



‘A perfect fit’ – Swedish midwives’ interest in continuity models of midwifery care

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ABSTRACT

Background: Midwifery continuity models of care are highly recommended yet rare in Sweden, although approximately 50% of pregnant women request them. Before introducing and scaling up continuity models in Sweden, midwives' attitudes about working in continuity models must be investigated.

Objective: to investigate Swedish midwives' interests in working in midwifery continuity models of care and factors influencing the midwifery workforce's readiness for such models.

Methods: A cross-sectional online survey was utilised and information collected from a national sample of midwives recruited from two unions regarding background and work-related variables. Crude and adjusted odds ratios and logistic regression analysis were used in the analysis.

Results: A total of 2084 midwives responded and 56.1% reported an interest. The logistic regression model showed that respondents' ages 24–35 years (OR 1.73) or 35–45 years (OR 1.46); years of work experience 0–3 years (OR 5.81) and 3–10 years (OR 2.04); rotating between wards or between tasks (OR 2.02) and working temporary (OR 1.99) were related to interest in continuity models. In addition, working daytime only (OR 1.59) or on a two-shift schedule (OR 1.93) was associated with such interest.

Conclusion: A sufficient number of midwives in Sweden appear to be interested in working in continuity models of midwifery care to align with women's interest in having a known midwife throughout pregnancy, birth and postpartum period. Developing strategies and continuity models that will address the preferences of women in various areas of Sweden is important for offering evidence-based maternity services.

Statement of significance

Problem or Issue

Swedish midwives' interest in working in continuity models is largely unknown.

What is already known

About 50% of pregnant women in Sweden request continuity models, but only a few initiatives to develop them are ongoing.

What this paper adds

More than half of the sample of Swedish midwives reported an interest in working in continuity models.

Introduction

Midwifery continuity models of care usually refers to models of care where one midwife or a smaller group of midwives provides care for a selected number of women throughout pregnancy, birth and the post-natal period. International studies have shown that continuity models are beneficial for women's and infant's health in terms of fewer interventions, more spontaneous births, fewer preterm births, and higher levels of satisfaction [1]. Continuity models of midwifery care can be offered in midwifery teams, a midwifery group practice or as caseload models. The difference between the models is usually the number of midwives each woman meets during her pregnancy. In some countries such as Australia [2] and the UK [3], there are national recommendations to increase continuity models, and recently, the Swedish government and health authorities recommended initiating and developing intrapartum care to move towards continuity models of midwifery care

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[4]. To date, only a few initiatives have been introduced, mainly as projects, that offer midwifery continuity models of care in Sweden [5,6]. Although access to continuity models is limited in Sweden, previous national and regional studies have found that about 50–55% of pregnant women would prefer to have a known midwife who follows them throughout their pregnancy including labour and birth, and provides care postpartum [7]. These preferences were of particular importance to younger women, single women, and women with fear of giving birth [7].

In recent years, midwives worldwide have been leaving the profession, due mainly to stressful work environments, extremely heavy workloads and a general lack of professional recognition [8]. A contemporary meta-ethnographic review showed that many midwives have considered leaving midwifery after questioning their own choice of this professional career [9]. However, research has revealed that working in continuity models of midwifery care appears to create healthier work environments for midwives and may result in lower rates of burnout compared to shift work in a hospital [10,11]. Following women through pregnancy and childbirth and, thereby, building trusting relationships increases midwives' feelings of responsibility, accountability and autonomy, resulting in an overall increase in job satisfaction [12]. Flexibility of working hours and using the full scope of midwifery practice have also been acknowledged as positive outcomes of this method. It has further been described that high job satisfaction and the feeling of autonomy in the profession gained by working with continuity models outweigh the difficulties of working long hours and being on call to assist women during labour and birth [13,14]. Being on call is a prerequisite for actually providing continuity, and continuity models could, therefore, be more or less attractive to midwives depending on their personal and family situations. Staffing midwifery continuity models may be challenging, especially in rural areas, and could limit the amount of continuity with a known midwife [5,15,17,18]. Continuity midwifery models are mainly provided in metropolitan areas internationally [16]. In Australia, there are some exceptions, such as the midwifery group in a rural town in northeast Victoria where a group practice has been functioning for more than 20 years, suggesting that it is a sustainable and satisfying way of providing maternity services [17,18].

Context of care

Midwives in Sweden work in a variety of areas and most commonly within the healthcare sector, where the division of care into primary health care and hospital-based specialist care are problematic when introducing continuity models of care. In community-based outpatient clinics, midwives work with, e.g. antenatal care, parenting classes, contraception, pap smear screening programmes, and in youth clinics. There is usually a designated midwife responsible for antenatal care during pregnancy, but it is unlikely that women and their partners will meet a midwife they know at birth. In specialised hospital-based care, midwives work across a range of settings including in intrapartum and postpartum care, gynaecological clinics and ultrasound clinics. During intrapartum care, they work in collaboration with obstetricians for complicated cases but are usually responsible for uncomplicated labour and birth in highly medicalised labour wards. There are currently no birth centres or midwife-led clinics, and the rate of homebirths is low (approximately 1/1000) [19]. Both antenatal and intrapartum care are financed through taxation, with no additional fees for women.

Problem area

Similar to other countries, midwives in Sweden tend to leave midwifery, especially intrapartum care. In addition, it has been observed that, despite the liberal flow of funding from the government directed to universities and university colleges meant to increase the number of midwifery students, newly graduated midwives tend to leave intrapartum care for other areas of midwifery or to go back to nursing.

Considering these circumstances, taking a fresh approach to Swedish maternity care is of the utmost importance. Working in continuity models appears to be beneficial for midwives and to result in greater work satisfaction and less burnout; thus, it might be a model for attracting midwives and reducing the attrition rate in Swedish labour wards. However, knowledge in this area is sparse in a Swedish context, and before introducing and scaling up continuity models in Sweden, midwives' attitudes about working in such models must be investigated on a national level.

The aim of this study was, therefore, to investigate Swedish midwives' interests in working in midwifery continuity models of care and the factors influencing the midwifery workforce readiness for such models of care.

Method

Design

A cross-sectional anonymous online survey directed towards midwives in Sweden was used.

Participants and procedure

Midwives were recruited through advertisements placed in the member journals of the two unions where midwives are usually organised (the Swedish Midwifery Association/SRAT and the Swedish Association of Health Professionals). Information about the study was also forwarded to midwifery groups on social media and through healthcare clinics. Data about the total number of registered midwives vary depending on the information site. The Swedish National Board of Health and Welfare reported in 2019 that about 7400 of 8500 (87%) registered midwives work in the healthcare sector [20]. In the 21 health care regions 70% reported a lack of experienced midwives. The age distribution shows that the majority of midwives are 60–64 years [20]. The most recent information from the National Board of Health and Welfare reported that all 21 regions have a shortage of midwives (press-release 2022-02-28).

According to the General Data Protection Regulation (GDPR), information about the number of midwives who belong to a union is inaccessible, but information provided from previous studies [21,22] suggest that around 68–70% are members of a union.

A description of the study was provided together with a QR code linked to the online questionnaire. Data were collected and managed using REDCap (Research Electronic Data Capture) hosted at Uppsala University [23,24]. REDCap is a secure, web-based software platform designed to support data capture for research studies; it provides 1) an intuitive interface for validated data capture; 2) audit trails for tracking data manipulation and export procedures; 3) automated export procedures for seamless data downloads to common statistical packages; and 4) procedures for data integration and interoperability with external sources.

Survey

The survey included demographic questions (age, sex, civil status, number and age of children at present and whether the respondents currently lived with their children and the zip code for their work). The last variable was further dichotomised according to the six major healthcare regions in Sweden. Further questions were related to professional matters such as years of work experience, academic exams, and area of work. Thereafter, the 15 main areas listed were grouped into four areas: antenatal care, family planning and youth clinics; intrapartum care, postnatal care and early discharge clinics; other areas (e.g. teachers, researchers, managers).

We also asked if midwives worked in only one area or rotated between wards or assignments; if they worked full-time, part-time or

temporary; and whether they worked only day shifts, two shifts (morning and evening shifts), three shifts (morning-, evening- and night shift) or only night shifts. Detailed questions about the main work area and additional work areas were investigated. Some of these questions have previously been used in national [25,26] and international [27,28] studies about midwives' health and well-being through the Work, Health and Emotional Lives of Midwives research network (WHELM). Researchers from Australia, New Zealand, Sweden, Norway, Germany, the UK, and Canada are members of the network where research teams have published scientific papers [25–28].

The main focus of the present study was midwives' interests in and readiness to work in continuity models and factors associated with such interests. The outcome variable, interest in working in midwifery continuity models, was a statement worded as 'I would consider working in a caseload or similar continuity model of care if it was available where I work'. There were five possible responses: 'Yes, I would like to work in a caseload model right now'; 'Yes, I would like to work in a caseload model in the near future'; 'Yes, I would like to work in a caseload model but not right now'; 'Unsure'; and 'No, I would not consider working in a caseload model'. In the analysis, all responses including the word 'yes' were compared to responses with 'unsure' and 'no'. Participants also had the opportunity to write comments about their reasons for their responses. The study was approved by the Ethics committee, Dnr 2021-01941.

Analysis

Descriptive statistics were used to present data. Crude and adjusted odds ratios with a 95% confidence interval were calculated for the explanatory background and work-related variables and interest in working in midwifery continuity models. SPSS version 26 was used for the analysis. The comments were sorted into groups with similar content and thereafter summarised.

Results

Participants

In all, 2537 midwives responded to some of the questions in the online survey, and 2084 answered the question of interest about continuity models and were included in the analysis. The majority was older than 55 years, living with a partner and had their own children. Females accounted for 2072 participants (99.5%); seven were male (0.3) and another 4 answered 'other'. Nearly two-thirds lived with children full-time, and 58% had children 15 years or younger. The respondents lived in all areas of Sweden, and more than 60% had some type of academic degree. There were 1973 (95% of the sample) currently working as midwives, one-third worked in antenatal care and just over a third worked in a labour ward. The majority had over a decade of work experience (> 10 years). Midwives commonly worked full-time (62%) or part-time (34%), and a much smaller percentage worked on a temporary or substitute basis (4%). Approximately 50% worked days only and nearly 60% in only one area (Table 1).

Interest in and availability of continuity models

About 59% of the midwives reported that they would like to have a continuity model available to them, but only 139 (6.7%) stated that such a model was actually available in their area of work and 32 already worked in a continuity model. These variables were not considered in the following analysis as there were too few options of continuity available and there was no variation within those who worked in a continuity model. A total of 2084 midwives responded to the item about interest in continuity models as a preferred working option. In all, 56.1% (n = 1170) were positive about working in this care model. Nearly 23% (n = 475) indicated that they would like to start working in a caseload

Table 1
Background variables.

	n = 2081 n (%)
Age groups	
24–35 years	313 (15.3)
35–45 years	631 (30.9)
45–55 years	557 (27.3)
55–70	543 (26.6)
Civil status	
Have a partner	1803 (87.4)
Single	260 (12.6)
Own children	
Yes	1912 (91.9)
No	169 (8.1)
Children younger than 15 years	
Yes	1090 (58.4)
No	777 (41.6)
Living with children n = 2171	
Full-time	1248 (65.4)
Part-time	143 (7.5)
No	518 (27.1)
Health care regions for workplace	
Northern region	214 (10.7)
Mid Sweden region	487 (24.3)
Stockholm and Gotland	498 (24.8)
Southeast region	200 (10.0)
West region	219 (10.9)
South region	387 (19.3)
Level of academic degree	
Bachelor exam	805 (38.6)
One-year master exam	684 (21.8)
Master exam (2 year)	80 (3.8)
Licentiate degree	9 (0.4)
Ph.D.	22 (1.1)
Currently working as midwife	
Yes	1973 (95.2)
No	100 (4.8)
Main area of work	
Antenatal outpatient clinic	652 (31.5)
Labour ward	730 (35.2)
Low risk birth unit	19 (0.9)
Homebirth	7 (0.3)
Postnatal ward	157 (7.1)
Early discharge	21 (1.1)
Manager	47 (2.3)
Research and development	27 (1.3)
Gynaecological ward	99 (4.8)
Family planning unit	16 (0.8)
Youth clinic	107 (5.2)
Education/supervision	11 (0.5)
Neonatal care	15 (0.7)
Other	163 (7.8)
Work experience as midwife	
0–3 years	252 (12.2)
3–10 years	669 (32.3)
11–20 years	549 (26.5)
20 years or more	604 (29.1)
Working hours	
Full time	1274 (61.6)
Part time	706 (34.1)
Temporary	88 (4.3)
Work organisation	
Work in only one area	1217 (59.7)
Rotating between wards or between tasks	822 (40.3)
Work distribution n = 2174	
Daytime only	1034 (50.1)
Two-shift	431 (20.9)
Three-shift	391 (19.0)
Night shift only	206 (10.0)

Numbers might not add to 100% due to internal missing values.

immediately, 335 (16%) in the near future, and an additional 17% (n = 360) at a later time.

Midwives not interested in continuity models

Of those who indicated that they were ‘not positive’ about working in a continuity of care model, 443 (21%) were unsure and 471 (23%) responded ‘no’ to this item. Numerous comments about the reasons regarding their interest or lack of interest were given. Of those 471 who responded ‘no’, 226 made comments. The most frequent comments were about not wanting to work in intrapartum care (n = 43 comments), not wanting to do shift work or to be on-call (n = 37 comments), and not being interested in antenatal care (n = 19 comments); there were also comments about the difficulties of keeping abreast of new information in several domains and a risk of losing excellent skills (n = 18 comments) or currently having a satisfactory working situation that they did not wish to leave (n = 18 comments). Although midwives gave different reasons for not being interested in working in a caseload model, comments about the caseload model itself were positive (n = 17 comments). Older age (n = 14 comments), unwillingness to become ‘too close’ to women or similar reasons (n = 14 comments), or family situation or travelling to women or to a distant labour ward (n = 15 comments) were also mentioned.

Background factors related to interest in continuity models

Thereafter, we compared midwives in the positive groups with the group of ‘unsure’ and ‘negative’. Of the background factors studied, we found that midwives who lived partly with children and those who did not live with children were less likely to show an interest in continuity models. Moreover, midwives with a bachelor’s degree or a one-year master’s degree were more interested in working in continuity models compared to those without academic degrees (Table 2).

Work-related factors related to interest in continuity models

Table 3 shows crude and adjusted odds ratios for work-related factors in relation to interest in working in continuity models of midwifery care. The odds ratios were adjusted for statistically significant differences retrieved from the analysis presented in Table 2. The crude analysis showed that midwives who worked in intrapartum care (p < 0.001), those who rotated between wards or between assignments (p < 0.001), and those with less than 20 years of work experience were more likely to show an interest in such models. Working in a two- or three-shift model was positively associated with interest in continuity models, while working days only or night shifts only was associated with less interest. After adjustment, area of work and work experience of 11–20 years were no longer statistically significant, but the majority of the variables remained significant.

The most important factors for interest in continuity models

In a final regression model, all statistically significant variables from the adjusted analysis together with statistically significant background variables were entered to determine which factors contributed most strongly to interest in continuity models. After entering all variables, they were removed one by one until only those that were still important explanatory variables remained in the model (Table 4). Of the background variables, only age was significantly associated with interest in continuity models, both in midwives ages 24–35 years (OR 1.73) and those ages 35–45 years (OR 1.46). The strongest work-related contributor to interest in a caseload or similar models with continuity was fewer years of work experience, i.e. 0–3 years (OR 5.81) and 3–10 years (OR 2.04). Rotating between wards or between assignments resulted in stronger interest (OR 2.02) as did working on a temporary or substitute basis (OR 1.99). In addition, working days only (OR 1.59) or in a two-

Table 2

Midwives’ interest in continuity models of care in relation to background factors.

	Interested n = 1170 n (%)	Not interested n = 914 n (%)	Odds ratio (95% CI)	p-value
Age				
24–35 years	244 (21.2)	69 (7.7)	4.99 (3.64–6.86)	0.000
35–45 years	401 (34.5)	230 (25.8)	2.46 (1.94–3.11)	0.000
45–55 years	283 (24.5)	274 (30.8)	1.46 (1.15–1.85)	0.000
55+	225 (19.5)	318 (35.7)	1.0 Ref.	
Having a partner				
Yes	1071 (91.5)	841 (92.3)	1.15 (0.88–1.49)	
No	99 (8.5)	70 (7.7)	1.0 Ref.	0.281
Having children				
Yes	1021 (88.1)	782 (86.5)	0.90 (0.88–1.49)	
No	138 (11.9)	122 (13.5)	1.0 Ref.	0.520
Children younger than 15 years				
Yes	705 (67.1)	385 (47.2)	2.28 (1.89–2.75)	0.000
No	345 (32.9)	430 (52.8)	1.0 Ref.	
Living with children				
Full-time	733 (72.2)	475 (56.7)	1.0 Ref.	
Part-time	74 (6.9)	69 (8.2)	0.65 (0.46–0.93)	0.019
No	224 (20.9)	294 (35.1)	0.46 (0.38–0.57)	0.000
Academic degree#				
Bachelor exam	478 (40.9)	327 (36.2)	1.24 (1.03–1.42)	0.018
One-year master exam	438 (37.4)	246 (26.9)	1.62 (1.35–1.96)	0.000
Master exam/ Licentiate/PhD	65 (5.6)	45 (4.9)	1.13 (0.76–1.67)	0.522
Health care regions				
Northern region	124 (10.9)	90 (10.4)	1.0 Ref.	
Mid Sweden region	282(24.8)	205 (23.6)	0.99 (0.72–1.38)	0.992
Stockholm and Gotland	283 (24.9)	215 (24.7)	0.95 (0.69–1.32)	0.783
Southeast region	99 (8.7)	101 (11.6)	0.71 (0.40–1.04)	0.085
West region	120 (10.6)	99 (11.4)	0.88 (0.60–1.28)	0.509
South region	228 (20.1)	159 (18.3)	1.04 (0.74–1.46)	0.817

#Reference = Midwives not exposed to the studied variable.

shift model (OR 1.93) was also associated with such interest, while working only in a three-shift model boarded on significance (p 0.057).

Discussion

The main findings of this online survey directed towards midwives in Sweden showed that more than half the workforce was interested in midwifery continuity models of care. A few background factors were associated with such an interest, but the strongest explanatory variables were work-related.

The prevalence of midwives who were interested in working in continuity models was about 56% of the respondents. This percentage corresponds well to the percentages of women included in national (52%) and regional (55%) surveys [7] who assessed having a known midwife assisting during labour and birth as important. The result is also similar to an Australian study where 50% of midwives who were not working in any continuity model reported an interest in working in a caseload model [29]. Another cross-sectional study from 27 so-called

Table 3
Midwives' interest in continuity models of care in relation to work factors.

	Interested	Not interested	Crude odds ratio		Adjusted odds ratio	
	n = 1170 n (%)	n = 914 n (%)	(95% CI)	p-value	(95% CI)	p-value
Main area of practice						
Outpatient clinic (antenatal care + youth clinic)	399 (34.5)	376 (41.5)	0.99 (0.77–1.28)	0.979	0.79 (0.60–1.04)	0.096
Intrapartum care and home birth	472 (40.9)	284 (31.4)	1.56 (1.20–2.01)	0.001	1.24 (0.93–1.65)	0.128
Postpartum care	103 (8.9)	75 (8.3)	1.29 (0.89–1.85)	0.170	1.13 (0.57–1.70)	0.538
Other	181 (15.7)	170 (18.8)	1.0 Ref.		1.0 Ref.	
Work organisation						
Work in only one area	593 (52.0)	624 (69.5)	1.0 Ref.		1.0 Ref.	
Rotate between wards or tasks	548 (48.0)	274 (30.5)	2.10 (1.75–2.52)	0.000	2.14 (1.74–2.63)	0.000
Work experience as midwife						
0–3 years	216 (18.6)	36 (4.0)	8.55 (5.80–12.61)	0.000	5.95 (3.32–10.64)	0.000
3–10 years	437 (37.5)	232 (25.5)	2.68 (2.14–3.37)	0.000	1.72 (1.23–2.56)	0.002
11–20 years	262 (22.5)	287 (31.5)	1.30 (1.03–1.64)	0.027	0.98 (0.73–1.32)	0.933
20 years or more	249(21.4)	355 (39.0)	1.0 Ref.		1.0 Ref.	
Working hours						
Full time	733 (63.1)	541 (59.6)	1.0 Ref.		1.0 Ref.	
Part time	374 (32.2)	332 (36.6)	0.83 (0.69–1.00)	0.050	0.95 (0.77–1.16)	0.645
Temporary	54 (4.7)	34 (3.7)	1.17 (0.75–1.82)	0.482	1.90 (1.17–3.09)	0.009
Work distribution						
Daytime only	522 (45.1)	512 (56.6)	1.19 (0.88–1.60)	0.253	1.14 (0.82–1.59)	0.409
Two-shift	286 (24.7)	145 (16.0)	2.30 (1.16–3.23)	0.000	2.05 (1.41–2.99)	0.000
Three-shift	254 (22.0)	137 (15.1)	2.16 (1.53–3.05)	0.000	1.87 (1.27–2.75)	0.001
Night shift only	95 (8.2)	111 (12.3)	1.0 Ref.		1.0 Ref.	

#Adjusted for age, children < 15 years, living with children and one-year master exam.

Table 4
Logistic regression model explaining midwives' interest in working in continuity models.

	OR (95% CI)	p-value
Age 24–35 years	1.73 (1.08–2.77)	0.023
Age 35–45 years	1.46 (1.01–2.11)	0.041
Work experience 0–3 years	5.81 (3.42–9.85)	0.000
Work experience 3–10 years	2.04 (1.41–2.94)	0.000
Rotating between wards or tasks	2.02 (1.62–2.51)	0.000
Working casual time	1.99 (1.17–3.36)	0.041
Working daytime only	1.59 (1.13–2.24)	0.008
Working two-shift	1.93 (1.33–2.81)	0.001

Reference categories: Age 55 years or more, Work experience 20 years or more, working only in one area, working full time, working night-shift only.

Work area was kept in the model as a covariate.

early adopter sites [30], e.g. maternity systems implementing some or all of the national recommendations [3] within two years in the UK, reported that 798 midwives from these sites participated in an anonymous online survey. The results showed that 35% of the respondents were willing to work in a model comprising intrapartum care in hospitals and at home and 45% in homebirths only, and that 54% would prefer continuity models without any intrapartum care [3,12]. Recently, one of the Swedish unions also arranged for a survey using an analysis and research company to approach their members, and 588 (19%) midwives replied. The distribution of interest in working in caseload models was 40% who were interested, 39% were not interested and 21% who did not know. An interest in such models was associated with working in antenatal care and being younger than 39 years old [21]. The main reasons for not wanting to work in a caseload model were difficulties with work schedules and a perception that the different areas of midwifery are too specialised, making it difficult to remain abreast of new developments in several areas; these are similar to comments made in the present study.

In the crude analysis for the present study, we found that midwives not living with children or living with them part-time were less likely to show an interest in working in continuity models. 'Having children' by itself was not associated with such an interest but 'having children younger than 15 years' doubled the likelihood of interest. Furthermore,

in the comments written by midwives not interested working in a caseload, it was stated that family concerns were one reason to be less interested in working in continuity models. Access to childcare and lack of support have previously been reported as reasons for not being able to work in continuity models of care [29,31].

Midwives with an academic degree such as a bachelor's or one-year master's showed a higher interest in working in continuity models compared to those without a degree. One explanation could be that their academic programmes may have increased their interest in providing evidence-based care. This variable reflects the number of years of education, which usually corresponds to the years of work experience. Swedish midwifery education has undergone several changes over recent decades. From the 1700s until the mid-1950s, Swedish midwifery education was a direct-entry programme, but since then, midwifery education has been based on a nursing education (currently 3 years at a bachelor's level). Based on the 2007 higher education reform in accordance with the Bologna process with additional academisation, Swedish midwifery education currently offers a one-year master's degree programme [32]. Midwives who completed their educations at an earlier time have been able to complete the one-year master's programme by attending free-standing courses at universities. However, these explanatory variables were no longer statistically significant when the analysis was adjusted for work-related variables.

Midwives with fewer years of work experience showed more interest in continuity models compared to midwives with more years of work experience. Similar findings were found in the study by Newton et al. [29], who found that younger age (< 30 years), fewer years of work experience, and being exposed to continuity models during midwifery education were associated with an interest in caseload work in midwives working in hospitals where caseload work was not an option. Taylor et al. [31] also found that midwives ages 20–29 years and those with less experience (0–5 years) expressed more interest in working in continuity models.

The results of the present study further revealed that midwives who worked in labour wards or with homebirths were more likely to be interested in continuity models compared to midwives working in 'other areas' (ultrasound, management, teaching, etc). Area of work usually interfered with the other work-related variables, such as work distribution and organisation, which was the reason for keeping the work area

variable in the final model despite its non-significant contribution.

In addition, midwives who rotated between different wards or different assignments expressed greater interest compared to those working in one area only. Similar findings were reported by Taylor et al. [31], who found that midwives who already worked in different settings on a rotating schedule were more interested in work in continuity models across all settings of antenatal and intrapartum care. These findings could be viewed as one component of flexibility, which is a prerequisite for working in continuity models [17–18,29]. It has been acknowledged in several studies that ‘working the full scope of practice’ is a great benefit in continuity models [17,18]. On the contrary, the perception of midwives in the Swedish survey distributed by one of the unions where midwives are members [21] was that working in several areas would make it difficult to maintain competence. Similar comments were also noted in the present study.

In the crude analysis and when the variables were adjusted for background differences, the distribution of work showed that midwives who worked two or three shifts were more interested in caseload midwifery compared to those working the nightshift only. However, when all variables were entered into the model simultaneously, working days became significant and working three shifts only boarded on significance. Caseload midwifery involves working on call rather than working on a traditional shift-based roster [29], and the on-call service has been one of the reasons midwives prefer not to work in a caseload model [29,31], a finding in the comments for this study as well. However, midwives from a rural part of Australia who participated in studies where a continuity model was offered to women during more than 25 years reported that ‘being on call and getting up in the middle of the night when a woman you know goes into labour is easier than working [the] night shift on the labour ward’ [17,18].

On-call schedules in Sweden need to be negotiated based on the work-time regulations, and it is well-known from the few options of continuity models in Sweden [5,6] that finding a work schedule that is appropriate for all midwives is highly challenging. Being stuck in discussions about schedules as the main problem with continuity models draws the attention away from the importance of the relations-based continuity that is the core of caseload or team midwifery [17–18, 26–31]. Another explanation might be that midwives, as well as pregnant women, are reluctant to consider new options or options not yet available and are apprehensive about changes, a phenomenon known as ‘what is must be best’ [33,34].

Despite the fact that not all midwives were interested in working in continuity models themselves, the majority were supportive of the statement that there should be a continuity model available at their place of work, but exposure to continuity models was limited in the present study. In the Australian survey, there was also strong support for and willingness to work in the caseload models, and respondents indicated that exposure to such models was important [29].

Strengths and limitations

One strength of this study is the relatively large number of participants who were drawn from a national sample of midwives in Sweden. To the best of our knowledge, it is the first study to examine midwives’ interests in working in continuity models. The participants came from all regions in Sweden and are representative in terms of age distribution in the midwifery workforce [20].

There are several limitations of the study. The first is the self-selected nature of the survey. If only midwives who were interested chose to complete the survey, the proportion of interest would have been higher; this was not the case as 56% showed an interest. The observational nature of the study is another limitation. However, we believe that it was the only way to present the research question and to cover a national sample. This study is also compromised by the choice to recruit midwives from the unions. We do not know how many midwives do not belong to a union, and such information is difficult to obtain due to the

General Data Protection Regulation (GDPR). Moreover, the sparse uptake of the online questionnaire must be considered when interpreting the results. We believe that we reached about 30% of the estimated 7400 midwives who work in the healthcare sector. Compared to the Australian survey [29], which reached 14% of the midwifery workforce, and to the UK survey (20%) [31], the estimated 30% seems sufficient to answer the research questions. A recent study from Sweden that recruited midwives from the unions reported that 5076 questionnaires were sent out to union members with 2060 midwives responding (41%) [22]. Translating these numbers to the estimated 7400 midwives working in the health care, rather similar proportions were found as in the present study.

Conclusion

There appears to be a sufficient number of midwives in Sweden who are interested in working in continuity models of midwifery care to align with women’s interests in actually having a known midwife throughout pregnancy, birth and the postpartum period. Certain work-related variables were associated with higher interest in continuity models. To develop strategies and continuity models that will address the needs and preferences of various parts of Sweden is important in order to offer evidence-based maternity services.

Conflict of interest

None declared

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Authors agreement

The authors declare that the article is their original work and it has not been published elsewhere and is not under consideration for publication elsewhere. All authors have seen and approved the final version of the manuscript and agree to the copyright terms and conditions of Elsevier.

Authors’ contributions

All authors contributed to the conception and design of the study, design of the survey, analysis and interpretation of the data, drafting and revising of the manuscript and approval of the final version submitted.

Ethical approval

Ethical approval for the study was provided Swedish Ethical Review Authority, Dnr 2021-01941.

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