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Midwives' readiness for midwife-led care: a mixed-methods study

Yvonne J. Kuipers [a,*], Valerie Bosmans [b], Ellen Thaels [c], Vanessa De Bock [b]

[a] School of Health and Social Care, Edinburgh Napier University, Sighthill Campus, Edinburgh, Scotland EH11 4BN, United Kingdom
[b] Department of Health and Science, School of Midwifery, Artesis Plantijn Hogeschool Antwerpen, Noorderplaats 2, Antwerp 2000, Belgium
[c] Faculty of Health & Wellbeing, School of Community Health & Midwifery, University of Central Lancashire, Preston, United Kingdom

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ABSTRACT

Background/Problem: To integrate midwife-led care in Belgian maternity services, understanding whether midwives are primed of executing the change is needed.
Aim: To explore Belgian midwives' readiness for midwife-led care and understand the underlying processes.
Methods: A mixed-methods sequential study: 1) A survey including 414 practising midwives and 2) individual interviews with 12 (student) midwives. General linear model analysis was used to examine the trend between knowledge, self-efficacy and performance mean scores - indicators of midwife-led care readiness - proposed in a 27-item questionnaire. The Readiness Assessment Framework served as a template for qualitative thematic analysis.
Findings: Template analysis illustrated the underlying mechanisms of midwifery-led care readiness: Governmental and institutional steering and rule-making functions, regulation and reimbursement, awareness of midwife-led care among stakeholders, capacity to extend primary care postpartum services to antenatal and intrapartum care and healthcare professionals' lack of awareness of available data of women's experiences and midwife-led care efficacy in Belgium. These qualitative findings contribute to the understanding of the significant trend with decreasing function for knowledge, self-efficacy and performance mean scores of 25 midwife-led care readiness indicators, and the two non-significant indicators referring to a physiological postpartum period.
Discussion/Conclusion: In determining midwife readiness for midwife-led care, we observed adequate knowledge mean scores, associated with low self-efficacy and even lower midwife-led care performance mean scores. Our findings suggest limited readiness for MLC in antenatal and intrapartum care. Belgian midwives are the domain experts of postpartum services but face challenges in extending midwife-led care to antenatal and intrapartum services.

Statement of significance

Problem or Issue

Although there is a global transition towards midwife-led care and recognition of midwives as autonomous primary healthcare professionals, this shift is less apparent in Belgium. Despite the positive health outcomes associated with midwife-led care, its implementation varies widely worldwide, including non, mal, or poor model utilisation. Very little describes midwives' readiness for midwife-led care in Western countries.

What is Already Known

The World Health Organisation and the International Confederation of Midwives recommend midwife-led care as childbearing individuals' first choice of care. Midwives thrive when practising the midwife-led care model, reporting well-being and job satisfaction.

What this Paper Adds

Belgian midwives demonstrate that despite adequate knowledge of midwife-led care, low self-efficacy leads to even lower midwife-led care performance. Underlying mechanisms are governance, regulation and reimbursement, service provision and health information, and midwife-led care awareness among childbearing women and care professionals.

* Corresponding author.
E-mail address: y.kuipers@napier.ac.uk (Y.J. Kuipers).
@YvonneFontein (Y.J. Kuipers)

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1. Introduction

Midwife-led care (MLC) is a model of care in maternity services. In MLC the midwife is the lead professional in planning, organising, and providing care to a woman from antenatal booking to the postpartum period within a multi-disciplinary network of consultation and referral with other healthcare providers. [1,2] The World Health Organisation [3] and the International Confederation of Midwives [2] recommend MLC as childbearing individuals' first care choice. Worldwide evidence shows that the model positively influences the long- and short-term health and well-being of childbearing women and their infants, it has a positive effect on maternal satisfaction and shows a cost-saving trend. [1] MLC is internationally recommended as a quality-of-care measure. [3] Of additional importance, midwives thrive when practising the MLC model, reporting high levels of well-being and job satisfaction. [4–6]

Despite the global transition towards MLC and the recognition of midwives as autonomous primary healthcare professionals, this shift is less apparent in Belgium. [7,8] Maternity care services in Belgium, are hierarchically structured and are mainly overseen by obstetricians within a medical model of care. Obstetricians direct antenatal and intrapartum care, with nearly all births (99 %) taking place in the hospital, [7,9] where the midwife has less autonomy. [10] A hospital midwife and an obstetrician typically attend the birth in a hospital setting. Usually, the woman has never met the midwife before. After the birth, women remain in the hospital for approximately two days and receive care from hospital-based midwives. Once discharged, the primary care midwife provides further postpartum care for up to one year. [11] Currently, 53 % of women receive care from primary care midwives at some point, mainly during the postpartum period. [11] Belgian midwives are legally allowed and competent to practise independently and autonomously to provide antenatal, intra- and postpartum care in hospitals and primary care settings to women with an uncomplicated pregnancy, labour and birth, including home birth. [12] In primary care, midwives work independently in group practices or public health organisations. [13] Of the Belgian practising midwives, 78 % work in a hospital setting, 9 % in primary care and 13 % combine both. [14] Belgian childbearing women have high opinions about primary care midwives' and value them because of their availability, supportiveness, personalised care and their ability to involve women in shared decision-making processes. [15,16]

Significant changes to how maternity services are offered have impacted the scope of practice for Belgian midwives in providing MLC. In 2019, the length of the postpartum hospital stay was shortened, resulting in a prominent role for primary care midwives enabling them to gain more autonomy in postpartum care. [17] In 2023, the Common Community Commission approved specific regulations in the Brussels Capital region: continuity of perinatal care, and the integration of midwifery units in hospitals. [18] The Flemish Organisation of Midwives started to collect midwife-led care data in Flanders and the Brussels Capital region among 31 primary care practices (108 midwives), showing good outcomes concerning spontaneous births, perineal damage, blood loss, and Apgar scores. [8]

With the emergence of MLC initiatives in Belgium, the researchers of this study felt that it was important to explore the MLC readiness of Belgian midwives to inform MLC change and utility. Midwives wish to transition to MLC [19] but very little describes midwives' MLC readiness in Western countries, while fifty per cent of change efforts in healthcare fail due to a lack of readiness. [20] For measuring MLC readiness, it is necessary to know its components to understand the complexities and nuances that are core to its integration into maternity services. [21] Change readiness is the degree to which those involved are individually and collectively primed and capable of executing the change. Readiness is operationalised as a tangible and immediate indicator to accept, embrace, adopt and act in the immediate future to alter the status quo purposefully. [22,23] Knowledge, self-efficacy and performance are regarded as operational indicators of readiness because they explain effectiveness in shifting to and adapting models of care [24,25] and predict the feasibility of MLC utility. [6] Our primary interest was to investigate whether MLC knowledge was associated with self-efficacy, and MLC self-efficacy with MLC performance. We hypothesised that a positive trend between the MLC readiness indicators knowledge, self-efficacy and performance predicts MLC change readiness, and thus readiness to commit and act, [26] while a negative trend does not. The premise is that there are many processes which, separately and together, either help or hinder the movement of the latest best research into practice. Our secondary interest was to uncover these processes to address midwives' readiness to optimise and sustain MLC change. [27]

2. Methods

2.1. Design

To explore Belgian midwives' readiness for midwife-led care and the underlying processes, we conducted an explanatory mixed-methods sequential study, where the core component is quantitative (survey), and the supplemental component is qualitative (interviews). [28] We integrated the data by combining quantitatively established outcomes with a qualitative description of the underlying process. This integration enhances the contextual understanding and improves the usefulness and integrity of the findings concerning MLC readiness. [28]

2.2. Sampling and sample

Midwives were eligible to participate when currently being professionally involved or having been involved in the care of perinatal women during the last year, irrespective of years of experience, setting (i.e. primary, secondary, tertiary), type of care (i.e. antenatal, intrapartum, postpartum) or care model (i.e. obstetric-led, midwife-led, shared care). We used convenience sampling and snowballing techniques to recruit Belgian midwives in Flanders (Dutch-speaking) and the Brussels Capital region (Dutch- and French-speaking). Primary care midwifery practices, hospitals, maternity units, lead midwives, higher education institutions, and midwifery organisations were informed about the study by e-mail which included the study link. We accessed publicly available email lists, and social media platforms such as Facebook© and LinkedIn© to distribute the survey invitation, including the link to the questionnaire. Sample size calculation showed that we needed a minimum of 384 participants ($p < 0.05$, CI 95 %) for reliable inferences of our survey findings. At the end of the questionnaire, participants could express their interest in participating in the next phase of the study (interviews) by leaving their email addresses. We recruited student midwives from one Flemish university for the interviews via the university's intranet secure group email system. Students were eligible in their last year of study, irrespective of clinical placement experiences in primary care. They could express their interest by emailing the researchers.

2.3. Quantitative study – survey

2.3.1. Data collection

We used two core documents to systematically generate items for our questionnaire to collect MLC context-specific data: [21]

1) A mixed-methods synthesis reporting on various midwives' behavioural factors promoting the utility of MLC reported by midwives [6]. This document presents a model of the utilisation of MLC, that is, what midwives do (behavioural components) to provide feasible, appropriate, meaningful, and effective MLC. [6]
2) The Midwifery Unit Network (MUNet) Standards [29] informing and supporting quality service provision for perinatal women. The MUNet Standards are essentially written for midwife-led units but apply to maternity care settings offering MLC. The MUNet Standards

include 29 key standards (recommendations), albeit not all standards apply to every country because of the diversity in maternity services between and within countries. [29]

To construct the MLC items for the questionnaire, we followed a stepwise approach:

1) We had access to the original mixed-methods synthesis data set of Kuipers and colleagues. [6] Two authors (VB,YK) independently extracted the behavioural items from this data set that showed strong evidence for MLC performance (e.g. 'sharing values and beliefs', 'maintaining skills to support homebirth', 'partnership is at the heart of midwifery'). After comparing and discussing the extracted items, a consensus was reached, and the items were listed.
2) Two researchers (ET,YK) independently added the MUNet standards that matched each behavioural item (e.g. 'a written and public care philosophy of shared values and beliefs', 'integration in the community', 'clear referral pathways'). After discussing the findings, the matching standards were listed. We selected the standard when at least two of three researchers (ET,VB,YK) considered the standard relevant and appropriate for the Belgian midwifery context. [29] In case of ambiguity, the researchers returned to the dataset and the core documents to verify the behavioural item or standard. After reaching a consensus, we selected 24 MUNet standards.
3) Two researchers (ET,YK) drafted statements combining the core meanings of the items obtained in steps 1 and 2. We discussed and adapted the formulation and meaning of the MLC items, ultimately reaching a consensus on the final set of 27 statements. The statements were pretested by a midwife, a lecturer, a guideline developer and an independent researcher, resulting in the rewording of some statements (MLC indicators).
4) The questionnaire was translated into French using the forward/backward method (VDB,YK). Consistency was ensured by checking the Dutch and French MUNet versions to verify wording (https://www.midwiferyunitnetwork.org/mu-standards/).

We collected the data between June 2022 and March 2023 using the LimeSurvey© online survey tool.

Information about sociodemographic and personal details was collected. We asked the participants to score the 27 MLC indicators for self-perceived levels of knowledge ('I have the knowledge to do this'), self-efficacy ('I can do this'), and performance ('I do this'), using a Likert scale from 1 to 10 ('totally disagree' to 'totally agree'). Before initiating the survey, all respondents signed an electronic consent form.

2.3.2. Statistical analysis

We regarded participants who completed <10 % of the MLC items as non-completers. We compared the characteristics of completers with non-completers using T-Test, Kruskal-Wallis and Chi-square. We used a general linear model analysis to examine the trend between knowledge, self-efficacy and performance mean scores per MLC variable and its effect size. A partial eta-squared (ηp^2) effect size of 0.01 indicates a small effect size, 0.06 is a medium effect size and 0.14 corresponds to a large effect size. [30] We used the Statistical Package for the Social Sciences© (SPSS) version 29 for the analysis.

2.4. Qualitative study - interviews

2.4.1. Data collection

A preliminary analysis of 107 questionnaires (September 2022) showed a consistent decreasing trend between knowledge, self-efficacy and performance of most MLC variables, apart from postpartum-related variables. The interview aimed to explore the trends among the item mean scores for self-reported knowledge, self-efficacy and performance. At the beginning of the interview, the researchers shared the preliminary findings with the participants. The opening question was 'Having the knowledge and to a certain extent feeling able to provide MLC, can you think of how or why this explains the low(er) MLC performance among midwives?', followed by probing questions. Two researchers (VB,VDB) conducted the interviews using Microsoft Teams© in November and December 2023. Interviews lasted between 45 and 60 minutes and were audio-recorded. The interviews were conducted in the Dutch language. Before initiating the interview, all respondents signed an electronic informed consent form.

2.4.2. Template analysis

Data was analysed using the template analysis method. [31] Template analysis is a particular style of thematic analysis which has been widely utilised in organisational and management research. [32] The Readiness Assessment Framework was chosen for our analysis, [21] its five pillars representing the a priori (sub) themes to address MLC readiness (Box 1). We transcribed and anonymised the interviews and randomly assigned a participant number to the transcripts. Two researchers (VB,VDB) read and re-read the transcripts. After each interview, the researchers independently highlighted text segments that said something relevant related to the pillars of the Readiness Assessment Framework. These text segments were extracted (paper and pencil method). [33] After all the data were collected, the findings were compared and discussed and the agreed transcript extracts of each (sub) theme were copied to sticky notes. At this point, the extracts were categorised under the different themes and subthemes congruent with the Readiness Assessment Framework. Additional themes could be added, and a priori themes could be deleted or modified. [33] Integration between the pillars was identified on a mind map drawing lines between them, [32] facilitating the final interpretation and write-up of the data using a theme-by-theme approach. [33] We held regular meetings (face-to-face and online) throughout the analysis phase to reach an agreement among the researchers.

3. Results

3.1. Survey

3.1.1. Participants

A total of 505 surveys were returned, including 414 completed questionnaires (82 %). Most completers were Dutch-speaking midwives. All participants identified as women. Around half of the sample (53 %) worked in a primary care setting and the other half was hospital-based, fulfilling various roles and scopes of practice (Table 1). The midwives were between 20 and 68 years of age (Mean 38.5, ±11.07) and had two months to 42 years of work experience (Mean 14.01, ±10.84). Midwives with multiple roles often combined community practice with antenatal hospital clinics, labour or the postnatal ward. Non-completers more often worked in high-dependency units and secondary care settings (p <.001; p <.001).

3.1.2. General linear model analysis

The two midwife-led care variables 'facilitating a physiological postpartum period' and 'mentoring students and (newly qualified) colleagues in physiologically approaching the postpartum period', showed no significant trend between the midwives' knowledge, self-efficacy and performance ($p.$ = 64, $p.$ = 44), indicating no significant differences between knowledge, self-efficacy and performance. We observed a significant non-linear trend with decreasing function for knowledge, self-efficacy and performance mean scores of the other 25 MLC variables (varying between p <.001 and p = .004). The 25 variables consistently showed significant quadratic decreases between knowledge and self-efficacy and between self-efficacy and performance mean scores, indicating a negative slope between knowledge and self-efficacy and between self-efficacy and performance mean scores. We observed large differences between the mean scores of 'facilitating a healthy pregnancy', 'facilitating a healthy labour and birth', 'mentoring students and

Box 1
Pillars Readiness Assessment Framework.

Governance

- Leadership and planning
- Guidelines and best practice

Regulation and reimbursement

- Regulation
- Reimbursement and funding

Identified need

- Epidemiology
- Patient awareness and information
- Healthcare professional awareness and referral patterns

Service provision

- Workforce capacity
- Health facility capacity

Health information

- Research and data
- Patient-generated data

(The Health Policy Partnership) [21]

Table 1
Details participants survey (N = 414).

	%/ N
Dutch-speaking midwives	86.6/ 284
French-speaking midwives	31.4/ 130
Primary care setting	53.6/ 222
Secondary care setting	30.7/ 127
Tertiary care setting	15.7/ 65
Community practice	48.1/ 199
Birth centre	2.4/ 10
Antenatal hospital clinic	21.5/ 89
Labour ward	38.2/ 158
Postnatal ward	32.9/ 136
High dependency unit	8.9/ 37
Other*	8.2/ 34
Multiple roles	36.2/ 150
Leading/coordinating role	15.2/ 63
Bachelor's degree	84.8/ 351
Master's degree	15/ 62
PhD	.2/ 1

organisation of midwives, maternity care organisations, paediatrics, education, fertility, abortion clinic, mental health support

* Ultrasound, antenatal group care, childbirth educator, lactation consultant,

(newly qualified) colleagues in physiologically approaching pregnancy', 'mentoring students and (newly qualified) colleagues in physiologically approaching labour & birth' and 'starting a community practice to be visible and accessible to childbearing women'. Small differences were observed between the mean scores of 13, and medium differences between the mean scores of seven MLC variables (see Table 2).

3.2. Interviews

3.2.1. Participants

A total of 29 email addresses were received from (student) midwives showing their interest in participating in the interviews. After contacting them, 17 (student) midwives agreed to participate (58.6 %). Five interviews could not be scheduled due to difficulties finding a mutually convenient date, leaving 12 participants/interviews. Eight practising midwives in Flanders and the Brussels Capital region were interviewed. Three practised as independent caseload midwives, one provided community-based antenatal and postpartum care, one worked in a birth centre, and three worked in a secondary care setting (labour and postnatal wards). The midwives had five to 36 years of work experience. Four final-year midwifery students were interviewed. They all had clinical antenatal, intrapartum and postpartum care experiences and were between 22 and 24 years of age. Ten participants practised in Flanders, two in the Brussels Capital region.

3.2.2. Readiness assessment framework template analysis

Congruent with the Readiness Assessment Framework, presented in Box 1, our analysis includes five themes and 11 subthemes. We changed the subtheme 'Leadership and planning' into 'Governmental and institutional roles and the subtheme 'Guidelines and best practice' into 'Guidelines and practice'. We did not delete or add themes. [33] We replaced the word patient with woman.

3.2.2.1. Theme 1. Governance. **Governmental and institutional roles**

Participants perceive that the government does not recognise the midwife's professional role and competencies. Governmental knowledge about the positive effects of MLC is regarded as inadequate. The general perception is that the midwifery profession is underappreciated,

Table 2
MLC items and trends knowledge, self-efficacy, performance mean scores.

MLC Items (n = 27)	Knowledge	Self-efficacy	Performance	*F*	*P**	ηp^2
Formulating a philosophy setting out the MLC model's values and beliefs	8.1 (±1.47)	7.6 (±1.69)	6.9 (±2.34)	18.79	<.001	.05[a]
Facilitating a physiological pregnancy	8.4 (±1.48)	7.9 (±1.83)	6.1 (±3.36)	49.59	<.001	.14[c]
Facilitating a physiological labour & birth	8.6 (±1.39)	7.6 (±2.25)	4.8 (±3.88)	145.81	<.001	.28[c]
Facilitating a physiological postpartum period	9.3 (±.77)	9.2 (±.02)	9.2 (±.84)	17.48	.64	.04[a]
Practicing according to a respect, diversity and inclusion policy	8.1 (±1.39)	7.8 (±1.65)	7.6 (±1.98)	11.31	.004	.06[b]
Working cross-disciplinary within maternity services	8.3 (±1.34)	7.9 (±1.64)	7.3 (±2.05)	9.95	<.001	.03[a]
Applying multi-disciplinary and inter-agency transfer/referral policies, protocols and/or pathways	8 (±1.7)	7.6 (±1.89)	7.0 (±2.63)	8.80	<.001	.02[a]
Committing to personalised and individualised care for all women	8.9 (±1.02)	8.5 (±1.33)	8.1 (±1.9)	6.18	<.001	.02[a]
Informing women about pathways of care	8.0 (±1.43)	7.6 (±1.62)	7.2 (±2.1)	6.94	<.001	.02[a]
Practising as a community midwifery	8.1 (±2.20)	7.3 (±2.86)	6.1 (±3.9)	18.87	<.001	.05[a]
Leading a community practice (team)	5.2 (±3.08)	4.5 (±3.26)	2.4 (±3.2)	40.88	<.001	.1[c]
Showing leadership to promote the MLC philosophy	5.4 (±3.07)	5.1 (±3.25)	2.8 (±3.36)	22.19	<.001	.06[b]
Doing all activities during pregnancy, labour and birth and the postpartum period (e.g. breastfeeding support, hearing screening, examination newborn, discharge, group care)	8.0 (±1.7)	7.1 (±2.35)	5.6 (±3.3)	33.14	<.001	.1[c]
Detailing the required community midwife's competencies	7.7 (±2.03)	6.7 (±2.28)	5.1 (±2.38)	21.00	<.001	.06[b]
Detailing MLC educational and professional developmental needs	7.6 (±2.1)	6.4 (±2.2)	5.1 (±3.0)	12.02	<.001	.03[a]
Mentoring students and (newly qualified) colleagues in physiologically approaching pregnancy	8.2 (±1.88)	7.6 (±3.18)	5.9 (±3.25)	28.87	<.001	.19[c]
Mentoring students and (newly qualified) colleagues in physiologically approaching pregnancy labour & birth	8.0 (±1.86)	6.9 (±2.54)	4.7 (±3.78)	60.73	<.001	.15[c]
Mentoring students and (newly qualified) colleagues in physiologically approaching pregnancy the postpartum period	8.9 (±1.13)	8.8 (±1.11)	8.7 (±1.44)	23.55	.44	.07[b]
Practising according to the biopsychosocial care model	7.1 (±2.52)	6.4 (±2.5)	6.1 (±2.7)	16.79	<.001	.05[a]
Building a relationship with women	8.1 (±1.70)	7.6 (±1.77)	7.1 (±2.3)	2.67	.001	.01[b]
Starting a community practice to be visible and accessible to childbearing women	6.7 (±3.27)	5.7 (±3.43)	4.3 (±4.04)	8.57	<.001	.1[c]
Practising autonomously in caring for healthy mothers and babies	7.7 (±2.26)	6.9 (±2.88)	6.0 (±3.59)	8.05	.005	.02[a]
Practising while respecting the autonomy of high- and low-risk women	8.6 (±1.37)	7.8 (±2.08)	7.3 (±2.58)	10.27	<.001	.03[a]
Showing MLC leadership at operational level to support less experienced colleagues, articulating a vision and commitment	6.2 (±2.83)	5.5 (±3.0)	4.4 (±3.35)	22.80	<.001	.07[b]
Informing women about place of birth (including home birth)	8.8 (±1.52)	7.9 (±2.41)	6.7 (±3.28)	7.79	.006	.02[a]
Support women in their choice of place of birth (including home birth)	8.7 (±1.7)	7.6 (±2.7)	5.7 (±3.46)	1.57	<.001	.01[a]
Optimising MLC practices	7.3 (±2.68)	6.7 (±3.0)	5.6 (±3.42)	28.24	<.001	.08[b]

[*] Quadratic trends reported
[a] Small effect-size
[b] Medium effect-size
[c] Large effect-size

illustrated by low financial reimbursement. The participants perceive the lack of governmental interest and appreciation as implied messages of degrading and undervaluing the midwife and midwifery. Self-perceived invisibility and submissiveness affect confidence in being and existing as a midwife.

> *"The government did not increase midwifery primary care fees, emphasising that the midwife is not valued, and her work is not important" (Participant 6)*

> *"There is a lack of politicians and female politicians who are concerned about or interested in midwifery or midwives, we are invisible and not recognised" (Participant 8)*

> *"Our healthcare system simply does not support midwives or midwife-led care" (Participant 2).*

Participants also describe the situation where the government took a proactive role: the positive profiling and expertise development of the midwife in the postpartum period following the introduction of short-stay maternity care and the more recent implementation of birthing homes in hospitals in the Brussels Capital region – emphasising the government's role in MLC.

> *"The government plays a big role in change, for example, the decision to give primary care midwives the responsibility to provide postpartum care" (Participant 1).*

Guidelines and practice

Participants describe that hospital obstetric-led protocols are long-standing and have been in place for a considerable time. The participants note that over the years, a risk-intolerant policy has been adopted, affecting the ability and opportunities for hospital midwives to act autonomously and utilise a physiological approach - dismissing the midwives' knowledge and skills, potential and content of their care. In the hospital setting, midwives are typically not assigned to provide antenatal care, leading them to develop expertise primarily in intrapartum and postpartum duties which they numerously and repeatedly perform, often under the auspices of the obstetrician.

"Obstetricians make protocols that suit them and the hospital" (Participant 9)

"Hospital management recognises the obstetrician as the lead in birth care, determining extremely risk-averse care management with little room for me to be involved in antenatal care or to pursue a physiological approach during birth… an underutilisation of my skills" (Participant 5)

"I do the same thing over and over again" (Participant 9)

3.2.2.2. Theme 2. Regulation and reimbursement. **Regulation**

The participants describe that hospitals and obstetricians use liability to intimidate or undermine the confidence of midwives in practising autonomously. Hospital management argues about who is legally liable when something goes wrong in the case of a primary care midwife supporting a woman during labour and birth on their premises, refusing the primary care midwife hospital entrance. Hospital-based midwives must keep the obstetrician informed about the woman's course of labour perceiving projected disbelief about their autonomy.

"The obstetricians say that we (midwives) are legally not allowed to support births autonomously or at home" (Participant 6)

"As an independent midwife, I was refused labour ward entrance because the hospital did not want to take responsibility for the care I provided to the woman in my care. This way, I can't provide continuity" (Participant 6)

"This obstetrician demands me to report every single thing…I feel insecure and disallowed to make my own decisions" (Participant 12)

Reimbursement and funding

The participants articulate details about the reimbursement mechanisms in primary and secondary care. According to the participants, the underpaid primary care midwife constitutes the low-value asset of midwife-led care. As a solution, some primary care midwives and birth centres have started to surcharge women. In hospitals where obstetricians receive a fee-for-service, obstetricians negotiate about the levy to fund hospital income.

"Because of the low fee, my work as a primary care midwife borders on altruism or voluntary work…I need to charge women a fee to financially survive" (Participant 3)

"Hospitals will never allow midwives to have more autonomy or pursue physiology because no interventions, no money. Midwife-led care will only reduce revenue for obstetricians and hospitals, and that will never happen" (Participant 1)

3.2.2.3. Theme 3. Identified need. **Epidemiology**

All participants voiced awareness of the Belgian high intrapartum intervention rate, stipulating how MLC holds potential for de-medicalisation.

Women's awareness and information

The participants indicate that the Belgian public, childbearing women, including those in the preconception period, are ignorant of the midwife's role, competencies, skills and knowledge, apart from women who have received care from the primary care midwife. The MLC model is a rather unfamiliar territory for childbearing women because the obstetrician is often women's default choice when pregnant.

"In general, women have no idea about midwives' competencies and qualifications, only women who are familiar with the primary care midwife do" (Participant 1)

"The obstetrician is the default choice when pregnant and the public opinion is that the midwife has an assisting role" (Participant 4)

Healthcare professional awareness and referral patterns

The participants articulate that apart from postpartum care there is no referral pathway where obstetricians refer women to midwives for antenatal or intrapartum care. The prevailing medical care model constrains midwives from gaining skills, expertise and autonomy in antenatal and intrapartum care, most visible in the hospital setting.

"Obstetricians never refer women with healthy pregnancies to us" (Participant 1)

"Midwives will never do certain things, not only losing their experience but also their courage and autonomy" (Participant 4)

Participants describe the apprehensiveness of hospital management regarding multidisciplinary collaboration with primary-care midwives. This affects continuity of care after referral and transfer, specifically during labour and birth.

"Collaboration between primary and secondary care usually takes a very long time and a lot of discussion to come to a formal partnership. And when it does happen, rules and conditions make the midwife's autonomous practice almost impossible" (Participant 3).

The participants identify the institutional hierarchy, hierarchical relationships between obstetricians and midwives, women choosing the obstetrician as lead carer, financial regulation and reimbursement and how midwives perceive obstetricians and vice versa as main barriers for MLC. Many participants describe the influence of the obstetrician's attitude and personality as decisive in positive and negative experiences of collaboration. The participants describe the perceived inequality between the level of education of obstetricians and midwives – the obstetrician having a higher level of education - affecting the midwife's assertiveness in MLC.

"The obstetrician likes to think he is the boss about what I do and who gets paid what" (Participant 10)

"The obstetrician was so authoritarian, patronising and unkind when I referred the woman during labour" (Participant 8)

"During discussions about care management, the obstetricians keep repeating they have more years of education than midwives, implying that midwife-led care is a utopia" (Participant 9)

3.2.2.4. Theme 4. Service provision. **Workforce capacity**

According to the participants, there are enough midwives in Belgium, although they perceive that not all midwives want to practice in the primary care setting. Birth centres in the Brussels Capital region are faced with an increase of women signing up for care and women signing up from outside the region. The participants articulate that despite the efforts of educational institutions, students often only encounter medicalised perinatal care during placements, due to a lack of placements in primary care, simultaneously observing the mentoring midwife in an assisting role as a midwife in a medical model. For students, it is hard to gain skills in antenatal care and observe autonomous midwifery practice.

"There are plenty of midwives, but MLC is not everybody's cup of tea which makes it difficult to respond to the increasing demand for it" (Participant 5)

"Women come to us to give birth because there is no birth centre in their region" (Participant 8)

"With few primary care practices, there is not enough opportunity for students to experience and develop autonomy" (Participant 12)

Health facility capacity

The participants share anecdotes of postpartum women who had never been aware that the primary care midwife also provides antenatal and intrapartum care, signing up for antenatal care in the next pregnancy, anticipating a home birth, giving birth at a birth centre or a midwife-led hospital birth. Often the obstetrician is the primary point of contact for women, who seems less inclined to inform women about other care options. Hospital midwives have little to no contact with pregnant women to inform them about their choice of care provider.

"The change in postpartum care resulted in this unforeseen demand of women wanting MLC in the next pregnancy" (Participant 9)

"Obstetricians and hospital midwives do not inform women about care choices; women often find out during the postpartum that the primary care midwife also provides antenatal and intrapartum care" (Participant 7)

One-to-one care or the midwife autonomously supporting a physiological birth in hospitals are mainly provided during night shifts when there is usually little presence of medical staff.

"When the cat's away…" (Participant 6)

3.2.2.5. Theme 5. Health information. **Research and data**

The participants acknowledge the availability of international MLC research. Some participants who had been involved in updating the Belgian 'Multidisciplinary low-risk intrapartum' guideline, observed that Belgian obstetricians were reluctant to accept the international MLC evidence, simultaneously citing a lack of national evidence. The participants refer to the Flemish Organisation of Midwives' reports on MLC outcomes (2021 and 2022) in addition to the annual national data. The participants acknowledge the need for Belgian MLC data for discussions with obstetricians about the efficiency and safety of MLC. At the same time, they recognise midwives' lack of participation in research or not responding to MLC research invitations.

"Obstetricians keep saying there is no Belgian evidence, but they forget or ignore the data collected by the Study Centre for Perinatal Epidemiology and the Flemish Organisation of Midwives" (Participant 1)

"The obstetrician said that international guidelines do not apply to the Belgian context" (Participant 10)

"Evidence is needed to fight for the existence of MLC and the wellbeing of women. To have an impact, you need to participate in research" (Participant 9)

Women-generated data

Midwives indicate that the experiences and wishes of the women regarding MLC are not obtained on a national level. Therefore, their women's opinions are missing in public discussions about reforming maternity care. Overall, they indicated that they were insufficiently aware of the existing Belgian reported evidence on women's experiences.

"I am sorry to admit that I am not very familiar with the work of Flemish midwifery researchers" (Participant 5)

4. Discussion

This study explored midwife-led care readiness among Belgian midwives in the Flemish and Brussels Capital regions by observing the trends between self-reported knowledge, self-efficacy and performance of 27 different MLC components. We conducted interviews to better understand these trends and the complexities and nuances core to potential MLC integration in Belgian maternity services. The midwives in our study report adequate knowledge about midwife-led care but low self-efficacy and even lower midwife-led care performance. The negative trend between the MLC readiness indicators suggests a low MLC readiness among Belgian midwives. Our findings indicate that precontemplation, implementation, optimising or sustaining MLC in Belgium is at risk due to limited readiness. [20] As observed in our study, the readiness of Belgian midwives to buy into MLC cannot be separated from policy, regulatory and organisational change agents, including obstetricians. [34] MLC feasibility strongly relies on socio-political and financial commitment and willingness to regulate and manage the care model within the climate of maternity services. [20] Although the political context of MLC is often not addressed in the (pre)complementation stages of change, our participants referred to governmental and institutional steering and rule-making functions impacting reimbursement and funding - not perceiving a collective governmental and institutional readiness, but rather perceiving resistance and dominant opinions. [35] This macro-level resistance is not exceptional [36,37] but prohibits the commitment to change maternity services and the institutionalisation of MLC. [38] Based on the perceptions of the midwives in our study, it is likely that obstetricians are apprehensive about implementing MLC. [39] We observed readiness at the level of individual cognitions, while the goal is to generate system readiness. [38] This requires further investigation among politicians, institutional managers and obstetricians. Additionally, professional midwifery organisations should contribute to health policy, get involved in the political debate and guideline development and attempt to influence policy-making decisions that may impact midwifery care and women's health. [40] The tension, obstacles and barriers reported in our study in interprofessional and inter-organisational relations in maternity services are not new. [41] Our study enhances the necessity of adopting a culture of interprofessional collaboration and cooperation between midwives and obstetricians despite paradigm differences, which benefits mothers and children. [41]

Our interview participants described the organically occurring process of women becoming familiar with the primary care midwife and signing up with a primary care midwife for antenatal care in the next pregnancy. This process will take time but can facilitate the MLC readiness process in Belgian maternity services. [38] Research shows that childbearing women in Belgium value primary care midwives. [15,16] Therefore, a lobby initiated by women to build structures that support an MLC culture, regulated and financed, and reflection on power structures might steer governmental and institutional readiness. [42]

Despite the overall low self-efficacy and performance mean scores, our findings show midwives feel confident and able to provide postpartum care. This is emphasised by the lack of significant trends observed between midwives' self-reported knowledge, self-efficacy for facilitating a physiological postpartum period, and their mentoring of students and (newly qualified) colleagues in this approach. Postpartum care seems to be the designated domain of midwives. [43] Belgian midwives are committed to supporting and caring for women during the postpartum period. They are regarded as postpartum experts in maternity services, contributing to feeling respected. [44] Midwife-led postpartum care facilitates midwife ownership of this care period. [45] The large effect sizes explaining the quadratic trends of facilitating a healthy pregnancy and healthy labour and birth', mentoring students and (newly qualified) colleagues in physiologically approaching pregnancy and labour & birth direct the imminent developmental needs of Belgian midwives to provide MLC throughout the perinatal continuum. These findings suggest that the biggest challenges lie in extending the scope of practice and autonomy from postpartum to antenatal and intrapartum services. The impact of the absence of Belgian midwife-led antenatal and intrapartum services on healthcare costs and revenue must be evaluated, along with an estimation of the potential costs and income generated by

expanding midwife-led care (MLC) services. [46]

4.1. Strengths and limitations

The Readiness Assessment Framework was instrumental in identifying readiness gaps and understanding the capabilities and preconditions of (student) midwives which are critical for implementing and utilising MLC in the Belgian maternity services context. The questionnaire was systematically constructed and fitted to the Belgian context. [29] Our sample size calculation showed that we needed a minimum of 384 participants, 414 completed surveys were included - enhancing the reliability of our findings. Involving midwifery students is recognised as contributing to their sense of topic ownership and being a stakeholder in the real world of midwifery. [47] The present study has several limitations. The generalisability of the findings may be impaired due to the sample characteristics: the non-completers differed from the completers. More than half of our survey sample practised in primary care, which is not representative of Belgian maternity services. [14] Although we might have attracted autonomously practising midwives [48] with the likelihood of response bias due to self-selection, these midwives can be considered benchmarkers of MLC readiness. [49] Our study findings might not be generalisable to other countries or maternity care settings but they offer valuable insights into the macro-level mechanisms affecting MLC.

5. Conclusion

The observed negative trend between MLC knowledge, self-efficacy and performance suggests Belgian midwives are not ready to execute MLC in antenatal and intrapartum care, facing implementation challenges. They are however capable and primed to provide midwife-led postpartum care. Our qualitative findings enhance the contextual understanding and improve the usefulness and integrity of the findings concerning this limited readiness. Governmental and institutional steering and rule-making functions, regulation and reimbursement, awareness of midwife-led care among stakeholders, the capacity to extend primary care postpartum services to antenatal and intrapartum care and not being aware of available data on women's experiences of midwife-led care efficacy in Belgium among healthcare professionals explain the underlying mechanisms of midwifery-led care readiness. Belgian midwives are the domain experts of postpartum services but face challenges in extending antenatal and postpartum care services to provide full MLC services.

CRediT author statement

Yvonne Kuipers: Conceptualization, Methodology, Formal Analysis, Writing – Original Draft, Supervision, Funding Acquisition. **Valerie Bosmans:** Investigation, Formal Analysis, Resources, Writing – Reviewing and Editing. **Ellen Thaels:** Conceptualization, Investigation, Resources, Writing – Reviewing and Editing. **Vanessa De Bock:** Validation, Investigation, Formal Analysis, Writing – Reviewing and Editing.

Author agreement statement

We, the undersigned declare that this manuscript is original, has not been published before and is not currently being considered for publication elsewhere.

We confirm that the manuscript has been read and approved by all named authors and that there are no other persons who satisfied the criteria for authorship but are not listed. We further confirm that the order of authors listed in the manuscript by all of us.

We understand that the corresponding author is the sole contact for the editorial process. She is responsible for communicating with the authors about progress, submissions of revisions and final approval of proofs.

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Ethical statement

The Ethics Committee Social and Human Sciences Antwerp University approved the survey (SHW_22_085, 1 June 2022 and the interviews SHW_2023_269_1, 1 November 2023). The committee reviewed the research proposals, the information letters for participants, and the informed consent forms.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

References

[1] J. Sandall, C. Fernandez Turienzo, D. Devane, H. Soltani, P. Gillespie, S. Gates, et al., Midwife continuity of care models versus other models of care for childbearing women, Art. CD004667, Cochrane Database Syst. Rev. 4 (2024), https://doi.org/10.1002/14651858.CD004667.pub6.

[2] ICM, Position Statement Midwifery led care, the first choice for all women (PS2011_012 V2017 ENG), International Confederation of Midwives, The Hague, Netherlands, 2011.

[3] WHO recommendations: Intrapartum care for a positive childbirth experience. Transforming care of women and babies for improved health and well-being Executive summary. WHO Recommend Intrapartum Care a Posit childbirth Exp: 1–8. 2018.⟨https://apps.who.int/iris/bitstream/handle/10665/272447/WHO-RHR-18.12-eng.pdf⟩.

[4] V. Burau, C. Overgaard, Caseload midwifery as organisational change: the interplay between professional and organisational projects in Denmark, BMC Pregnancy Childbirth 15 (2015) 121.

[5] K. Dawson, H. McLachlan, K.F. Willis, et al., Comparing caseload and non-caseload midwives' burnout levels and professional attitudes: a national, cross-sectional survey of Australian midwives working in the public maternity system, Midwifery 63 (2018) 60–67.

[6] Y. Kuipers, J. Degraeve, V. Bosmans, E. Thaels, E. Mestdagh, Midwifery Led Care: a single mixed-methods synthesis, Int. J. Healthc. Manag. 16 (1) (2023) 35–50, https://doi.org/10.1080/20479700.2022.2070824.

[7] W. Christiaens, M.J. Nieuwenhuijze, R. de Vries, Trends in the medicalisation of childbirth in Flanders and the Netherlands, Midwifery 29 (1) (2013) e1–e8.

[8] L. Vandeputte, E. Van Den Bergh, I. Rothmann, K. Pink, I. Tency, M. Reyns, et al., Jaarrapp. vroedvrouwgeleide zorg tijdens De. Arb. En. bevalling Cijfer.: Vlaam. Beroepsorgan. Van. Vroedvrouwen. 2021 (2023). ⟨https://www.vroedvrouwen.be/sites/default/files/Persberichten/Jaarrapport/Jaarrapport/341021_jaarrapport_2023.pdf⟩.

[9] R. Goemaes, L. Fomenko, M. Laubach, K. De Coen, A. Bogaerts, K. Roelens, Perinatale gezondheid in Vlaanderen - Jaar 2022, Studiecentrum voor Perinatale Epidemiologie, Brussel, 2023.

[10] J. Vermeulen, A. Luyben, R. Buyl, S. Debonnet, G. Castiaux, A. Niset, et al., The state of professionalisation of midwifery in Belgium: A discussion paper, Women Birth 34 (1) (2021) 7–13, https://doi.org/10.1016/J.WOMBI.2020.09.012.

[11] K. Helsloot, M. Walraevens, Een Vlaams model van kwalitatief hoogstaande postnatale zorg. Ontwikkelen van kwaliteitsindicatoren vanaf ontslag uit het ziekenhuis. A Flemish Model of High Quality of Postnatal Care from Discharge to Home, Ugent, 2015.

[12] Federale OverHeidsdienst. Het beroeps- en competentieprofiel van de Belgische vroedvrouw. Directoraat-Generaal Gezondheidszorg, Brussels. 2016. Avaialble: ⟨https://overlegorganen.gezondheid.belgie.be/sites/default/files/documents/2016_01_cfsf_frvv_bijlage_beroepsprofiel.pdf⟩.

[13] Federal Public Service. Healthcare professionals. Edition 2022. Directorate-General Healthcare, Brussels. 2022. Available: ⟨https://www.health.belgium.be/sites/default/files/uploads/fields/fpshealth_theme_file/healthcare_profesionals.pdf⟩.

[14] PlanKad Vroedvrouwen. Cel Planning van het Aanbod van de Gezondheidszorgberoepen,Dienst Gezondheidszorgberoepen en Beroepsuitoefening, Directoraat-generaal Gezondheidszorg,FOD Volksgezondheid, Veiligheid van de Voedselketen en Leefmilieu. 2019. Available: ⟨https://overlegorganen.gezondheid.belgie.be/sites/default/files/documents/vroedvrouwen_op_de_arbeidsmarkt_2019.pdf⟩.

[15] Y. Kuipers, V. Bosmans, V. De Bock, N. Van de Craen, E. Mestdagh, Perceived reality and subjective importance of shared decision-making during perinatal care, Res. Theory Nurs. Pract. (2024), https://doi.org/10.1891/RTNP-2024-0041.

[16] Y. Kuipers, V. De Bock, Van de Craen, V. Bosmans, Naming and faming' maternity care professionals: A mixed-methods study. Midwifery 130 (2024) 103912 https://doi.org/10.1016/j.midw.2023.103912.
[17] N. Benahmed, M. Lefevre, W. Christiaens, C. Devos, S. Stordeur, Naar een geïntegreerd prenataal zorgpad voor laag risico zwangerschappen – Synthese. KCE Rapport 326As [An integrated care pathway for low-risk pregnancies - synthesis], Health Serv. Res. (HSR). Fed. Kennis voor De. Gezondh. (KCE). D. /2019/10. 273/76 (2019).
[18] J. Vermeulen, M. Fobelets, A. Schoentjes, L. Boucher, L. Depuydt, F. D'haenens, Maternity care in the Brussels Capital Region: Towards a paradigm shift? Eur. J. Midwifery 4 (8) (2024) https://doi.org/10.18332/ejm/186405.
[19] B. Dahl, K. Heinonen, T.E. Bondas, From Midwife-Dominated to Midwifery-Led Antenatal Care: A Meta-Ethnography, Int J. Environ. Res Public Health 17 (23) (2020) 8946, https://doi.org/10.3390/ijerph17238946.
[20] M. Livet, C. Blanchard, C. Richard, Readiness as a precursor of early implementation outcomes: an exploratory study in specialty clinics, Implement Sci. Commun. 3 (1) (2022) 94, https://doi.org/10.1186/s43058-022-00336-9.
[21] Health Policy Partnership. Readiness Assessment Framework. Health Policy Partnership Ltd, London. 2022.
[22] D.T. Holt, C.D. Helfrich, C.G. Hall, B.J. Weiner, Are You Ready? How Health Professionals Can Comprehensively Conceptualize Readiness for Change, J. GEN INTERN MED 25 (1) (2010) 50–55, https://doi.org/10.1007/s11606-009-1112-8.
[23] B.J. Weiner, H. Amick, S.-Y.D. Lee, Review: Conceptualization and Measurement of Organizational Readiness for Change: A Review of the Literature in Health Services Research and Other Fields, Med. Care Res. Rev. 65 (4) (2008) 379–436, https://doi.org/10.1177/1077558708317802.
[24] R. Coates, L. Rocca-Ihenacho, E. Olander, S. Ayers, D. Salmon, A postgraduate Optimum Birth module to increase midwives' readiness to work in midwifery-led settings: A mixed-methods evaluation, Birth 46 (2019) 533–539, https://doi.org/10.1111/birt.12399.
[25] A. Yazon, E.C. Callo, Assessing Teacher's Knowledge, Self-Efficacy, and Practices (KSP) in Adopting Flexible Learning during the COVID-19 Pandemic, Univers. J. Educ. Res. 9 (1) (2021) 136–144. Available at: ⟨https://ssrn.com/abstract=3995873⟩.
[26] B.J. Weiner, A theory of organizational readiness for change, Implement. Sci. 4 (67) (2009), https://doi.org/10.1186/1748-5908-4-67.
[27] S. Bayes, J. Fenwick, D. Jennings, Readiness for practice change: Evaluation of a tool for the Australian midwifery context, Women Birth 29 (3) (2016) 240–244, https://doi.org/10.1016/j.wombi.2015.11.001.
[28] J. Schoonenboom, R.B. Johnson, How to construct a mixed methods research design, : Kolner. Z. Soz. Sozpsychol. 69 (2017) 107–131.
[29] Rocca-Ihenacho L., Batinelli L., Thaels E., Rayment J., McCourt C. Midwifery unit standards. London: London City University. 2018. Available: ⟨https://www.midwiferyunitnetwork.org/wp-content/uploads/PDFs/LY1309BRO-MUNEt-Standards-PRINT-opt.pdf⟩.
[30] J.T.E. Richardson, Eta squared and partial eta squared as measures of effect size in educational research, Educ. Res. Rev. 6 (2) (2011) 135–147, https://doi.org/10.1016/j.edurev.2010.12.001.
[31] N. King, Doing template analysis, in: G. Symon, C. Cassell (Eds.), Qualitative organizational research: core methods and current challenges, Sage Publications, Thousand Oaks, CA, 2012.
[32] J. Brooks, S. McCluskey, E. Turley, N. King, The utility of template analysis in qualitative psychology research, Qual. Res. Psychol. 12 (2) (2015) 202–222, https://doi.org/10.1080/14780887.2014.955224.
[33] N. King, J. Brooks, S. Tabari, Template Analysis in Business and Management Research, in: M. Ciesielska, D. Jemielniak (Eds.), Qualitative Methodologies in Organization Studies, Palgrave Macmillan, Cham, 2018, https://doi.org/10.1007/978-3-319-65442-3_8.
[34] A.E. Corrigan, S. Lake, R. McInnes, Normalisation process theory as a conceptual framework for continuity of carer implementation, Woman Birth 34 (2021) e204–e209, https://doi.org/10.1016/j.wombi.2020.02.017.
[35] A.L. Middlemis, S. Channon, J. Sanders, S. Kenyon, R. Milton, T. Prendeville, S. Barry, H. Strange, A. Jones, Barriers and facilitators when implementing midwifery continuity of carer: a narrative analysis of the international literature, BMC Pregnancy Childbirth 24 (2024) 540, https://doi.org/10.1186/s12884-024-06649-y.
[36] B.F. Bradford, A.N. Wilson, A. Portela, F. McConville, C. Fernandez Turienzo, C.S. E. Homer, Midwifery continuity of care: A scoping review of where, how, by whom and for whom? PLOS Glob. Public Health 2 (10) (2022) e0000935 https://doi.org/10.1371/journal.pgph.0000935.
[37] Y. Kuipers, The future of midwife-led continuity of care: Call for a dialogue, Dialog-. Health 4 (2024) 100170, https://doi.org/10.1016/j.dialog.2024.100170.
[38] G.W. Stevens, Toward a process-based approach of conceptualizing change readiness, J. Appl. Behav. Sci. 49 (3) (2013) 333–360, https://doi.org/10.1177/0021886313475479.
[39] F. Maillefer, C. de Labrusse, L. Cardia-Vonèche, et al., Women and healthcare providers' perceptions of a midwife-led unit in a Swiss university hospital: a qualitative study, BMC Pregnancy Childbirth 15 (56) (2015), https://doi.org/10.1186/s12884-015-0477-4.
[40] J. Smith, Politics: A matter for midwives? Br. J. Midwifery 22 (5) (2014) 312.
[41] R. Behruzi, S. Klam, M. Dehertog, V. Jimenez, M. Hatem, Understanding factors affecting collaboration between midwives and other health care professionals in a birth center and its affiliated Quebec hospital: a case study, BMC Pregnancy Childbirth 17 (1) (2017) 200, https://doi.org/10.1186/s12884-017-1381-x.
[42] R. De Vries, M. Nieuwenhuijze, S.E. Buitendijk, What does it take to have a strong and independent profession of midwifery? Lessons from the Netherlands, Midwifery 29 (10) (2013) 1122–1128, https://doi.org/10.1016/j.midw.2013.07.007.
[43] WHO, WHO recommendations on postnatal care of the mother and newborn, World Health Organization, Geneva, 2013. ⟨https://www.who.int/publications/i/item/9789241506649⟩.
[44] P. Gillen, Connecting status and professional learning: An analysis of midwives career using the place© model, Educ. Sci. 9 (2019) 256.
[45] L. Van den Branden, N. Van de Craen, L. Van Leugenhaege, E. Mestdagh, O. Timmermans, B. Van Rompaey, Y. Kuipers, Flemish midwives' perspectives on supporting women during the transition to motherhood: A Q-methodology study, Midwifery 105 (2022) 103213, https://doi.org/10.1016/j.midw.2021.103213.
[46] S.A. DeJoy, S. Holley, L. Friedman, M. Mills, D. Jackson-Köhlin, C. Detterman, K. Green, Expanded Practice in Midwifery: Designing, Implementing, and Maintaining Programs, J. Midwifery Women'S. Health 64 (2019) 559–566, https://doi.org/10.1111/jmwh.13015.
[47] Y. Kuipers, S. Verschuren, Students as researchers: an example of high-level participation of undergraduate midwifery students as co-investigators in research, Women Birth 36 (2) (2023) 171–176, https://doi.org/10.1016/j.wombi.2022.11.004.
[48] J. Vermeulen, M. Fobelets, V. Fleming, A. Luyben, L. Stas, R. Buyl, How Do Midwives View Their Professional Autonomy, Now and in Future? Healthcare 11 (12) (2023) 1800, https://doi.org/10.3390/healthcare11121800.
[49] Y. Kuipers, E. Thaels, R. Bleijenbergh, E. Mestdagh, Benchmarking criteria of humanised midwifery care: an exploratory survey, Women'S. Stud. Int. Forum (2024) 102956, https://doi.org/10.1016/j.wsif.2024.102956.