Chapter 1

General introduction

‘Om te zijn moet met eerst en vooral verantwoordelijkheid aanvaarden.
Men moet een taak op zich nemen.’

A. de Saint-Exupéry

"Yes, yes, [counseling should be] really a conversation. Not like hm ... it was a bit uh, too little attention was paid to it. I got that impression a little bit [because the midwife said:] Yes, you can do that, but yes, I do not really know what to tell you about this, we have a leaflet … and, well read that one." (A client about her counseling needs).

This thesis is about the conversation between clients and midwives concerning prenatal anomaly screening in early pregnancy. In order to gain knowledge about counseling for prenatal anomaly screening in the Dutch, midwifery-led care context, we focused on two different aspects: 1) the perspectives on counseling of clients and of midwives, and 2) the actual communication between midwives and clients during prenatal counseling. Both aspects are brought together in chapter 6. Before introducing the relevance of investigating midwife prenatal counseling, we first explain the approach to prenatal screening in the Netherlands.

Prenatal anomaly screening

From a positive pregnancy test to considering prenatal anomaly screening

Most expectant parents are happy to discover that they are expecting a baby and probably search the internet for the next step [1]. The client website of the Royal Dutch Association of Midwives (KNOV) recommends that women make an appointment with a midwife for primary, prenatal midwifery led care as soon as they know they are pregnant. The website also recommends women to attend their first appointment together with their partner [2]. Coming together to this intake visit is important for several reasons, including the fact that during the appointment midwives take both clients' and partners' family history regarding inherited birth defects, and provide counseling for prenatal anomaly tests, with the aim to facilitate clients' decision-making regarding whether or not to opt for prenatal anomaly screening [2-6]. For most couples, the decision whether to opt for anomaly screening or not is a decision couples want to make together, which underlines the importance to provide counseling to both of them, to make sure they both have the relevant information and support in making their decision [7,8]. As a result, when it comes to counseling for prenatal anomaly screening, partners are also midwives' clients. In this thesis we consider both pregnant women and their partners as clients; their perspectives regarding counseling for prenatal anomaly screening is our first focus.

Most women and their partners feel excited about their pregnancy but also a bit nervous about the first visit at their midwife [3,9]. At the end of this intake visit, or sometimes in a separate consultation, the midwife introduces the Dutch prenatal anomaly screening program, which aims to detect congenital anomalies in order to provide expectant parents with, if they choose to participate, reproductive choices [4]. Even the offering of the program is cause for parents to confront the fact that although most children are born with no diagnosed anomaly, in

every pregnancy there is a risk that the unborn child has a congenital anomaly [4]. As a result, some expectant parents may struggle to shift from their context of happily expecting a baby to talking about prenatal anomaly screening. The prenatal anomaly screening offer is timed in early pregnancy, because the first test can be completed around 12 weeks of gestation [10]. Because they have a 'right not to know' anything about prenatal anomaly tests, by about 10 weeks gestational age, clients need to make the first decision about prenatal screening: that is to decide whether they want any information about prenatal anomaly tests [11-13].

Dutch prenatal screening offer

If expectant parents accept the information offer about prenatal anomaly screening, the information process starts [14,15]. According to Van Agt *et al.* [16] expectant parents should get information about the available prenatal anomaly tests, the aim of these tests, medical information about the target anomalies and the prevalence of these anomalies. So, at the time of this study (data collection between 2010-2011), clients should have been informed that the Dutch prenatal screening program comprised two tests: 1) the Combined Test (CT) undertaken around 12 weeks gestational age to calculate a pregnancy related risk for Down Syndrome (trisomy 21) [4,10]; and 2) the Fetal Anomaly ultrasound Scan (FAS) done at around 20 weeks gestational age, to detect structural anomalies [4,10]. In January 2011, risk assessments for Edwards- (trisomy 18) and Patau syndrome (trisomy 13) were added to the CT. Since April 2014, the Non-Invasive Prenatal Test (NIPT) is also offered to clients who are identified to be at increased risk on the CT, defined as ≥1:200, or family history [4,17,18]. The NIPT is a blood-screening test for Down-, Edwards- and Patau syndrome [17].

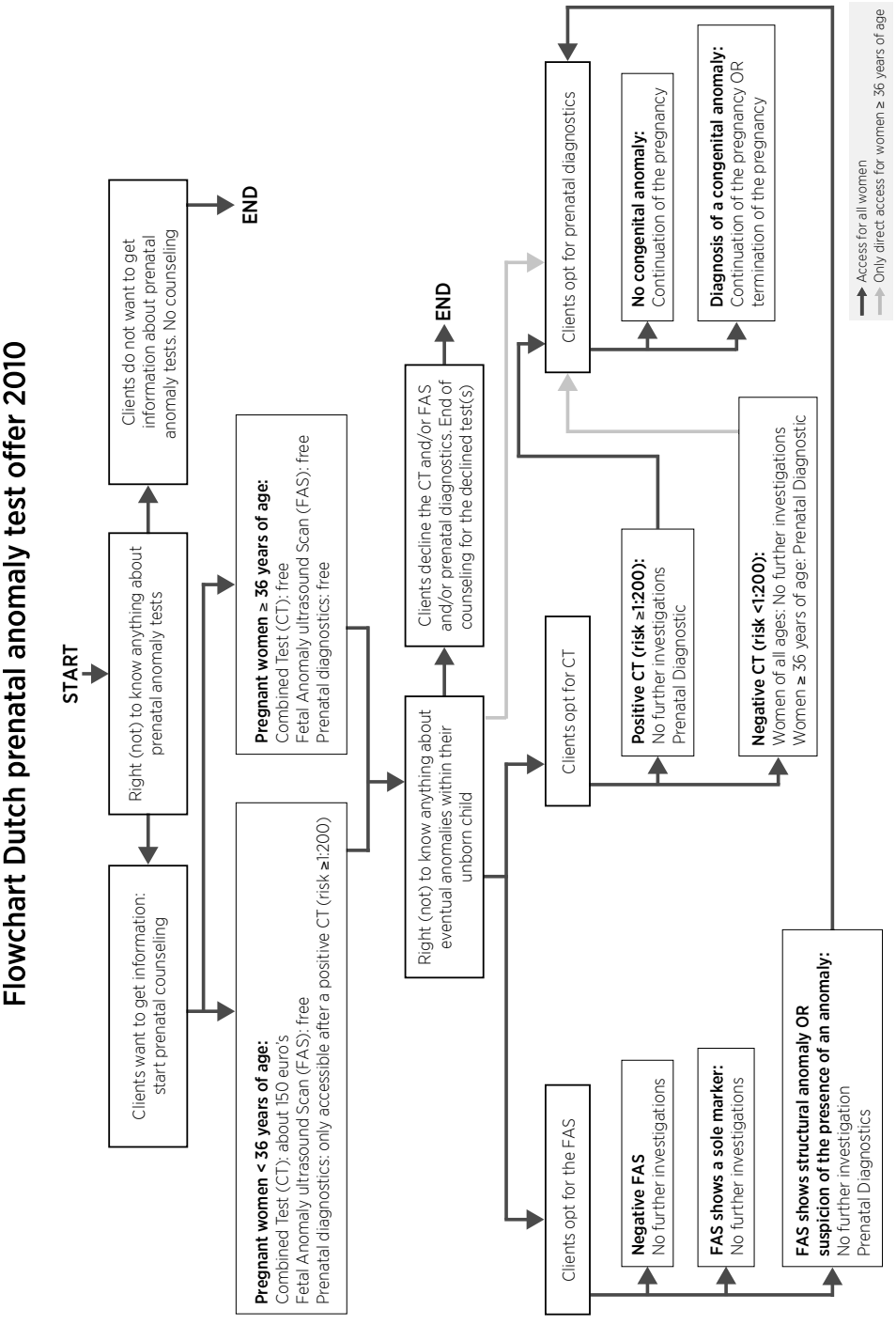
Regarding the target anomalies of the CT and NIPT, clients should be informed that children with Down syndrome have a decreased cognitive function, but that cognition can vary from normal or low intelligence to profoundly impaired. In addition certain complications and risks, such as congenital cardiac defects and ear, nose and throat defects, are higher among individuals with Down syndrome compared to the average population [19]. Clients should hear that children diagnosed with Edwards- and Patau syndrome show much more severe clinical manifestations than trisomy 21; only rarely do affected infants survive to one year of life [10]. Prevalence of Down-, Edwards- and Patau are respectively 1:500, 1:3000, and 1:6000 yearly [10,20].

Further, clients should be informed about test procedures, the meaning of test results (screening versus diagnostic), including detection percentages, options after a positive screening outcome and the costs [16]. Thus, clients will be told that the CT comprises a blood test and ultrasound and is, like the FAS, considered harmless for both mother and unborn child [10]. For the client, the CT results indicate personal risk of a trisomy, which will indicate if follow-up prenatal diagnostic is indicated based on a cutoff value ≥ 1:200 [4]. The test result of the FAS can be divided into three main categories to make clients clear what they can

expect; outcome 1, no anomaly is detected, but clients have to know that, for instance, 25-50% of heart defects are missed; outcome 2, a sole marker is seen that is of no known clinical significance; or outcome 3, a structural anomaly is seen or suspected [10]. When clients receive a positive screening outcome of the CT and/or FAS, and/or NIPT, clients can choose to follow up prenatal anomaly screening by a diagnostic test. Diagnostic, invasive tests are only offered on indication. In addition to positive screens, at the time of this study, maternal age ≥ 36 years of age and family history of birth defects were indications for direct access to diagnostic anomaly tests [12,21]. The FAS and, if indicated, diagnostic tests were free of charge, whereas the CT had to be paid for by women younger than 36 years of age [12,22]. Diagnostic, prenatal anomaly tests comprise an advanced ultrasound, chorion vilus sampling or amniocentesis, aiming to confirm the outcome of screening by providing a diagnosis. Parents should be informed that chorion vilus sampling and amniocentesis are associated with a miscarriage risk of about 0.5%, because the procedures involve the insertion of a needle into the uterus [10,23-25]. Finally, parents ought to be informed about the possibilities for action after diagnostic tests. Such information should comprise the two options continuing or terminating the pregnancy if an unborn child is diagnosed with an anomaly, treatment options and legal terms for termination of the pregnancy [16] (see flowchart Dutch prenatal anomaly test offer).

The right (not) to know

The above information is, in a nutshell, what expectant parents might hear during one of the first visits with their midwife. It is up to the pregnant women and her partner to decide whether to opt for anomaly screening or not and subsequently, whether or not to take a further diagnostic path. In other words: prenatal anomaly screening and diagnosis is offered using an *opt-in* approach; expectant parents have the right (not) to know and are thus encouraged to make their own reproductive choices based on reliable information [3,11,12,14]. To make a personal, reproductive choice is not always perceived as easy by clients [26,27]. The offer of prenatal anomaly screening seems to be an answer to one of clients' main concerns, that is, the wellbeing of their unborn child. At the same time the prenatal screening offer forces clients also to answer moral questions such as 'how welcome are children with an anomaly in my world, my life, my family?' or 'what does this pregnancy mean to me?' or 'how do I feel about the risk of a miscarriage in relation to my wish to know that my child does not suffer from a congenital anomaly?' [27-33]. Ultimately, clients can be confronted with the question whether to continue the pregnancy or to terminate the pregnancy in case of a confirmed, congenital anomaly [4,27,33]. Furthermore, prenatal anomaly screening is becoming better known to the general public. Both to take or decline the offer can be challenging in the resulting context of societal expectations and reactions of family and friends [34,35,36]. Consequently, regardless of whether clients opt for anomaly test or not, the offer of prenatal


Flowchart Dutch prenatal anomaly test offer 2010
START
Clients want to get information: start prenatal counseling
Right (not) to know anything about prenatal anomaly tests
Clients do not want to get information about prenatal anomaly tests. No counseling
END
Pregnant women < 36 years of age:
Combined Test (CT): about 150 euro's
Fetal Anomaly ultrasound Scan (FAS): free
Prenatal diagnostics: only accessible after a positive CT (risk ≥1:200)
Pregnant women ≥ 36 years of age:
Combined Test (CT): free
Fetal Anomaly ultrasound Scan (FAS): free
Prenatal diagnostics: free
Right (not) to know anything about eventual anomalies within their unborn child
Clients decline the CT and/or FAS and/or prenatal diagnostics. End of counseling for the declined test(s)
END
Clients opt for the FAS
Negative FAS
No further investigations
FAS shows a sole marker:
No further investigations
FAS shows structural anomaly OR suspicion of the presence of an anomaly:
No further investigation
Prenatal Diagnostics
Clients opt for CT
Positive CT (risk ≥1:200):
No further investigations
Prenatal Diagnostic
Negative CT (risk <1:200):
Women of all ages: No further investigations
Women ≥ 36 years of age: Prenatal Diagnostic
Clients opt for prenatal diagnostics
No congenital anomaly:
Continuation of the pregnancy
Diagnosis of a congenital anomaly:
Continuation of the pregnancy OR termination of the pregnancy
Access for all women
Only direct access for women ≥ 36 years of age

anomaly screening alone forces parents to make a difficult choice [26]. Such a difficult choice takes time. Clients might want to (re)read information leaflets, talk to important others, visit advised websites, use a web-based decision-clarification aid, or ask for a second visit to their midwife [4,37].

If expectant parents choose to opt for prenatal screening, the midwife refers them to a provider of prenatal tests. Clients will receive the test result either by the provider of the test or by their midwife; in both cases midwives talk about the test results with the clients [4]. If prenatal anomaly diagnostic tests are to be considered, clients will receive counseling from professionals of one of the eight prenatal screening centers in the Netherlands [4].

Midwives as counselors

A new role

Midwives' perspective on counseling for prenatal anomaly screening is another important focus of this thesis. Midwives provide primary maternity care to approximately 80% of the Dutch pregnant women and are consequently the designated counselors in these pregnancies [4,11,38]. In 2006, midwives provided 202,000 counseling consultations (pre- and post-test counseling) to about 160,000 pregnant women who started prenatal midwifery-led care [38,39]. It is unclear what these figures indicate in terms of the number of counseling sessions per client.

The Dutch midwifery profession has evolved through, among other things, the continuous addition of tasks being added to midwives' responsibilities [39,40]. This was probably especially challenging for midwives between circa 2000 and 2005, when there was a huge shortage of midwives in the Netherlands [41]. At the end of this period, in 2005, the KNOV published a new Professional profile of midwives, with a strong emphasis on client-centered care: "Within daily care, the midwife should find a balance between the expectations, needs, desires and the identity of the individual client and her own professional standards as a midwife" [42]. In order to give midwives more practical guidance, client-centered care was further specified in professional roles and tasks. One of these roles was the role of counselor, which is client-centered by nature [43]: "The midwife as a counselor guides the woman to be her best self (empowerment). She offers the client guidance in gaining insight into her own feelings and behavior and will equip and assist her in making (emotional) decisions. The midwife as a counselor is characterized by her openness, sincerity, respect, listening skills, conversation skills, empathy, and especially her non-directivity" [42].

Although the role of counselor is relevant during conversations about preference sensitive decisions in general, Dutch midwives most often associate counseling with prenatal anomaly tests. This is understandable, since soon after the introduction of the new professional profile, in 2007, the task to provide prenatal counseling for anomaly screening and the role of being

a counselor became part of primary, prenatal midwifery-led care [12]. At the time of this study, the role of counselor was relatively new to midwives. Being a counselor requires the addition of other professional attitudes, associated knowledge and skills than midwives used to have. Midwives were familiar with the provision of information to clients, but not so much with empowering clients to make their own decision. To be oriented to the counselor role, all midwives were required to take a course in prenatal counseling for anomaly screening. This course is a prerequisite for offering prenatal counseling, for all midwives who graduated prior to 2007, at which time counseling became part of the educational requirements [4]. During a course about counseling for prenatal anomaly screening, information about relevant genetics, congenital anomalies, test characteristics and interpretation of test-results was offered as well as information and training regarding risk-communication and the competencies needed to facilitate decision-making in a non-directive, client-centered way while addressing moral and psychosocial issues [4,10]. The course for midwives about prenatal counseling for anomaly tests seem to be constructed in line with the international consensus about how counseling for preference sensitive choices, including prenatal anomaly screening, should be done.

Counseling for prenatal anomaly screening

A counseling model

In a review, Meiser *et al*., [5] describe two models of genetic counseling, which are used in practice; the 'teaching model' and the 'counseling model'. Within the 'teaching model', counselors focus on information-giving and education, because the information that is transmitted is often seen as very complex, extensive and difficult to understand. For instance, explaining the value of a medical risk assessment, the differences between screening and diagnosis, the variety of the abilities of children with Down syndrome, the huge diversity of anomalies that could be detected with the FAS, the eligibility to screening in the Dutch health care context and recently the introduction of the NIPT, make the information complex and difficult to understand. In the 'teaching model', counselors' main goal is as a medical expert providing information in order to accurately educate their clients.

Within the 'counseling model', the main goal is to promote informed-decisions and to facilitate psychosocial understanding of the personal risks and conditions that could be tested for. Within the 'counseling model', increasing the emotional well-being of clients is also seen as a crucial part of genetic counseling. The 'counseling model' has been described as a psychotherapeutic process in which the counselor listens carefully to the client's story while asking client-centered questions; questions which follow and facilitate the clients' lines of reasoning in giving personal sense to the prenatal screening offer [4,5,6,36,43-48]. In a critical review of empirical studies regarding genetic counseling, Meiser *et al.* [5] suggested a two function counseling model. This model comprises both 'teaching' and 'counseling' in order

to enhance the key goal of genetic counseling; that is the facilitation of clients' autonomous, informed decision-making [4].

A non-directive attitude and client-centered approach

Counselors' guidelines and policy statements have advised counselors to use a non-directive counseling attitude, which means a non-persuasive communication style while facilitating clients' decision-making about prenatal anomaly screening [3,12,22,49,50] The rationale for the emphasis on a non-directive attitude was to remove the counselors' personal views regarding a particular course of action, because the decision whether to opt for prenatal anomaly screening, or not, is preference sensitive: one course of action is not seen as better than another course of action [14,49,51,52]. Another core concept of genetic counseling is the use of a client-centered approach. Client-centered communication regarding the provision of information, that is the teaching component, focusses on tailoring the information to individuals' preferences, knowledge, interests and concerns [3,53-55]. When client-centered communication is used to facilitate a client's decision-making process, in the counseling function, counselors should follow the client's lead, encourage the client to share their deliberations and help them to make a 'decision-balance', a personal list of pros and cons of prenatal anomaly tests [48,56]. As clients are, in the end, the expert regarding their concerns, values and preferences concerning the decisions at hand, counselors should take the role of an engaged professional guide [37,48].

Recently, more and more authors point to the problems arising in practice from the use of a non-directive counseling approach; provision of information is always framed one way or the other and at least some clients seem interested to hear the opinion of the professional regarding whether they should opt for an anomaly test or not [8,50-52].

Perspectives of clients and midwives

Research on the development of guidelines about counseling for anomaly testing has shown that clients' preferences and counselors' views on appropriate counseling are relevant to incorporate in the ongoing development process of counseling guidelines [57,58]. At the time of this study research into clients' preferences regarding counseling for prenatal anomaly screening and counselors' views on appropriate prenatal counseling was minimal, although the two function counseling model seems to have been adapted within prenatal counseling for anomaly screening.

Clients: pregnant women and their partners

With regard to the 'teaching' function of prenatal counseling for anomaly screening, most clients indicated that some balance between details and brevity was optimal, since the wide

range of options could led to confusion [59]. However, clients also feel a need for detailed, accurate information about the day-today symptoms that result from the anomalies that the unborn child could potentially be tested for, including information on potential suffering, and the potential quality of life for the child and his or her family [60,61]. Additional important aspects are the logistics of testing, follow-up if the test is positive, and options and resources if the child is affected with a disorder [59]. Clients seem to have mixed feelings about information stated with uncertainty and risks assessments, because the usefulness of risk assessments is not always clear to them [62,63]. Regarding the 'teaching' function, research shows that clients prefer information that is adapted to their social, ethnic and cultural background and provided in simple and accessible language, supported by written documents and photos [58,64,65]. During counseling, the client wants to be seen as an equal member of the team; a team in which care-providers know the limits of their knowledge and are willing to refer [58,61].

Research has focused almost exclusively on the 'teaching' function of counseling. Limited attention has been given to clients' preferences regarding the 'counseling' function, despite the fact that most clients do not want to be given 'information only', without guidance. The resulting lack of detailed and systematic insight into clients' 'counseling' preferences is problematic, because within health care, optimizing client empowerment, health decisions, and health behavior requires tailored communication; that is, communication that is adapted to the preferences, interests, and concerns of the individual [3,43,53-66,67]. Furthermore, whereas pregnant women have been included in counseling research, their partners have rarely been. Because of the important role of partners in decisions around prenatal screening for anomalies, we viewed partners to also be midwives' clients. Therefore, both pregnant women's and their partners' preferences regarding prenatal counseling for anomaly screening are investigated within this study.

Midwives' perspectives

Counselors' views on appropriate counseling are important to understand, because these views will reflect the way counseling is carried out in daily practice [6]. From the relatively little available literature it is known that genetic counselors in general, perceive the 'teaching' function as part of their role, but only a minority of counselors view also the 'counseling' function as part of their role [6]. With regard to the 'teaching' function, counselors primarily stressed the importance of informed consent while balancing the information that is given compared to the information that is withheld. Regarding the 'counseling' function, counselors struggle with directiveness versus non-directiveness. Some counselors admitted to provide 'teaching' and 'counseling' based on their own (predictably limited) experience, and gave advice based on the choices they themselves would make. This may led to a huge variety in counselors' views about appropriate counseling and in daily practice of counseling [61,68,69].

Moreover, several researchers concluded that clients and counselors do have very different perspectives on appropriate counseling and value information and professional behavior, such as non-directiveness, differently [61,70]. These findings and the fact that they were found in a relative small sample of obstetric-, midwife-, nurse- and general genetic counselors underline the relevance to investigate midwives' views on appropriate counseling and clients' preferences in relation to each other.

Communication during counseling

Actual communication during counseling has been investigated in several studies among health care providers with diverse backgrounds, e.g. genetic counselors and cancer genetic counselors [6,71,72]. Studies focus on the provision of the two genetic and/or prenatal counseling functions, 'teaching' and 'counseling' in practice. Counseling has been shown to focus on 'teaching' and that more attention is needed for providing 'counseling' [6,71,73-77]. However, little research has been done to investigate real life communication during prenatal counseling for anomaly screening. Such information is relevant, since it is known that prenatal counseling does not always lead to informed decisions [75,78,79]. As a result, in practice, clients sometimes have to be counseled again once they are already in the room to have the ultrasound of the CT. This is problematic in some cases, when following the receipt of additional information, the clients appreciate the purpose of anomaly screening that they did not grasp earlier and determine just prior to the test being done, that they actually do not want to take the test. It might also indicate that more than one pre-test counseling consultation is needed. For instance, one session to exchange information and another to talk about clients' questions and the decision whether to opt for screening, may be the best approach for some clients. For parents involved in prenatal testing, the today offer of pre- and post-test counseling might be too limited [37].

Study design

This study is embedded in the DELIVER study, a nationwide, multicenter cross-sectional study investigating the organization, accessibility and quality of primary midwifery led care in the Netherlands [80]. Seventeen of the 20 midwifery practices across the country that participated in the DELIVER study, participated in the present study. We studied client and midwife perspectives regarding appropriate prenatal counseling for anomaly screening. Furthermore, we made video recordings of midwife-client interactions during the prenatal intake visit to study prenatal counseling for anomaly screening by midwives in daily practice. The communication process was investigated by means of clients' experiences, midwives' self-evaluations and observations of the video recorded counseling consultations. We used a

mixed methods approach in order to gain knowledge about prenatal counseling by midwives based on multiple perspectives, positions, and standpoints, e.g. the standpoints of qualitative and quantitative research [81].

Perspectives of clients and midwives

At the time of this study there was no measurement tool available to investigate clients' preferences and experiences regarding prenatal counseling for anomaly screening. However, a commonly used measurement tool to measure the perspectives of clients, e.g. their preferences and experiences with care, is the QUOTE (QUality Of care Through the patient's Eyes); a series of questionnaires adapted to a diverse range of healthcare contexts [67,82,83,84]. Each QUOTE-questionnaire consists of two parts. In part one, the pre-counseling questionnaire, clients are asked to what extent they consider aspects, related to the care they are about to receive, as important. In part two, the post-counseling questionnaire, clients are asked to evaluate the consultation regarding the same aspects of care as mentioned in the pre-counseling questionnaire. So, the QUOTE-questionnaires can be used to both investigate clients' perspectives on preferable care and their perspectives on the extent to which these aspects are addressed [83,84]. This focus on clients' perspectives is extremely useful for getting information about clients' preferences, needs, opinions and ideas regarding counseling which can be used to optimize client-centered counseling in practice. We adapted the original QUOTE questionnaire to measure client preferences and experiences regarding prenatal counseling for anomaly screening.

To measure midwives' views on appropriate counseling and their self-evaluation we wanted to use a similar measurement tool that could be compared with clients. We developed a pre-counseling questionnaire to measure midwives' views on appropriate counseling and a post-counseling questionnaire, to measure midwives' self-evaluation of the prenatal counseling they just offered. Both midwifery questionnaires mirrored those of the clients.

Communication during prenatal counseling

In communication research, observational studies are designed to investigate the communication process [5]. In this type of research, recordings of actual health care consultations using audio or video taping are typically used for analyses. Within the Dutch midwifery research context at the time we started our study making audio or video tapes of consultations had never been done. Despite this possible barrier, we felt videotaping was the most effective means to gain a better understanding about what exactly happens during midwives' prenatal counseling. To be able to open the 'black box' and to know more about the coherence between the counseling practice, the prenatal counseling theory, and the perspectives of Dutch clients and midwives on appropriate counseling.

A widely used and valid scheme for coding audio or video taped healthcare encounters is the Roter Interaction Analysis System (RIAS) [6,77,85]. The RIAS focuses on the smallest unit of expression or statement (utterance) to which a meaningful code can be assigned [6,86]. The main focus of the RIAS is verbal behavior. A distinction is made between affective utterances and instrumental utterances, thereby complying clients' most urgent needs: the need to feel known and understood (to be fulfilled by using affective communication) and the need to know and understand (for which instrumental communication is needed) [87,88]. The affective categories include social conversation, such as emotional statements, e.g. empathy. The instrumental categories refer to the communication aspects that primarily focus on solving problems, such as giving information, asking questions and providing counseling [6, 86]. Several studies have adapted the RIAS, to make the coding scheme more suitable and reliable for their coding context [82,89-91]. We adapted the RIAS for coding videotapes of prenatal counseling for anomaly screening by midwives to the items of the QUOTE. We added coding of client-directed gaze to the coding protocol in order to have information about one of the most important forms of nonverbal communication [92-97]. Our adaptation of the RIAS also allowed us to integrate the results of the video recordings with the results of client and midwife questionnaires.

Aims of the thesis

The overall aim of this thesis was to investigate clients' preferences and midwives' views regarding appropriate prenatal counseling for anomaly screening. Furthermore, this study aims to provide knowledge about how prenatal counseling for anomaly screening by midwives is performed in daily practice, from the perspectives of clients, midwives and observers.

Outline of this thesis

The first study of this thesis is about the development and validation of a QUOTE-questionnaire that assesses clients' and their partners' preferences and experiences regarding prenatal counseling for congenital anomaly tests. The resulting questionnaire was used in a cross-sectional study design in primary midwifery care in the Netherlands. Data were used to assess clients' pre-counseling preferences regarding prenatal counseling and clients' experiences. Data of socio-demographic background characteristics of clients were used to determine possible differences between different groups of clients in pre-counseling preferences and post-counseling experiences (**chapter 2**). The final client questionnaire was mirrored for midwives so that it could be used as a pre-counseling instrument for measuring midwives' views on appropriate counseling. All Dutch midwives who were a member of the KNOV were asked to complete this questionnaire. Midwives' views on appropriate prenatal counseling for anomaly tests were compared to clients' preferences and the functions described in the

theoretical prenatal counseling model (**chapter 3**). To examine actual prenatal counseling for anomaly screening in daily practice, we introduced video recording in primary midwifery care. **Chapter 4** describes the introduction procedure, resulting dataset, and use of data for research purposes. In **chapter 5** we used the video recorded prenatal counseling consultations to describe how the functions of prenatal counseling were expressed in daily, midwifery practice. We described the conversational contribution of both clients and midwives during counseling and explored characteristics, which were associated with the performance of midwives' prenatal counseling. After each video recorded counseling consultation midwives completed a post-counseling questionnaire, to evaluate their own counseling. Data of post-counseling client questionnaires, video-observations and midwives' self-evaluations were compared to each other (**chapter 6**). Nonverbal behavior was the topic of the last study within this thesis. In this study we examined if and how the nonverbal behavior 'client-directed gaze' was related to clients' psychosocial communication, which is an important part of the *decision-making support* function of counseling. In addition to midwives' psychosocial questioning, we also examined the relation between verbal affective communication, and clients' psychosocial communication (**chapter 7**).
The thesis ends with a general discussion of the findings including suggestions for further research and practical implications.

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