would get any questions. Informants must voluntarily decide to participate and give their informed consent to the researcher (ibid.). The information letter included an informed consent form (see appendix 1). When booking a time for the interview the researcher (SA) sent the information letter and the informed consent form again and encouraged the informants to read it, sign the consent form and send it to the researcher before their interview. Both the requirement for information and informed consent is also relevant regarding the principle of autonomy (41, 59). All data gathered in a study shall be protected by the greatest possible confidentiality, especially

personal information (60). The measures that were taken to ensure confidentiality was the following: After each interview was conducted the audio recording was transferred to a password-protected computer and deleted from the mobile phone. During transcription, all personal information was removed. The interviews were labelled a number, e.g., “interview 1” and names were changed to “xx”. The code keys for the labels were only handled by the main researcher (SA) and stored in a safe place. The personal information gathered in a study can only be used for research purposes (ibid.). The personal information collected in this study was only available to the main researcher (SA) who deidentified the data during the process of transcription. Anonymized data, later in the process of analysis, was shared with the supervisor. Both the requirement for confidentiality and the requirement for utilization addresses the principle of non-malevolence (41, 59).

Regarding the principle of beneficence (41, 59, 61), this study aimed to shed light on the health care workers experiences and perceptions of both positive aspects and opportunities for improvements of the Health Dialogue method. The interview gave the health care workers a chance to reflect upon their experiences and perceptions. Hopefully, the results will advise the higher authorities in the Scania region for the broader implementation. A publication as a scientific article could further spread the knowledge to a wider audience. The principle of justice and equality (41, 59) was considered throughout the study and with all contact with the informants. During the study ethical considerations was continuously discussed with the supervisors.

4. Findings

4.1 Characteristics of the informants

The results were based on individual in-depth interviews with 12 informants at eight different public and private primary health care clinics, out of 11 clinics participating in the pilot. The clinics included were situated in six out of eight municipalities participating in the pilot. All areas of Scania (west, Malmö, south and northeast) was represented. The different professions participating in the pilot were all represented; nurses (9), physiotherapists (2), and dieticians (1). Nine informants were women and three men. The average ages of the

informants were 41 years and ranged from 24 to 71 years. The average professional experience was 15 years and ranged from one to 50 years. Six informants had previous experience of Motivational Interviewing.

The analysis of data resulted in five main categories, presented in bold, derived from 12 subcategories, presented in italic below (see Table 2). The informants' perceptions and experiences of the pilot phase were marked by the overarching theme *"Hoping that the Health Dialogue is the start of a paradigm shift in Swedish primary health care".* The interviewees, the Health Dialogue practitioners, were called informants and the persons they met and conducted the Health Dialogues with during the intervention was called participants.

4.2 An increased health-promoting mindset would benefit primary health care

4.2.1 Health Dialogue is health promotion

Informants expressed that the Health Dialogue was a structured way to naturally implement health promotion and primary prevention in primary health care and that increased focus on health promotion and raising awareness about lifestyle can be a way to reduce the burden on the health care system long term. The Health Dialogue can facilitate both primary and secondary prevention and the more age groups that are included in the intervention the greater public health effect it will have.

> *"In the future, I hope that the Health Dialogue will be a natural part of health care, for 40-year-olds and 50- and 60-year-olds. This, I believe, will make a major difference as we will find many diseases in an early stage and also risks for diseases."* Informant 1

4.2.2 Encourage a healthy lifestyle in the whole population

Informants expressed that the goal with the Health Dialogue is to raise awareness about health and lifestyle, most directly to the invited participants but they hopefully spread the awareness to their family and friends as well. Another important part of the intervention is local collaboration to reach the community level. The majority of the informants did not start local collaborations during the pilot, both due to lack of time and due to local restrictions caused by the Covid-19 pandemic. However, they all stressed the importance of this part of the intervention and had ideas for future collaborations. Informants also raised that local collaborations will be easier to start after the broader implementation once all primary health care clinics in Scania has started and the clinics can work together towards external collaborations.

> *"I believe that the most important part is to raise awareness […] that it shall spread like ripples on the water, this work. That it shall be easy to live a healthy life, eventually. A project that is set up very large will soon fall, the most important thing is to let this mindset infuse the whole population, eventually. Otherwise, it will just be another new trend, I don't think we shall see this that way…"* Informant 2

4.2.3 Health care workers new knowledge will benefit patients

Informants experienced that the Health Dialogue method was in the back of their minds continuously during the pilot phase and made them naturally integrate lifestyle questions, which was beneficial for many regular patients. Another example was that the Motivational Interviewing method helped them get a lot of information quickly during telephone triage, as they gave more space for the patients to talk. An important benefit expressed by the informants was that they learnt to see the whole person more holistically than before. No matter what reason they met a patient, they integrated all lifestyle aspects and asked about those as well, when they deemed it necessary.

> *"I think that you get a completely new understanding of the whole person, that you not just focus on, for example, the medical part, and stare blindly at that because it is all about the holistic view. We've talked a lot about that, that you learn how to see the*

whole person, not just a small area with a problem because it's all connected, we know that sleep is very important, for example. So, I think it can be helpful to get a more holistic understanding, in all health care." Informant 10

4.2.4 Supportive colleagues are important when primary prevention introduces an additional patient group

Informants reported that they had support at their clinics. A supportive boss allocated the time needed, allowed this intervention to be as prioritized as the other parts of the clinic and regularly followed up on how the intervention was going. Informants also experienced support from their colleagues who were interested in the intervention and thought that it was important to acknowledge lifestyle factors to a bigger extent in primary health care. Most of their colleagues understood that introducing health promotion and primary prevention into primary health care can bring more work initially as patients will be treated at earlier stages of their diseases, but that it can decrease the burden on the health care long-term.

"*The doctors at our clinic are very curious and they ask about how it goes and so on, and I think everyone at the clinic is aware that this can increase the burden initially but on the other hand maybe we can avoid that burden in the future"* Informant 12

At some of the clinics, colleagues thought that it was unnecessary and inappropriate to carry out the pilot phase in the middle of the Covid-19 pandemic. However, after the pilot phase was finished they realized that the intervention had benefitted participants. Many informants presented the method and the results of the pilot phase for their colleagues at clinic meetings, which was met with big interest both to continue with the Health Dialogue and ideas on how to increase health promotion and incorporate lifestyle factors in regular appointments at the clinics.

4.3 Empower individuals

4.3.1 A chance to stop and reflect if changes are needed

Informants experienced that all participants benefited from the Health Dialogue no matter their health status. The perfectly healthy ones got a confirmation that their lifestyle is good and that they can continue correspondingly, and the ones with many health risks got a wake-up call, awareness of their risks and often realizations about what they need to change. Almost all participants were positive about getting awareness about their health status. Some participants falsely perceived themselves as healthy and some lived in denial about their health risks, but getting an evidence-based, graphical health curve in their hand often gave those participants insight and motivation to change. The Health Dialogue empowers the participants, after getting knowledge about risk factors and awareness about their health the participants can make informed choices about their lifestyle.

> *"In most cases, some factors have not really been alarmingly red but at least orange, I think I've had two in total that has been completely green. […] Being aware, one can make active choices in everyday life. Choose active transportation, walk, or bike or so. When one goes grocery shopping one can make active choices there, there are many alternatives to what one usually buys, I think. One can choose alcohol-free alternatives, which I think becomes more and more common."* Informant 9

Informants raised that getting awareness early also buys the participants' time, most of them got awareness about their risks early in the disease process or got awareness about how their everyday lifestyle choices increased the risk of disease long-term. They, therefore, got the option to change their habits gradually, which can be beneficial for those who need that to change sustainably. Some informants indicated that answering the questionnaire beforehand, wherever, and whenever suitable for each participant, often gave honest answers and mentally prepared the participants for the appointment. Some informants reported that participants who were aware of certain risks in their lives even changed their habits before the dialogue. The Health Dialogue practitioners had different ways of approaching the participants' health risks, some were guiding and encouraging, while some had a more fear-inducing approach. Although, they all aimed towards empowering the participants.

4.3.2 Let the participant guide the dialogue

Informants experienced it pedagogic to talk about lifestyle based on the participants result on the health curve, instead of just talking without having a result to show them. The informants experienced motivational interviewing as a good method for letting the participant guide the dialogue. It was important to adjust the dialogue according to the participant, for example, leave out the Latin names and facilitate a conversation without prestige. It was also important, in some dialogues, to point out that the aim is to inform and offer help and let it be completely up to each participant to make their own choices so that they feel empowered instead of forced. Some informants let the participant choose what areas to talk about and some tried to cover all areas.

> *"First, I explained to the participant what the health curve is and how it looks, before starting. Then I'd show their health curve to them and ask if there's anything, in particular, that they want to focus on or if it's okay that we start from the top to the bottom. Partly because if you'd talked about all areas then I think that they felt like the red areas was a little less dramatic because there might also be green areas. If you'd only focus on the red areas, then it could be perceived as criticism or attack. So, I used to say to them that if there's anything, in particular, you want to talk about then we do that, but I think it works well to talk about all areas from top to bottom because they are all connected"* Informant 6

4.4 Facilitate sustainable lifestyle changes

4.4.1 Being invited to a Health Dialogue regularly will give a sense of comfort and a reminder to prioritize health

Informants reported that they had participants who asked about coming back on a Health Dialogue in the future. They perceived the participants interested in the intervention and grateful for the insights it gave them about their health. Some participants expressed that being called to a checkup like this regularly, for example, every 10 years, would give them comfort and would work as a reminder to prioritize their health. The informants reflected on the age group 40-year-olds and that they are in the midst of life, many combine children and an advancing career which is stressful for some. The informants also raised that 40 is often

young enough to find risks early and prevent NCDs. However, 50-year-olds often have more time to prioritize their health as their children are older. Some informants indicated that it would ease the transition into retirement and decrease the risk of falling ill soon after retirement if 65-year-olds were included, with a focus on the lifestyle changes retirement often bring. Informants reported that they think it would benefit most individuals by having specific age groups as well as Health Dialogues through referral in Scania.

> *"I think the participants' would appreciate being invited every 10 years. Then they would get a reminder to not forget themselves and to prioritize their own health."* Informant 9

4.4.2 It is important to support the participants to change their habits

Informants stressed the importance of supporting the participants change process. Follow-up and referral to other caregivers when needed were mentioned as ways to support the participants. Health risks were sometimes associated with social factors, which could make them hard to change and support was sometimes crucial. If the participants were given just one appointment, some of them might change for a few weeks and then fall back to their old habits again. Some informants solved this by offering the participants a follow-up after six months when necessary, to evaluate their lifestyle changes.

"I had some participants who needed to change their diets and increase their physical activity and they were motivated to change. I offered to contact them again, either by phone or to book a new appointment where I would weigh them and measure their hip-waist ratio again. Almost all of them were positive about it, just to get some feedback, someone who actually follow-up on you. It's not just empty words that I should try to change my diet so that I can lose that 30 kg overweight that I have that is actually dangerous to me, and then to know that yes, she will call me in six months again and then we'll follow-up and see if the changes I've made have been beneficial or not." Informant 6

Some informants indicated that another reason to follow-up was that they found it hard to manage to talk about health goals during the Health Dialogue, either due to lack of time or because they judged it overwhelming for that participant to talk about goals during the first appointment. Some informants encouraged the participants to reflect on their new knowledge about their health and how they would like their health to be in ten years from now. Then they either had a follow-up appointment where they talked about goals or they gave the participants a health plan folder where they could fill in their goals by themselves.

4.5 It is challenging to be part of a pilot intervention

4.5.1 Complicating factors arose during the pilot phase

Informants experienced it challenging to be part of a pilot, mostly because it was hard to estimate how much time would be needed. The start of the software was continuously postponed due to technical problems. Because of that, the Health Dialogue practitioners could choose if they wanted to start with a printed version instead or wait for the software.

> *"I think we used the printed version at least some weeks because we had already started inviting participants when we found out that the software was delayed. Then we got shown how to use the paper questionnaires and we thought that no, this is no fun, shall we really do this, this was not how it was supposed to be…And it felt a bit hopeless."* Informant 4

Most of the informants started with the printed version but some waited for the software. Among those who started many experienced it time-consuming and difficult to do the calculations manually. However, some found it hard to switch to the software because they got used to the printed version. Among those who waited for the software, it was stressful to see all participants within the project's timeframe and many of them had to work overtime. Some found learning motivational interviewing and to conduct the dialogue challenging, it was sometimes solved by introducing motivational interviewing gradually, trying to include at least one aspect of the method in each dialogue.

4.5.2 Minor adjustments would improve the intervention

The training was divided into three parts: three days of motivational interviewing, one day of method and one day about the software. Some participants expressed that dividing the method section into three days would facilitate learning as the training was perceived as very intense by some. Include more practice on how to conduct a Health Dialogue during the training would be beneficial. All Health Dialogue practitioners received a method guide during their training. It was an extensive guide with chapters about every area covered in the Health Dialogue. Informants reported that switching to a digital method guide would make it easier to use, be more environmentally friendly and would be easier to keep updated.

> *"The method guide was good, but I'd prefer a digital one. […] There will be quite a lot of material in interventions like this, and with the coming broader implementation, it will be wise to think more digital"* Informant 11

Informants experienced that it was tricky to find out the reason behind the health risks in the software compared to the printed version, where they directly would see the reason, for example, high consumption of red meat. Making that clearer in the software would make the dialogues easier to conduct.

4.6 Tools and support eased the implementation of the Health Dialogue

4.6.1 Method and competence support is necessary

The Centre of Excellence on Lifestyle Factors and Disease Prevention in Scania has functioned as a method- and competence support, both through the training of the Health Dialogue practitioners and through support during the pilot phase. Informants expressed that the method and competence support was very accessible and helpful, and that support was crucial, especially at the beginning of the implementation. They also stated that it was good that someone had an overview of the project and could keep track so that all clinics did it similarly.

“They have been amazing; it has been great! One can email them questions, call also but we’ve mostly emailed them, but you get an answer quickly and advice on how to handle this and that, you get feedback on what you’re wondering […] So truly great support, really. Nothing feels embarrassing or difficult to ask, truly great collaboration.” Informant 3

4.6.2 The tools and materials are unique and effective

Informants experienced the method guide as good support while they were new to the method. Reading the relevant parts was a good way to prepare for appointments that were expected to be difficult. It was also important to go through the questionnaire before the appointment to know what factor caused each health risk. The health curve was foundational to the method. A few informants reported that they had previously been conducting health talks, a bit like Health Dialogues but simpler, with patients at their clinics before the pilot phase. They thought that the Health Dialogue method gave a much better structure which made it easier. They pointed out that the health curve and the software were unique and essential, and that the questionnaire includes more areas than what they had previously experienced.

“The health curve is very clear, it’s really great… It would have been harder to conduct a dialogue like that, just out of thin air and just talk about the areas, here you really get it on print.” Informant 10

4.7 Emerging theme

The analysis of the interviews resulted in the overarching theme *“Hoping that the Health Dialogue is the start of a paradigm shift in Swedish primary health care”*. All categories and sub-categories are presented in table 2. What all informants had in common, which permeated all interviews, was hope. Hope that this is the start of a change process, a

paradigm shift, that will eventually change the primary health care system towards increased health promotion, through primary and secondary prevention of NCDs.

5. Discussion

5.1 Summary of main findings

The overarching emerging theme was a hope that this intervention will be the start of a reform of the primary health care system. The informants experienced the Health Dialogue method good for integrating health promotion in primary health care. Informants used their new knowledge in their regular tasks and patient interactions. Support from colleagues as well as method- and competence support was important. The method includes helpful tools such as the health curve and the software as well as the counselling method motivational interviewing. Findings revealed it important to individualize, empower and support the participants' change process. There were varying experiences about motivational interviewing and strategies to approach the participants. A wish for regular check-ups through Health Dialogue every 10 years was expressed. The pilot phase of the intervention implied some complicating factors for the informants, such as delayed start and technical problems with the software. However, the informants were prepared for complications as it was a pilot, and the problems were solved. Minor adjustments, such as digitalizing material and add functions to the software, could further improve the method.

5.2 Interpretation of the findings

5.2.1 Hope for change

Findings indicated a high burden on the primary health care clinics in the Scania region. Prescription of medicine was often chosen for conditions where evidence suggest that lifestyle changes would have a similar effect (6), just because it is faster to prescribe a medicine than to guide behavioural change. Informants perceived the currently high burden on primary health care as a barrier to providing quality care to all patients and a reduction in NCD's could decrease the burden on primary health care (14, 16) which would make it possible for the health care workers to help the remaining patients sustainably. A previous

study indicated that Health Dialogue has the greatest effect on disadvantaged groups (11) and that the method could facilitate health equality (20, 22, 25).

Previous research indicates that the Health Dialogue method decreases all-cause premature mortality not only among those who get an individual Health Dialogue but also among those who get an invitation but do not make the appointment (9, 62). The method intends that it shall have a positive effect on all inhabitants in the region (62, 63), both through the participants' influence on their family and friends and through local collaborations (13). Therefore, local collaborations to reach the community level is an important part of the intervention. The pilot phase had a short timeline which was further affected by technical problems as well as Covid-19. All informants regarded local collaboration as an important part of the intervention and hoped to start it once the broader implementation starts. The Health Dialogue practitioners were encouraged to prioritize seeing participants over starting local collaborations, so it was not surprising that only a few of them managed to start local collaborations during the pilot. Informants expressed worries about if stakeholders will be patient enough to wait for years to see the results of the intervention. However, previous studies from other regions of Sweden indicate cost-effectiveness and decrease of all-cause premature mortality (9, 11, 36, 64) which can motivate a continuous intervention. Long-term, a broader implementation in the Scania region, with more age groups included, could give inhabitants increased awareness about their health, decrease the incidence of NCDs, reduce the burden on the health care system, save money, increase the quality of care, increase health equality, and increase the quality of life among inhabitants. Most of these predicted results are supported by the scientific literature (9-11, 29, 36, 38, 62-64) and correspond well with the Scania region's goals (8).

5.2.2 Lifestyle counselling during the dialogues

Motivational interviewing is the counselling methodology used in Health Dialogue (32). Many informants experienced it as a helpful tool during the dialogues as well as in their regular work with patients. Although, some informants found it challenging and hard to learn. A Danish study indicated that it can be hard for clinicians to combine motivational interviewing and a health curve tool (65).

Findings indicated the importance of letting the participant guide the dialogue and motivational interviewing was perceived as facilitating for that. However, informants did not experience motivational interviewing suitable for all participants and they sometimes chose specific aspects of it deemed applicable for that participant, instead of conducting the whole dialogue according to the method. One systematic review and meta-analysis on motivational interviewing for lifestyle counselling found promising results (66). However, another one regarding motivational interviewing to support lifestyle change among individuals with increased risk of CVD found that the effectiveness remains uncertain, and more research is needed (67). Due to the complexity of counselling lifestyle changes as well as combining a health curve tool with motivational interviewing, it might be advisable to offer the Health Dialogue practitioners regular training to develop their motivational interviewing skills.

Informants had a great will to empower the participants. A systematic review of nurses' patient empowerment implies that empowerment is complex (68). Findings indicated that there were different approaches on how to address lifestyle factors and health risks during the Health Dialogues, despite getting the same training and instructions on how to conduct a dialogue. Some had a guiding and encouraging approach while some had a more fear-inducing approach. Varying approaches while conducting Health Dialogues are supported by a study on primary health care nurses in Umeå (69). In Scania nurses, physiotherapists, dieticians, occupational therapists, and physicians are invited to participate. During the pilot, nurses, physiotherapists, and dieticians participated. Approaches and strategies for conducting Health Dialogues in a mixed profession setting could be explored further in future studies.

5.2.3 To guide behaviour changes

During the dialogues, the Health Dialogue practitioners listened to the participants' suggestions of possible lifestyle changes as well as presented changes that could decrease their health risks. That was often followed by the participant's reflections on their perceived benefits and barriers, where the Health Dialogue practitioner would explain known, realistic, outcome expectations if the participant were unaware of those. Findings indicated that

informants covered the first steps of the Health Belief Model (see appendix 5) (12, 34, 35), which the Health Dialogue method is inspired by. However, it was not obvious for all informants to talk about self-efficacy during the dialogues. Supporting self-management through a focus on self-efficacy and behaviour change is supported (70, 71). An Uppsala study further supports the importance of self-efficacy for lifestyle changes, through patients' perspectives (72). Only a few informants had started any local collaboration during the pilot phase, although everyone considered it important. A study on primary health care in London indicated the importance of a supportive community context for sustainable lifestyle changes (73). Incorporating the Health Belief Model in the training could increase the focus on self-efficacy and societal reminders to facilitate change, which could benefit the participants' change processes.

As previously mentioned, findings indicated hope that this is the start of a structural change in primary health care towards increased primary prevention. The tools of the Health Dialogue are helpful. Minor challenges arose during the pilot but were dealt with. There were varying experiences of counselling, incorporating the Health Belief Model in the training could increase the focus on self-efficacy which could support the participants' change process further. This study achieved the aim of describing the Health Dialogue practitioners' experiences and perceptions through the information provided in the interviews and the subsequent sub-categories, categories, and theme that were identified.

5.3 Methodological considerations

In qualitative research, it is important to take actions to strengthen trustworthiness through credibility, transferability, dependability, and confirmability (41). Credibility considers if the researcher captured and understood the informants' subjective realities (41). To strengthen credibility the following measures were taken. A prolonged engagement was applied to this study. SA did an internship at the Centre of Excellence on Lifestyle Factors and Disease Prevention between August and October 2020, which was largely focused on preparations for the pilot phase. For example, SA took part in the training of the Health Dialogue practitioners. After the internship, SA kept in contact with the centre and got news about how the pilot phase was going. SA has previously been working as a physiotherapist in primary

health care in Scania and has a preunderstanding of the context. The interviews and the transcripts were listened to and read several times to ensure familiarization with the data. Peer debriefing during the analysis phase was done with the supervisor and the two co-supervisors. Purposive sampling with a focus on maximum variation was applied to get as varied experiences and perceptions of the pilot phase as possible (41, 43, 74). The sampling goal was to try to recruit informants from as many different clinics as possible, informants with different professions, to include both private and public primary health clinics, preferably from many different municipalities in all areas of Scania (west, Malmö, south and northeast).

A strength of this study was that not only informants who immediately responded "yes" to the invitation were included. Some agreed to participate after one reminder, some after a presentation and some after an additional personal invitation email. Different levels of enthusiasm to participate in the study indicates some balance among informants. 12 out of the 21 Health Dialogue practitioners who met the inclusion criteria participated in the study. Another strength of this study was that saturation was reached, no substantial new information emerged during the last interviews (41).

Due to the Covid-19 pandemic and local restrictions physical meetings were not possible. It was decided to conduct the interviews via Zoom video conferencing because it allows for real-time face-to-face meetings (52, 53). There was a concern about rapport building between the researcher and the informants, but it worked better than expected. A possible reason was SA's prolonged engagement within the Health Dialogue intervention. However, it might have been even better with traditional in-person interviews.

A limitation of this study was that member checking was not done on all informants due to the short timeframe of the study and the informants' lack of time. However, all informants could have been offered to do member checking and they could have chosen to do it or not. The quality of the audio recording of the last 20 minutes of one interview was insufficient. The author failed to increase the quality using different software and eventually asked the informant to do a new interview with the last questions or to do member checking and also

fill in on the last questions where there were only parts of the answers transcribed. The informant chose to fill in and thereby also did a member checking on the whole interview (41).

Transferability refers to if the findings are applicable to other contexts (41, 43). Thick descriptions of the research context and the participants have been provided, the sampling strategy and the methodological steps of the study were explained, and the findings were discussed in relation to studies in similar settings (41, 74). These descriptions aimed to make it possible for the reader to decide on the transferability of the study (ibid.).

Dependability considers the researcher's ability to show how decisions were made throughout the research process and if it would be possible to repeat the study and get similar results (41, 43). A reflexive journal, where SA wrote substantive, methodological, and analytical field notes during and after each interview, as well as reflections and ideas during the analytical phase of the research process, was kept, creating an audit trail. An audit trail means that steps and decisions during the research process are documented to make it possible to follow (ibid.). During the data analysis, the data was continuously re-examined with increasing insights, which is called iterative data analysis (74). Providing quotations in the result section of the final report illustrated that the result and conclusions were rooted in the data and give the reader insight into how the data was interpreted (41, 43, 74).

Confirmability refers to the neutrality of the data, that the findings were based on the informants' perceptions and experiences and not on the researcher's perspectives (ibid.). During key parts of the analysis, such as coding and categorization, peer debriefing with the supervisor and the co-supervisors was done to strengthen confirmability (41, 74).

6. Conclusion

Informants conducting the Health Dialogues hoped for an increased focus on health promotion and primary prevention in primary health care in the future, to increase the quality of care and quality of life among inhabitants in Scania. The Health Dialogue is well

structured and has tools to make health promotion and primary prevention a natural part of primary health care. Another implication of this study was that lifestyle counselling is complex and incorporating the Health Belief Model in the Health Dialogue practitioners' training could increase the focus on self-efficacy during counselling which could favour the participants' change process. The intervention has a large potential to influence public health and these findings are clinically relevant for the coming broader implementation of the Health Dialogue in the Scania region. Public health practitioners in the municipalities of Scania can collaborate with all Health Dialogue practitioners in their municipality to reach the community level of the intervention.

Future health policies should consider an increased focus on health promotion and primary prevention in primary health care in Sweden to decrease the incidence of NCD's, reduce the burden on the health care system, improve quality of care, health equality and quality of life.

Further qualitative research is needed once the width introduction is running. For example, Health Dialogue practitioners' experiences of lifestyle counselling; motivational interviewing, self-efficacy, and empowerment. Mixed professions' approaches and strategies for conducting a Health Dialogue and strategies to reach the community level of the intervention, as well as studies on the participants' perspectives of the intervention, for example on their needs during lifestyle changes.

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8.2 Tables and figures

8.2.1 Table 1: Example of data analysis process

Meaning unit	**Condensed meaning unit**	**Code**	**Sub-category**	**Category**
(Example 1) *"It will have great effect I think, for those who want help. Because I mean, in the end it's voluntary and unfortunately, it's probably many who would have needed it who decline. Uhm, but sure I think it can*	This can have a great effect. Voluntary so many who need it might decline. Takes time to see results but probably great	Decrease the burden on health care through awareness and healthy lifestyle choices.	Encourage a healthy lifestyle in the whole population (3.2.2)	An increased health promotion mindset would benefit primary

be, it will take time, it probably will, but I think we'll see great results in 10-15 years' time, by starting something like this. I think the burden on the health care can decrease, absolutely, I believe so. That people take more responsibility over their health and, kind of, don't need to seek health care because of health problems you get out of a bad lifestyle. So, I absolutely think it will have a positive effect." Informant 10	effect in 10-15 years. Decrease the burden on the health care. Make people take responsibility over their health.			health care (3.2)
(Example 2) *"The aspect that health care workers with different professions can become Health Dialogue practitioners is very important. As mentioned, I think lifestyle habits is responsible for many of the conditions we treat in health care. So, if both doctors, nurses, physiotherapists, maybe even assistant nurses, get this knowledge about how much we can influence our health through lifestyle, then I think we can reach and motivate patients at all levels."* Informant 9	Important that more health care workers get this knowledge. Lifestyle is responsible for many conditions we treat. If all health care workers had this knowledge, we could reach patients at all levels.	This knowledge can help motivate patients in all stages of health care.	Health care workers new knowledge will benefit patients (3.2.3)	An increased health promotion mindset would benefit primary health care (3.2)
(Example 3) *"Primarily the participants realize that their current lifestyle doesn't look so good. Many live in denial, that I have health, then there's no reason I won't keep health in the future. But when they get it on paper, that this is an unhealthy behavior, regarding heart health, then they've realized that they can change some habits. Many are perceived as motivated to change and also happy to get to know that there is potential for healthier habits."* Informant 1	The participants realize that current lifestyle isn't so good. Many live in denial that they feel good now, don't see any risk to not feel good in the future. Unhealthy habits on paper give insights. Motivated to change.	Many live in denial but health status on paper gives insights and motivation to change.	A chance to stop and reflect if changes are needed (3.3.1)	Empower the participants (3.3)

8.2.2 **Table 2:** Table of Results

Sub-category	Category	Theme
Health Dialogue is health promotion	**An increased health-promoting mindset would benefit primary health care**	Hoping that the Health Dialogue is the start of a paradigm shift in Swedish primary health care
Encourage a healthy lifestyle to the whole population		
Health care workers new knowledge will benefit patients		
Supportive colleagues are important when primary prevention introduces an additional patient group		
A chance to stop and reflect if changes are needed	**Empower individuals**	
Let the participant guide the dialogue		
Being invited to a Health Dialogue regularly will give a sense of comfort and a reminder to prioritize health	**Facilitate sustainable lifestyle changes**	
It is important to support the participants to change their habits		
Complicating factors arose during the pilot phase	**It is challenging to be part of a pilot**	
Minor adjustments would improve the intervention		
Method and competence support is necessary	**Tools and support ease the implementation of the Health Dialogue**	
The tools and materials are unique and effective		

Appendices

Appendix 1: Information letter (translated from Swedish)

Information and invitation to participate in an interview study about health care workers experiences of the pilot phase of the Health Dialogue in Scania

My name is Sara Alenius and I study the master program in Public Health at Lund University. During my master, I have done an internship at the Centre of Excellence on Lifestyle Factors and Disease Prevention in the Scania region and I will write my master thesis about the project Health Dialogue. This study is a part of a larger research project about Health Dialogue. This qualitative study aims to describe the Health Dialogue practitioners' experiences of health-promoting work through the Health Dialogue. The study is relevant to increase the knowledge for the coming broader implementation.

It is voluntary to participate, and you can withdraw your participation at any point without having to give a reason. If you choose to participate the interview will be conducted through the encrypted video conferencing platform Zoom and can be scheduled at a time that suits you during February or the beginning of March 2021. The audio will be recorded with a mobile phone and the interview will take approximately 1-1,5 hours. The audio recording will then be transferred to a computer and deleted from the mobile phone.

All data will be handled and stored confidentially as research data at Lund University. In the presentation of the results, it will not be possible to trace any information to individuals or specific health care clinics. The results of the study will be presented as my master thesis and, hopefully, published as a scientific article.

If you want more information or have any questions you are welcome to contact me or my supervisors, see our contact details below. You are also welcomed to contact us in the future if you get questions or if you wish to see the results.

With kind regards,

Sara Alenius

Principal investigator of the larger project:

Kristina Sundquist – Professor, General practitioner. Head of Department at Centre for Primary Health Care Research, Scania region. Project manager for research on the Health Dialogue in Scania.

Researcher:

Sara Alenius – Master student in Public Health, Faculty of Medicine, Lund University. Physiotherapist.

Email: Sara.alenius@gmail.com

Telefon: 0738-45 07 78

Supervisors:

Lina Magnusson - PhD, Associate professor in Global Health, Faculty of Medicine, Lund University. Orthopaedic engineer.

Email: Lina.magnusson@med.lu.se

Ena Thomasson – PhD, Dietician. Strategist and expert in food habits at the Centre of Excellence on Lifestyle Factors and Disease Prevention, Scania region.

Email: Ena.thomasson@skane.se

Kjell Olsson – PhD student, Dietician. Nutrition Epidemiology, Faculty of Medicine, Lund University. Process Leader at the Centre of Excellence on Lifestyle Factors and Disease Prevention, Scania region.

Email: Kjell.olsson@skane.se

Consent form (translated from Swedish)

I hereby certify that I have gotten information about the aim of the study, how the data will be collected, processed, and stored, as well as my right, as a participant, to ask questions about the process and that I have the right to receive answers. I certify that I understand that my participation is voluntary and that I have the right to discontinue my participation without having to give a reason.

Location, date	Signature	Name clarification

Samtyckesblankett

Jag intygar att jag har fått information om studiens syfte, hur data kommer samlas in, bearbetas och förvaras, samt att jag som deltagare har rätt att ställa frågor om processen och har rätt att få svar. Jag intygar att jag förstår att mitt deltagande är frivilligt och att jag när som helst kan avbryta mitt deltagande utan skyldighet att ange orsak.

Ort, datum Namnteckning Namnförtydligande

Appendix 2: Interview guide (translated from Swedish)

Interview guide

Interviewer:

Date:

Background questions

Gender:

Profession:

Age:

Primary health care clinic:

Part of Scania:

Professional experience:

Previous experience of Motivational Interviewing (MI):

Previous experience of Health promotion:

Health promotion

- What does *Health promotion* mean to you?

- Can you please describe your experiences of working as a Health Dialogue practitioner?

- What do you think will be the effect on public health in Scania to emphasize more on health promotion in primary health care?

The dialogues

- Can you please describe your experience of inviting participants like this (mail and call)
  - Examples of good experiences
  - Examples of difficulties

- Can you please describe your experience of the dialogues?
  - Please describe one dialogue that felt great, in detail.
  - Please describe one dialogue that was difficult, in detail (what was difficult, how did you handle it)

- How did you experience the training in MI?
  - (If it was insufficient) How can it be improved?

- Did you have any dialogues with interpretation? (please describe)

- Can you please describe how you used the health curve in the dialogues?

- What insights does the participants get during the dialogues?
  - Did many need to get awareness about health risks? (how did they take it?)

- What long-term health effects do you think the Health Dialogue will have on the participants?

Organizational aspects

- Can you please describe how the organizational aspects of the intervention worked at your clinic? (inviting, booking, set aside time, collaborations etc.)

- Can you please tell me about how you think the PMO program worked (for documenting)?

- Can you please describe how you experienced your clinics participation in the research?

- How was the collaboration with colleagues?
- Was the training about the research sufficient?

- Can you please describe how you experienced the software?

- Did you use the printed questionnaires? (if yes, how did you experience it?)

- Can you please describe how you experienced the communication materials? (such as the invitation, the invitation in other languages, the health plan, brochures, the local brochure, posters etc.)

- Can you please describe how you experienced the method guide?

    - How was the training?

- Can you please describe how you experience of integrating the method among your regular tasks?
    - How much time and priority where you allowed to allocate to the project? (was it enough?)
    - How much time and priority where you allowed to allocate to health promotion before the project?

- How has collaborations around the project worked at your clinic?
    - How have you experienced support from your boss and colleagues?
- Can you please describe how you experienced the Centre of Excellence on Lifestyle Factors and Disease Prevention as a knowledge- and method support?
    - Examples of good experiences
    - Ideas for improvement

Local collaboration

- Can you please describe local initiatives around the clinic to facilitate collaboration and the community perspective of the intervention?
    - Examples of good experiences
    - Examples of difficulties

- How much time could you allocate to local collaborations during the project?

- What are your ideas for local collaborations in the future?

Closing questions

- Do you want to continue as a Health Dialogue practitioner when the broader implementation is starting?

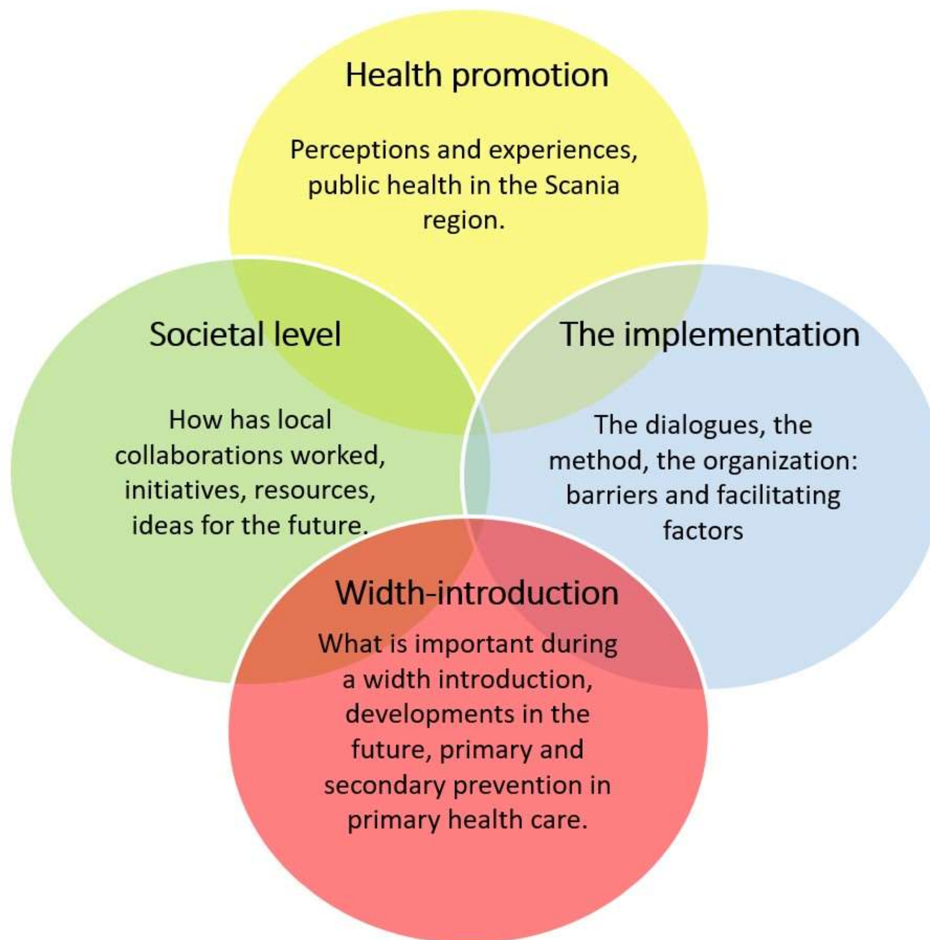
- What do you think is important in a broader implementation? (e.g. time allocation, support etc.)

- How do you hope health promotion in primary health care is developed in the future?

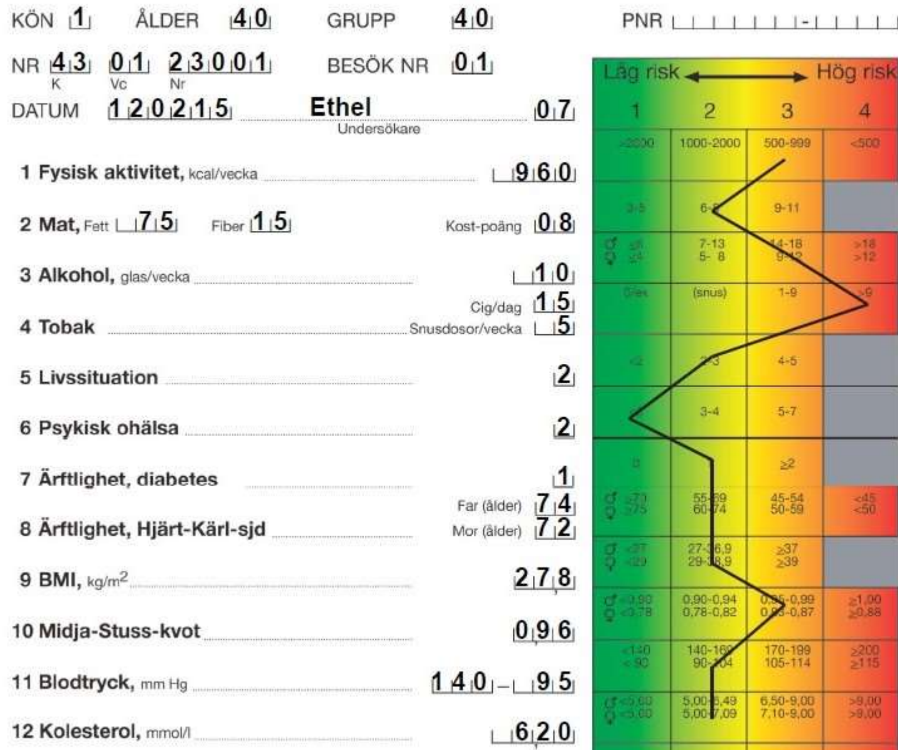
- Health Dialogue practitioners can have different professional backgrounds, what effect do you think it will have on health care that more health care workers get wider competence? (such as talking to patients about all lifestyle factors, social situation etc.)

- Is there anything else you would like to add?
(Show interview mind map)

Appendix 3: Interview mind map (translated from Swedish)



Appendix 4: The health curve



Hälsokurvan

KÖN 1 ÅLDER 40 GRUPP 40 PNR

NR 43 (K) 01 (Vc) 23001 (Nr) BESÖK NR 01

DATUM 120215 Ethel (Undersökare) 07

1 Fysisk aktivitet, kcal/vecka 960

2 Mat, Fett 75 Fiber 15 Kost-poäng 08

3 Alkohol, glas/vecka 10

4 Tobak Cig/dag 15 Snusdosor/vecka 5

5 Livssituation 2

6 Psykisk ohälsa 2

7 Ärftlighet, diabetes 1

8 Ärftlighet, Hjärt-Kärl-sjd Far (ålder) 74 Mor (ålder) 72

9 BMI, kg/m2 278

10 Midja-Stuss-kvot 096

11 Blodtryck, mm Hg 140 – 95

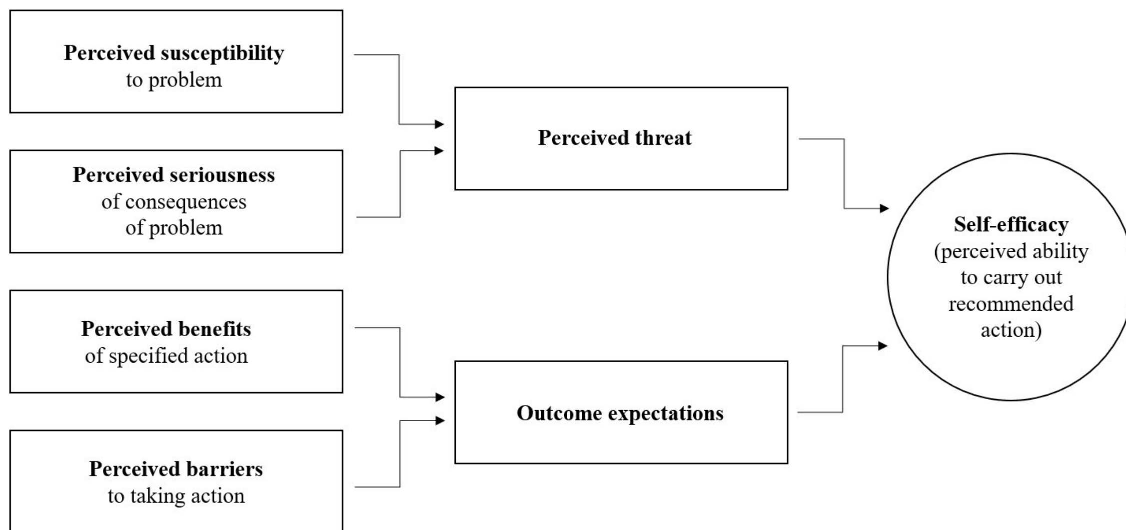
12 Kolesterol, mmol/l 620

Låg risk ⟷ Hög risk

	1	2	3	4
1	>2000	1000-2000	500-999	<500
2	3-5	6-8	9-11	
3	♂ ≤6 ♀ ≤4	7-13 5-8	14-18 9-12	>18 >12
4	0/ex	(snus)	1-9	>9
5	<2	2-3	4-5	
6		3-4	5-7	
7	0		≥2	
8	♂ ≥70 ♀ ≥75	55-69 60-74	45-54 50-59	<45 <50
9	♂ <27 ♀ <29	27-36,9 29-38,9	≥37 ≥39	
10	♂ <0,90 ♀ <0,78	0,90-0,94 0,78-0,82	0,95-0,99 0,83-0,87	≥1,00 ≥0,88
11	<140 <90	140-169 90-104	170-199 105-114	≥200 ≥115
12	♂ <5,00 ♀ <5,00	5,00-6,49 5,00-7,09	6,50-9,00 7,10-9,00	>9,00 >9,00

(62)

Appendix 5: The Health Belief Model



(35)

Appendix 6: Copy of ethical approval

1(2)

Dnr 2020-07138
Stockholm avdelning 4 medicin

BESLUT
2021-01-26

Sökande forskningshuvudman
Region Skåne

Forskare som genomför projektet
Kristina Sundquist

Projekttitel
Riktade hälsosamtal i Skåne: screening av levnadsvanor och analyser av molekylära mekanismer för ett hälsosamt liv.

Aktuell ändring
Ansökan om ändring inkommen 2020-12-21.

Grundansökan godkänd 2020-07-01 av Stockholm avdelning 4 medicin med diarienummer 2020-02689.

Etikprövningsmyndigheten beslutar enligt nedan.

BESLUT

Etikprövningsmyndigheten godkänner den forskning som anges i ansökan om ändring.

På Etikprövningsmyndighetens vägnar

Peter Strömberg
Ordförande

Beslutet har fattats efter föredragning av vetenskaplig sekreterare Erik Näslund.

Beslutet sänds till
Ansvarig forskare: Kristina Sundquist

Etikprövningsmyndigheten registrator@etikprovning.se | 010-475 08 00 | Box 2110, 750 02 Uppsala | etikprovning.se

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Appendix 6: Popular Science Summary

Hope for more health promotion in primary health care in Scania, Sweden

Non-communicable diseases, especially cardiovascular diseases and diabetes type 2 are major causes of death and disability in Sweden. Large scientific studies have found that a healthy lifestyle can decrease the risk significantly. Health-promoting Health Dialogue is a primary health care method to initiate a dialogue with participants about their health and lifestyle. The method has been used in other regions of Sweden since the 1980s with promising results.

The Scania region implemented a pilot phase of the Health Dialogue method in 2020. This study aimed to describe primary health care workers experiences and perceptions of health promotion through the Health Dialogue method during the pilot phase of the intervention in the Scania region. Interviewing 12 health care workers who worked with the pilot resulted in findings that health care workers perceived health promotion as a possible way to decrease the burden on primary health care, decrease death and morbidity in non-communicable diseases, increase the quality of care and increase the quality of life among inhabitants long-term. The health care workers experienced the Health Dialogue as a good method to integrate health promotion into primary health care and they experienced the tools and materials of the method unique and effective even though minor challenges arose during the pilot. Suggestions for small changes in the method to make the implementation easier for the health care workers were found. For example, teaching the health care workers about the Health Belief Model during their training would encourage them to talk to the participants about self-efficacy and to focus on local collaborations in the intervention to provide inhabitants with further support. This could further facilitate the achievement of sustainable and healthy lifestyle changes among inhabitants in Scania.