Fear of childbirth and mental health among lesbian, bisexual, transgender and queer people: a cross-sectional study

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Fear of childbirth and mental health among lesbian, bisexual, transgender and queer people: a cross-sectional study

Sofia Hallström, Hanna Grundström, Anna Malmquist, Matilda Eklind and Katri Nieminen

ABSTRACT

Background: Most studies of fear of childbirth (FOC) are conducted on heterosexual cisgender pregnant populations of birth-giving parents. Among lesbian and bisexual women, as well as transgender and queer people (LBTQ), minority stress can add an extra layer to FOC. Gender binary and cisnormative assumptions leave it to the patient to educate and navigate healthcare providers, which can increase mental health problems.

Objective: The aim of this study is to compare FOC and mental illness among expecting birth-giving parents and their partners in an LBTQ population.

Materials and methods: This cross-sectional study recruited 80 self-identified pregnant LBTQ persons and their 54 non-pregnant partners at a LBTQ specialized antenatal clinic in a large Swedish city of over one million inhabitants. The survey included socio-demographic characteristics, sexual and gender orientation, obstetric history, previous mental health, previous trauma exposure and measures of FOC and mental health.

Results: Levels of FOC were significantly higher for the pregnant participants (median W-DEQ 67.5) than for partners (median W-DEQ 60.0). The proportion of severe FOC was higher for pregnant participants (20.3%) than for partners (9.4%), although this difference was not statistically significant. Mental illness was significantly associated with FOC.

Conclusion: The results add valuable information to our understanding of the specific needs of pregnant LBTQ people and their partners and may help us to develop healthcare in the future.

Introduction

Fear of childbirth (FOC) is defined as “a strong anxiety which impairs the pregnant person’s daily functioning and wellbeing” and can lead to negative consequences for both the parents and the child. Some people are even so afraid that they do not dare to become pregnant [1]. The most frequent aspects of the fear are fear for the child’s health, fear of pain and fear of obstetrical medical interventions [2]. Birth-giving people with FOC more often require psychiatric care, and mental health problems are twice as common, compared to birth-giving people without FOC [3]. FOC can be a reason for the expecting parent to request a cesarean section [4]. Previous studies indicate that FOC is more common among people with previous experience of any kind of abuse [5], which in turn is positively correlated to the preference for cesarean section on parental request [6].

Most studies of FOC are conducted on general populations of birth-giving parents [7], where the majority are heterosexual cisgender women. Among lesbian and bisexual women, as well as transgender and queer people (LBTQ), minority stress can add an extra layer to FOC [8]. Minority stress is known as the accumulated stress due to marginalization and discrimination that minority people are exposed to [9]. Minority stress has been explained to cause increased levels of mental illness among LBTQ people, where depression and anxiety disorders are more common compared to the general population [10]. In the case of LBTQ people who fear childbirth, minority stress mainly concerns fears and experiences of being inadequately treated in medical healthcare [8]. Stressors concerning not being seen or respected as an LBTQ person, or a same-sex couple, add to the stressors e.g. fearing pain, loss of control, or...
injuries, as commonly experienced by pregnant people fearing childbirth [10]. Furthermore, limiting norms about maternity, femininity and cisgender increase stress among LBTQ people with FOC [11]. Experiencing FOC as an LBTQ person may also affect the choice of birth-giving partner [12], which in turn can affect parenting roles many years ahead [13].

Most studies on sexual and gender minority (SGM) peoples’ experiences of reproductive healthcare in Sweden focus on female same-sex couples. They report similar experiences of meeting heteronormativity and a lack of knowledge about lesbian families, but also common experiences of satisfaction with reproductive healthcare contacts [14–16]. Pregnant transmasculine people often experience minority stress in Swedish reproductive healthcare, where many healthcare providers often lack knowledge about this group [17]. Gender binary and cisnormative assumptions can leave it to the patient to educate and navigate healthcare providers, which in turn can increase mental health problems [17].

A meta-analysis of FOC in the general pregnant population worldwide showed a prevalence of 14%, including both nulliparous and multiparous pregnant people [7]. The prevalence of FOC in male partners of pregnant women has been shown to be around 13% [18].

The primary aim of this study is to compare levels of FOC and the proportion of participants with severe and phobic FOC among expecting birth-giving parents and their partners of all gestational ages. The secondary aims are to analyze differences in mental health between pregnant and non-pregnant LBTQ people and to analyze the correlation between FOC and symptoms of depression or anxiety in this population.

Materials and methods

Study context/setting

In Sweden, the number of LBTQ people giving birth is increasing due to changes in laws and regulations [19]. Same-sex female couples have had access to assisted reproduction since 2005 [15]. Until 2013, transgender people were forced to undergo sterilization when having a legal gender reassignment, but since the omission of these interventions transgender men have had access to assisted reproduction [19]. Furthermore, single people with a childbearing capacity have had access to assisted reproduction since 2016 [18].

Sampling and data collection

Between February 2019 and May 2021, LBTQ people attending antenatal consultations at an LBTQ specialized maternity care unit in a large Swedish city (over one million inhabitants) were asked by their midwife at a routine visit to participate in this cross-sectional study. Nulliparous and parous pregnant self-identified LBTQ people and their partners of all gestational ages were eligible. Exclusion criteria were not speaking or reading Swedish and being under 18 years of age. During the study period, 190 pregnant people attended the antenatal care appointments at the clinic and thus were eligible, together with their partners. They were given oral and written information about the study, and finally, 80 pregnant people and 54 partners gave their written informed consent to participate in the study.

The participants were asked to fill in the paper survey consisting of questions about socio-demographic characteristics, sexual and gender identity, obstetric history, previous mental health and trauma exposure, and measures of ongoing FOC and mental health anonymously either on site after the visit or at home and return it to the researchers in a prepaid envelope.

Wijma delivery expectancy questionnaire (W-DEQ)

The Wijma Delivery Expectancy/Experience Questionnaire, a validated self-assessment questionnaire, was used to measure FOC [19]. The scale consists of 33 statements about the upcoming childbirth. The statements are rated on a Likert scale from “not at all” (0) to “extremely” [5], generating a sum score range of 0–165 points. A high score indicates more FOC [1]. We used a W-DEQ sum score of ≥85 points to indicate severe FOC and ≥100 points to indicate phobic FOC [20]. Cronbach’s alpha has previously been reported at 0.89 [20].

Hospital anxiety and depression scale (HADS)

The Hospital Anxiety and Depression Scale [21] is a self-report questionnaire designed for somatic medical care and was used to measure symptoms of ongoing anxiety and depression. The questionnaire has 14 items divided into subscales valid for measuring symptoms of anxiety and depression. We used a cutoff of ≥11 points [21] on both of the HADS scales, for anxiety or depression, as an indication of clinically significant symptoms of mental illness. Cronbach’s alpha is reported as 0.89–0.93 in previous studies [21].
Statistical analysis

Data were analyzed using IBM SPSS 26.0. Variables on continuous scales were described as median and 25th and 75th percentiles, and nominal data as frequency and percentage. Mean values and standard deviations (SD) were also presented to enable comparison with previous studies. For missing values (n = 4), the mean imputation of existing values was performed. Comparisons of socio-demographic and questionnaire data in the study groups were conducted using a Mann-Whitney U-test for continuous data and a Chi-Square test or Fisher’s exact test for nominal data. The correlation analyses were conducted on the study sample using Spearman’s rank-order correlation (Rho). The correlations represent the strengths and directions of the relations between FOC (sum score) and symptoms of anxiety, and FOC (sum score) and symptoms of depression, respectively. Spearman’s Rho correlation coefficient and the p-value were presented. The initial power calculation concerning the large effect size on FOC indicated that we would need a minimum of 50 pregnant person respectively partners in both groups when aiming for 80% power and statistical significance of p < 0.05.

Results

In total, 134 respondents participated in the study, of whom 59.7% (n = 80) were pregnant at between 7 and 42 weeks of gestation (median 28 weeks). The remaining 40.3% (n = 54) were non-pregnant partners. The mean age for the entire group was 33.6 years. Most of the participants were expecting their first child in their family constellation (68.7% n = 92). Among those who had given birth previously, most were the non-carrying partner in this pregnancy (25.9% n = 14 of the non-pregnant respondents and 8.8% n = 7 of the pregnant respondents had given birth themselves previously). Socio-demographic data is presented in detail in Table 1.

The median W-DEQ sum score for the total group was 65.0 and the mean was 64.3 (SD 22.3). The pregnant participants had a statistically higher median W-DEQ sum score compared to the non-pregnant partners (p = 0.005). The proportion of severe FOC in the total study group was 15.7% (n = 21), 4.5% (n = 6) having a phobic FOC. The proportion of participants with severe FOC was 20.0% for pregnant respondents and 9.3% for partners (p = ns) (Table 2).

Table 1. Socio-demographic data of the participants.

<table>
<thead>
<tr>
<th></th>
<th>Total sample n = 134</th>
<th>Pregnant partner n = 80 (59.7%)</th>
<th>Non-pregnant partner n = 54 (40.3%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age in years (mean SD)</strong></td>
<td>33.6 (4.0)</td>
<td>33.7 (3.7)</td>
<td>33.4 (4.5)</td>
</tr>
<tr>
<td><strong>Education n (%)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High school</td>
<td>18 (14.0)</td>
<td>10 (13.0)</td>
<td>8 (15.4)</td>
</tr>
<tr>
<td>University degree</td>
<td>110 (85.3)</td>
<td>66 (85.7)</td>
<td>44 (84.6)</td>
</tr>
<tr>
<td>Other</td>
<td>1 (0.8)</td>
<td>1 (1.3)</td>
<td>–</td>
</tr>
<tr>
<td><strong>Civil status n (%)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cohabiting/married</td>
<td>128 (96.2)</td>
<td>75 (94.9)</td>
<td>52 (98.1)</td>
</tr>
<tr>
<td>Couple living apart</td>
<td>2 (1.5)</td>
<td>1 (1.3)</td>
<td>1 (1.9)</td>
</tr>
<tr>
<td>Single</td>
<td>3 (2.3)</td>
<td>3 (3.8)</td>
<td>–</td>
</tr>
<tr>
<td><strong>Gestational age in weeks (mean SD)</strong></td>
<td>28.4 (7.5)</td>
<td>28.1 (7.5)</td>
<td>28.6 (7.6)</td>
</tr>
<tr>
<td><strong>Obstetric history n (%)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Respondent given birth previously</td>
<td>21 (15.7)</td>
<td>7 (8.8)</td>
<td>14 (25.9)</td>
</tr>
<tr>
<td>Respondent’s partner given birth previously</td>
<td>22 (16.4)</td>
<td>20 (25.0)</td>
<td>2 (3.7)</td>
</tr>
<tr>
<td>Respondent present when partner was giving birth</td>
<td>15 (11.2)</td>
<td>14 (17.5)</td>
<td>1 (1.9)</td>
</tr>
<tr>
<td><strong>Gender identity n (%)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>126 (94.0)</td>
<td>76 (96.2)</td>
<td>48 (90.6)</td>
</tr>
<tr>
<td>Transgender male</td>
<td>2 (1.5)</td>
<td>0 (0)</td>
<td>2 (3.8)</td>
</tr>
<tr>
<td>Non-binary/Gender fluid/Gender queer</td>
<td>6 (4.5)</td>
<td>3 (3.8)</td>
<td>3 (5.7)</td>
</tr>
<tr>
<td><strong>Lesbian/Homosexual</strong></td>
<td>90 (67.7)</td>
<td>53 (67.1)</td>
<td>37 (68.5)</td>
</tr>
<tr>
<td>Bisexual/Pansexual</td>
<td>32 (24.1)</td>
<td>20 (25.3)</td>
<td>12 (22.2)</td>
</tr>
<tr>
<td>Other/Queer</td>
<td>11 (8.3)</td>
<td>6 (7.6)</td>
<td>5 (9.3)</td>
</tr>
<tr>
<td><strong>Medication n (%)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychotropic drugs</td>
<td>13 (9.7)</td>
<td>3 (3.7)</td>
<td>6 (1.3)</td>
</tr>
<tr>
<td>Other/non-specified</td>
<td>37 (27.6)</td>
<td>22 (27.8)</td>
<td>22 (41.5)</td>
</tr>
<tr>
<td><strong>Self-reported earlier trauma n (%)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sexual abuse as trauma</td>
<td>18 (13.4)</td>
<td>9 (11.3)</td>
<td>9 (16.7)</td>
</tr>
<tr>
<td>Other trauma</td>
<td>35 (26.1)</td>
<td>23 (28.8)</td>
<td>12 (22.2)</td>
</tr>
</tbody>
</table>
Furthermore, we found a high proportion of severe FOC among participants who had a non-binary gender identity (n = 2 of 6), those who were single (n = 1 of 3) and participants who were bi/pansexual (n = 7 of 32). However, it is important to note that the number of participants in these subgroups was small.

Among pregnant respondents who had given birth previously, the proportion of FOC was high, 42.9% (n = 3 of 7), compared to pregnant respondents who had not given birth previously, 17.8% (n = 13 of 73). None of the non-pregnant partners who previously had given birth (n = 14) had severe FOC, while 12.5% (n = 5 of 40) of non-pregnant partners who had not given birth previously had severe FOC. Among participants who had been present when their partner gave birth to a previous child, the proportion of FOC was 26.7% (n = 4 of 15).

In the total study sample, 16.4% (n = 22) had anxiety symptoms on a clinically significant level. Furthermore, 2.2% (n = 3) had symptoms of depression on a clinically significant level (Table 3). Notably, all three individuals who scored above the cutoff on the depression scale also scored above the cutoff on the anxiety scale.

The proportion of severe FOC was 45.5% (n = 10 of 22) among participants with clinical symptoms of mental illness (defined as HADS anxiety and/or depression ≥11p). Among participants without mental illness, the proportion of severe FOC was significantly lower, 10.9% (n = 11 of 112) (p ≤ 0.001). The proportion of phobic FOC was significantly higher in the group with symptoms of mental illness 18.2% (n = 4 of 22) compared to those without, 1.8% (n = 2 of 112) (p = 0.007).

Spearman’s correlation analyses showed a significant correlation between FOC and symptoms of anxiety (Rho 0.448, p ≤ 0.001), and between FOC and symptoms of depression (Rho 0.315, p ≤ 0.001). The correlation was significant in both the pregnant and the non-pregnant partners (p < 0.001–0.02).

**Discussion**

The present study is the first to explore FOC and its relation to mental illness in pregnant LBTQ individuals and their non-pregnant LBTQ partners. The proportion of severe FOC among the pregnant participants in the study group was high (20%) compared with general pregnant populations worldwide (14%) [7]. Qualitative studies on LBTQ people with FOC point at experiences of minority stress as an important reason for understanding their fears [8]. The fear of being insufficiently treated in reproductive healthcare, as well as feeling uncomfortable with norms on maternity, femininity, and cisgender, add stress to LBTQ people with FOC [11]. This offers a potential explanation for the increased FOC shown in the data.

Pregnant LBTQ respondents had significantly higher scores on W-DEQ when measuring FOC, than the non-pregnant partners. This difference could possibly be explained by the fact the non-pregnant respondents were not standing up-front giving birth themselves.

Furthermore, the proportion of severe FOC was remarkably high among parous pregnant respondents (42.9%), which suggests previous negative, potentially traumatic, birth experiences [4]. As the number of pregnant parous respondents was small, this finding must be considered tentative. In contrast, none of the non-pregnant partners who previously had given birth themselves had severe FOC. Possibly, their previous positive experience of birth-giving, in combination with them not standing up-front another birth-giving of their own, may have reduced their fears. While previous birth experience seemed to increase FOC in pregnant respondents, the opposite was seen among partners. Further research is needed to explain this difference.

The higher level of FOC in pregnant respondents compared to partners indicates that LBTQ people with high levels of FOC do not generally lend birth-giving to their partner. FOC seems to be only one of many other factors influencing the decision of the birth-giving parent where the vulnerability of the group matters [12].

Furthermore, it is well known that previous traumatic birth experience increases FOC in subsequent pregnancies [22], less is known about trauma experiences when witnessing a partner giving birth. It is therefore important to note that in the present study, among respondents who reported having witnessed their

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**Table 2. Severe and phobic FOC in the total sample and the groups of pregnant and non-pregnant partners.**

<table>
<thead>
<tr>
<th>Fear of childbirth</th>
<th>Total sample n = 134</th>
<th>Pregnant partner n = 80</th>
<th>Non-pregnant partner n = 54</th>
<th>Sign.</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>W-DEQ, median (25th–75th percentile)</td>
<td>65.0 (48.8–78.0)</td>
<td>67.5 (55.3–81.8)</td>
<td>60.0 (42.8–70.0)</td>
<td>0.005</td>
<td>a</td>
</tr>
<tr>
<td>W-DEQ, mean (SD)</td>
<td>64.3 (22.3)</td>
<td>68.7 (22.8)</td>
<td>57.6 (20.0)</td>
<td>–</td>
<td>-</td>
</tr>
<tr>
<td>Severe FOC (W-DEQ ≥ 85) n (%)</td>
<td>21 (15.7)</td>
<td>16 (20.0)</td>
<td>5 (9.3)</td>
<td>0.093</td>
<td>b</td>
</tr>
<tr>
<td>Phobic FOC (W-DEQ ≥ 100) n (%)</td>
<td>6 (4.5)</td>
<td>5 (6.3)</td>
<td>1 (1.9)</td>
<td>0.401</td>
<td>-</td>
</tr>
</tbody>
</table>

W-DEQ: Wijma Delivery Expectancy Questionnaire.
* Mann-Whitney U-test; * Chi-Square test; * Fischer’s exact test.
partner giving birth, the proportion of FOC was high (26.7%). LBTQ people who have witnessed a partner giving birth may be at risk of developing more severe FOC. Therefore, it is important to address the partner’s experiences of birth postpartum, especially when the partner has childbearing capacity.

The proportion of severe FOC among participants with clinical symptoms of depression or anxiety (HADS \( \geq 11p \) on either anxiety or depression) was high in our study, 45.5%. This indicates that LBTQ people with depression or anxiety are a vulnerable group as regards FOC and thus need adequate professional support. Storksen et al. [23] showed that pregnant people with both anxiety and depression had the highest prevalence of FOC. Our results point in the same direction, with a significantly larger number of respondents with severe FOC among those with mental illness. Our results show a significant correlation between FOC and symptoms of anxiety or depression. Similar findings have been shown in studies on general pregnant populations [23]. Previous studies have also shown higher levels of mental illness in general in LBTQ populations compared to cisgender heterosexuals [24]. Thus, the generally increased mental illness in LBTQ populations could offer an explanation for the high FOC occurrence found among pregnant participants in the present study.

The proportion of severe FOC in our study was higher among some subgroups of LBTQ people. Respondents identifying their gender as non-binary, as well as those being single, and those identifying their sexuality as bi/pansexual had an increased occurrence of severe FOC. Previous studies have also shown a higher prevalence of mental illness among these groups in general. However, the results must be interpreted with caution, due to the small number of participants in each sub-group. Larger studies are needed to confirm our preliminary results.

**Limitations and directions for future research**

The study sample was purposive as LBTQ people are a hidden population not registered in the health-care systems. The recruitment was done at an LBTQ-specified antenatal clinic, in a big city in Sweden, resulting in a small sample size, and selection bias concerning the educational level and partnering, which might limit the generalizability of our results. Due to the small number of participants in the present study, analyses of subgroups offer only tentative suggestions for further research on the prevalence and risk factors of FOC in different groups of SGM. Furthermore, future studies are needed to measure FOC among LBTQ people with lower educational levels, living single, but also geographically in smaller towns or rural areas as well as in other countries. Studies in larger populations are needed to investigate the reasons and consequences of severe FOC in pregnant LBTQ population.

**Conclusions**

The proportion of severe FOC in the pregnant LBTQ population was high compared with general pregnant populations, and some subgroups seem to be more prone to severe FOC. Pregnant LBTQ parents reported a significantly higher level of FOC compared to their non-pregnant partners. Suffering from mental illness is significantly associated with FOC among expecting LBTQ people. The results add valuable information to our understanding of the specific needs of pregnant LBTQ people and their partners, which can help in individualizing the care for these persons during childbirth.

**Ethical approval**

This study has been approved by the Ethical Review Board of Sweden on the 12th of December 2017 (Reg. nr 2017-499-31) and registered in the ClinicalTrials.gov ID:2017-499-31.

**Disclosure statement**

The authors have no conflicts of interest to declare.
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