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Experiences of Norwegian community midwives with caring for vulnerable pregnant women – A national cross-sectional study

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A B S T R A C T

Objectives: The study aimed to describe Norwegian community midwives' care for vulnerable pregnant women. It assessed vulnerability factors midwives identified and the type of care they provided. Factors associated with use of identification tools and care of vulnerable pregnant women were investigated.
Method: A quantitative, cross-sectional study. Data collected via an anonymous online survey conducted spring 2020. Of approximately 700 eligible community midwives in Norway, 257 (36.7%) participated.
Results: Community midwives who worked primarily in the community, in close to full-time positions (>80%) and who were responsible for >100 women a year in large community clinics were more likely to identify vulnerable pregnant women than midwives who worked in combined hospital and community posts, less than 80% in the community and at smaller community centres. Attended a training progam called 'Early Start' (Tidlig Inn) was associated with an increased use of standardized identification tools. Almost all community midwives reported providing vulnerable women with more frequent consultations, individual and culturally personalized care, and relevant information about support options.
Conclusion: Community midwives appeared to be aware of their role as a midwife in the care of vulnerable pregnant women. They reported encountering vulnerable pregnant, identifying them by actively using methods to do so and addressing their needs in various ways. This study suggests that specific training increases midwives' ability to identify vulnerable pregnant women. Further research is needed to assess how midwives experience interdisciplinary collaboration in caring for these women.

Introduction

Vulnerable pregnant women may have a greater need for care during pregnancy [1]. Research in seven European countries defined a vulnerable pregnant woman as a woman who is threatened by physical, psychological, cognitive and/or social risk factors combined with a lack of adequate support and/or adequate coping skills [2]. The list of potential risk factors is long. Core risk factors that the Norwegian authorities focus on are mental health problems, substance misuse and domestic violence [3–5]. These factors can affect women irrespective of their socio-economic status. Other recognised vulnerability factors are poverty, low educational level, young maternal age, single status, limited social support, immigrant background and childhood neglect [4–7]. Vulnerability factors are often invisible and frequently not detected unless healthcare workers specifically enquire about them. Vulnerable pregnant women have a higher risk of poor mother–child relations, little confidence in their own parenting ability, parental neglect, diffuse health problems, depression and suicidal thoughts [7–9]. In the worst case, vulnerability can result in suicide or femicide [7,8]. Known potential consequences for the fetus of a vulnerable pregnant woman are intrauterine growth restriction, premature rupture of membranes, premature birth, fetal alcohol syndrome and intrauterine fetal demise [7,10,11]. Newborns may develop abstinence symptoms, and these children may later experience behavioral problems, learning difficulties, ADHD symptoms, delayed cognitive development and mental disorders; death may occur as well [10,11].

It is difficult to assess the proportion of pregnant women who are vulnerable as there are many risk factors and women may have several. Studies frequently focus on one specific vulnerability factor, for example depressive symptoms among pregnant women. Thus, we know the prevalence of these individual factors among pregnant but not the proportion of vulnerable pregnant women in a population. Based on such studies The World Health Organization states that 10% of pregnant women globally have a mental health problem, primarily depression [12]. Studies based on The Norwegian Mother and Child Cohort (MoBa) show a 13% prevalence of violence experienced by women in the course of a lifetime and 5% during pregnancy [13], while 12–16% of pregnant women in Norway consumed alcohol during their first trimester [14].

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We found only one study which estimated the overall prevalence of vulnerability in a pregnant population at 76 units providing antenatal care in the Netherlands [6]. Women were defined as vulnerable as the combined presence of one of more indicator conditions such as psychopathology (past and present), psychological problems, and substance abuse combined with lack of individual and/or social resources [6]. In this Dutch study, the prevalence varied depending on type of practice and geographic location from 18% to 38.4% [6].

Midwives play a key role in the identification and care of vulnerable pregnant women. Standardized tools are an effective means of identifying vulnerable pregnant women, and research shows that good communication skills improve the efficacy of detection tools [15]. The Edinburgh Postnatal Depression Scale (EPDS) and the screening questionnaire on alcohol use habits known as the Tolerance, Worried, Eye-opener, Amnesia and K/Cut down (TWEAK) have been introduced in numerous countries, including in Norway [4,16–18]. In Norway, training for health professionals in the use of EPDS, TWEAK, questions about domestic violence and Motivational Interviewing (MI) are offered through the Early Start (*Tidlig Inn*) training program [3]. The program runs over 6 individual days, includes theory and participatory methods and presumes implementation of skills into practice. Feedback is given on role-play and reported clinical experience. Research shows that a good woman-midwife relationship can give the pregnant woman an opportunity to talk about her problems, receive maternity care and get follow-up on recommendations [7,19].

When the care needs of vulnerable pregnant women exceed the midwife's competence, it is beneficial to provide close, structured follow-up by a team of professionals [6,11]. Like Canada and Scotland, Norway has introduced the Nurse-Family Partnership (NFP) (*Familie for første gang*) in five project communities, which has been implemented by the Norwegian Directorate of Health. The project offers close, family-centered follow-up from early pregnancy until the child turns two years old. Developed in the USA, the NFP incorporates principals such as early identification and close, structured follow-up [5]. In Norway, several research projects have been carried out on interdisciplinary collaboration with vulnerable pregnant women and their families [3,5,20]. While these projects appear to have a positive effect for the families and health professionals they are restricted geographically. It is therefore essential to increase knowledge about the experiences of community midwives' care for vulnerable pregnant women in Norway, regardless of the geographic area. The objective of this study is to chart the community midwives' experiences with care for vulnerable pregnant women in Norway. How do community midwives identify pregnant women who are vulnerable and what kind of care do they provide? The study will also investigate if there are any associations between the background variables of the community midwives and a) which vulnerable pregnant women they encounter and b) their way of using identification tools.

Method

We conducted a descriptive cross-sectional study by inviting all the community midwives in Norway to respond to an online survey prepared by OnlineUndersøkelsen.no. The questionnaire was distributed through Facebook and both Norwegian midwifery associations send a link via email to midwives registered with them as working in the community. Reminders were sent twice. In addition was the link distributed through a community midwives' mailing list independent of membership in an association. An estimated 95% of the approximately 700 community midwives in Norway were reached with these e-mails. The form was accessible from 8 June 2020 to 23 August 2020. Only midwives confirming they worked in the community were included in our study.

Questionnaire

The questions and potential responses were formulated on the base of our professional experience and research literature [4,6,19]. The first three authors have extensive experience of working with vulnerable women in the community, while the last author has conducted extensive research in the field of violence against women. The questionnaire was piloted among 16 midwife colleagues with 1–25 years of experience from community midwifery practice and/or antenatal outpatient care in hospital. As a result of the piloting some text and order of questions were revised (Appendix 1). The background information included the midwife's age, experience and type of position. Midwives were asked if they encountered pregnant women with the following vulnerability factors: mental health problems, domestic violence, substance abuse, childhood neglect, young maternal age, single status, immigrant background, financial problems and limited social network. The possible responses were on a Likert scale with the options don't know, never, seldom, sometimes, often. We did not use "always" as an option, because it is not logic that midwives will always meet pregnant have the actual vulnerable factor we asked about. "Don't know" is included in addition to never, because community midwives will realize they meet women with vulnerable factors without knowing it. The midwives were also asked how they identified vulnerable pregnant women, and how often. Answering options were: standardized methods such as MI, TWEAK, EPDS, routine questions about domestic violence [4] and dialogue with the pregnant woman/partner/midwife-colleague, referral from a collaboration partner, and anonymous conversation with the child welfare service, informal lunch conversation. For each of the options the Likert scale answering options were; have not used/not relevant, never, seldom, regularly and always. Midwives were asked which care intervention they introduced upon identifying vulnerability factors and how often. Response options included: more frequent consultations, information about available treatment options and support measures, individualized care, inclusion in decision-making, culturally adapted care, a birth plan, postnatal care and home-visitation, help to stop drinking alcohol/smoking/chewing tobacco [3–6,15,19,21]. Likert scale responses for each care intervention were seldom, to some degree, medium degree, often, large degree.

Statistical analysis

Frequencies and percentages were used in the descriptive analysis of the following: background of the sample, response to the questions about which and how often community midwives met vulnerable pregnant women, how they are identified, and which interventions are offered. The association between the background variables and the midwives' work with vulnerable pregnant women was investigated using unadjusted regression analyses and presented as an odds ratio (OR) with a 95% confidence interval (CI). All the background variables were dichotomized for these analyses (Appendix 2). Missing data were $< 1\%$ for all variables and were not replaced. The statistical software SPSS version 26 was used to analyze the data.

Ethics

The questionnaire was targeted towards healthcare professionals and designed to ensure that the respondents remained anonymous. The respondents were informed about their rights and that their participation was voluntary (Appendix 1). The community midwives had to give their consent to participate and affirm that they were community midwives in order to continue the survey. The Regional Committees for Medical and Health Research Ethics (REK) found that the project did not require approval, ref: 139450. The Norwegian Centre for Research Data (NSD) found the project to be anonymous, ref: 137883.

Results

Background information on community midwives participating

Of the estimated 700 community midwives in Norway, 257 (36.7%) responded to the survey. The majority of the 257 participating community midwives were in the age group 41–54 years (45.9%), more than half had less than 10 years of experience as a midwife (59.8%), 178 (69.5%) held a position exceeding 80% full-time employment (FTE), and few combined their job with other positions (Table 1). About one-third of the midwives reported that they had completed the Early Start training program (Table 1).

Frequency of meeting vulnerable pregnant women

The most common vulnerability factors that midwives encounter, in descending order: immigrant background (91.1%), mental health problems (88.7%), limited social network (82.5%) and neglect (73.2%) (Table 2).

Methods used to identify vulnerable pregnant women

In order to identify vulnerability, 98% of the midwives reported that they used dialogue with the pregnant woman always/often, and 94.1% said that they used routine questions about domestic violence always/often (Table 3). MI is the method most frequently used by midwives to identify vulnerability factors; 41.2% stated that they use this method always or often (Table 3). The next most frequently used is EPDS, which is used by 31.1% of midwives always/often. In comparison, 16.3% of midwives use TWEAK always/often (Table 3).

Table 1
Background information on community midwives participating, N = 257.

	n	(%)
Age		
24–30	3	(1.2)
31–40	52	(20.2)
41–54	118	(45.9)
≥55	84	(32.7)
Experience as a midwife		
0–10 year	153	(59.8)
≥ 10 year	103	(40.2)
Work percentage of Full Time Employment (FTE)		
0–20	10	(3.9)
21–50	42	(16.4)
51–79	26	(10.2)
80–100	178	(69.5)
Combining positions		
No – only community midwife	163	(64.1)
Patient transport escort	20	(7.9)
Maternity ward	49	(19.3)
Other	22	(8.7)
Number of pregnant women per year at workplace		
0–20	12	(4.7)
21–50	49	(19.2)
51–100	100	(39.2)
101–149	69	(27.1)
≥150	25	(9.8)
Number of midwifery positions at workplace		
<1	47	(18.3)
1–3	99	(38.5)
3–7	64	(24.9)
7–11	35	(13.6)
Do not know	12	(4.7)
Participation in Early Start		
Yes	84	(32.8)
No	166	(64,9)
Don't remember	6	(2.3)

Table 2
Frequency of meeting vulnerable pregnant women, N = 275.

	Often/ Sometimes n (%)	Never/ Seldom n (%)	Missing/Don't known (%)
Immigrant background	234 (91.1)	23 (8.9)	(0)
Mental health problems	228 (88.7)	29 (11.3)	(0)
Limited social network	212 (82.5)	44 (17.1)	1 (0.4)
Neglect	188 (73.4)	67 (26.2)	1 (0.4)
Economic challenges	175 (68.1)	77 (30)	5 (1.9)
Young mothers	154 (59.9)	102 (39.7)	1 (0.4)
Single mothers	107 (41.6)	150 (58.4)	(0)
Domestic violence	50 (19.5)	196 (76.2)	11 (4.3)
Substance abuse	29 (11.3)	227 (88.3)	1 (0.4)

Table 3
Methods and tools used by midwives to identify vulnerable pregnant women, N = 257.

	Always n(%)	Often/ To large degree n(%)	Sometime/ To medium degree n(%)	Seldom/ To some degree n(%)	Never/ not used/ missing n(%)
Screening tools in general	25(9.7)	38 (14.8)	45(17.5)	57(22.2)	92(35.8)
MI	26 (10.1)	80 (31.1)	65(25.3)	58(22.6)	28(10.9)
EPDS	36 (14.0)	44 (17.1)	26(10.1)	56(21.8)	95(37.0)
TWEAK	24(9.3)	18(7.0)	17(6.6)	67(26.1)	131 (51.0)
Routine questions domestic violence	191 (74.3)	51 (19.8)	9(3.5)	6(2.4)	(0)
Dialogue with:					
The pregnant woman	192 (74.7)	60 (23.3)	4(1.6)	(0)	1(0.4)
Partner	3(1.2)	28 (10.9)	29(11.3)	132 (51.4)	65(25.2)
Midwife colleague	8(3.1)	56 (21.8)	77(30.0)	85(33.1)	31(12.0)
Public health nurse	5(1.9)	42 (16.3)	75(29.2)	112 (43.6)	23(9.0)
Refugee workers/office	2(0.8)	11(4.3)	54(21.0)	119 (46.3)	71(27.6)
Teacher	(0)	1(0.4)	5(1.9)	80(31.1)	171 (66.6)
Community violence team	(0)	(0)	2(0.8)	88(34.2)	167 (65.0)
NFP (Nurse Family Partnership)	(0)	6(2.3)	9(3.5)	19(7.4)	223 (86.8)
Referred from a collaboration partner	2(0.8)	18(7.0)	78(30.4)	127 (49.4)	32(12.4)
Anonymous dialogue with child welfare service	(0)	1(0.4)	28(10.9)	157 (61.1)	71(27.6)
Anonymous dialogue with social drug welfare workers	(0)	2(0.8)	20(7.8)	143 (55.6)	92(35.8)
Informal lunch conversation	(0)	8(3.1)	16(6.2)	111 (43.2)	122 (47.5)

Care offered

A total of 92.2% and 98.1% of the community midwives, respectively, reported providing care interventions to large degree/often

Table 4
Frequency of care interventions community midwives offer vulnerable pregnant women, N = 257.

	Large degree n (%)	Often n (%)	Medium degree n (%)	Some degree n (%)	Seldom n (%)
More frequent consultations	189 (73,5)	59 (23,0)	3(1,2)	6(2,3)	(0)
Information about available treatment options	169 (65,8)	73 (28,4)	14(5,4)	1(0,4)	(0)
Information about available support measures	171 (66,8)	72 (28,1)	11(4,3)	2(0,8)	(0)
Personalized care	211 (82,0)	41 (16,0)	3(1,2)	2(0,8)	(0)
Inclusion in decision making	186 (72,6)	65 (25,4)	4(1,6)	1(0,4)	(0)
Culturally adapted care	200 (77,8)	48 (18,7)	8(3,1)	1(0,4)	(0)
A birth plan, postnatal stay and homecoming plan	181 (70,7)	55 (21,5)	17(6,6)	3(1,2)	(0)
Help to stop drinking alcohol/smoking/ chewing tobacco	94 (36,9)	68 (26,7)	45(17,6)	35 (13,7)	13(5,1)
In-home follow-up care	63 (24,5)	46 (17,9)	37(14,4)	40 (15,6)	71 (27,6)

(Table 4). Only the interventions 'help to quit smoking' and 'in-home follow-up care' had a low reported frequency (63.6% and 42.4% to large degree/often).

Community midwives' characteristics associated with use of identification tools

Community midwives with more than ten years of midwifery experience were more likely than those with less experience to use screening tools in general, OR = 2.3 (95% CI 1.29–4.10) and MI, OR = 1.75 (95% CI 1.05–2.91) (Table 5). In contrast, they used routine questions about domestic violence significantly less, OR = 0.25 (95% CI 0.08–0.82) (Table 5).

Midwives who had completed the Early Start training were five times more likely to use screening tools, over three times more likely to use TWEAK, four times more likely to use EPDS and twice as likely to use MI than midwives without the Early Start training (Table 5).

We found no significant associations between background factors and how frequently the midwives reported that they used dialogue with pregnant women to identify vulnerability. (Data not included in Table 5)

Community midwives' characteristics associated with encountering vulnerable pregnant women

The background factors of age, experience and completed Early Start training showed no clear associations with how frequently midwives encountered vulnerable pregnant women (Table 6).

Midwives had a higher likelihood of encountering vulnerable pregnant women if they held a position exceeding 80% FTE in the community as compared with those who worked fewer hours, if they worked in a unit with three or more full-time FTEs rather than fewer, if they worked only as a community midwife instead of holding a combined position, and if they met with 100 or more pregnant women a year (Table 6).

Findings not shown in the tables

Midwives had a significantly higher likelihood of reporting that they encountered young mothers if they were in the age group 41–54 years than if they were 55 years or older, OR = 2.83 (95% CI 1.58–5.10). The likelihood of encountering pregnant women with an immigrant background was significantly higher, OR = 4.64 (95% CI 1.34–16.04) if the midwives worked in a unit with three or more FTE positions as compared with fewer. Midwives had a significantly higher likelihood of meeting pregnant women with financial problems if they held a position of 80% FTE or more as compared with more part-time positions, OR = 1.78 (95% CI 1.02–3.11) and if they worked only in the community rather than holding a combined position, OR = 1.85 (1.08–3.19). There were no significant associations for pregnant women with a limited social network.

Discussion

Midwives reported encountering vulnerable pregnant women. Most frequently, they met pregnant women with an immigrant background and those with mental health problems, less frequently pregnant women who experience domestic violence or have substance abuse problems. The community midwives used dialogue with the pregnant woman and

Table 5
Unadjusted Odds-Ratio for association between background variables and the midwives using identification tools always/often, N = 257.

	Screening tools OR (95% CI)	Tweak OR (95% CI)	EPDS OR (95% CI)	Routine question domestic violence OR (95% CI)	Motivational interview OR (95% CI)
Age					
24–40	0.42(0.19–0.96)	0.67(0.27–1.68)	0.78(0.37–1.62)	2.41(0.48–12.05)	1.11(0.56–2.22)
41–54	0.48(0.26–0.91)	0.66(0.32–1.39)	0.80(0.44–1.46)	1.70(0.55–5.25)	1.14(0.64–2.01)
≥55	1	1	1	1	1
Experience as a midwife					
≥10 yrs	2.30(1.29–4.10)	1.61(0.83–3.13)	1.48(0.87–2.53)	0.25(0.08–0.82)	1.75(1.05–2.91)
<10 yrs	1	1	1	1	1
FTE* over 80%					
yes	0.69(0.38–1.26)	0.66(0.33–1.32)	0.78(0.44–1.38)	2.10(0.73–6.00)	0.93(0.54–1.59)
no	1	1	1	1	1
Number of midwifery positions at workplace					
≥3	0.68(0.37–1.24)	0.67(0.33–1.37)	0.87(0.50–1.50)	1.27(0.42–3.83)	0.58(0.35–0.98)
<3	1	1	1	1	1
Completed Early Start training programme					
yes	5.38(2.93–9.88)	3.44(1.75–6.80)	4.19(2.38–7.36)	0.71(0.25–2.08)	2.28(1.34–3.88)
no	1	1	1	1	1
Only community midwife					
yes	0.71(0.39–1.27)	0.85(0.43–1.69)	0.69(0.40–1.19)	1.62(0.57–4.61)	1.07(0.63–1.80)
no	1	1	1	1	1
Pregnant women per year per midwife					
≥100	0.82(0.45–1.48)	0.64(0.31–1.32)	0.92(0.53–1.59)	0.87(0.30–2.52)	1.00(0.59–1.67)
<100	1	1	1	1	1

*Full Time Employment.

Table 6
Unadjusted Odds-Ratio for the association between background factors and which kind of vulnerable pregnant women midwives meet often or sometimes, N = 257.

	Mental health problems OR(95% CI)	Domestic violence OR(95% CI)	Substance abuse OR(95% CI)	Childhood neglect OR(95% CI)	Single mothers OR(95% CI)
Age					
24–40	1.02(0.41–2.56)	0.72(0.29–1.83)	1.10(0.33–3.66)	0.40(0.19–0.84)	0.57(0.28–1.16)
41–54	3.73(1.37–10.17)	1.20(0.60–2.41)	1.85(0.73–4.69)	1.16(0.60–2.27)	1.04(0.59–1.82)
55 or more	1	1	1	1	1
Experience as a midwife					
>10 yrs	0.59(0.27–1.28)	1.64(0.88–3.06)	1.45(0.67–3.14)	1.16(0.66–2.04)	1.17(0.71–1.94)
<10 yrs	1	1	1	1	1
FTE* over 80 %					
yes	2.03(0.92–4.45)	2.29(1.06–4.99)	4.28(1.25–14.58)	1.44(0.80–2.58)	1.97(1.12–3.46)
no	1	1	1	1	1
Number of midwifery positions at workplace					
≥3	2.64(1.04–6.74)	1.80(0.96–3.35)	1.84(0.85–3.99)	2.37(1.27–4.39)	2.55(1.52–4.27)
<3	1	1	1	1	1
Completed Early Start training program					
yes	1.31(0.56–3.10)	1.84(0.98–3.46)	1.10(0.49–2.47)	1.39(0.76–2.55)	1.00(0.59–1.70)
no	1	1	1	1	1
Only community midwife					
yes	4.82(2.09–11.11)	2.96(1.37–6.43)	5.57(1.64–18.95)	2.37(1.35–4.18)	2.90(1.66–5.06)
no	1	1	1	1	1
Pregnant women per year per midwife					
≥100	3,12(1,15–8,47)	3,15(1,66–5,97)	1,99(0,92–4,34)	2,33(1,24–4,37)	2,56(1,52–4,32)
<100	1	1	1	1	1

*Full Time Employment

screening tools such as routine questions about domestic violence, MI, EPDS and TWEAK to identify vulnerable pregnant women. Having completed a training program increased the use of these tools. Upon meeting vulnerable women midwives offered a wide range of interventions in care.

Young maternal age and immigrant background are visible vulnerability factors. This study showed that the community midwives most often met vulnerable pregnant women with an immigrant background. Of all babies born in Norway in 2019, 28% had a mother with an immigrant background [22]. Immigrant women are a heterogeneous group with different challenges related to pregnancy and birth, depending on their country of origin and whether they are, for example, labor immigrants or refugees [23,24]. Immigrants as a group are known to have a higher incidence of conditions such as maternal diabetes and hyperemesis gravidarum [22]. They also have a higher risk of other vulnerability factors such as financial problems, limited social network, mental health problems and experience with domestic violence [23–26]. All the community midwives in the study stated that they provided culturally adapted care, which may involve the use of an interpreter [4]. Knowledge of cultural differences and a trained interpreter with a cultural understanding of the host country and the country of origin can help midwives to uncover problems and needs of the pregnant women [23,26].

This study showed that nine in ten community midwives reported encountering pregnant women with mental health problems sometimes or often. Mental problems may be known before the pregnant woman sees the community midwife [11] and may be ticked off and described on the health card. The health card in paper format contains boxes that the midwives tick off to indicate their country of origin, mental health and alcohol use so that involved healthcare professionals can come to know about the identified vulnerability factors. This may be a reason that the midwives report encountering pregnant women with mental problems more often than those who experience domestic violence or have substance abuse problems. One reason that the midwives report meeting fewer pregnant women who experience domestic violence is that the incidence of domestic violence is one-third as common as mental problems during pregnancy [12–14]. Another explanation is that experience with domestic violence in a lifetime perspective is not specified in the study, and the incidence of domestic violence in a lifetime perspective is six times as great as during pregnancy [13]. The finding in this study that most of the midwives seldom or never encounter pregnant women who experience domestic violence corresponds with the literature; domestic violence is often a hidden vulnerability that is difficult to detect [8].

With regard to hidden vulnerability factors such as substance abuse, domestic violence or mental health problems, many pregnant women are afraid that others will find out about their problems [7]. This is because they may feel ashamed or fear that they will lose their parental rights [7,11]. To prevent pregnant women's vulnerabilities from staying hidden, a study by Vanceulebroeck et al. recommend using a checklist to identify vulnerable pregnant women, in addition to providing good information and respectful treatment [15].

One type of checklist is screening tools such as routine questions about domestic violence, MI, EPDS and TWEAK. These tools were used to identify vulnerable pregnant by the community midwives who participated in this study. A systematic review from the USA reported that EPDS was not often used to detect depression at a pregnant woman's first maternity check-up [7]. This appears to be in contrast to this study's finding that one-third of the midwives used EPDS always/often. Since this study did not specify when EPDS is used, it could be from the first consultation to the postpartum conversation. One-third of the community midwives in this study had completed the Early Start training, which is both a theoretical and a practical introduction to MI, EPDS, TWEAK and routine questions about domestic violence [3]. The evaluation report on the Early Start training program states that the training makes the practitioners feel more confident in their work with vulnerable pregnant women [3]. In line with this report, this study showed that those who had completed the Early Start training used the screening tools more frequently.

However, community midwives who had not completed the Early Start training reported encountering vulnerable pregnant women just as frequently. Regardless they had received training from the Early Start program or not, most midwives in this study asked about domestic violence always/often, which aligns with maternity care guidelines [4]. The Norwegian Directorate of Health has put the spotlight on domestic violence, first through the handbook on domestic violence in 2014, and later by incorporating these guidelines into the maternity care guidelines in 2018 [4]. This overall national focus on domestic violence, as well as a focus on mental health and substance abuse [4], may have helped community midwives to do a better job of identifying vulnerability. It is possible that community midwives have received local training for identifying vulnerable pregnant women. Other possible

explanations are that community midwives may have completed a different type of education than we have measured, such as postgraduate studies in mental health.

All the community midwives in this study used dialogue to uncover vulnerability. In a qualitative study from eight of eleven health districts in Scotland, directors of a short-term intervention program were interviewed about the significance of conversation for detecting alcohol misuse among pregnant women. The study showed that midwives more frequently disclosed alcohol abuse if they had a trusting relationship with the pregnant woman by talking about drinking habits prior to pregnancy and leading a positive conversation [27]. This study showed that almost all the community midwives reported offering individualized, culturally adapted care and inclusion of women in decision-making. These interventions might strengthen the relationship and trust between the midwife and the pregnant woman [27]. In a qualitative study based on midwives' experiences with working with vulnerable pregnant women in Australia, midwives' prioritization of the woman-midwife relationship in maternity care was found to be crucial [19]. A study by Jarosinksi and Fox on the care of pregnant women with mental health problems recommends developing trust with the caregiver so that the woman can disclosure her problems [7]. It was important to have a warm, non-judgmental relationship, where the professional made an effort to develop respect and trust [7]. In maternity care in Norway, the pregnant woman sees the same midwife multiple times. Time, relationship-building and trust can make it easier for the woman to talk about her problems [27].

It is logical that if a midwife meets many pregnant women in general, she will encounter more vulnerable pregnant women, as this study showed. In addition to this logical connection, another possible factor could be that the experience gained from seeing a large number of women and the exchange of knowledge and experiences with professional colleagues enhanced the competence of the community midwives [6,8,11,19]. When a community midwife is present every weekday, it is possible to provide continuity over time. Moreover, a full-time position can improve a community midwife's competence in conversing with women during maternity care, which in turn can lead to more experience and competence in detecting vulnerability.

Strengths and weaknesses of the study

We designed the questionnaire ourselves, as existing questionnaires did not contain the variables we wanted to include in this study. The strengths of this study are that the variables are based on research literature and clinical practice and that a pilot questionnaire was administered to colleagues and revised, based on their feedback. However, core concepts such as "young mother", "mental health problems" were not defined in the questionnaire and could be defined differently by the responding midwives. A major weakness is that the variables are not validated and cannot be directly compared to previous research on the same variables [28]. All our findings are self-reported and present the midwives' perception. Midwives may provide a more positive view of the care of vulnerable women than vulnerable women would, if asked. Another weakness is that only 36.7% of the total population responded, and thus the findings cannot be generalized [28]. A key weakness of the study is that adjusted analyses to ascertain associations were not performed. Since the design was descriptive and explorative, only unadjusted analyses were conducted. Therefore, it is uncertain whether the associations shown in this study would still be valid if several variables had been tested simultaneously. For future studies we advice that possible confounding factors to be included in the data collection are geographic location, urban versus rural, size of community and other services available for referral [6].

A possible bias in this study is that community midwives with a special interest in care of vulnerable pregnant women were more likely to have responded. Consequently, the results could be more positive than they would be for the total population of community midwives in Norway. Community midwives with a special interest will probably identify more vulnerable pregnant women than the total population of midwives. The findings can be regarded as transferable in the sense that training of community midwives results in better professional practice. This is because these are findings about associations and not about incidence or proportion. The uniform nature of the findings about frequent maternity care interventions suggests that the results might have been similar if more midwives had responded [28]. Although the frequently reported maternity care interventions for vulnerable pregnant women cannot be generalized, they can indicate what constitutes good professional practice.

Conclusion

Community midwives seem to be aware about their role in caring for vulnerable pregnant women. Midwives identified vulnerable pregnant women by actively using screening tools and other methods, as well as by meeting the women's needs in various ways. This study suggests that specific training in identifying vulnerable pregnant women increases midwives' ability to do so. More research is needed on the experiences of community midwives with inter-disciplinary collaboration for vulnerable pregnant women.

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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.

Appendix A. Supplementary material

Supplementary data to this article can be found online at https://doi.org/10.1016/j.srhc.2021.100693.

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