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ORIGINAL ARTICLE

Screening for trauma and anxiety recognition: knowledge, management and attitudes amongst gynecologists regarding women with fear of childbirth and postpartum posttraumatic stress disorder

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ABSTRACT

Objective: Fear of childbirth (FoC) and postpartum posttraumatic stress disorder (PP-PTSD) are often less well recognized by healthcare professionals than other peripartum mental health disorders. This study aims to evaluate knowledge, management and attitudes of gynecologists and gynecology residents regarding women with FoC and PP-PTSD.

Study design: A cross-sectional study was conducted among gynecologists and gynecology residents using an online questionnaire. An invitation was sent to all 1401 members of the Dutch Society of Obstetrics and Gynecology.

Results: Two hundred forty-four respondents completed the online multiple-choice and open question survey. More respondents were able to answer the questions about risk factors, signs/symptoms and consequences of FoC in comparison with similar questions about PP-PTSD. When asked about performing a cesarean section on maternal request, 74% of respondents would grant this request if fear would persist despite adequate psychological treatment. During labor, providing good explanations and obtaining informed consent were most frequently named to reduce fear or the likelihood of a traumatic birth experience. Caregivers' attitudes towards women with FoC or suspected PP-PTSD were mainly positive.

Conclusions: Further knowledge, in particular about PP-PTSD, is desirable for appropriate recognition of women with FoC and PP-PTSD. Gynecologists should be made more aware of how their communication is perceived by patients, given the discrepancy between patients' experiences and the attitudes gynecologists report themselves. For optimizing the organization of care, we would recommend the use of a clear (inter)national policy regarding maternal requests for cesarean section (CS).

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Education; fear of childbirth; postpartum; posttraumatic stress disorder; pregnancy

BRIEF RATIONALE

The objective of this study was to evaluate knowledge and awareness regarding fear of childbirth (FOC) and postpartum posttraumatic stress disorder (PP-PTSD) among gynecologists and gynecology residents, assessing their attitudes towards women suffering from these conditions, and evaluating organization of care.

The main findings and recommendations of the study include that gynecologists should be better trained to appropriately recognize fear of childbirth and postpartum posttraumatic stress disorder, and they should be made more aware of how their communication is perceived by patients, given the discrepancy between patients' experiences and the attitudes gynecologists report themselves.

Introduction

Although pregnancy and giving birth are mostly seen as a positive life event, some women experience psychological distress or even develop pregnancy and/or birth related mental health disorders. Fear of childbirth (FoC) and postpartum posttraumatic stress disorder (PP-PTSD) are often less well recognized by health care professionals than other peripartum mental health disorders [1,2].

Many women experience some degree of fear during pregnancy and childbirth, which is normal. However, when fear becomes pathological by disrupting daily functioning it may be a reason for professional interference.

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Approximately 6–10% of all pregnant women experience severe FoC [3,4]. FoC can manifest itself as (inexplicable) physical complaints, nightmares, concentration problems, and requests for a cesarean section (CS) without a medical indication [5–8].

Several kinds of therapy have already been studied for FoC of which group psycho-education showed positive results on the childbirth experience as well as on the maternal wellbeing postpartum [9–11]. Factors associated with FoC can be categorized in social (e.g. lack of social support), biological (e.g. fear of pain), psychological (e.g. prior mental health issues) or secondary factors (e.g. previous childbirth experiences) [3,5,12–14]. FoC may influence mother–infant bonding and may increase the risk of developing postpartum depression and PP-PTSD [10,15].

When childbirth is experienced as traumatic, women may develop PTSD (symptoms). The diagnosis of PTSD is based on the criteria of the Diagnostic and Statistical Manual of mental disorders, fifth edition (DSM-5). Main symptoms according to DSM-5 include re-experiencing, avoidance, increased arousal, and negative alterations in mood or cognitions [16]. Nine to forty-six percent of women experience their delivery as traumatic [17–22]. One to four percent of women meet all criteria of PTSD in the postpartum period [21,23,24], and 10–33% experience some PTSD symptoms [17–22]. For good awareness of PTSD it is important to know the risk factors for developing PP-PTSD, for example pregnancy or birth complications, depression and a history of PTSD, and lack of perceived support from staff [25]. Cognitive behavioral therapy (CBT) and eye movement desensitization and reprocessing (EMDR) therapy are effective treatment options in non-childbirth related PTSD. Although little research has been done on treatment of PP-PTSD, positive effects have been found in small sample studies [26–29].

Research assessing the awareness, knowledge, management and attitudes of gynecologists and residents gynecology (in further text: gynecologists) regarding FoC and PP-PTSD does not exist. An inquiry into these aspects helps to determine how to optimize care, whether by increasing knowledge through education, by optimizing the organization of care, and/or by attempting to influence the attitudes of caregivers towards women with these conditions.

Materials and methods

Setting/Research design

In The Netherlands, obstetric care is divided into primary, secondary, and tertiary care. Women with low-risk profiles receive care from community midwives in primary care. Women who develop complications or are at high-risk for developing complications, will be referred into secondary care (general hospitals), or tertiary care (academic medical centers) in which women will be under the care of gynecologists. In secondary care gynecologists sometimes have a specific subspecialty, and in tertiary care almost every gynecologist has a specific subspecialty. Regardless of one's subspecialty all gynecologists have been trained to supervise deliveries and perform cesarean sections, and most do so in their daily practice.

Participants

In September 2015 an invitation to participate was sent to all 1401 practicing members of the Dutch Society of Obstetrics and Gynecology (NVOG) and a notification was made in the newsletter of the NVOG. Two weeks after the initial invitation, a reminder email was sent.

Instrument

No validated questionnaire assessing the topics evaluated in this research existed. Therefore a 33-item survey (plus nine demographic questions) containing multiple choice and open questions was specifically constructed for the purpose of this study. The survey was reviewed by two independent analysts experienced in designing questionnaires for research objectives. The questionnaire consisted of five parts:

- Part 1. Knowledge regarding fear of childbirth (FoC) and postpartum posttraumatic stress disorder (PP-PTSD): containing informative questions about the prevalence, signs/symptoms, risk factors, consequences, and treatment options of the conditions evaluated.
- *Part 2*. Care provided to women suffering from FoC and postpartum PTSD: containing questions sketching situations during pregnancy or postpartum checkups evaluating the current care provided to these women.
- *Part 3*. Caregivers' attitudes towards women with FoC and suspected PP-PTSD: containing questions about the feelings evoked when caring for affected women.
- *Part 4*. Department policies and guidelines: containing questions about management and organization of care regarding FoC and postpartum PP-PTSD.

- *Part 5.* Demographic characteristics: containing questions about gender, age, function, working experiences etc.

Respondents with a subspecialty or clinical focus other than obstetrics received a shortened version of the questionnaire, depending on their daily practice. This was done by starting the questionnaire with two distinguishing statements ("I conduct pregnancy checkups at the outpatient clinic at least one half day a month" and "I see at least five women a month for postpartum checkups"). Therefore, the number (*N*) of responses varies per item.

Statistical analysis

The online survey software "Survey Monkey" was used to facilitate the online questionnaire. Statistical Package for Social Sciences, SPSS, version 22 was used to conduct statistical analyses.

For categorization of open questions, general and subcategories were created by authors AA and CS, after viewing the answers. Author NV has shortened the (sub)categories without viewing the answers. After performing (sub)categories open questions were categorized independently by ED and NV. A Cohen's kappa score (*k*) was calculated in SPSS, measuring the inter-observer agreement (interpretation: $k < 0$ indicating no agreement, 0–0.20 "slight", 0.21–0.40 "fair", 0.41–0.60 "moderate", 0.61–0.80 "substantial", 0.81–1 "almost perfect" and 1 "perfect"). (Sub)categories with a Cohen's kappa score below 0.61 were revised.

Multiple choice questions were analyzed using descriptive statistics. In the main text, results of open questions are rounded to the nearest whole numbers. The tables only mention main categories, a detailed description of all subcategories is available upon request from the corresponding author.

Results

A total of 337 gynecologists started the online questionnaire of whom 244 fully and 29 partially completed it. Sixty-four respondents were excluded from analysis because they only answered the opening statements. As shown in Table 1 (demographic characteristics) 79 respondents had a subspecialty in perinatology and twenty-four in psychosomatic obstetrics and gynecology.

Informative questions regarding FoC and PP-PTSD

Respondents were asked what risk factors, signs/symptoms, and consequences of FoC and PP-PTSD they encountered in daily practice (Table 2). All (sub)categories of the informative questions about FoC and PP-PTSD reached "substantial" to "perfect" interobserver agreement.

Care provided to women with (suspected) FoC and (suspected) PP-PTSD

Tables 3 and 4 give an overview of the care provided to women with (suspected) FoC and PP-PTSD, respectively. All (sub)categories were found to have "substantial" to "almost perfect" interobserver agreement.

Thirty-two percent of respondents answered to always ask women about FoC and 55% only asks in specific situations (e.g. obvious signs of FoC (69%)). In case of obvious signs of FoC most respondents would make a referral to a specialist (82%).

Respondents were asked whether they would grant a maternal request for a cesarean section (CS) in case of severe FoC. Seventy-four percent of respondents would grant the request if fear persists despite treatment and for this they would refer these women to a psychologist or psychiatrist. Twenty-one percent of respondents would not grant the request, of which 16% would make a plan together with the woman and 5% would make a referral. Five percent of respondents would agree to the request without providing extra or further help.

When caring for pregnant women with PTSD symptoms after a previous delivery, most respondents would either provide extra care themselves (44%) or make a referral to another caregiver (46%).

During postpartum care, 96% of respondents answered to always ask women about their birth experiences. When PP-PTSD is suspected, most respondents would ask further about the birth experience and clarify the delivery process (78%) or make a referral (66%), most frequently to a psychologist (72%).

Caregivers' actions and behaviors

A total of 248 respondents answered the question about intra-partum actions or behaviors with the aim to reduce fear or the likelihood of a traumatic birth experience (Table 5). Measurement of inter-observer agreement showed "substantial" to "almost perfect" levels of agreement.

Table 1. Demographic characteristics.

	Number of respondents	%
Gender *(N = 244)*		
Female	200	82.0
Male	44	18.0
Age (years) *(N = 244)*		
25–34	66	27.0
35–44	72	29.5
45–54	76	31.1
55–64	30	12.3
≥ 65	0	0.0
Current position *(N = 244)*		
Resident gynecology	72	29.5
Gynecologist/fellow	172	70.5
(Main) workplace *(N = 244)*		
Academic center	54	22.1
General hospital	187	76.6
Private clinic	2	0.8
Other	1	0.4
Subspecialty *(N = 244)*[a]		
None	49	20.1
Perinatology	97	39.8
Benign gynecology	61	25.0
Oncology	25	10.2
Urogynecology	38	15.6
Reproductive medicine	33	13.5
Psychosomatic obstetrics and gynecology	24	9.8
No. of half days spend on obstetric checkups (per week) *(N = 194)*[b]		
Rarely or never	6	3.1
1–3	137	70.6
4–6	49	25.3
>6	2	1.0
No. of shifts (per month) (including supervision and obstetric-shifts in daytime) *(N = 244)*		
Rarely or never	6	2.5
1–3	55	22.5
4–6	112	45.9
7–9	51	20.9
>9	20	8.2
No. of years practicing *(N = 244)*		
0–5	39	16.0
6–10	61	25.0
11–15	50	20.5
16–20	33	13.5
21–25	31	12.7
>25	30	12.3

[a]Multiple answers were possible for this question.
[b]Differentiation took place using opening statements, therefore *N* can very per question.

Thirty-six percent of respondents mentioned antepartum or postpartum actions or behaviors instead of (the way the question was phrased) intra-partum actions or behaviors. To draw the right conclusions, we only took intra-partum answers into consideration. Eighty-eight percent of respondents mentioned intra-partum actions or behaviors, of which clear explanation and obtaining informed consent was mentioned most often (55%). Also, clear and open communication (29%), and creating a peaceful environment (32%) were mentioned frequently.

Attitudes

A total of 245 respondents described what feelings women with FoC or suspected PTSD evoked in them. Empathy, compassion, and involvement were the most frequently experienced feelings (Figure 1). Guilt was mentioned a lot more often when caring for women with suspected PTSD in comparison with FoC.

Discussion

Despite the large proportion of respondents who adequately answered the informative questions regarding risk factors, signs/symptoms and consequences of FoC and PP-PTSD, many respondents were not able to answer these questions, particularly about PP-PTSD. This may be due to a lack of knowledge regarding PTSD, resulting in less awareness. Another reason could be a lower exposure to women with PP-PTSD, due to the lower prevalence of PP-PTSD when compared with FoC. However, the large number of women who experience birth as traumatic or develop some PTSD symptoms makes this explanation less plausible. Women might not (fully) experience PTSD symptoms

Table 2. Informative open questions regarding FoC and postpartum PTSD.

Fear of childbirth	Number of respondents[b]	%	*Postpartum PTSD*	Number of respondents[b]	%
Risk factors *(N = 273)*[a,c]			Risk factors *(N = 253)*[a,c]		
Psychological	196	71.8	Psychological	116	45.8
Social	129	47.3	Social	40	15.8
Complications current pregnancy	5	1.8	(Previous) pregnancy or birth related	142	56.1
Secondary to previous pregnancy or birth experience	245	89.7	Caregiver-related	61	24.1
None	6	2.2	None	55	21.7
Otherwise	35	12.8	Otherwise	28	11.1
Signs/Symptoms *(N = 273)*[a,c]			Signs/symptoms *(N = 253)*[a,c]		
Psychological	155	56.8	DSM-5 symptoms PTSD	175	69.2
Selfreported fear	23	8.4	Medical	28	11.1
Medical	178	65.2	Psychological comorbidity	59	23.3
Secondary to previous pregnancy	25	9.2	Physical	35	13.8
Social	16	5.9	Social	21	8.3
Physical	135	49.5	Mother–child	20	7.9
None	11	4.0	Secondary to subsequent pregnancy	32	12.6
Otherwise	34	12.5	None	45	17.8
			Otherwise	21	8.3
Consequences *(N = 273)*[a,c]			Consequences *(N = 253)*[a,c]		
Antepartum medical	132	48.4	Psychological	103	40.7
Antepartum psychological	79	28.9	Social	71	28.1
Intrapartum	108	39.6	Physical	26	10.3
Postpartum	62	22.7	Medical	10	4.0
Physical	34	12.5	Mother–child	101	39.9
Caregiver-related	17	6.2	Subsequent pregnancy	39	15.4
Social	26	9.5	None	65	25.7
None	25	9.2	Otherwise	8	3.2
Otherwise	18	6.6	Treatment *(N = 253)*[a,c]		
			EMDR [∞]	179	70.8
			CBT [∞]	59	23.3
			Other therapies	41	16.2
			Referral to other caregiver	45	17.8
			Medication	37	14.6
			Additional care/information	18	7.1
			Clear agreements/birth plan	10	4.0
			Giving support and empathy	5	2.0
			Complementary and relaxing therapies	4	1.6
			None	23	9.1
			Otherwise	9	3.6

[a]Classification of open questions by researchers prior to analysis.
[b]Respondents with incomplete questionnaires were taken into account hence the variation in N.
[c]Multiple answers were possible for this question.
[∞] Eye movement desensitization and reprocessing (EMDR) – Cognitive Behavior Therapy (CBT).

yet during the first 6 weeks, after which the postpartum checkup usually takes place. Furthermore, avoidance is one of the symptoms of PTSD, which could result in women denying complaints or avoiding medical care by not attending postpartum checkup.

Regarding risk factors of FoC, previous traumatic birth experiences and mental health problems were mentioned most often, which is in line with existing literature [14,30,31]. Most respondents identify FoC in pregnant women through medical demands. This is in line with a study of 329 pregnant women, in which the wish for an elective CS was found to be one of the most important manifestations of fear [14]. Besides medical signs, also psychological and physical signs were mentioned frequently, which is also in accordance with symptomatology of FoC found in literature [1,14].

Respondents seemed to be well informed about consequences of FoC. However, respondents seemed to be less aware of the risk of developing PP-PTSD, since this was rarely mentioned. However, an association between FoC and developing PP-PTSD has been found in literature [15,24].

Regarding the risk factors of PP-PTSD, most respondents mentioned negative birth experiences and (a history of) mental health problems. These risk factors were also found in the meta-analysis by Ayers et al. [25]. Even though none of the respondents could name all four DSM-5 symptom categories, most respondents could name some of the symptoms. Regarding consequences of PP-PTSD Cook and Ayers et al. found in a recent systematic review that PP-PTSD is associated with low birth weight and lower rates of breastfeeding [32]. Respondents of our study did not seem to be well informed about these consequences since only a small number of respondents mentioned feeding problems and none mentioned low birth weight.

Table 3. Care provided to pregnant women with (suspected) FoC.

	Number of respondents[b]	%
Asking about FoC (N = 200)		
Always	63	31.5
Sometimes	129	54.5
Never	8	4.0
Specific situations in which I ask for FoC (N = 125)[a,c]		
Medical history	69	55.2
Signs of FoC	86	68.8
Selfreported anxiety/uncertainty by women	16	12.8
When discussing birth plan / as a standard topic during prenatal checkup	9	7.2
Otherwise	23	18.4
Action when FoC is suspected (N = 200)[c]		
No elaboration on the topic and generalization	8	4
Figure out underlying reason for distress and make a plan together	133	66.5
Figure out underlying reason for distress and make referral to a specialist	163	81.5
I don't have experience with these women	0	0.0
Action when women ask for PSC without a medical indication (N = 196)		
Regardless of the underlying reason, I would not agree with the request	1	0.5
I would agree with the request, if I notice women have considered it thoroughly	6	3.1
In case of severe FoC I would agree with the request	4	2.0
In case of severe FoC I would refer a woman to a specialist, but I would not agree with the request	10	5.1
In case of severe FoC I would make a plan together, but I would not agree with the request	31	15.8
In case of severe FoC I would refer a woman to a psychologist or psychiatrist, but when despite treatment the fear persists I would agree to the request	144	73.5

[a]Classification of open question by researchers prior to analysis.
[b]Respondents with incomplete questionnaires were taken into account hence the variation in N.
[c]Multiple answers were possible for this question.

Most respondents seem to be up to date on accurate treatment options for women suffering from PP-PTSD, of which EMDR was better known than CBT.

Regarding antepartum care for women with (suspected) FoC or PTSD, caregivers' actions with regard to maternal requests for CS demonstrated a great variety. Most respondents would grant this request if FoC would persist despite adequate psychological treatment. However, 21% of respondents would not agree to the request regardless of referral/treatment and a total of 5% of respondents would agree to the request without providing further help. This variability among caregivers could be a result of ambiguity of protocols. The NVOG guideline (Dutch Society of Obstetrics and Gynecology) states that a request should be approved only in case of a medical or psychiatric indication. However, when there is no such indication the gynecologist should comply with several conditions, for example using a low-threshold for referral to a psychologist [33]. The World Health Organization (WHO) recommends performing a CS only when medically necessary, because of the short and long term risks [34]. On the contrary, the National Institute for Health and Care Excellence (NICE) in the UK recommends to explore reasons behind the maternal request and to discuss all risks and benefits. If despite these clarifications the wish for a CS remains then it should be offered to the patient [35].

In a recent systematic review, Olieman et al. reported that granting a maternal request for a CS does not seem to reduce antepartum anxiety and/or depression levels. On the other hand, women who persisted in their wish for a CS but did not receive one, showed significantly higher levels of PTSD and depression symptoms compared to women who had planned a vaginal delivery [36]. Given these results, referral to a psychologist or psychiatrist for these women seems to be appropriate.

Very little is known about the prevention of traumatic delivery experiences [37]. Most respondents indicate that they attempt to reduce fear or the likelihood of a traumatic birth experience by providing good explanation, obtaining informed consent and offering open and clear communication. This contrasts recent findings among 2192 women with a traumatic birth experience in The Netherlands; They were asked about what caregivers could have done to prevent their traumatic experience, and good communication, explanations and support were among the most common answers [38]. Similarly, although almost all respondents answered to always ask women about their birth experience, Hollander et al. found that 26% of women who had a traumatic delivery experience reported that they had not been asked about their birth experience during the postpartum checkup [38].

The majority of gynecologists expressed positive feelings towards women with FoC and suspected PTSD. Remarkably, more respondents expressed negative emotions, in particular guilt, towards women with

Table 4. Care provided to women with (suspected) postpartum PTSD in the antepartum and postpartum period.

	Number of respondents[b]	%
Antepartum care		
Action when caring for pregnant women with PTSD symptoms after previous delivery (N = 196)		
Provide standard care	4	2.0
Provide extensive care	86	43.9
Refer to another care giver	91	46.4
No experience with these women	15	7.7
Which caregiver do you refer to when caring for a pregnant woman with PTSD after a previous birth experience (N = 91)[a,c]		
Psychologist	65	71.4
Psychiatrist	30	33.0
POP outpatient clinic	28	30.8
Social worker	15	16.5
General practitioner	4	4.4
(Delivery) coach	5	5.5
Otherwise	10	11.0
Postpartum care		
Asking about childbirth experience after giving birth (N = 193)		
Always	185	95.9
Sometimes	8	4.1
Never	0	0.0
Action when postpartum PTSD is suspected (N = 192)[c]		
Referral to another caregiver	126	65.6
Asking about the complaints after labor	104	54.2
Reassuring and/or soothing	5	2.6
Planning an extra checkup	88	45.8
Asking about the experience, clarify and answer questions	149	77.6
I never see these women	5	2.6
Otherwise	28	14.6
Which caregiver do you refer to when you have a suspicion of postpartum PTSD in a maternity woman? (N = 121)[a,c]		
Psychologist	87	71.9
Psychiatrist	52	43.0
POP outpatient clinic	8	6.6
General practitioner	15	12.4
Social worker	19	15.7
Otherwise	15	12.4

[a]Classification of open question by researchers prior to analysis.
[b]Respondents with incomplete questionnaires were taken into account hence the variation in N.
[c]Multiple answers were possible for this question.

Table 5. Caregivers' actions and behaviors during labor.

	Number of respondents[b]	%
Specific actions or behaviors during labor or SC with the intention to reduce fear and/or the risk of a traumatic birth experience (N = 248)[a,c]		
Intrapartum	217	87.5
Create peaceful environment/take enough time	80	32.3
Positive stimulation/coaching	39	15.7
One-to-one care/continuous attendance	25	10.1
Open and clear communication	71	28.6
Explain all actions/ask informed consent	136	54.8
Shared decision making	54	21.8
Offer pain medication	30	12.1
(Try to) comply with birth plan	11	4.4
Continuity of caregivers	10	4.0
Offer gentle cesarean section	16	6.5
Involve others	57	23.0
Other caregivers	24	9.7
Partner/close ones	36	14.5
Otherwise	15	6.0
None	16	6.5

[a]Classification of open question by researchers prior to analysis.
[b]Respondents with incomplete questionnaires were taken into account hence the variation in N.
[c]Multiple answers were possible for this question.

suspected PTSD compared to FoC. It may be that caregivers find it difficult to empathize with the fact that the delivery has been experienced as traumatic while medically the delivery was without many complications or even uneventful. It could also be hypothesized that it makes gynecologists uncomfortable despite their best intentions some women still report having had a traumatic experience. It may also be seen as a coping mechanism, since obstetricians may also develop PTSD (symptoms) themselves [39], in particular if they experienced feelings of guilt after a traumatic birth event [40].

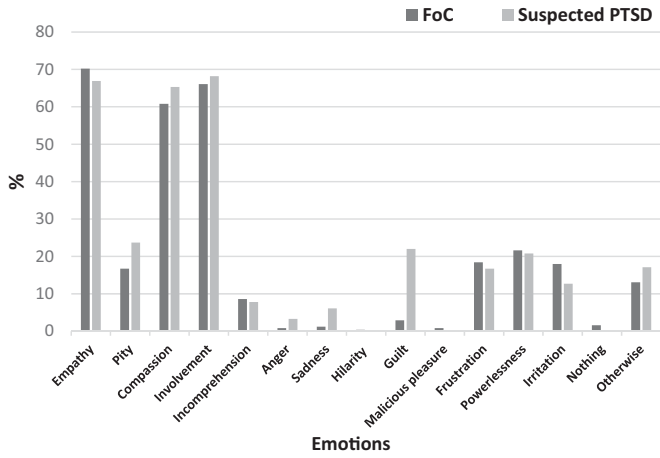

Figure 1. Caregivers' attitudes towards women with FoC and suspected PTSD ($N = 245$).

A major strength of this study is that it provides important insights into the understanding and management of FoC and PP-PTSD, since no previous research has been done with the same purpose. Inter-observer agreement analysis demonstrated adequate categorization of open questions, since all values of Cohen's kappa reached "substantial" to "perfect" levels of agreement.

A limitation of this study is the moderate response rate of 19.5%. We think this is due to the extensiveness of the questionnaire and the large number of open questions. Because of the extent and large number of open questions we considered this response rate as acceptable. Finally, sampling bias might have occurred in this study, in which gynecologists who are more interested or experienced in obstetric mental health care may be more inclined to participate, resulting in an overestimation of knowledge. However, the potential low interest and knowledge of non-responders (80%) guides intervention for improvement of knowledge.

In conclusion, we would recommend optimization of care by increasing education, especially about PP-PTSD since a large number of respondents were not able to answer the informative questions. As for attitudes, gynecologists should be made more aware of how their communication is perceived by patients, given the discrepancy between patients' experiences and the attitudes gynecologists report themselves. For optimizing the organization of care, we would recommend the use of a clear (inter)national policy regarding maternal requests for CS.

Disclosure statement

No potential conflict of interest was reported by the authors.

Ethical approval

No ethical approval was needed.

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