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A survey of contemporary antenatal parental education in Sweden: What is offered to expectant parents and midwives' experiences

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ABSTRACT

Objective: To explore how antenatal parental education is provided in southern Sweden and midwives' experiences of it.

Methods: A cross-sectional survey with data collection from 66 antenatal clinics and 189 midwives during 2016. Descriptive and comparative statistics, chi-square and *t*-tests, were used to present the findings.

Results: Antenatal parental education was most commonly offered in small parental groups and the number of hours provided varied between two and ten (mean 5.8) hours. A common and structured program for the sessions was used at 37.3% of the clinics. Normal birth, pain relief, partner role during birth, breastfeeding advantages and breastfeeding initiation were the topics most extensively covered. Topic coverage was in 12 topics, mostly related to the time after birth, lower than midwives' rated importance of the topic: *p*-values between 0.05 and < 0.01. Only 14.2% of the midwives often provided guidance to websites. Although midwives enjoyed working with antenatal parental education, they expressed lack of organizational support and lack of personal skills in group leadership and teaching. Years of experience did not significantly affect their self-rated skills in group leadership or teaching.

Conclusion: These results contribute to knowledge about contemporary antenatal parental education in Sweden. Our results showed that antenatal parental education is not always in accordance with parents' expectations, especially concerning early parenthood and guidance on the internet. To provide antenatal parental education tailored to the needs of expectant parents it is vital to develop evidence-based guidelines and to address midwives' needs for improved skills in group leadership and teaching.

Introduction

Antenatal parental education (antenatal PE) is offered to expectant parents in many countries worldwide with the aim of preparing them for childbirth and parenthood. Content and form of antenatal PE has been discussed through the years and criticism has been raised that provision of antenatal PE is more commonly based on views of professionals rather than on the needs of expectant parents [1,2]. Studies show that parents would like a clear focus on early parenthood [3,4], but there is little scientific knowledge of what is offered to expectant parents and the lack of evidence-based guidelines is likely to result in unequal access to adequate parental support.

Transition to parenthood can be an overwhelming time in life when feelings of joy are mixed with the strain of parental responsibilities [5–7]. Being prepared, having knowledge and receiving social and professional support may facilitate this transition [8]. Parental support and guidance are also included in the UN Convention on the Rights of the Child, as measures to increase children's health [9]. According to earlier studies, midwives experienced the provision of antenatal PE as challenging and reported lack of skills regarding group leadership [10,11] and teaching [11]. The use of internet to access information related to pregnancy, birth and parenthood is common among expectant parents [12–14]. Nevertheless, they want professional guidance in order to sift among the large amount of accessible information on the internet [6,7,15]; a task also experienced as challenging by health care professionals [11]. The extent of professional guidance in locating evidence-based information on websites or mobile applications in antenatal PE is largely unknown.

The effects of antenatal PE have been evaluated in several studies. Women in Denmark who attended antenatal PE with a structured

Abbreviations: PE, Parental education; ANC, Antenatal clinic

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programme reported less worry in late pregnancy [16]. Another large Danish trial comparing antenatal PE in small classes to auditorium based lectures showed significant effect on women's childbirth self-efficacy [17] but no significant effects on parental stress or parenting alliance [18]. In contrast to these findings, other studies have shown effects of antenatal PE on parenting outcomes. Parents who received antenatal PE compared to those who received only a brochure had significantly lower parental stress and higher parental self-efficacy in an American study [19]. In Australia, a trial of the provision of antenatal PE by enhancing parents' own learning activity also resulted in a significant increase in parental self-efficacy and knowledge [20].

Since the late 1970s antenatal PE in Sweden has been provided by midwives and integrated with antenatal care. It is offered free of charge to expectant parents in groups and also individually [2]. The Swedish National Board of Health and Welfare has identified antenatal PE as an area in need for development [21]. In order to develop antenatal PE based on evidence for best practice there is a need to know what is presently offered and also experiences of those working with antenatal PE.

Therefore, the overall aim of this study was to explore how antenatal PE is provided in southern Sweden and midwives' experiences of it. Three explicit aims guided the data analyses: to describe the form and content of antenatal PE and identify the most common type of provision; to explore midwives' experiences of working with antenatal PE; and to compare the content in antenatal PE with midwives' views on the importance of the content.

Methods

Design and setting

A cross-sectional survey was conducted from March to end of June 2016 in the southern region of Sweden. The region encompasses both urban and rural areas and has 1 344 689 inhabitants of which approximately 20% were born outside of Sweden. Of the inhabitants between 25 and 64 years, 43% have higher education, 42% secondary level education and 15% basic schooling or unknown educational level [22]. Maternity health care in this region is organised in a health care choice system with both publicly and privately owned clinics, although all are publicly financed and free of charge. Antenatal clinics (ANC) may be organised as independent clinics or as part of a family centre clinic.

Participants and data collection

Managers of all 82 ANCs in the region were informed about the study and were asked for permission to send out two questionnaires, one addressed to the ANCs and one addressed to the individual midwives working in the ANCs. Managers of 66 ANCs (80.5%) gave permission to send questionnaires. Postal addresses were collected through official data of registered ANCs.

The questionnaire for ANCs was sent by post, with instructions for the midwives working in the ANC to fill in the questionnaire collectively. A reminder was sent after five weeks by phone or by post. A third of the non-responding ANCs were reached by phone, the remaining reminders were sent by post.

The questionnaire for individual midwives was sent as a web link in an email to 189 midwives who worked at the 66 ANCs. E-mail addresses to individual midwives' were provided by the managers. A web-based system "Survey and Report" was used to distribute the questionnaire and automated reminders were sent three times with a two-week interval to those midwives who had not responded. All collected data was handled anonymously.

Instruments

Two questionnaires were developed for this study, one for ANCs and one for individual midwives. Both were based on a validated questionnaire developed for use in parental groups in Child Health Clinics by Wallby [23] and later used by Lefèvre et al. [24]. Questions regarding the topics covered in antenatal PE were constructed for this study and based on national recommendations for antenatal PE [2] and on previous studies exploring parents' perspectives on preparation for parenthood [6,7]. When developing the questionnaires a statistician was involved in the process of constructing response alternatives related to the statistical analysis plan. Thereafter three midwives with experience in antenatal PE tested the questionnaires for face validity in terms of relevance of content and comprehensibility of the questions. This resulted in minor adjustments.

The ANC questionnaire

The questionnaire for ANCs included 54 items within four themes. The themes were organisation of the ANC (5 items), to whom antenatal PE is offered (3 items), forms and structure of antenatal PE (17 items) and topics covered in antenatal PE (29 items). Statements about the extent of topic coverage were answered on 5-point Likert-type scales with the response alternatives: not at all, to a very small extent, to a small extent, to a large extent and to a very large extent. Other questions had fixed response options. A space for open comments was provided for some questions.

The midwife questionnaire

The questionnaire for individual midwives also included 54 items; the midwife's age, work experience, views on the importance of topics covered in antenatal PE and experiences of support, skills and challenges in working with antenatal PE. Statements about views on importance of topics covered in antenatal PE were answered on 4-point Likert-type scales, as were self-rating statements on group leadership and teaching skills. The response alternatives were: of no importance, of little importance, important and very important. Statements regarding experiences of challenges, support and skills when working with antenatal PE were answered on 4-point Likert-type scales with the alternatives: do not agree at all, agree to a small extent, agree to a large extent or totally agree. Other questions had fixed response options. A space for open comments was provided for some questions.

Data analysis

Analyses of the ANC questionnaire

Descriptive statistics were provided for background variables for ANCs and for the form of provision of antenatal PE.

To identify the most common antenatal PE provided, answers from the Likert-type scales regarding topic content were summarized and a mean value and standard deviation was calculated for total scores. The ANCs were then dichotomised to those whose scores fell within one standard deviation and those whose scores did not. A mean value and standard deviation were calculated for number of hours of education offered and a description of group type was provided.

Analyses of the midwife questionnaire

Descriptive statistics were provided for midwives' background variables.

To analyse whether experience in leading antenatal PE affected self-rated skills in group leadership and teaching, years of experience in antenatal PE was dichotomised according to Benner's theory of progress from novice to expert; ≤ 5 years and > 5 years experience [25]. The individual samples *t*-test was then used to compare mean scores for differences in self-reported teaching and leadership skills between the

two groups.

The midwives' age variable was dichotomised to ≤40 or > 40 years of age. Responses to the use of websites and mobile applications were dichotomised by merging "Use often" and "Use sometimes" to one value and "Never use" was the second value. The affect of midwives' age on their use of websites or mobile phone applications in antenatal PE was then analysed using Pearson's Chi-2 test to compare younger and older midwives' responses.

The paired samples *t*-test was used to test differences between mean scores for midwives' rating of their topic knowledge regarding birth, breastfeeding and early parenthood.

Analyses of comparisons between responses in ANC questionnaire and midwife questionnaire

The ANC's responses regarding coverage of topics in antenatal PE were answered on 5-point scales whilst individual midwives answered about importance of the topics on 4-point scales. To allow comparison of means for responses to these questions, the two values "Not at all" and "To a very small extent" on the 5-point scale were merged to one value. The individual samples *t*-test was used to test mean score differences between responses to the ANC questionnaire and the midwife questionnaire.

Cronbach's alpha was used to test reliability of items regarding topics in antenatal PE answered on Likert-type scales in the questionnaires.

Missing values were few and were therefore excluded from all analyses. All tests were two-sided and p-values ≤ 0.05 were considered statistically significant. Statistical analyses were conducted using the IBM SPSS version 24.

Ethical considerations

The study was conducted in compliance with the ethical principles of the Declaration of Helsinki [26] and ethical approval was obtained from the Regional Ethical Review Board in Lund (2013/651).

Results

The antenatal clinics

The response rate for the questionnaire to the ANCs was 78.8% (n = 52). Single internal drop-outs did not exceed 3.8% (n = 2) in any question. A profile of the participating ANCs is shown in Table 1.

Form and content of antenatal parental education

Two thirds (67.3%; n = 35) of the ANCs offered antenatal PE to all expectant parents while 19.2% (n = 10) offered mainly to first-time parents but, subject to availability, expectant parents with previous children were also offered antenatal PE. Some ANCs only offered antenatal PE if one of the parents expected their first child (9.6%; n = 5) and others only if it was the mother's first child (3.8%; n = 2).

Table 1
Profile of antenatal clinics in the study (N = 52).

	n (%)	Missing, n
Type of care provider		
Public	28 (53.8)	
Private	24 (46.2)	
Family centre clinic		1
Yes, with ANC and Child Health Clinic (CHC)	17 (33.3)	
Yes, with ANC; CHC and open nursery school	2 (3.9)	
Yes, with ANC, CHC, open nursery school and social services	11 (21.6)	
No	21 (41.2)	
Number of midwives working in the clinic	Mean 3 (SD 1.7) Range 1–8	

Measures to increase partners' participation in antenatal PE were taken by 35.3% (n = 18) of the ANCs. These measures included pointing out that the content was relevant to both parents and encouraging both to take part and also offering antenatal PE at hours that interfere less with parents' working hours.

The majority of ANCs (73.1%; n = 38) did not offer antenatal PE sessions that separated the parents into gender groups while 7.4% (n = 4) did offer separate sessions for mothers and fathers. A further 3.8% (n = 2) offered separate sessions for mothers only and 15.4% (n = 8) for fathers only.

Antenatal PE directed to specific groups of parents, for example young parents, parents expecting twins, non-Swedish speaking parents, same-gender couples or single mothers were offered by 40.4% (n = 21) of the ANCs. A small number of ANCs (9.6%; n = 5) also offered groups that focused on psychoprophylaxis for couples, on yoga or on water exercise for mothers.

The ANCs offered between two and ten hours of antenatal PE, with a mean of 5.8 (SD 1.8) hours. The number of sessions varied between one and five with a mean of 2.8 (SD 0.9). Most commonly, the ANCs started antenatal PE between gestational weeks 30 to 34 (64.7%; n = 33).

Small parental groups with less than 15 individuals were offered by 90.4% (n = 47) of the ANCs. Lectures with more than 14 individuals were offered by 30.8% (n = 16). It was the intention of two thirds of the ANCs (69.2%; n = 36) to provide a fixed group constellation. Themed sessions, such as a session on labour and birth and a session on breastfeeding, were offered by 76.9% (n = 40) of the ANCs. A common and structured program for the sessions was followed by 37.3% (n = 19). Group discussions were included in the majority of the sessions by 61.5% (n = 32) of the ANCs while 19.2% (n = 10) never included group discussions in the sessions.

Antenatal PE was commonly led by a midwife alone (53.8%; n = 28) but could also be led together with a second midwife (15.4%; n = 8) or other professional (19.2%; n = 10). Other professionals involved in antenatal PE were for example Child Health Care nurses, social workers, pre-school teachers, psychologists, physiotherapists, dieticians, male father group leaders and yoga instructors.

Topics covered in antenatal PE at the ANCs are shown in Table 2. The topics normal birth, pain relief, partner role during birth, breastfeeding advantages and breastfeeding initiation were those with the highest scores for topic coverage.

The most common form and content of antenatal PE

The most common form for provision of antenatal PE was in small parental groups of 8–14 individuals and included 5.8 (SD 1.8) hours. The ANCs had a mean total score for topic coverage of 85.6 (SD 13.3). Two thirds (67.3%; n = 35) of the ANCs had scores that fell within one standard deviation and were identified as providing the most common antenatal PE regarding content.

The midwives

The midwife questionnaire had a response rate of 57.1% (n = 108). Single internal drop-outs did not exceed 1.9% (n = 2) in any question. The midwives were between 32 and 66 years old, with a mean of 50.7 (SD 8.5) years. Their professional experience as a midwife varied between one and 43 years, mean 19.7 (SD 10.3) years. The experience of leading groups in antenatal PE varied between none to 38 years, with a mean of 12.2 (SD 9.4) years.

Midwives' experiences of antenatal parental education

Almost all midwives who answered the individual questionnaire (97.2%; n = 104) had experience of leading antenatal PE in small groups and a third (32.7%; n = 35) had experience of leading large parental groups/lectures. Midwives' experiences of working with antenatal PE are shown in Table 3.

Table 2
A comparison between the extent of topic coverage in antenatal PE at the ANCs and midwives' individual opinions on the importance of these topics.

Themes and topics	ANCs' extent of coverage of topics[a] (N = 52)		Individual midwives' opinions on importance of topics[b] (N = 108)		t-value	p-value
	m (SD)	Missing n	m (SD)	Missing n		
Labour and birth						
Normal birth	3.87 (0.4)		3.85 (0.4)		0.24	0.81
Methods for breathing and relaxation in labour	3.10 (0.9)		3.58 (0.6)	1	−4.21	< 0.01*
Partner role during birth	3.65 (0.5)		3.81 (0.4)		−1.94	0.05*
Birth positions	3.02 (0.8)		3.06 (0.8)		−0.21	0.83
Pain relief during labour and birth	3.58 (0.6)		3.54 (0.6)	1	0.41	0.68
Perineal tears	2.69 (0.7)		3.07 (0.7)	1	−3.13	< 0.01*
Induction of labour	2.35 (0.7)		2.63 (0.7)	1	−2.28	0.02*
Instrumental birth	2.63 (0.6)		2.99 (0.6)	1	−3.30	< 0.01*
Caesarean birth	2.62 (0.6)		3.05 (0.6)		−3.97	< 0.01*
Breastfeeding						
Breastfeeding advantages	3.75 (0.7)		3.84 (0.4)		−1.13	0.26
Breastfeeding initiation	3.73 (0.7)		3.81 (0.4)	1	−0.96	0.34
Common breastfeeding problems	3.39 (0.8)	1	3.54 (0.6)		−1.24	0.22
Breastmilk substitutes	2.35 (0.9)		2.86 (0.8)	2	−3.70	< 0.01*
Baby						
Daily baby care	3.04 (1.0)		3.41 (0.6)		−2.78	< 0.01*
Baby health, signs of illness	2.81 (1.0)		3.25 (0.7)		−3.05	< 0.01*
Mother						
Mother's physical postnatal recovery	2.98 (0.9)		3.40 (0.6)		−3.59	< 0.01*
Pelvic floor exercises	2.67 (1.2)		3.31 (0.7)		−4.31	< 0.01*
Physical exercise postnatally	2.38 (1.1)		3.03 (0.6)		−4.52	< 0.01*
Family						
Attachment	3.31 (0.8)		3.68 (0.5)	1	−3.53	< 0.01*
Postnatal emotional mood	3.31 (0.7)		3.69 (0.6)		−4.00	< 0.01*
Sleep	3.00 (0.8)	1	3.40 (0.6)	1	−3.58	< 0.01*
Siblings	2.33 (1.0)		2.89 (0.7)		−5.15	< 0.01*
Relationship and sexuality	2.94 (0.9)		3.38 (0.5)		−3.67	< 0.01*
Contraception	2.33 (1.1)		2.89 (0.8)		−3.63	< 0.01*
Equal parenting, gender roles	2.88 (1.0)		3.19 (0.7)		−2.25	0.03*
Economy, social insurance	1.81 (1.0)		2.22 (0.7)	1	−2.79	< 0.01*
Practical information						
Birthing unit	3.16 (0.8)	1	3.19 (0.7)	1	−0.18	0.86
Postnatal ward	3.20 (0.7)	1	3.16 (0.7)		0.37	0.71
Child health clinics	3.06 (0.9)	1	3.11 (0.7)	2	−0.36	0.72

[a] 1 = not at all or to a very small extent; 2 = to a small extent; 3 = to a large extent; 4 = to a very large extent.
[b] 1 = of no importance, 2 = of little importance, 3 = important, 4 = very important.
* Statistical significant difference.

The vast majority of midwives agreed, to a large extent or totally, that leading groups in antenatal PE was fun (80.5%; n = 87) and stimulating (80.3%; n = 86). A wish to abstain from leading groups was reported by a fifth of the midwives (23.4%; n = 25). In total 38.3% (n = 41) of the midwives did not agree at all or agreed to a small extent, to having sufficient skills in group leadership. Further, 55.1% (n = 59) of the midwives reported not having sufficient teaching skills. No statistically significant differences were found between those with

Table 3
Midwives' experiences of working with antenatal PE[a] (N = 108).

	m (SD)	Range	Missing, n
Positively phrased statements			
I have sufficient topic knowledge to prepare expectant parents for birth	3.53 (0.6)	2–4	2
I have sufficient topic knowledge to prepare expectant parents for breastfeeding	3.39 (0.6)	1–4	1
I have sufficient topic knowledge to prepare expectant parents for parenthood and the first postnatal weeks	3.38 (0.6)	2–4	1
I find it fun to lead parental groups	3.21 (0.8)	1–4	1
I feel comfortable in the role as group leader	3.20 (0.8)	1–4	2
I find it stimulating to lead parental groups	3.13 (0.8)	1–4	1
I have access to all technical equipment that I need when working with parental groups	2.75 (0.9)	1–4	2
I have sufficient support from my manager when working with parental groups	2.73 (1.0)	1–4	2
I have sufficient support from my colleagues when working with parental groups	2.73 (1.0)	1–4	1
I have sufficient skills in group leadership	2.68 (0.8)	1–4	1
I find the rooms that I have access to are suitable for parental groups	2.67 (1.0)	1–4	
I find the time during the parental group sessions as enough to prepare expectant parents for birth and parenthood	2.64 (0.9)	1–4	2
I have sufficient pedagogical skills	2.47 (0.8)	1–4	1
I have possibilities to dispose enough time to prepare the parental group sessions	2.27 (0.9)	1–4	2
Negatively phrased statements			
I would like to abstain from leading parental group	1.82 (1.0)	1–4	1
I find it difficult to lead parental groups	1.91 (0.8)	1–4	2

[a] 1 = Not agree at all, 2 = Agree to small extent, 3 = Agree to large extent, 4 = Totally agree.

≤5 years or > 5 years of experience in leading parental education groups for self-rated skills in group leadership (t −1.86; p 0.07) or teaching (t −1.44; p 0.15). Midwives' rated their topic knowledge about birth significantly higher than their topic knowledge about breastfeeding (t 2.88; p < 0.01). Knowledge about birth was also significantly higher than knowledge about parenthood and the first postnatal weeks (t 2.17; p 0.03).

In the midwife questionnaire, 14.2% (n = 15) of the midwives answered that they often introduced websites to expectant parents, 47.1% (n = 50) introduced websites occasionally while 38.7% (n = 41) never introduced websites in antenatal PE. Introducing smart phone applications in antenatal PE was not common among the midwives; 2.8% (n = 3) introduced apps often and 15.7% (n = 17) occasionally while 81.5% (n = 88) never introduced them. There was no statistically significant difference between younger (≤40 yrs) or older (> 40 yrs) midwives for provision of guidance to websites (χ^2 = 0.12; p 0.73) or apps (χ^2 = 0.19; p 0.66).

Comparison between ANCs' content of antenatal PE and midwives' views of the importance of the content

The different topics covered in antenatal PE among the ANCs in the study, midwives' individual views on the importance of these topics and a comparison between the two are shown in Table 2. Midwives' rated importance of the topics as significantly higher than the ANC's extent of topic coverage in a majority of the topics, especially those concerning postnatal themes regarding the baby, mother and family.

The Cronbach's alpha coefficient for items regarding topics in antenatal PE in the questionnaires was for the ANC's version 0.92, and for the midwife's version, 0.89.

Discussion

This cross-sectional study of 66 ANCs and 108 midwives gives a contemporary view of the provision of antenatal PE in Sweden. Important findings in this study were that the most common way to provide antenatal PE was in small parental groups starting in the third trimester and that topics related to normal birth and breastfeeding were those most extensively covered in the antenatal PE. The results also showed that coverage of topics offered in antenatal education were often significantly lower than midwives' rated importance of topics, especially those concerning the time after birth and only 37.3% of the ANCs used a structured programme for the sessions. A high number of midwives did not guide parents to websites and mobile applications. Midwives' self-reported levels of skills in teaching and group leadership were low and time at their disposal for the preparation of antenatal PE was insufficient. The midwives also reported low mean scores for support from colleagues and managers. The following discussion will focus on identified weaknesses in the provision of contemporary antenatal PE.

More than half of the ANCs offered antenatal PE starting in the third trimester although previous studies have proposed that the second trimester may be a more optimal starting point for the education [6,8,27]. An earlier start would give parents more time to reflect and discuss with each other, which may enhance their preparation. Antenatal PE was most commonly provided in small groups, which may facilitate discussions among participants [6,7] but not all ANCs included group discussions. Previous studies have found that parents prefer to take an active part in their learning and that they value discussion with peers [4,28].

The reported high topic coverage regarding breastfeeding is an interesting finding as previous studies from Scandinavia and UK have shown that women feel unprepared for breastfeeding challenges [5,6,29]. It may be that the content or learning strategies do not match parents' needs since parents require more problem-solving skills regarding breastfeeding according to Swedish research [6,7,30]. These are skills that are important to the individual mother, when returning home from the hospital, especially in the wake of closure of breastfeeding support clinics in Sweden today [31,32]. Promoting parents active learning in antenatal PE is important as active learning has been shown to improve learning outcomes [20]. Midwives' self-reported lack of skills in teaching and group leadership, which also have been identified by midwives themselves and by parents in several earlier studies [10,11,27,28], are likely to affect the promotion of active learning in antenatal PE [33]. In the present study midwives' skills in teaching and group leadership were not affected by their professional experience. This indicates that a stronger focus on skills in teaching and group leadership in midwifery education in Sweden today is needed and may improve learning outcomes of antenatal PE. However, parents' active learning should not exclude professionals' responsibility in focusing on important topics that have been pinpointed by researchers. This is particularly important since previous studies have found that first-time expectant parents may have difficulties in knowing what they need to know [5–7]. The fact that only 37.3% of the ANCs had a common and structured program for antenatal PE indicates a clear need for evidence-based guidelines to provide equal professional care to all expectant parents.

In the present study topics regarding birth seemed to be better covered than those regarding the time after birth. The results also showed that coverage of topics in antenatal PE in several cases was significantly lower than midwives rated importance of the topics, especially for topics concerning the time after birth. Previous research has shown that the main reasons for parental participation in antenatal PE are to prepare for parenthood and to feel secure in how to take care of their newborn [3]. Despite this, research continues to show that parents feel inadequately prepared for the early parenthood period [4,6,7]. The need to increase the balance between childbirth preparation and parenthood preparation in antenatal PE has previously been shown in an earlier Swedish study [8]. In the present study antenatal PE was most commonly led by a midwife. The fact that the midwives rated their topic skills about the early parenthood period lower than for the birth is not surprising since birth is given a very central role in the curriculum for midwifery education and early parenthood is covered to a lesser extent. It has previously been suggested that midwives might not be the best suited or most skilled professionals to prepare parents in all topics in antenatal PE [10,20,34]. Cooperation with other professionals during antenatal PE might be one way to resolve issues of lack of topic skills and introduction to other professionals could also increase parents' awareness of where support can be accessed both before and after the baby is born.

The introduction of websites and apps containing information about early parenthood, could also be an adjunct for continued support in the early parenthood period. In the present study midwives' guidance to websites and apps in antenatal PE was low. Today's parents are internet savvy but despite this, studies have shown that they want more professional guidance to locate reliable information on the internet [6,7,15]. Several websites and apps have commercial interests, which may be one reason for health professionals' caution in giving recommendations. A previous study showed that many midwives worldwide lacked awareness of important indicators to assess quality in online health information [35]. Providing health professionals with recommendations for evidence-based websites and mobile applications for parents may be one measure but guiding parents on the internet also requires skills for critical appraisal of the information. The term "antenatal parental education" implies that the health care system is educating parents. It is however important to acknowledge that providing information to expectant parents is not a goal that stands alone; it is vital to stimulate parents' own reflections and thus stimulate self-empowerment [2]. Improving parents' health literacy, which includes knowing where to find, critically analyse and use information to maintain or improve health, has been reported as an important focus in antenatal care [36]. This could be a useful strategy to deal with

midwives' limited time in antenatal PE and improve parents' self-empowerment. This would however demand access to information that is understandable regardless of parents' educational level or language [36].

The midwives in the present study also experienced low levels of support from colleagues and managers in their work with antenatal PE and insufficient time at their disposal for the preparation of sessions, indicating a lack of organizational support. This may to some extent be an effect of the lack of guidelines; when content and form are not defined, the work becomes invisible and the provision of antenatal PE becomes difficult for the midwives and support for the midwives becomes difficult for managers. It seems unreasonable to charge a professional group with an important task without providing any substantial guidance as to the content and performance of the task. Providing midwives with knowledge, tools and support to provide antenatal PE is crucial for the quality of the education they can provide to parents and should be given high priority.

Strengths and limitations

The ANC questionnaire was sent out with instructions for the midwives to fill it out together but how they in reality answered the questionnaire is unknown. Questions about the time given to each topic might have given valuable information even though quantity and quality are not always correlated. A majority of the statements in the midwife questionnaire regarding their experience of antenatal PE were positively phrased, and an equal share of negatively phrased statements would have given a better balance. The questionnaires used in this study were based on questionnaires previously used by others [23,24] but not tested for reliability. The results of the Cronbach's alpha tests in the present study showed high alpha coefficients, which might be an indication that the number of items in the scales could be reduced, particularly in the ANC version. However, a reduction in the number of items would provide a less detailed description of the content in antenatal PE. Furthermore, testing for face validity of the questionnaires was carried out before their use and appeared to render a degree of accuracy in our measurements. The use of 4-point Likert-type scales will render low mean scores and the use of means and standard deviations for reporting measurements of Likert-type scales is debated by statisticians [37]. Differences shown are small but may nonetheless be both statistically and clinically significant.

The present study was conducted in southern Sweden but results from an observational study of antenatal PE groups in another region in Sweden showed some corresponding results [8] indicating possibilities to generalize the findings to other settings where antenatal PE is organised in a similar fashion. The sample was limited to one geographical region in Sweden although the inclusion of all ANCs and midwives in the region and the high response rate of 78.8% in the questionnaire to ANCs is a strength. The response rate for the questionnaire to individual midwives was lower, 57.1%. Nevertheless, the midwives who chose to participate varied in age and years of experience in leading antenatal PE.

Conclusions and implications

This study has provided new knowledge about the form and content of contemporary antenatal parental education in Sweden. The provision of antenatal PE seemed in some respects not in accordance with what previous studies have shown expectant parents want, especially regarding topics concerning the period after birth and guidance on internet. An earlier start of antenatal PE than, as most common today, the third trimester could be more beneficial. To provide antenatal PE tailored to the needs of expectant parents based on care equality it is vital to develop evidence-based guidelines. To reach that goal, intervention studies are required. Empowering expectant parents by increasing their own activity in learning and providing possibilities for peer learning and peer support are important but demand skills in teaching and group-leadership, which, according to present results, seem not to be learnt by experience. An intervention should therefore also address midwives' needs for improved skills in group leadership and teaching and enable them to incorporate guidance to evidence-based websites and mobile applications for parents. In the long term, these skills should be considered for inclusion in the curriculum in midwifery education.

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Conflict of interest

The authors have no conflict of interest to declare.

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Appendix A. Supplementary material

Supplementary data to this article can be found online at https://doi.org/10.1016/j.srhc.2019.01.003.

References

[1] Gagnon AJ, Sandall J. Individual or group antenatal education for childbirth or parenthood, or both. Cochrane Database System Rev 2007;3. Cd002869.
[2] Intressegruppen för Mödrahälsovård inom SFOG, Samordningsbarnmorskorna inom SBF i samarbete med Psykologer för mödrahälsovård och barnhälsovård. Mödrahälsovård, sexuell och reproduktiv hälsa [Maternity healthcare, sexual and reproductive health]. Report no 76. Stockholm: Svensk Förening för Obstetrik och Gynekologi [Swedish Society of Obstetrics and Gynecology]; 2008. Updated web version 2016.
[3] Ahlden I, Ahlehagen S, Dahlgren LO, Josefsson A. Parents' expectations about participating in antenatal parenthood education classes. J Perinat Educ 2012;21(1):11–7.
[4] Entsieh AA, Hallstrom IK. First-time parents' prenatal needs for early parenthood preparation-A systematic review and meta-synthesis of qualitative literature. Midwifery 2016;39:1–11.
[5] Deave T, Johnson D, Ingram J. Transition to parenthood: the needs of parents in pregnancy and early parenthood. BMC Pregnancy Childbirth 2008;8:30.
[6] Pålsson P, Kvist LJ, Ekelin M, Kristensson Hallstrom I, Persson EK. "I didn't know what to ask about": First-time mothers' conceptions of prenatal preparation for the early parenthood period. J Perinatal Educ 2018;27(3):163–74.
[7] Pålsson P, Persson EK, Ekelin M, Kristensson Hallström I, Kvist LJ. First-time fathers experiences of their prenatal preparation in relation to challenges met in the early parenthood period: Implications for early parenthood preparation. Midwifery 2017;50:86–92.
[8] Barimani M, Forslund Frykedal K, Rosander M, Berlin A. Childbirth and parenting preparation in antenatal classes. Midwifery 2018;57:1–7.
[9] Ohchr UN. Convention on the rights of the. Child United Nations 1989.
[10] Fabian H, Sarkadi A, Ahman A. Challenges and benefits of conducting parental classes in Sweden: Midwives' perspectives. Sex Reprod Healthc 2015;6(4):236–42.
[11] Forslund Frykedal K, Rosander M, Berlin A, Barimani M. With or without the group: Swedish midwives' and child healthcare nurses' experiences in leading parent education groups. Health Promotion Int 2016;31(4):899–907.
[12] Bjelke M, Martinsson AK, Lendahls L, Oscarsson M. Using the Internet as a source of information during pregnancy - A descriptive cross-sectional study in Sweden. Midwifery 2016;40:187–91.
[13] Oscarsson MG, Medin E, Holmstrom I, Lendahls L. Using the Internet as source of information during pregnancy - a descriptive cross-sectional study among fathers-to-be in Sweden. Midwifery 2018;62:146–50.
[14] Prescott J, Mackie L. You sort of go down a rabbit hole…you're just going to keep on searching": A qualitative study of searching online for pregnancy-related information during pregnancy. J Med Internet Res 2017;19(6). e194.
[15] Danbjorg DB, Wagner L, Clemensen J. Do families after early postnatal discharge need new ways to communicate with the hospital? A feasibilility study. Midwifery 2014;30(6):725–32.
[16] Maimburg RD, Vaeth M, Hvidman L, Durr J, Olsen J. Women's worries in first pregnancy: results from a randomised controlled trial. Sex Reprod Healthc 2013;4(4):129–31.

[17] Brixval CS, Axelsen SF, Thygesen LC, Due P, Koushede V. Antenatal education in small classes may increase childbirth self-efficacy: Results from a Danish randomised trial. Sex Reprod Healthc 2016;10:32–4.
[18] Koushede V, Brixval CS, Thygesen LC, Axelsen SF, Winkel P, Lindschou J, et al. Antenatal small-class education versus auditorium-based lectures to promote positive transitioning to parenthood - A randomised trial. PLoS One 2017;12(5). e0176819.
[19] Feinberg ME, Jones DE, Kan ML, Goslin MC. Effects of family foundations on parents and children: 3.5 years after baseline. J Family Psychology: JFP: J Division Family Psychology Am Psychol Assoc (Division 43) 2010;24(5):532–42.
[20] Svensson J, Barclay L, Cooke M. Randomised-controlled trial of two antenatal education programmes. Midwifery 2009;25(2):114–25.
[21] Socialstyrelsen. Kunskapsstöd för mödrahälsovården [Knowledgesupport to maternity health care]. Stockholm: Socialstyrelsen [Swedish National Board of Health and Welfare]; 2014.
[22] Regionfakta. Skåne län: fakta & perspektiv 2018. Available [27.06.2018] from: http://www.regionfakta.com/Skane-lan/.
[23] Wallby T. Föräldrastöd på BVC - en nationell kartläggning. In: Sarkadi A, editor. Föräldrastöd i Sverige idag - Vad, när och hur? [Parental support in Sweden today - What, when and how?]. Östersund: Folkhälsoinstitutet [Swedish National Institute of Public Health]; 2009. p. 145–68.
[24] Lefèvre Å, Lundqvist P, Drevenhorn E, Hallström I. Managing parental groups during early childhood: New challenges faced by Swedish child health-care nurses. J Child Health Care: For Professionals Working Children Hospital Community 2015;19(3):381–91.
[25] Benner P. From novice to expert: excellence and power in clinical nursing practice. Menlo Park, Calif.: Addison-Wesley; 1984.
[26] World Medical Association (WMA). WMA Declaration of Helsinki – Ethical Principles for Medical Research Involving Human Subjects Fortaleza: World Medical Association; 2013.
[27] Svensson J, Barclay L, Cooke M. The concerns and interests of expectant and new parents: assessing learning needs. J Perinat Educ 2006;15(4):18–27.
[28] Forslund Frykedal K, Rosander M. The role as moderator and mediator in parent education groups–a leadership and teaching approach model from a parent perspective. J Clin Nurs 2015;24(13–14):1966–74.
[29] Wagner EA, Chantry CJ, Dewey KG, Nommsen-Rivers LA. Breastfeeding concerns at 3 and 7 days postpartum and feeding status at 2 months. Pediatrics 2013;132(4):e865–75.
[30] Barimani M, Vikstrom A, Rosander M, Forslund Frykedal K, Berlin A. Facilitating and inhibiting factors in transition to parenthood - ways in which health professionals can support parents. Scand J Caring Sci 2017.
[31] Bogdegård Y. Danderyds amningsmottagning stängs. Sveriges Radio; 2018. Available [15.10.2018] from: https://sverigesradio.se/sida/artikel.aspx?programid=103&artikel=6939406.
[32] Karolinska universitetssjukhuset. Amningsmottagningen i Huddinge är tillfälligt stängd tills vidare; 2018. Available [15.10.2018] from: https://www.karolinska.se/for-patienter/alla-mottagningar-och-avdelningar-a-o/tema-barn-och-kvinnosjukvard/graviditet-och-forlossning/amningsmottagning/amningsmottagningen-huddinge/.
[33] Lefevre A, Lundqvist P, Drevenhorn E, Hallstrom I. "From resistance to challenge": child health service nurses experiences of how a course in group leadership affected their management of parental groups. BMC Nursing 2017;16:73.
[34] Bergstrom M, Kieler H, Waldenstrom U. A randomised controlled multicentre trial of women's and men's satisfaction with two models of antenatal education. Midwifery 2011;27(6):e195–200.
[35] Lagan BM, Sinclair M, Kernohan WG. A web-based survey of midwives' perceptions of women using the Internet in pregnancy: a global phenomenon. Midwifery 2011;27(2):273–81.
[36] Renkert S, Nutbeam D. Opportunities to improve maternal health literacy through antenatal education: an exploratory study. Health Promotion Int 2001;16(4):381–8.
[37] Norman G. Likert scales, levels of measurement and the "laws" of statistics. Adv Health Sci Educ: Theory Practice 2010;15(5):625–32.