

## Research

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# Shared Decision-Making Regarding Place of Birth—Mission Impossible or Mission Accomplished?

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### ABSTRACT

**Aim:** To explore Dutch pregnant women's experiences of shared-decision making about place of birth to better understand this process for midwifery care purposes.

**Design:** Qualitative exploratory study with a constant comparison/grounded theory design.

**Methods:** We performed semi-structured interviews, including two focus groups and eight individual interviews among 16 primiparous and multiparous women with uncomplicated pregnancies. Consent was obtained and interviews were audiotaped and fully transcribed. The interviews were analyzed utilizing a cyclical process of coding and categorizing, following which the themes were structured based on the three-step shared-decision making model of Elwyn.<sup>1</sup>

**Results:** We identified the three themes according to Elwyn's model: Choice talk, Option talk and Decision talk. We expanded the model with one additional theme: Decision ownership. The four themes explained women's decision making process about place of birth. Women perceived shared-decision making about place of birth as a decision to be taken with their partner instead of with the midwife. Women and their partners regarded the decision about place of birth as a choice to be made as a couple and expecting parents; not as a decision in which the midwife needs to be actively involved. Women and their partners considered their options and developed a strong preference about where to give birth; even before the initial contact with the midwife was made. Involvement of the midwife occurred during the later stages of the decision-making process, where the women sought acknowledgement of their choice which was already made.

**Conclusion:** Women considered their partners as the most and actively involved in the shared-decision making process regarding the place of birth. The women's decision-making process about the place of birth did not fully occur during the antenatal care period. The midwife should ideally be involved before or during the early stages of pregnancy to facilitate the process.

**KEY WORDS:** Shared-decision making; Midwifery; Antenatal care; Pregnancy; Place of birth.

### INTRODUCTION

Women in the Netherlands with uncomplicated pregnancies receive midwife-led care and can freely choose between birth at home, at a birth centre or at a short-stay hospital birthing unit. Midwife-led antenatal care commences at approximately seven weeks of gestation.<sup>2</sup> Midwife-led births are managed according to a physiological approach.<sup>2</sup> Within this physiological management of birth, midwives do not offer interventions such as medical pain relief, augmentation, or continuous fetal monitoring. If complications arise, interventions are needed, or when medical pain relief is requested or required, women are transferred to an obstetric-led unit.<sup>3</sup> The Dutch maternity care system and management of midwife-led care, specifically homebirth, has received a lot of negative criticism.<sup>4,5</sup> Safety of homebirth was widely and publicly debated. This negative publicity of homebirth has resulted in a decreased homebirth rate

in the Netherlands; a decline from 32% between 2001 and 2003 to 13% in 2015.<sup>6</sup> Despite this debate and decline in homebirth, the Dutch homebirth number still represents one of the highest rates amongst the Western countries.<sup>7</sup> In the Netherlands, an annual number of 66,790 pregnant women with uncomplicated pregnancies have to make a choice about the place of birth.<sup>6</sup> A Dutch study, including a sample of 2,854 women receiving midwife-led care, showed that 49% nulliparous and 36.6% parous women preferred a short-stay hospital birth, 38.3% nulliparous and 53.3% parous women articulated a preference for a home birth; and 12.7% nulliparous and 8% parous women were undecided up to 35 weeks of gestation.<sup>8</sup>

In order to optimize Dutch maternity care services, recommendations have been drawn up in a governmental report.<sup>9</sup> The first and main key point comprised: *Mother and the (unborn) child at the centre of midwifery care*,<sup>9</sup> including offering choices and information, and addressing the woman's needs, preferences and choices regarding the place of birth.<sup>9,10</sup> Midwives play an important role in offering women information and helping them to find, shift, and interpret information in order to make choices.<sup>11</sup> Given the importance of this finding, midwives need to consider their role in women's decision-making concerning the place of birth. There is ample evidence of the *why* factors that influence women's decision where to give birth, including the midwife's role,<sup>8,12-21</sup> but we have little information and understanding about *how* women's decision-making process takes place determines the place of birth and *how* the midwife is involved in this process. When midwives understand the woman's decision making process regarding place of birth and how to support this process, they are better equipped to facilitate women's decision making in their care and it will allow midwives to move away from a 'home *versus* hospital birth' debate.<sup>22</sup> In a maternity care system where home-birth is an integrated part of maternity services and where midwives are the main care providers during pregnancy; who aim to maintain the provision of offering homebirth to healthy women,<sup>2,10</sup> it is important to fully understand the features of women's decision making about place of birth<sup>2,10</sup> in order to facilitate this process.

In an earlier midwifery study,<sup>19</sup> Elwyn's model of

shared-decision making was recommended as a potential valuable and practical model to support women's decision making processes about the place of birth. This model outlines a step-wise process for shared-decision making, (Table 1) where the emphasis is on the process of coming to a decision between woman and midwife.<sup>1</sup> The Dutch organization of midwives (KNOV) recommends the importance of shared-decision making in midwifery care, including place of birth.<sup>10</sup> Following theoretical<sup>19</sup> and practical<sup>10</sup> recommendations, we have chosen Elwyn's model to underpin our study.

In this study, we aimed to explore and understand the process features<sup>25,26</sup> of shared-decision making experiences about place of birth of pregnant women who receive midwife-led care in order to yield either a discussion or a propositional theory, building on Elwyn's theory of shared-decision making.<sup>1</sup> According to Elwyn's model, the midwife is the woman's designated partner in shared-decision making and thus the antenatal care period is the appointed period to apply the steps of the model. Because women with uncomplicated pregnancies can freely choose their place of birth, the Netherlands is one of the few countries in the Western world where such a study can be performed.

## METHODS

### Design

This qualitative exploratory study is based on a constant comparison/grounded theory design<sup>25-27</sup> utilizing various methods for data collection, being focus groups and individual interviews.

### Participants

We aimed to recruit pregnant women from various Dutch regions as the places of birth numbers (*i.e.*, *home*, *birth centre*, *hospital*) vary locally.<sup>28</sup> We included Dutch speaking pregnant women with uncomplicated pregnancies; with a gestational age of  $\geq 27$  weeks of a single child, and when at term presented by the vertex; anticipating the woman had received information about

Table 1: Three Step Shared-Decision Making Model.<sup>1,23,24</sup>

#### Step 1. Choice talk

Introducing that a choice/ decision needs to be made. Making sure that the woman knows that options are available.

#### Step 2. Option talk

List/ describe options. Providing more detailed information about the woman's possible options and its consequences. Exploring the woman's knowledge, preferences, wishes, needs and values.

#### Step 3. Decision talk

Deliberation, supporting and considering the woman's preferences and deciding what is best. Making the final consensus-based decision.

labour and birth, including place of birth.<sup>2</sup> We excluded pregnant women with complicated pregnancies<sup>3</sup> and those women with a priori determined intrapartum interventions requiring a planned (obstetric-led or shared care) hospital birth.<sup>3</sup> We included 16 participants in our study, from different parts of the Netherlands (west, central and south). The mean gestational age was 32.3 (SD 3.49, range 27-38) weeks. All the participating women were living with their partner. Nine women were expecting their first child, four their second and three their third child. All but two women (Somalia, Morocco) had a Dutch ethnicity. Twelve women preferred a short-stay hospital birth and four women decided to have a homebirth.

## PROCEDURE

To recruit eligible women for our study a purposive sampling was used, according to our preselected criteria. We decided on theoretical sampling, based on the cyclical nature of the data collection process<sup>25-27</sup> and applied mixed recruiting strategies.<sup>26</sup> Between December 2014 and February 2015, we approached women *via* approximately 125 midwifery practices throughout the Netherlands (January to March 2015). To expand and refine the collected data already gathered,<sup>26</sup> we also approached women *via* antenatal education groups to recruit more participants (March 2015). Additionally, we approached pregnant women in person and through Facebook within our networks to recruit participants.

The researchers (AB, EOH, DdR) were final-year midwifery students. They had received training about interview techniques and had conducted a literature review about shared-decision making prior to the study. They reflected on their own ideas and thoughts about the concept. They regarded their own perceptions of shared-decision making as predominantly theoretical, which were not believed to influence participants' answers or cause researchers' bias.<sup>26</sup> None of the interviewers were personally or professionally related to the interviewees assuming the limitation to gratitude bias.<sup>26</sup>

We conducted two focus groups interviews consisting of respectively five (3 March 2015) and three women (30 March 2015), and eight individual interviews (between 13 March to 2 April 2015). Due to illness, the second focus group was smaller than anticipated (n=5). Focus group interviews took place at midwifery practices at an agreed time suiting all participants. The individual interviews were conducted at a time and place convenient for the participants, which was either the midwifery practice or the woman's own home. Two women preferred a telephone interview.

## Ethical Consideration

The Rotterdam Research Ethics Committee confirmed that because of the non-invasive character of the study ethical approval was not required, and we were advised to conform to the ethical principles of the Central Committee on Research

Involving Human Subject.<sup>29</sup> We obtained written consent from all the participants in our study. All participants received a written statement assuring anonymity and confidentiality and declaring that they could freely withdraw from the study at any time.

## Data Collection

The participants were briefed about the purpose of the study. We emphasized that there were no wrong answers and participants were encouraged to reveal anything they wanted to say about the topics addressed during the interview, positively and negatively. The interviews were audiotaped and the consent for audiotaping was obtained prior to the interview. A semi-structured interview guide (topic list) was developed and used to maintain focus during the interviews. The topic list was structured according to the three steps of Elwyn's shared-decision making model (Table 2). Specific open-ended conversational-phrased questions were formulated to obtain some uniformity in how questions were asked in the different interviews. The first focus group and individual interview were regarded as pilot-interviews to increase reliability and internal consistency of the interviewers' usage of the topic list<sup>27</sup> and to check comprehensibility and clarity of the questions asked. We evaluated the pilot-interviews amongst the research team, with peer final-year midwifery students and midwifery tutors. One question was taken into account; no questions were added.

The interviews with the focus groups lasted between 45 to 60 minutes and the individual interviews between 25 to 30 minutes, excluding instruction, introduction and summary. Three researchers (AB, EOH, DdR) were present during both focus group interviews and two researchers alternately conducted the individual interviews. One researcher coordinated the interview and asked the questions and the other researcher(s) observed and noted non-verbal communication (field notes) of the interview and checked if all topics were addressed. To validate the findings, the researchers checked the interpretation of the answers from the participants by summarizing the answers, throughout and directly following the interview.<sup>26</sup> After each interview, the interviewers evaluated the findings and formulated topics that called for more in-depth exploration in the next interview, according to the cyclical process of the constant comparison design.<sup>26,27</sup> One additional topic emerged during this process (Table 2). After each subsequent interview, the researchers reflected and explored their own thoughts about what was said during the interview, to minimize personal bias.<sup>27</sup>

## Data Analysis

The recorded interviews were transcribed verbatim and emailed to the participants for a member check, giving them an opportunity, should they wish, to change or remove any data.<sup>26,27,30</sup> All participants agreed with the transcripts and no data were removed. We anonymized the transcripts. As a reliability check, we read the transcripts several times to get a sense of

<b>Table 2:</b> Topic List.		
<b>Introduction</b>		
Choice place of birth		
Timing 'birth talk'		
Experience/opinion 'birth talk'		
<b>Topics according to SDM*-steps and procedural aspects</b>		
<b>Choice talk</b>	<b>Option talk</b>	<b>Decision talk</b>
Being aware of options	Moment(s) of information	Decision support
Moment(s)/ timing introduction options	Methods of information	Voicing preference
Exploring own role	Content of information	Methods of enquiry preferences
Being aware of preferences	Available time information given	Moment(s) of enquiry preferences
	Tailoring information to wishes and needs	Midwife's response to preference
	Discussing pros & cons/harms and benefits	Coming to a final decision
	Deliberation	Voicing the final decision
	Involving others	Clarity decision
	Exploring preferences	Decision support
<b>Process</b>		
Expectations of contributing role midwife regarding decision making process/path		
Balance of decision between woman and midwife – 'who tipped the scale or was balance struck' (sense of autonomy)		
Decision made being based on informed choice		
Significance of decision		
Respect for decision		
Satisfaction with the decision and decision-making process/path		
Relation with midwife (e.g., trust)		
Positive aspects and aspects of improvement		
<b>Added topic</b>		
The woman's perception, meaning and interpretation of shared-decision making (as a concept)		
*SDM: Shared-decision making steps <sup>1</sup>		

the content as a whole.<sup>27</sup> Each interview was directly transcribed and coded after the interview had taken place. The field notes were added to the transcripts and used to aid the interpretation of the recorded data.<sup>26,27</sup> The researchers categorized the data by connecting the codes. We shared and discussed findings and meaning throughout the data collection period.<sup>25-27</sup> We reached theoretical saturation on all categories. Finally, the categories were reduced to core themes<sup>27</sup> using Elwyn's shared-decision making model as a framework in order to answer the research question as adequate as possible.<sup>27</sup> We added one separate theme in order to reflect the completeness of the data.<sup>27</sup> Examples of the analytical coding process are shown in Table 3.

## RESULTS

We explored the shared-decision making experiences about place of birth of Dutch pregnant women who received midwife-led care. Our findings were structured in four main themes that reflect a comprehensive understanding of the features of this phenomenon.<sup>27</sup> The themes included: Choice talk, Option talk,

Decision talk, and Decision ownership. Quotes were added to illustrate the findings. The quotes were translated from Dutch to English by a native bilingual speaker.

### Choice Talk

Most of the participants were aware that they could make a choice about where to give birth. This awareness was present even before they contacted or met the midwife, or accessed maternity services.

*"I had already claimed the choice as soon as I found out that I was pregnant (...) I decided to have a hospital birth"*

All participants experienced that the choice talk was part of a checklist at the first antenatal (booking) visit during which midwives introduced the topic and simultaneously enquired about women's preferences. The participants already had a strong preference where to give birth prior to this moment and therefore regarded it as somehow overdue. They also mentioned

**Table 3:** Examples of Analytical Coding.

Quote	Category	Theme
<i>"Having this choice is an obvious thing, isn't it? I never gave it much thought that I wouldn't"</i>	Awareness of choice	Choice talk
<i>"Why not ask again... talk about it... later on"</i>	Moment of information	Option talk
<i>"It was really good to pay some attention to it (...) the facts, pros and cons"</i>	Discussing pros & cons	Option talk
<i>"...and discussed pros and cons with my boyfriend"</i>	Decision support (partner)	Decision talk
<i>"...and with recognition of the midwife"</i>	Decision support (midwife)	Decision talk
<i>"I really appreciated it that she completely respected my choice, you know, never a moment of trying to change my mind or convince me to alter my decision"</i>	Attitude midwife	Decision talk
<i>"...the ultimate choice, uh, where, well, that is ours..."</i>	Perception	Decision ownership

that the topic overall did not receive a lot of attention or time.

*"It was just a question of: 'You can choose where to give birth. Have you thought about it?' That's it. So, yes, I knew, I had already made a decision, and I told her... yeah, that was really it. Box ticked"*

**OptionTalk**

Participants received information pre-dominantly during the first half of pregnancy. Most participants said that the midwife's option talk mainly included detailed information about the available places of birth options. This information was usually provided at the booking visit, simultaneously with the choice talk. A majority of the participants thought that the option talk was too early and sometimes even unnecessary. They perceived that things change during pregnancy (*i.e., complications*), which may influence or change their initial decision. But above all, they had other priorities and concerns at the early stage of pregnancy.

*"I know about the different options and what they involve, yes, but I don't give it a lot of attention just yet, there are other things that occupy me (...) work, where this baby is going to sleep"*

All participants thought that their preferences need to be revisited, ideally in the third trimester, although none of the participants had changed their mind about their preferred place of birth during the course of pregnancy. They were, however, aware that there could have been a slight possibility that they would have changed their mind during the pregnancy.

*"It was a bit weird, um, she [midwife] thinks I am having a hospital birth but she [midwife] never checked it [preference] again. As I say, weird; what if, say if, maybe I might change my mind. I don't know; why not ask again... talk about it... later on"*

All participants had a very strong preference where to give birth prior to the option talk and did not specifically want information about options and consequences, as they had no desire to change their decision. Instead, they wanted more

tailored information, fitting parity. All participants experienced the option talk as a moment of confirmation or evaluation of their preference. The participants did not weigh options and consequences when talking to the midwife, but they merely revised the merit of their preference.

*"It was really good to pay some attention to it [option talk], uh, not that I didn't know the facts, pros and cons etcetera, etcetera, or heard something new, but just, well, to put it [preference] into perspective"*

**Decision Talk**

All participants mentioned that they had experienced an individual decision-making process considering their preferences and deciding what suited them best. The participants perceived that their partner had an active role in supporting the decision. Although they assigned the midwife a more passive role, all participants voiced a need for the midwife to acknowledge their choice.

*Interviewer: "How did you know you had come to a final decision?"*

*Woman: "I had thought about it [preference], and discussed pros and cons with my boyfriend, and then it [place of birth] was completely clear. It [decision] was based on what I thought and wanted and a mutual understanding between him [boyfriend] and me... it suited us... and, yes, with recognition of the midwife"*

**Decision Ownership**

All participants strongly emphasized that the *final decision* belonged to them and to their partner. Only when complications arose or in case of emergency, they thought it was the midwife's decision and responsibility to intervene with the woman's choice. The participants also perceived the *decision-making process* was owned by oneself and the partner. The midwife was only regarded to alter the decision about place of birth when referral became necessary.



*“Yes, she [midwife] then takes the decision. (...) At that moment [when referral is necessary]. So, yes, in that case, yes, that situation than overrules my choice”*

All participants voiced that shared-decision making about place of birth is a process that solely belongs to, and takes place between the woman and her partner; as main stakeholders and owners of the decision.

*“Well, to my opinion the decision is something that belongs to me and ... [name partner], um, my husband. It is our decision. We eventually, uh, it is going to be our child, and yes, the birth of our baby will be supported by the midwife and she will help me, but uh, the ultimate choice, uh, where, well, that is ours...”*

## DISCUSSION

We explored the shared-decision making experiences about place of birth of Dutch pregnant women who received midwife-led care in order to better understand the features of this phenomenon. Shared-decision making regarding place of birth is considered to be a mutual process of the woman and her midwife.<sup>1,19</sup> We appointed pregnancy or the antenatal care period as the course of making a shared decision about place of birth.<sup>2,8</sup> As cross-reference, we fitted Elwyn's model<sup>1</sup> with its included steps over this designated period—aligning choice talk with the beginning of pregnancy and the initial contact with the midwife, the decision talk with the end of pregnancy/start of labour and the option talk fitting in between the two.<sup>2</sup>

Our findings confirmed that shared-decision making is indeed a bilateral process but—in our case—between the woman and her partner instead of the woman and the midwife, opposed to the theory appointing the midwife as the partner in the decision making process.<sup>1,19</sup> Our findings also showed that women did not experience shared-decision making as a process consisting of a sequence of separate recognizable steps, but they experienced these steps to occur somehow simultaneously, blended and as iterative. Our findings also showed that choice talk, option talk and decision talk did not take place throughout the period that women received antenatal care, as the decision had already been made before the woman actually had met the midwife. These findings are consistent with women's decision making about breastfeeding.<sup>31,32</sup> We identified an additional theme: Decision ownership. The women in our study claimed the decision as personal, concerning herself and her partner, as exclusive executives of the decision.

The decision about place of birth appears to be a topic with a personal character that requires a decision between the woman and her intimate and significant other (*i.e.*, *partner*), instead of a decision being made between the woman and a professional healthcare provider. This might be explained by the fact that women perceive that preparation for birth, including place of birth, is not a priority for midwives<sup>11</sup> and therefore make this decision with their partner. We need to consider that the period of pregnancy is a period of transition to parenthood for the

partner. This might explain why women put a stronger emphasis on the relationship with their partner as a future co-parent than on the relationship with their midwife. The underlying rationale supporting the achievement of shared-decision making relates to the character and quality of the interpersonal relationship and interdependency between people.<sup>1,33-35</sup> Our findings suggest that these aspects play an important role in shared-decision making regarding the place of birth between the woman and her partner.

Women in our study dismissed the option talk with the midwife, they did however use this to validate their decision—although it did not change their preference, only when obstetric-led care was needed. Women apparently do not change their mind about place of birth when the pregnancy has a physiological course.<sup>8</sup> We are not fully aware as to on the basis of what information women and their partners make their decision in this preconception period and further research to expand our knowledge about women's resources is therefore required. If midwives are involved earlier in women's lives, it might optimize women's breadth and content of information. It might not change women's preferences, as we know these are based on attitude that subsequently influences intention and thus preference.<sup>36</sup> However, it might contribute to incorporating option talk to a wider extent as currently described in our study. How to involve midwives at earlier stages in women's lives requires more research. Our findings underpin the importance of preconception care, where the midwife might be able to make better use of the three steps of the shared-decision making model<sup>37</sup> regarding place of birth. Therefore, it is worth to explore shared-decision making regarding place of birth among healthy women who have a pregnancy wish or are planning to become pregnant, in order to better understand the process.

Decision ownership contradicts with the midwives' perceptions that partners should not be involved in final decisions in care.<sup>38</sup> Decision ownership can also be regarded as a sign of autonomy.<sup>19,33</sup> Ownership of the decision is also strengthened by the timing of the woman's decision making in our study, an event that took place before the initial contact with the midwife—a moment when there is an established communication between the woman and her partner, and not necessarily with the midwife. This suggests that it might be worth considering how women can become familiar with midwives even before they get pregnant.

## STRENGTHS AND LIMITATIONS

To our knowledge this study is the first to explore women's experiences regarding place of birth by means of the practical usage of the shared-decision making model.<sup>1</sup> The findings expand our knowledge and understanding of some important features of this process. We reached a saturation point that no new findings were evident in the data. We transparently documented our strategies to enhance the credibility, transferability, dependability and conformability of our findings, including cross-referencing our research question throughout, member checking during and post interview, triangulation of the

interview data and field notes, peer debriefing and peer review, an audit trail of our analysis process, and purposive sampling techniques.<sup>25-27,30,39</sup> However, our purposive sampling may have introduced selection bias because of its self-selective nature.<sup>30,39</sup> All our participants had an outspoken preference for the place of birth, none of our participants were undecided. However, the participants were in the third trimester of their pregnancy and a decision regarding place of birth is expected to be made.<sup>2,8</sup> We might have included women with a high sense of autonomy or more outspoken ideas<sup>19</sup> about the choice regarding place of birth, likely affecting representativeness of our findings. Moreover, the timing of the interview in the third trimester of pregnancy when decisions about place of birth had been made much earlier, might have introduced recall bias.<sup>39</sup> Our focus groups were small which could have affected the dialogue dynamics. On the other hand, a small number of participants might have enhanced the feeling of group safety and therefore is likely to have increased self-disclosure of the participants.<sup>40</sup>

Using the shared-decision making model<sup>1</sup> allowed us to understand the process better. The use of a priori model in constructing our topic list for the interviews increased the robustness of our study.<sup>41</sup> Identifying an additional theme showed completeness of the data and contributed to better understand why shared-decision making about place of birth occurs at a different time than anticipated based on the literature.<sup>1,19</sup>

The fact that women think that having a choice where to give birth is an accepted norm, can be a cultural aspect of maternity services where homebirth is still accepted as one of the realistic choice options.<sup>2,8</sup> This might not be the case in other countries where options are sometimes limited or hospital birth is the only option. Therefore, this finding might not be generalizable to other populations of pregnant women. Additionally, all our participants were living with their partner and were between 27 and 38 years of age. The shared-decision making process of younger and single women about the place of birth might differ from those of women with characteristics similar to our study.<sup>36</sup> Our findings might therefore not be transferable to women from different ages and with other relationship status.

Participants were partly recruited by their own midwives and practice assistants. It is unknown how many women were approached and if women were consciously and categorically approached. This could have created selection bias.<sup>30,39</sup> There is no information available of the midwifery practices; specifically, how and what information during the steps of shared-decision making is handled by individual midwives. Communication skills<sup>1</sup> and experience of midwives with shared-decision making,<sup>42</sup> identified as influencing factors, might vary between midwives, as acceptance of shared-decision making is still evolving in maternity services.<sup>43,44</sup> There is also evidence that the degree of involvement in decision-making regarding pregnancy and birth issues vary among women.<sup>38</sup> These factors might have introduced variance in midwives' application and women's experiences of the three steps of the model, which subsequently

could have influenced our findings.

## CONCLUSION

Midwives have a more facilitating role rather than being an active partner in the decision-making process about place of birth. Applying the shared-decision making model to the antenatal care period does not align with women's timing and process of making a decision where to give birth. For midwives to be involved in the process of decision-making about place of birth, the steps 'talking about options' and 'providing information' about place of birth should be taken at the very beginning of care or early in pregnancy but ideally before that. This allows an interactive exchange of professional and personal information between the midwife and the woman. We have to emphasize that shared-decision making of place of birth has to be built on the midwife's communication skills, building rapport and structuring pre-conception and antenatal visits as well as considering the time of choice, option and decision talk. Decision support of the partner should not be underestimated.

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## CONTRIBUTION TO AUTHORSHIP

YF designed the study, AB, EOH, and DdR collected and analyzed the data. YF drafted the article. All authors interpreted the data, contributed to discussion, and reviewed or edited the article. All authors take responsibility for the integrity of the data and the accuracy of the data analysis. YF supervised the study and is the guarantor.

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## CONFLICTS OF INTEREST

The authors declare that they have no conflicts of interest.

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