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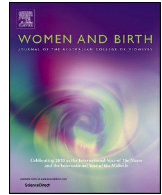

Women's preferences for care delivery during labour and birth in Dutch hospitals: A Q-methodology study

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ABSTRACT

Problem: Women's preferences regarding care delivery during labour and birth remain insufficiently understood. Obtaining a clear understanding of these is important to realise a maternity care system that is future-proof and person-centred.

Background: Dutch maternity care deals with capacity issues due to staff shortages. Despite expected stable birth rates in the coming decades, this situation jeopardises the provision of care during labour and birth that is responsive to women's preferences.

Aim: To systematically study a variety of women's preferences for care delivery during labour and birth in Dutch hospitals using Q-methodology.

Methods: Q-methodology is a mixed methods approach. Thirty individual interviews were conducted with women living in the south-western Netherlands, during which they ranked 29 statements about their labour and birth preferences from least to most important. By-person factor analysis was performed to identify factors (viewpoints). Interpretation of the viewpoints was done using the qualitative interview data.

Findings: Four viewpoints emerged from the study sample: 1) The personal approach, 2) The empowering approach, 3) The expert approach and 4) The needs-based approach. Consensus statements show a shared preference for respectful interaction. The study cohort emphasises continuity of adequate information provision, while continuity of care professional is deemed less important.

Discussion: Our study was the first to apply Q-methodology to capture women's preferences for care delivery during labour and birth in Dutch hospitals. Although preferences are individual, they share commonalities in four viewpoints.

Conclusion: The viewpoints provide valuable guidance for the allocation of scarce resources to ensure a maternity care system that is responsive to women's preferences.

Statement of significance

Problem or issue

Dutch maternity care deals with capacity issues, which jeopardises the delivery of care that is responsive to women's preferences. Insight into women's preferences regarding care delivery during labour and birth is needed to guide future restructuring efforts.

What is already known

Previous studies report various aspects that are important to women during labour and birth, however, findings remain inconsistent due to the application of diverse research methodologies in different contexts.

What this paper adds

Although women's preferences are individual, the application of Q-methodology shows that they share commonalities which are divided into four viewpoints: the personal, - empowering, - expert, and needs-based approach. Consensual preferences include respectful interaction and continuity of information.

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Introduction

Healthcare systems worldwide are experiencing capacity constraints due to staff shortages and scarce resources [1–4]. Dutch maternity care is specifically under pressure due to increasing shortages in the nursing profession, high turnover of community midwives of relatively young age and maternity nurses reaching retirement ages [5,6]. Although Statistic Netherlands (CBS) does not expect a significant increase in the number of births in the Netherlands in the coming decades, the current problems indicate that the same number of births are being supervised by fewer staff [7]. This is problematic and requires managers and care professionals to implement restructuring efforts to realise a future-proof maternity care system [8–10].

According to the WHO (World Health Organization), women's preferences should be the principal focus of care delivery [11]. However, women's preferences regarding care delivery during labour and birth remain insufficiently understood, as findings of previous studies are variable. This might indicate that women's preferences vary [12]. For example, one might prioritise shared-decision making and availability of pain relief [13], while others prioritise continuity of care [14]. Furthermore, differences might be due to the application of diverse research methodologies in different contexts [14–16]. There is a lack of studies considering the different types of preferences, if and how these vary among women in different contexts and whether they share commonalities. To inform future restructuring efforts in Dutch maternity care, a comprehensive understanding of women's preferences in the Dutch context is needed.

In this study we aimed to systematically explore a variety of women's preferences for care delivery during labour and birth in Dutch hospitals using Q-methodology. Our research question was: *what are the different perspectives of childbearing women living in the south-western Netherlands on what is important during labour and birth in a Dutch hospital?* A better understanding of women's preferences facilitates the practice of person-centred care (PCC). This concept aims to put the person in the centre of care delivery by focussing on their preferences, needs and experiences. It aims to move away from the traditional passive role in care delivery, to a more active role [17–19]. As preferences can take on many forms and types, a broad spectrum of preferences was included in this study [20]. Therefore, the insights of this study may enable a better understanding women's preferences for care delivery during labour and birth to realise a future-proof, person-centred maternity care system.

Participants, ethics and methods

Study aim and design

Q-methodology was applied to systematically study a variety of women's preferences for care delivery during labour and birth in Dutch hospitals. Q-methodology helps to systematically identify patterns in individual opinions (e.g. viewpoints) on a subject using qualitative and quantitative data collection methods [21]. In Q-methodology, participants rank a set of statements on the subject on a distribution grid according to the degree of importance to them, followed by interviews to explore their reasoning. The ranked statements are statistically compared using by-person factor analysis to identify 'factors', which represent a shared viewpoint. These are interpreted using qualitative data from the interviews to construct a narrative per viewpoint.

Ethics approval

Ethical approval for this study was obtained from the medical ethics committee of the Erasmus Medical Centre, Rotterdam, the Netherlands, under reference number MEC-2023–0474. Participants gave informed consent to participate in the study before taking part.

Study setting

This study focusses on birthing in a hospital setting, which in the Dutch context can be a midwife-led (outpatient) setting or an obstetrician-led (inpatient) setting. The Dutch maternity care system is characterised by the allocation of women to one of two tiers: midwife-led primary care and obstetrician-led secondary or tertiary care. Low-risk women receive care from an independent, community midwife. Possible birth settings are at home or in a midwife-led hospital setting [22]. If complications arise, women are referred to obstetrician-led care in the hospital [23]. Medium to high-risk women receive care from the obstetrician in the hospital throughout their pregnancy and childbirth. In daily practice, approximately 40 % of this care is fully managed by a clinical (hospital) midwife [24]. Obstetricians become actively involved only when there are additional risks or complications, such as fetal distress or the necessity for an operative childbirth [25]. All women are recommended to construct a birth plan, which contains information about their wishes concerning childbirth [26].

Application of Q-methodology

Statement set development

The first phase of Q-methodology entails the development of the set of statements (Q-set) on the topic of interest. It is the aim to cover the topic with a representative set of statements [27]. A first set of statements was constructed based on peer-reviewed literature on women's preferences and experiences [10,13,15,28–36] and expert opinions. Next, these statements were structured and categorised using the eight domains of patient-centred care [20]. This model was chosen due to its fit with the different types of preferences and provides a robust framework for understanding and operationalising care preferences. This study consistently employs the term 'person-centred care' instead of 'patient-centred care', as women giving birth are not perceived as patients.

The domains were operationalised and interpreted to fit care delivery during labour and birth in Dutch hospitals. The domain *'Personal preferences'* relates to respect to women's values, preferences and expressed needs in care delivery during labour and birth. *'Physical comfort'* is aimed at minimising pain and discomfort, for example through the availability of pain relief. *'Coordination of care'* relates to clear organisation of care. Originally, '*Continuity and transition'* is operationalised as continuity in information flow. However, in our study, continuity of care is interpreted as continuity in terms of supervision during labour and birth, for example seeing 'the same face' throughout labour. The '*Emotional support'* domain focusses on the support provided by care professionals to comfort and reduce anxiety. '*Access to care'* is aimed at ensuring accessibility to care services before labour, during labour and birth and post-partum. '*Information and education'* relates to the timing and the provision of information. Finally, the domain '*Family and friends'* entails policies concerning the presence of loved ones [20,37,38]. The structured set of statements were evaluated and altered based on expert opinions. To ensure comprehensibility, two pilot interviews were conducted. This led to several statements being merged or adapted and resulted in a final set of 29 statements with 3–5 statements per domain.

Participant recruitment

In Q-methodology, representativeness is achieved by the development of the Q-set, and by including a diverse group of participants which capture a variety of viewpoints on the topic [12,21]. Therefore, purposive sampling is done by selecting participants based on specific characteristics. In this study, diversity was represented in terms of age, education, country of birth of mother, parity, pregnant or post-partum and induced labour. Based on previous studies, it was expected that these characteristics could influence women's preferences [15,23,39].

Participants were recruited in the southwest region and part of central Netherlands through maternity care providers, social media, and the authors' personal networks. Participants were included guided by the following criteria: currently pregnant (with a gestational age of at least 23 weeks) and wishing to give birth in a midwife- or obstetrician-led hospital setting or have given birth in a midwife - or obstetrician-led hospital setting (no longer than twelve months ago). Q-sorts from women who gave birth over twelve months ago were included if their birth experience was still vivid (e.g., due to traumatic experiences). In this way, the preferences of the women could be viewed from the perspective before childbirth and after childbirth. Reading and speaking Dutch or English was a precondition. Women who underwent planned caesarean sections or who gave birth at home were excluded because of the distinct course and/or setting compared to the included childbirths in the study. It was anticipated that the nature of their childbirth would influence the ranking of the statements and potentially introduce bias. An exception was made where a woman who underwent a planned caesarean section was included unintentionally. The final Q-sort aligned with previous ones and therefore did not introduce bias.

Data collection

Individual interviews were conducted by the first three authors (MB, MV and EB) either at the participants' homes (30 %) or online (70 %). The interviews were recorded and lasted between 45 and 90 minutes. A topic list was used to ensure consistency. Every interview started with a short introduction to the study, followed by a short but in-depth interview about the participants' experience with maternity care. Next, the researcher explained the procedure of ranking the statements (Q-sorting). The participants were asked to rank the 29 statements from "most important" to "least important" on a sorting grid [Fig. 1] while reasoning out-loud. Participants were permitted to adjust the ranked statements if necessary. After sorting, the reasoning for the final Q-sort was summarised by the researcher to realise member check. Data saturation was reached when no additional answers or explanations were expressed by participants during interviews. The Q-sorts and interview transcripts were securely stored in accordance with the guidelines set by the medical ethics committee of Erasmus Medical Centre.

Data analysis

Analysis was done by employing the PQ Method software. The Q-sorts of all participants were compared to each other by measuring a correlation of association. Next, the correlations were included in a by-person factor analysis to reduce the data to factors. Factors are based on a comparable ranking of the statements among groups of participants and therefore represent a common viewpoint on the study's topic. The software computes an average ranking of the statements per viewpoint, which is called a factor array. This represents an ideal Q-sort for each viewpoint. Multiple factors can be extracted, but it is the aim to explain as much variance with the least number of factors. In this study, a four-factor solution was decided to be the most appropriate after employing the criteria described by Watts and Stenner [21]. The factor arrays are used as a basis for factor interpretation. First, the statements that were ranked most important (4, 3) and least important (-4, −3) were studied. Second, the statements ranked relatively more or less important compared to the other factors (distinguishing statements) and the statements that were ranked similar to other factors (consensus statements) were studied. Next, the qualitative data from the interviews with participants defining the factor were analysed in Atlas.ti (version 23). It was the aim to support the interpretation of the factors and consistency by comparing the provided explanations during the ranking procedure.

Results

Participants

In total, 30 women were interviewed. Sample demographics are presented in Table 1. The by-person factor analysis resulted in a four-factor solution with an explained total variance of 53 %. As Table 2 shows, factors 1 and 2 are defined by nine Q-sorts and factor 3 and 4 by three. Three Q-sorts (10 %) were confounded, and three Q-sorts (10 %) did not load on any factors. Factor arrays are presented in Table 3.

Viewpoints

Interpretation of the factors resulted in the construction of four distinct viewpoints on preferred care delivery during labour and birth, namely: the personal approach, the empowering approach, the expert approach, and the needs-based approach. The results are indicated by the statement's number (1 to 29) and corresponding value (-4 to 4), along with quotes for illustration.

Viewpoint 1: the personal approach

Women with this viewpoint emphasise the need for respectful interaction as they fear being treated as "the next one in the assembly line" (statement 1, 4). They want to be treated as a human being, who is

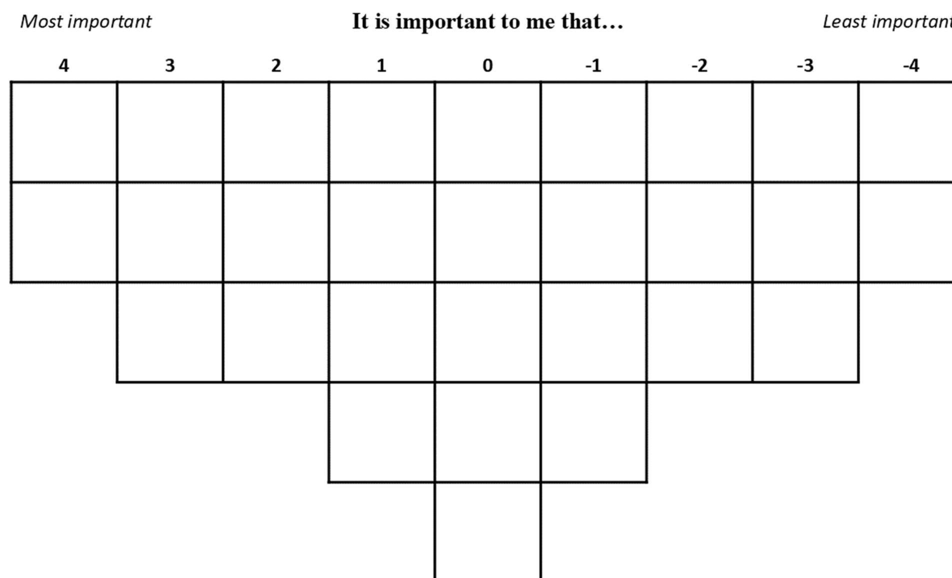

Fig. 1. Sorting grid.

Table 1
Sample demographics (n=30).

	N (%)
Age (years)	
30 and younger	15 (50 %)
31 and older	15 (50 %)
Education	
Secondary, vocational and below	13 (43 %)
Higher professional and university	15 (50 %)
Unknown	2 (7 %)
Country of birth	
Netherlands	26 (87 %)
Other	4 (13 %)
Pregnant or post-partum	
Pregnant	9 (30 %)
Post-partum	21 (70 %)
Parity	
Primiparous	18 (60 %)
Current pregnancy	5 (17 %)
Post-partum	13 (43 %)
Multiparous	12 (40 %)
Current pregnancy	4 (13 %)
Post-partum	8 (27 %)
Induced labour	
Yes	8 (27 %)
No	13 (43 %)
Planned	3 (10 %)
Not (yet) planned	6 (20 %)
Maternity care provider	
Midwife-led care	11 (37 %)
Current pregnancy	6 (20 %)
Post-partum	5 (17 %)
Obstetrician-led care	19 (63 %)
Current pregnancy	3 (10 %)
Post-partum	16 (53 %)

Table 2
Q-sorts defining the factors.

Factor	Q-sorts loading on the factors	Total number of Q-sorts per factor	Eigen values	% explained variance
1	7, 8, 9, 18, 21, 25, 26, 27, 28	9	10,65	36 %
2	2, 4, 6, 10, 12, 17, 19, 20, 30	9	2,16	7 %
3	1, 3, 23	3	1,53	5 %
4	5, 24, 29	3	1,51	5 %
Confounded	Factor 1 with 3: 22 Factor 2 with 3: 13, 15	3		
Non-significant	11, 14, 16	3		

about to experience a life-event. This is perceived as a personal approach, through which the women feel heard, seen and therefore treated with respect.

The personal approach also comes about through well-coordinated care (statement 10, 4). For example, it is important for these women that care professionals are up to date about their personal situation based on their medical file and birth plan (statement 2 and 3, 1). Furthermore, continuity of information flow and medical advice is important (statement 12, 2).

> *"[…] there's quite a bit of turnover in staff, people dropping out, changes in responsible care professionals. And that just makes it difficult because you're talking about your most precious possession, bringing your child into the world. And that doesn't always feel comfortable. It sometimes really feels like we were all just a case number, and not everyone was always informed about everything." (Participant 27)*

Adequate information provision is emphasised as this supports anticipation on events during labour. The women with this viewpoint

Table 3
Statements and factor arrays.

	Statements	Factor arrays per viewpoint			
		The personal approach	The empowering approach	The expert approach	The needs-based approach
Personal preferences					
1	I am treated with dignity and respect	**4**	**3**	**3**	**2**
2	The care professional(s) take my personal situation, beliefs and/or culture into account	1	−1*	−3*	1
3	The care professional(s) take my wishes and/or needs into account	1	4	−1**	3
4	The care professional(s) involve me in decision-making during labour	3	4	−1	−1
Physical comfort					
5	I can get pain relief 24/7	0	−2	1	−1
6	I can choose between primary care and clinical care forms of pain relief	0	−3	0	−2
7	The delivery (birth) room has a homey atmosphere	−3	0**	−4	−2
8	The delivery (birth) room is quiet (as little in and out as possible)	−1	3*	−1	0*
9	I can give birth in a birthing pool	−4*	1**	−2	−3
Coordination of care					
10	Care is well coordinated between care professionals	4	1	4	0
11	It is clear to me who is in charge of care	0	0	0	−4**
12	The care professionals provide me similar information	2	0*	4	3
Continuity and transition					
13	I do not have to be moved during labour when referred to secondary care	−3**	−2**	3	2
14	A care professional is in the delivery (birth) room with me non-stop	−4	−4	−3	−2
15	I am supervised by one and the same person (like my own community midwife)	**−1**	**−1**	**−2**	**0**
16	My own community midwife supervises the birth	−2	−3	−4	−3
Emotional support					

(continued on next page)

Table 3 (*continued*)

	Statements	Factor arrays per viewpoint			
		The personal approach	The empowering approach	The expert approach	The needs-based approach
17	I receive emotional support from the care professional (s)	−2	1	0	−3
18	I feel heard and seen by the care professional(s)	3	3	1	1
19	I feel supported and reassured by the care professional(s)	**1**	**2**	**3**	**1**
Access to care					
20	I do not have to travel to the hospital for more than 30 minutes during labour	0	−1	2	4
21	I can give birth in my own region	−3	−2	1*	−4
22	I can come to the hospital early (3 cm dilation)	0	−3*	0	−1*
23	I don't have to go home within 2 hours after giving birth	−1	0	−1	4**
Information and education					
24	I receive timely information during labour	**3**	**2**	**2**	**2**
25	Information is shared with me in an appropriate and understandable manner	**1**	**1**	**2**	**3**
26	I am communicated with in a pleasant way	**2**	**2**	**1**	**0**
Family and friends					
27	The care professionals are attentive to my (birth) partner	**−1**	**−1**	**−2**	**−1**
28	My (birth) partner is involved in making decisions	2	0	0	1
29	In addition to my (birth) partner, one or more persons are allowed to be present	−2*	−4	−3	0**

Bold represents consensus statements (1, 15, 19, 24, 25, 26, 27)
* $p=<0.05$
** $p=<0.01$

desire to take on a reactive role in the decision-making process, as they want to be kept up to date about events and give consent when needed.

> *"[…] You see, to get information at all, that's obviously very important, that you're aware of what's being done. And the timeliness, of course, is absolutely relevant, so that you know in time what they're going to do to you, what you can expect, what's going to happen. So you're not going to be surprised." (Participant 27)*

Geographical location (statement 21, -3) and the specific facilities of the hospital (statement 9, -4, statements 5 and 6, 0) are deemed less important. The preferences of women with this viewpoint are therefore considered less tangible.

In summary, this viewpoint emphasises a personal approach to care delivery during labour and birth. The key factor lies in ensuring that women receive respectful treatment, combined with well-coordinated care and timely information flow.

Viewpoint 2: the empowering approach

Within this viewpoint, maintaining autonomy is crucial and is accomplished by actively involving women in decision-making (statement 4, 4). They stress the importance of respecting the preferences of women during labour, as many have a clear vision they intend to realise (statement 3, 4).

> *"But for us, it's more about having our own wishes. When you take a course [hypnobirthing], you also gain a bit more knowledge, a bit more backbone, so to speak, to be able to say yes or no to certain things. You don't have to blindly obey. Of course, if there is a real danger to the life of the mother or child, then it's a different story." (Participant 11)*

Examples of women's preferences are a peaceful (statement 8, 3) and homey atmosphere (statement 7, 0) and the option to give birth in a birthing pool (statement 9, 1). They value the ambiance of the birth room and try to preserve peace. This clarifies why they are particularly opposed to the continuous presence of visitors (statement 29, −4) or care professionals (statement 14, −4). This further explains why early admission is not preferred, as they feel most comfortable at home (statement 22, −3).

> *"I actually want as much peace in the room as possible, not too many people constantly coming in and out. I want to be able to indicate what I need myself, and not have them constantly asking. That way, you're actually disturbed all the time, and I'm told that it just takes you out of your concentration, so to speak, or your own atmosphere. And then, well, it's just not pleasant." (Participant 11)*

Medical pain relief is not a shared preference within this viewpoint (statement 5, −2 and statement 6, −3). The women expressed their critique on the medicalisation of maternity care. According to them, childbirth is a physiological process that needs to be preserved. Natural forms of pain relief are therefore valued, such as the birthing pool.

In summary, within this viewpoint, an empowering approach is valued. This is realised by considering the wishes and needs of the women and including them as equals in the decision-making process.

Viewpoint 3: the expert approach

The women with this viewpoint favour the expert approach because they have confidence in the maternity care system and trust the care professionals involved in their care. However, this trust needs to be reinforced through the experience of well-coordinated care (statement 10, 4) and consistent information delivery (statement 12, 4).

> *"[…] it gives you comfort. […] It was the obstetrician, she was basically in the lead, but they did everything in consultation with a supervisor at a distance, yeah, and it feels like that, yeah, it gives a kind of confidence that there is someone watching and […] a supervisor who has given approval for certain steps." (Participant 3)*

The expert approach also relates to the perception of the birth plan, which is rather perceived as a formality. Therefore, the women with this viewpoint put less emphasis on the domain personal preferences. They prefer care professionals to focus on delivering care instead of their personal wishes and needs. Moreover, they prefer to put medical decision making in the hands of the professionals but appreciate to be kept up to date in a timely (statement 24, 2) and understandable way (statement 25, 2).

> *"I didn't have a birth plan. Some people like certainty, I thought it was a bit silly. It goes as it goes. […] The people who help me give birth do it 10 times a day, so they have more knowledge than we do." (Participant 1)*

Within this viewpoint, minimising or preventing transport during labour is a key preference. They emphasised the discomfort experienced during transport, which explains the preference for not being transported for referral (statement 13, 3), to travel no longer than 30 minutes (statement 20, 2) and to give birth in their own region considering travel time and geographical location (statement 21, 1).

In summary, the women holding this viewpoint emphasise the expert approach as they are confident in the clinical expertise of the professionals. They wish a primary focus on their health and safety. They expect high-quality care, which for them counts as well-coordinated care.

Viewpoint 4: the needs-based approach. Women with this viewpoint prioritise responsiveness from care professionals and the maternity care system to their needs during labour and birth. This is translated into a needs-based approach, where the focus is on meeting their essential needs rather than their wishes, which they consider secondary. For example, women with this viewpoint need to be in a hospital within 30 minutes (statement 20, 4), and therefore are less concerned about the exact location of the hospital (statement 21, −4).

"[.], it's about where I am at that moment, if I'm not in my own region… I don't necessarily have to go to my own region, I don't have time for that." (Participant 25)

Another aspect of accessibility needed within this viewpoint is the option to recover post-partum (statement 23, 4). Certain hospitals adopt a policy of discharging women two hours post birth, if possible, to manage capacity. Women with this viewpoint find this challenging and express a need for an extended post birth stay to rest and recover. They accentuate the post birth discomfort and pain.

"I had a strong feeling of being rushed. And I experienced that as very unpleasant. Yes, you have two hours and then you must leave. […] And I was also pushed like 'come on, you have to take a shower.' But in my head, I was still processing the childbirth, and it was just going way too fast." (Participant 30)

Next, these women need uniform provision of information from health care professionals. They consider it important that the information is being shared appropriately and understandably (statement 25, 3). When health care professionals give the same information, it takes away stress from the woman giving birth and timeliness allows the woman and her partner to prepare for decisions to be made. It is noticed, however, that the manner of communication does not necessarily have to be pleasant, so the preference is particularly placed on the clarity and timing of the information.

In summary, within this viewpoint, a needs-based approach in care delivery is preferred. This entails a quick, effective and supportive response to the specific needs of the women in labour and birth. This relates to a trait of the maternity care system, in terms of accessibility, as well as the maternity care professional, in terms of recognising women's needs and acting upon them.

Discussion

This study was undertaken to systematically study a variety of women's preferences for care delivery during labour and birth. Our findings suggests that women's preferences are multi-faceted, as the studied domains are not equally important within this study sample. The application of Q-methodology revealed four distinct viewpoints, namely: the personal approach, the empowering approach, the expert approach, and the needs-based approach.

These viewpoints stem from diverse expectations women have of the maternity care system. Those inclined towards the personal approach trust the system but fear being reduced to mere case numbers, emphasising their desire for individual recognition. Advocates of the empowering approach seek to maintain control, wishing to be active decision-makers rather than passive recipients. Those favouring the expert approach prefer to delegate decision-making to professionals, prioritising a primary focus on safety. Lastly, women with the needs-based approach expect a quick, effective and supportive response to their needs. The emerged viewpoints underscore the importance of clinical, physical, socio-cultural and psychological aspects of care, which aligns with previous work [15,16]. In the context of person-centred care, which aims to activate persons in care delivery, it appears that women also have different perspectives on their desired role in the process. These preferences should be recognised in future advancement of person-centred care.

The viewpoints are constructed with a primary focus on the relative ranking of the individual statements rather than the overarching domains. It is relevant to also study the relative importance given to the domains, based on the ranking of the statements corresponding with the domains. First, 'information and education' is deemed important consistently across all viewpoints. As shown by the consensus statements [Table 3]. The entire sample expressed a need for adequate information provision. The most frequently provided explanation was the reliance on the expertise of the care professionals during labour and birth. It is desired to be informed about the progress of childbirth and to receive clear guidance. Within the domain, timeliness is mostly valued, together with an appropriate and understandable provision of information, which is supported by previous work on preferred maternity care services [10].

The second most important domain is 'personal preferences', also shown by a consensus statement [Table 3]. The study cohort emphasises unanimously the importance of respect during care delivery during labour and birth. The importance of appropriate interaction is described in recent work showing similar findings in terms of respect and communication among Dutch women [28,40]. Respect encompasses more than simple politeness; it is about genuine emotional availability [15]. Previous work shows how respectful and empathetic interaction is often prioritised over factors related to possibilities for pain relief and interventions [41–43]. This underscores the powerful influence of appropriate interaction.

Notably, the ranking of the other statements within the domain 'personal preferences' show mixed opinions. For example, it shows how women look differently upon being included in decision-making, ranging from an active to a passive role. In previous work, shared decision-making is often reported as an important preference of women during labour [13,29,30,36]. Scholars claim that attention for women's autonomy falls short in current client-care provider interaction in the Netherlands [28]. While it may be assumed that all women desire active involvement in decision-making, our study reveals a preference among some women to entrust these decisions to care professionals.

The domains that were considered of less importance across all viewpoints were 'family and friends', 'physical comfort' and 'continuity and transition'. Most of the participants appreciated the inclusion of the partner during decision-making but desired a primary attention of the professionals on themselves. Also, the presence of other family members, friends or other individuals was not prioritised. The findings regarding physical comfort were unexpected in comparison with previous studies, specifically regarding the availability and accessibility of pain relief. Previous studies highlight the importance of pain relief, while our study sample perceives this subject as less important [10]. A potential explanation could be the relatively lower pain relief use in the Netherlands compared to other countries [44].

The findings concerning the domain 'continuity and transition' also contrast previous work on continuity of care during labour [10,14,15,44–48]. In our study, the domain 'continuity and transition' captures continuity of care professional. Continuity of information and policy is captured by the domain 'coordination of care' and continuity of location by 'access to care'. Previous work emphasises the importance of continuity of care professional for women in Australia [14]. Surprisingly, our

study cohort puts less emphasis on this type of continuity. Instead, continuity of information and policy was perceived most important. Our cohort detaches continuity of information and policy from continuity of care professional. The participants expressed that continuity of care professional is not always feasible, which – for them – is acceptable when continuity of information and policy can be assured, and respectful interaction can be counted on. This is in line with previous studies that describe the benefits of continuity of professionals and recognize these factors, but also state that continuity of professionals is not easily achievable in practice [49,50].

Our study has several strengths. Firstly, the statement set was constructed based on previous work on the study topic and categorised using eight domains. This approach ensured the inclusion of a representative set of relevant statements. Furthermore, this structured approach ensured a balanced inclusion of different types of preferences based on the categorisation using the different domains. As such, we gained a comprehensive understanding of women's preferences for care delivery during labour and birth.

Secondly, in contrast to methodologies applied in previous work, which are predominantly characterised by survey instruments, the application of Q-methodology stands out for its ability to delve into the nuanced aspects of individual perspectives on a specific topic. Furthermore, it is able to identify commonalities in these. Even though preferences are unique and based on previous experiences, the systematic approach of the method abstracts shared opinions. Survey instruments do not allow for this. Therefore, the application of Q-methodology provides a unique understanding, which is not thoroughly achieved by previously applied methodologies. This provides invaluable insights for day-to-day work [16].

Thirdly, the application of Q-methodology allows for the inclusion of a diverse group of participants. This is particularly relevant considering preferences evolve throughout a women's life. For instance, it varies between pregnancy and childbirth, and between giving birth for the first time and subsequent times [39]. Our sample is diverse in terms of participants currently pregnant, post-partum and parity. Therefore, the viewpoints are built on a wide range of experiences.

Our findings must be interpreted within the limitations of this study. Firstly, our objective was to include a heterogeneous group of participants to encompass diverse viewpoints on the subject. Diversity was achieved for the determinants age, education, parity, pregnant or post-partum and induced labour. The results concerning the mother's country of birth are ambiguous, as they include women born in the Netherlands whose parents have a migration background. Since it is possible that some viewpoints may be underrepresented, future research could be conducted with women from different countries of birth and potentially different cultural backgrounds to confirm or supplement the results of this study.

Secondly, we aimed for comprehensiveness in the statement set by a thorough literature study, by structuring the statements using the eight domains, organising expert opinions and pilot interviews. It is possible that statements on the subject were overlooked that could have altered the ranking results. To mitigate this, participants were explicitly queried about any omitted topics at the end of every interview. Their responses indicated that they did not miss any statements, which indicates sufficient coverage of the topic.

Thirdly, it is important to interpret the findings with caution. While the results highlight the varying importance of statements from different viewpoints, it's important to note that ranking some statements as less important does not diminish their actual significance. The distribution grid used in the process compels participants to make choices between statements, potentially resulting in a ranking that might inaccurately portray statements as less important when they could hold equal importance.

This study was conducted to systematically study a variety of women's preferences for care delivery during labour and birth. It was the aim to inform future restructuring of maternity care to improve the experienced capacity issues. Based on our findings, we suggest two solutions to this problem. First, the study cohort puts less emphasis on continuity of care professional, which provides flexibility in staffing. If women can count on respect, sympathy, and adequate information provision, this is a plausible solution. Second, women seem to attach less value to the specific location of birth if travel time remains below 30 minutes. Therefore, agreements about sharing capacity between different hospitals within a geographical area might be plausible. For example, in the form of agreements for diverting to a neighbour hospital in times of capacity constraints. The findings provide a first step in understanding what women prefer during labour and birth. The next step would be to include them in the design of future restructuring efforts.

Conclusion

This study is the first to apply Q-methodology to systematically study a variety of women's preferences for care delivery during labour and birth. This resulted in the emergence of four distinct viewpoints, namely the personal approach, the empowering approach, the expert approach, and the needs-based approach. Furthermore, the study reveals a uniform preference for respectful interaction and adequate information provision. The findings help to gain a better understanding of what is most important during this life-event. This provides valuable insights for future restructuring of maternity care and the prioritisation of limited resources. Furthermore, the findings support maternity care professionals in recognising the needs of women in labour and to be responsive to these needs.

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Ethical Statement

Ethical approval for this study was obtained (22/08/2023) from the medical ethics committee of the Erasmus Medical Centre, Rotterdam, the Netherlands, under reference number MEC-2023–0474. Participants gave informed consent to participate in the study before taking part.

CRediT authorship contribution statement

M.A. van den Berg: conceptualization, methodology, investigation validation, formal analysis, writing – Original Draft, project administration. **M. van der Voorden:** conceptualization, methodology, investigation validation, formal analysis, writing – Review & Editing, project administration. **E. Bossenbroek:** investigation, validation, writing – Review & Editing. **H. Ernst-Smelt:** validation, funding acquisition, writing – Review & Editing, supervision. **K. Ahaus:** validation, writing – Review & Editing, supervision. **A. Franx:** validation, writing – Review & Editing, supervision

Declaration of Competing Interest

The authors declare that they have no conflict of interest.

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Author agreement

The authors confirm that this work is original and has not been

published elsewhere, nor is it currently under consideration for publication elsewhere. There are no conflicts of interest to disclose. All authors approved the manuscript being submitted. The authors abide by the copyright terms and conditions of Elsevier and the Australian College of Midwives.

Disclosures

During the preparation of this work the author(s) used ChatGPT 3.5 (OpenAi) in order to improve readability and language. After using this tool/service, the author(s) reviewed and edited the content as needed and take(s) full responsibility for the content of the publication.

Appendix A. Supporting information

Supplementary data associated with this article can be found in the online version at doi:10.1016/j.wombi.2024.101842.

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