

PLANNED PLACE OF BIRTH AND ITS RELATIONSHIP TO EMOTIONS AND FEAR IN POLISH WOMEN DURING THE COVID-19 PANDEMIC

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A – study design, **B** – data collection, **C** – statistical analysis, **D** – interpretation of data, **E** – manuscript preparation, **F** – literature review, **G** – sourcing of funding

ABSTRACT

Background: The COVID-19 pandemic, which started in December 2019, significantly changed the lives of people worldwide. A group particularly affected by the SARS-CoV-2 virus were women who experienced pregnancy and childbirth during the pandemic, many of whom began to look for an alternative to the hospital as a safe place for delivery.

Aim of the study: To examine how the COVID-19 pandemic affected the choice of place of delivery and whether fear and emotions were determinants of this choice.

Material and methods: This study was conducted on a group of 123 postpartum women who completed an online survey during the COVID-19 pandemic in 2020–2021. The research tools used were a custom-designed questionnaire that recorded the place of birth and feelings related to the thought of giving birth, and the Generalized Anxiety Questionnaire (GAD-7).

Results: Among women who experienced a hospital birth during the pandemic, many of them would now choose to give birth at home, while women who gave birth at home tended not to want to change their decision. Overall, women who gave birth at home and women who gave birth in a hospital did not differ in their levels of perceived generalized anxiety ($n=123$, $p=0.439$). However, their feelings did differ when it came to a fear of giving birth without the support of a husband. Fear of childbirth without a husband's support was correlated with generalized anxiety only in women who gave birth at home ($\rho=0.674$, $p=0.016$).

Conclusions: Generalized anxiety affected women who gave birth at home and in the hospital. This anxiety was associated with a fear of giving birth without the support of a husband/partner. Women who would not have decided to give birth at home before the pandemic tended to choose home as a place of delivery during the pandemic.

KEYWORDS: parturition, home childbirth, emotional regulation, COVID-19, GAD-7

BACKGROUND

The COVID-19 pandemic, which started in December 2019, significantly changed the lives of individuals worldwide. In Poland, the first cases of people infected with the virus were detected on March 4, 2020 [1]. Following this initial detection, several restrictions were introduced in the country to prevent the spread of the virus. Information chaos and images in the traditional and social media from other countries created an atmosphere of uncertainty and fear.

One group particularly affected by the SARS-CoV-2 virus was women who experienced pregnancy and childbirth during the pandemic. During pregnancy, women undergo many changes, including physical, hormonal, and psychological (e.g., fear of the future, fear of childbirth, and fear for the health of the child). This also happens in normal, non-pandemic conditions [2]. The pandemic, especially at the beginning when the world knew very little about the SARS-CoV-2 virus, was especially difficult for pregnant women. Studies have indicated that the level of anxiety in pregnant women was higher than in the general population before COVID-19 [3].

The changes that took place in the Polish health system that particularly affected pregnant women included a transition to a remote system of medical consultations, the inability to participate in a partner's ultrasound examination, the suspension of childbirth classes, and a restriction on family deliveries. Decisions on family deliveries were made by the hospital manager, taking into account an individual assessment of current hospital conditions [4].

Women began to look for a place to give birth that would meet their need for safety, taking into consideration giving birth with a partner, without a mask, and without fear of infecting themselves or the child with the SARS-CoV-2 virus. An alternative location that would meet the criteria for a safe childbirth outside of the hospital included their own homes. However, due to a lack of funding from the National Health Fund, a shortage of medical personnel ready to visit homes outside of large cities, and the detailed qualifications dictated by the Standards of Perinatal Care, the options for choosing the place of delivery were limited [5].

AIM OF THE STUDY

This study surveyed Polish women to examine how the pandemic influenced the choice of place of delivery, and how fear and emotions were determinants of the place of birth.

MATERIAL AND METHODS

Study design

This study was conducted using a survey among postpartum women during the COVID-19 pandemic. The study was carried out between the end of 2020 and early 2021. All respondents were informed about the aims and purpose of the study. This study was approved by the Bioethics Committee of Medical University of Warsaw (No. AKBE/40/2021). The survey was made available on the Internet on various forums and parenting groups. Participation in the study was voluntary. A total of 131 questionnaires were received, of which 8 were rejected due to incomplete answers.

Participants

Analyses were conducted on a group of 123 women who completed the online survey. The inclusion criterion for the study was vaginal delivery in Poland during the first or second wave of the pandemic. The exclusion criteria were an incomplete online form, cesarean section delivery, preterm delivery, birth before the declaration of a pandemic in Poland, and delivery outside of the study period.

The required sample size was calculated based on the population of women of reproductive age in Poland ($n=9,527,000$) and the number of births in hospitals ($n=355,336$) and homes ($n=1,265$) in 2020 (GUS) [6]. Assuming a statistical significance level of 0.05 and a test power of 0.80, the required test group size was 12 individuals and the required control group size was 100. In the current study, the study group consists of 12 people, and the control group of 111.

Data sources/measurement

The research tools used were a custom questionnaire that recorded the place of birth and feelings related to the thought of giving birth, and the Generalized Anxiety Questionnaire (GAD-7).

The Generalized Anxiety Questionnaire (GAD-7) in the Polish language version was used to assess the level of anxiety and to assess the risk of a generalized anxiety disorder (GAD). The questionnaire consists of 7 questions answered on a four-point Likert scale. The questions contained in the survey assess the feelings of nervousness, tension, fear, and the ability to relax and control emotions. Each question can be scored from 0 to 3 points. The number of points indicates the frequency of occurrence of a given phenomenon (i.e., 0 points indicates that the phenomenon does not oc-

cur, 1 point indicates that the phenomenon occurs for several days, 2 points indicate more than half of the days, and 3 points indicates every day in the last 14 days). The interpretation of the results depends on the number of points obtained and allows one to assess the degree of anxiety faced by an individual. A score of 5 indicates mild anxiety, 10 indicates moderate anxiety, and 15 indicates severe anxiety. Obtaining a score of 10 points or higher indicates a high probability of generalized anxiety disorder [7].

Questions for the custom questionnaire were created by obstetrics students at the Medical University of Warsaw. For this questionnaire, the women were asked if they would choose to give birth at home if they had given birth before the pandemic, and whether, after their own experience of childbirth (in the hospital or at home), they would choose home as a place of birth. Other questions examined women's feelings about fear of pain, complications, infection, lack of a husband's support, positive attitudes to childbirth, and joy about the upcoming childbirth using a 5-point Likert scale (from 1-strongly disagree to 5-strongly agree).

Statistical methods

The normality distributions of the data were checked using the Shapiro–Wilk test. As the data were not normally distributed, the differences between the groups were tested using the Mann–Whitney U test. Correlations between the data were assessed using Spearman's rank correlations. Qualitative variables were compared using the chi-squared test with a continuity correction. The reliability (Cronbach's alpha) of the GAD-7 was 0.69. Statistical significance was assumed at $p < 0.05$. Statistical analyses were carried out using Statistica v 13.3.

RESULTS

Characteristics of the study group

Most of the respondents were under 27 years of age ($n=33$, 57%), had a higher education ($n=72$, 58.54%), and gave birth in a hospital ($n=111$, 90.24%). The full characteristics of the group are presented in Table 1

Table 1. Group characteristics ($n=123$)

Demographics	Number	%	Average GAD-7 (\pm SD)	Median GAD-7 (min-max)
Age				
18–26 years	33	56.91	5.85 (\pm 4.92)	5.0 (0–21)
27–35 years	70	26.83	7.64 (\pm 4.95)	7.0 (0–18)
Over 36 years	20	16.26	7.95 (\pm 4.95)	7.5 (0–21)
Education				
Primary/professional	7	5.69	6.57 (\pm 3.78)	6.0 (1–13)
Medium	44	35.77	7.25 (\pm 5.09)	7.0 (0–21)
Higher	72	58.54	7.25 (\pm 5.05)	7.0 (0–21)
Domicile				
Village	26	21.14	6.73 (\pm 5.62)	5.50 (0–21)
City up to 50,000 residents	21	17.07	6.14 (\pm 6.30)	5.00 (0–17)
City of 50,000 to 150,000 residents	36	11.38	5.07 (\pm 5.09)	6.00 (0–12)
City of 150,000 to 500,000 residents	14	29.27	7.25 (\pm 5.51)	7.00 (0–15)
City over 500,000 residents	26	21.14	9.65 (\pm 5.55)	8.00 (0–21)
Income level				
No liquid income	5	4.07	8.80 (\pm 5.59)	11.00 (1–14)
Below pln 2,500	9	7.32	7.78 (\pm 7.87)	4.00 (1–21)
Pln 2,501–3,500	13	10.57	5.23 (\pm 5.37)	5.00 (0–18)
Pln 3,501–4,500	41	33.33	7.41 (\pm 5.01)	7.00 (0–21)
Over pln 4,501	55	44.72	7.29 (\pm 4.25)	7.00 (0–19)
High-risk pregnancy				
Yes	103	83.74	9.20 (\pm 5.45)	9.00 (0–21)
No	20	16.26	6.83 (\pm 4.80)	7.00 (0–21)
Place of birth				
Hospital	111	90.24	7.37 (\pm 5.03)	7.00 (0–21)
House	12	9.76	5.75 (\pm 4.27)	6.50 (0–12)

Main results

Figure 1 shows the pattern of decisions made by the women. The survey showed that 9.76% (n=12) of the women gave birth at home, while 90.24% (n=111) of the women gave birth in a hospital. Only 8.1% (n=9) of women from the group giving birth in a hospital declared that before the pandemic, they would have decided to give birth at home, and

20.72% (n=23) did not know if they would. After experiencing childbirth in a hospital during the pandemic, 17 of these women (15.3%) would decide to give birth at home, and 20 women (18%) did not know whether they would decide to do this. All women who declared a desire to give birth at home before the pandemic (n=5, 41.67%) did not want to change this decision after experiencing a home birth.

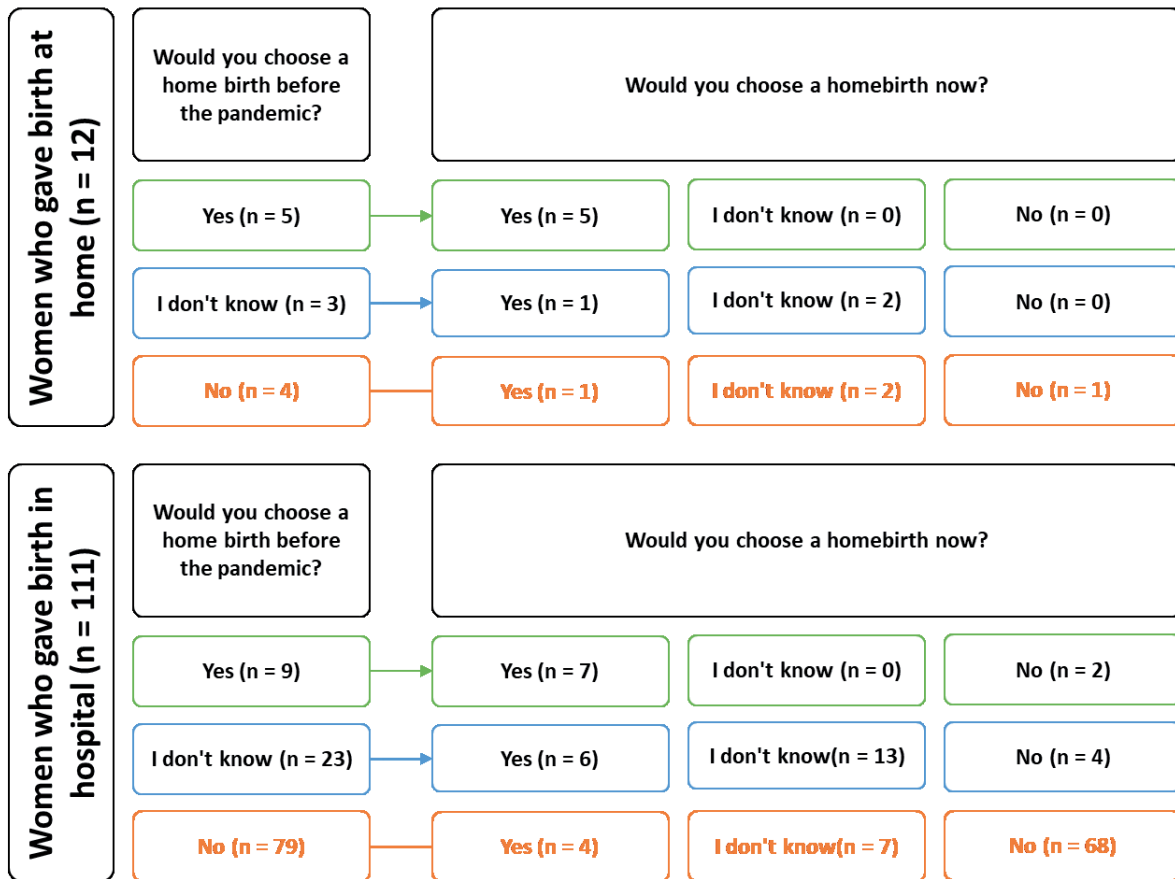


Figure 1. Women’s decisions about where to give birth

The average level of anxiety as measured by the GAD-7 questionnaire for the whole group was 7.21±4.97 and the median was 7.00 (0–21). The anxiety of women experiencing a high-risk pregnancy was not statistically different from women experiencing a normal pregnancy (n=123, p=0.064). The results regarding the levels of anxiety among the respondents separated by group are presented in Table 2.

To examine the relationships between the demographic data and anxiety, correlations between the demographic data and the level of anxiety were calculated using Spearman’s rank correlations. These correlations separated by group are presented in Table 3.

Women who gave birth at home and women who gave birth in a hospital did not differ in the overall scores of perceived generalized anxiety (n=123,

Table 2. The levels of anxiety among the female respondents by group (n=123)

Level of anxiety	N (%)	Hospital birth (n=111)	Home birth (n=12)
None (0–4)	38 (30.89%)	33 (29.73%)	5 (41.67%)
Mild anxiety (5–9)	49 (39.84%)	45 (40.54%)	4 (33.33%)
Moderate anxiety (10–14)	27 (21.95%)	24 (21.62%)	3 (25.00%)
Severe anxiety (≥15)	9 (7.32%)	9 (7.32%)	0

p=0.439). The feelings of women who gave birth at home and those who gave birth in a hospital differed only in terms of the fear of giving birth without the support of the husband. Women who gave birth at

home compared to women who gave birth in a hospital were statistically significantly less afraid of childbirth without the support of their husbands than women who gave birth in a hospital ($z=2.14$, $p=0.026$). Fear of childbirth without the husband's support was correlated with generalized anxiety only in women who gave birth at home ($\rho=0.674$, $p=0.016$).

Table 3. Correlations between the demographic data and the anxiety scores by group

Demographics	Hospital birth (n=111)		Home birth (n=12)	
	Spearman Correlation Coefficient (r)	P	Spearman Correlation Coefficient (r)	P
Age (n=123)	0.199	0.037*	0.072	0.823
Education (n=123)	0.030	0.756	-0.099	0.760
Place of residence (n=123)	0.266	0.005*	-0.030	0.927
Net income (per family) (n=118)	0.096	0.328	-0.365	0.244

* $p < 0.05$.

Correlations between the anxiety scores and women's feelings about childbirth separated by group are presented in Table 4.

Table 4. Correlations between the anxiety scores and women's feelings about childbirth by group (n=123)

Feelings	Hospital birth (n=111)		Home birth (n=12)	
	Spearman Correlation Coefficient (r)	P	Spearman Correlation Coefficient (r)	P
Positive attitude towards childbirth resulting from good preparation	-0.181	0.058	-0.094	0.771
Fear of labor pain	-0.026	0.786	0.417	0.177
Fear of complications during childbirth	-0.100	0.297	0.183	0.570
Fear of giving birth without the support of her husband	0.057	0.551	0.674	0.016*
Fear of SARS-CoV-2 infection in hospital	0.192	0.043*	0.407	0.189
Positive feelings resulting from support from loved ones	-0.190	0.046*	0.052	0.874
Joy at the thought of the upcoming birth	-0.221	0.020*	-0.195	0.544

* $p < 0.05$

Table 5. Differences between emotions in groups of women giving birth at home or in the hospital (n=123) **

Emotions	Whole group N (%)	Hospital birth (n=111)	Home birth (n=12)	P
Fear	50 (40.65%)	47 (42.34%)	3 (25.00%)	0.245
Loneliness	41 (33.33%)	41 (36.94%)	0	0.010*
Sadness	43 (34.96%)	40 (36.04%)	3 (25.00%)	0.446
Pain	6 (4.88%)	6 (5.41%)	0	—
Lack of a sense of agency	34 (27.64%)	33 (29.73%)	1 (8.33%)	0.115
Fear of the future	72 (58.54%)	69 (62.16%)	3 (25.00%)	0.013*
A sense of limitation	83 (67.48%)	76 (68.47%)	7 (58.33%)	0.476
Joy	7 (5.69%)	3 (2.70%)	4 (33.33%)	<0.001*
Luck	2 (1.63%)	2 (1.80%)	0	—
Composure	9 (7.32%)	8 (7.21%)	1 (8.33%)	0.887
Positive thinking	21 (17.07%)	15 (13.51%)	6 (50.00%)	0.001*
Faith it will get better	46 (37.40%)	38 (34.23%)	8 (66.67%)	0.027*
Ready for action	28 (22.76%)	22 (19.82%)	6 (50.00%)	0.018*

* $p < 0.05$, ** possibility to select more than one option.

The main emotions that women experienced since the announcement of the pandemic were a sense of limitation (n=83, 67.48%), fear of the future (n=72, 58.54%), and fear (n=50, 40.65%). Differences between emotions across the groups of women giving birth at home or in the hospital are presented in Table 5.

DISCUSSION

The current results show the general situation of home births in Poland, the decision-making process regarding the place of birth, and whether the pandemic situation and a women's own experience of

childbirth changed their approach to home births. The study indicates that some women who would not have decided to give birth at home before the COVID-19 pandemic would now choose to give birth outside of the hospital.

Home births

According to the data from the Central Statistical Office, home births represented 0.35% of all births in 2020. The low rate of home births may be due to several factors that limit the possibility of giving birth at home. For a home birth to be safe, a woman should undergo a detailed examination for out-of-hospital delivery in accordance with the Standards of Perinatal Care. A pregnancy that is complicated and requires special care disqualifies a woman from home birth. Another element that affects the choice of place of delivery is a lack of financing from the National Health Fund for home births. An analysis of commercial online data shows that the cost of home birth in Poland varies between PLN 2,000–4,000, depending on the location and the midwife's hourly rate. Lack of funding is a discriminatory factor for many families who cannot afford a commercial service. Another problem limiting the number of home births is a dearth of midwives ready to deliver at home. Currently, on the website of the Well Born Association, only 20 midwives are ready to support a woman during a home birth in Poland, of which 6 work in the Mazowieckie Voivodeship, mainly in Warsaw [8].

According to Baranowska et al. [9], the number of home births doubled in 2020, during the first and second waves of the pandemic. At this time, women were aware that the pandemic contributed to a tightening of safety rules at hospitals. While hospitals tried to eliminate the risk of contracting the SARS-CoV-2 virus, the quality of perinatal care, which was previously guaranteed by the Standards of Perinatal Care, decreased [10].

A similar situation also occurred in other countries. According to a study conducted in the USA, women who gave birth in their own homes or in a hospital birthing center were more satisfied with childbirth [11]. Researchers have also shown that in Russia, as many as 70% of women gave birth without the support of partners, and their rights to make informed decisions and deliver in accordance with a pre-prepared birth plan were respected only during home birth [12].

The SARS-CoV-2 virus and childbirth

The COVID-19 pandemic has particularly affected pregnant women. The first and second waves of

the pandemic, in particular, brought many changes that decreased the joy of experiencing pregnancy and childbirth. The logistics of perinatal care have also changed. According to a NIK (Najwyższa Izba Kontroli – Supreme Audit Office) report, some obstetrics and gynecology wards were changed into infectious diseases wards, thus blocking the possibility of giving birth in a facility chosen by patients [13]. This mobilized women to reflect on the place of childbirth. The current study examined how the COVID-19 pandemic contributed to changes in the perception of the home as a potential place of birth in Polish women.

The results show that the pandemic increased the interest in home births. In the current sample, 12 women (9.75%) gave birth at home, and 111 (90.25%) women gave birth in hospital. As discussed above, the proportion of hospital births may result from many factors, including a lack of reimbursement from the National Health Fund, a lack of qualifications for home births, and low availability of midwives who perform home births. In addition, the inability to use pharmacological anesthesia could have a demotivating influence on the choice to have a home birth [14].

A different view on the high percentage of deliveries in hospitals is held by Preis et al. [15], according to whom the choice of the place of delivery results from the perception of the risk of infection with the SARS-CoV-2 virus, but also from psychological factors, such as preparation for childbirth or fear of childbirth. According to these researchers, regardless of the COVID-19 pandemic, home birth is chosen by women who believe that childbirth is a natural physiological process for which no special preparation is required and that the best place to give birth is at home.

Some studies have indicated that women were less afraid of childbirth during the COVID-19 pandemic as the transition to remote work, which resulted in more free time and a better work-life balance, allowed for greater preparation [16]. Other work has shown that some women who do not feel prepared for childbirth and are afraid of its course tend to choose the hospital as a birthplace. For this group of women, the fear of childbirth is greater than the SARS-CoV-2 virus, which is why they choose the hospital as a place for delivery [15].

The current study surveyed Polish women to verify how the pandemic influenced the choice of the place of delivery and whether the fear and emotions that accompanied women during the COVID-19 pandemic were determinants of the place of delivery. For the group of women that gave birth at a hospital during the pandemic, nearly one-sixth of them (n=17, 15.3%) would now decide to give birth at home, and nearly one-fifth (n=20, 18%) do not know if they would. The majority of women who decided to give birth at home (n=7, 58.33) declared that, before the

pandemic, they wanted to give birth in a hospital but, due to the pandemic, they decided to give birth at home. Therefore, these results show an increase in the interest in home births during the COVID-19 pandemic.

The available literature also shows that a similar situation occurred in other European countries, as well as in the USA and Australia [17, 18, 19]. An increase in the number of out-of-hospital births was observed even in countries such as the Netherlands, where women, regardless of the pandemic, choose home births more often than in other countries [20]. The largest increases in interest in home births occurred during the first and second waves of the pandemic but, currently, the level of interest in home births remains higher than before the pandemic [16, 17, 21].

Many women give birth in the hospital because they are afraid of giving birth outside of the hospital. However, according to research on women who gave birth at home, the pandemic was just a justification and motivation to give birth at home. Home birth gave them the possibility of greater self-realization. These women had dreamed about it but, before the pandemic, they were too afraid to give birth outside the hospital. For some women, home birth became a viable alternative after negative experiences in the hospital, such as prolonged convalescence after childbirth, problems with breastfeeding, and postpartum depression [22].

Anxiety and the choice of place of birth

The current results show that generalized anxiety during the COVID-19 pandemic in the women who gave birth at home and those who gave birth in a hospital did not differ from each other ($n=123$, $p=0.439$). However, for the current data, it is not possible to determine whether the anxiety experienced was due to the fear of childbirth as a medical procedure or fear of infection with the SARS-CoV-2 virus. According to the literature, a score of 10 or more on the GAD-7 is an indication for further detailed diagnostics. This means that 29% of the surveyed women who gave birth in a hospital and 25% of the women who gave birth at home had moderate generalized anxiety that required extended diagnostics (Table 2).

Previous studies have not directly assessed whether the presence of generalized anxiety contributes to the choice of the place of delivery. However, there are studies among pregnant women that confirm that the level of anxiety in this population before COVID-19 was higher than in the general population. It has also been compared to the level of fear experienced by medical personnel in hospitals admitting infected patients [23]. Other researchers have confirmed that

the COVID-19 pandemic has had a moderate to severe impact on the mental health of pregnant women, leading to a 72% increase in anxiety symptoms [24].

Previous research has also pointed to the risk of COVID-19 infection [11,22,25,27], risk of transmission of the virus to the child [27], lack of information, loneliness, and obstetric interventions aimed at quick delivery as the main cause of fear of pregnancy-related complications, such as induction of labor in the 39th week of pregnancy, perforation of the amniotic sac, or cesarean sections [11, 22]. Women are also afraid of poorer care [20] and separation from their children [11]. Factors specifically related to the newborn include fear of fetal death, neonatal complications, and disability[14].

Research conducted by Iranian scientists showed that, during the existing pandemic, pregnant women were most afraid of hospital visits, safety procedures, and their child's health. Their well-being was also lowered by information presented on social media and the fear of infection [26]. The above studies confirm the current results indicating that the SARS-CoV-2 virus contributed to increased anxiety in pregnant women.

We also examined correlations between the levels of generalized anxiety and women's feelings about childbirth. The results suggest that the feelings of women who gave birth at home and those who gave birth at a hospital differ only in terms of the fear of giving birth without the support of the husband. Fear of giving birth without the husband's support was correlated with generalized anxiety only in women who gave birth at home. In this group, women who had a higher level of generalized anxiety had a higher level of fear of giving birth without the support of their husbands. In addition, women who gave birth at home compared to women who gave birth in a hospital were statistically significantly less afraid of childbirth without the support of their husbands than women who gave birth in a hospital ($z=2.14$, $p=0.026$).

After examining the above results, it can be assumed that the increased interest in home births during the COVID-19 pandemic resulted from the possibility of giving birth with the support of the husband. While previous research has not directly examined fear resulting mainly from the absence of the husband, research conducted by Goyal et al. shows that unaccompanied childbirth and a lowered standard of care can harm women [28].

Emotions and the choice of place of birth

Emotions are an inseparable part of life. There are likely differences in emotions between the women who gave birth at home during the pandemic and

those who decided to give birth in a hospital. Undoubtedly, each of them made a decision that was aimed at making them feel comfortable and safe. They were guided by what was important to them.

While previous research does not show what emotions accompanied women during childbirth during the pandemic, the current results indicate that emotions differed between the groups of women giving birth at home and in the hospital. Table 5 shows the range of emotions that the studied women experienced. In the case of home births, the percentage of negative emotions was statistically significantly lower in terms of fear of the future ($n=69$, 62.16% vs. $n=3$, 25%, $p=0.013$) and loneliness ($n=47$, 42.34% vs. $n=0$, $p=0.010$). There were also statistically significant differences among positive feelings, including the belief that things would get better ($n=38$, 34.23% vs. $n=8$, 66.67%, $p=0.027$), positive thinking ($n=15$, 13.51% vs. $n=6$, 50%, $p=0.001$), and joy ($n=3$, 2.70% vs. $n=4$, 33.33%, $p=0.001$). Although women giving birth in a hospital were more likely to struggle with negative emotions during childbirth, they still did not want to give birth at home.

Limitations of the study

This study was conducted on a group of women who gave birth during the first and second waves of the pandemic, but it was not specified whether they were women giving birth for the first time or if it was their second birth. In future research, it would be beneficial to check whether home birth is chosen by more women who have experienced childbirth or by women giving birth for the first time. It would also

be useful to determine whether there are differences in the levels of anxiety experienced by women giving birth again compared to those who have never given birth before. The aspect of anesthesia during labor was also not included in our study. Thus, we do not know if some women decided not to give birth at home because of the lack of anesthesia. However, no statistically significant differences were found between the level of fear of labor pain in women in terms of the place of delivery. An additional limitation of the current study is the small group of women giving birth at home, which could have given an incomplete picture of their situation.

CONCLUSIONS

Home births in Poland are limited by a lack of subsidies, a lack of available midwives in various regions of the country, and restrictive qualifications. Despite these restrictions, the number of home births doubled in Poland during the COVID-19 pandemic. The current results indicate that generalized anxiety affects women who gave birth at home and in the hospital to the same extent. This anxiety correlates with the fear of giving birth without the support of a husband/partner in women who have decided to give birth at home, and this may be the reason for the increased interest in home births during the pandemic. Women who would not have decided to give birth at home before the pandemic would choose home as a place of birth during the pandemic due to the limited or even suspended family deliveries in hospitals. In addition, positive emotions more often accompanied women who gave birth at home.

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