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Exploring women's self-reported health problems in pregnancy in the UK and Norway

Left running head: A. B. V. NILSEN ET AL.

Short title : Health Care for Women International

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Abstract

Women usually conceptualize pregnancy as a normal physiological state. In contrast, formal maternity care provision tends to be focused on pathology and risk. The authors aim to explore the extent to which childbearing women apply a sickness lens to pregnancy. We have therefore examined antenatal problems spontaneously reported by 4,000 UK and Norwegian women who responded to the international social media-based Babies Born Better survey. We coded and classified the free-text comments of the respondents as either complaint or disease. We found striking differences in the rates and types of problems reported by the women. We discuss our findings by applying different perspectives of medicalization and of lay and biomedical knowledge.

Health problems in pregnancy are common. Some health problems are defined by health-care professionals and professional guidelines as biomedical diseases. Most of women's health problems in pregnancy are conceptualized as "minor discomforts" (Coutts, 1998) because they do not appear to signal underlying disease and cannot be verified via objective measures or alleviated with standard

medical treatments. Doctors tend to rank medically unexplained symptoms below biomedical diagnoses in the hierarchy of illnesses (Album, 1991). This framing supervalues professional concepts of what is important and reinforces the fact that health-care professionals are responsible for deciding which needs are legitimate for treatment (Lian, 2000). It does not acknowledge that many of these so-called minor health problems are highly problematic and disabling for pregnant women. In many countries, including Norway, pregnant women who experience health problems that can be defined as diseases, with biomedical diagnoses, are eligible for medical treatment, social benefits, and sick leave from work, whereas pregnant women who experience health problems without a medically sanctioned diagnosis can struggle to be eligible for treatment and exemption from their daily duties (Fredriksen et al., 2014).

It is striking that certain disorders of pregnancy are more or less legitimate as conditions over time and across countries. Two examples are pelvic girdle pain (PGP) and gestational diabetes (GD). PGP was first reported in medical textbooks in the 18th century; thereafter it appeared and disappeared periodically. In Norway, it has been a well-known condition since the 1980s, when lay women launched a patient organization with the aim of research into PGP and improved medical treatment and social welfare for women with PGP. In the UK, however, the condition was very infrequently reported prior to 2004; since 2012 it has appeared far more often in the literature. Internationally, there has been a steady increase in research over the last three decades. GD was first reported in the literature in 1946, and there has been a stable rise in related research over the last two decades. Debate persists over the balance of benefits and risks in testing all women for GD and over the efficacy of current treatment regimens (Hartling et al., 2012). In both Norway and the UK, women are offered a GD test if they have certain risk factors.

The aim of our study has been to explore differences and similarities in the type and framing of health problems reported by pregnant women living in similar socio-cultural settings (Norway and the UK) and to discuss those differences and similarities by applying sociological theory on health and sickness. We chose pelvic girdle pain and gestational diabetes as specific anchors for to underpin the differences between “condition” and “disease” due to their fluid legitimacy over time.

This issue is of importance to an audience of researchers and health-care professionals internationally, because our study reveals through two examples that different and parallel medicalization processes of pregnancy may influence the perception and management of pregnant women's health at both a societal and an individual level and that this applies cross-culturally.

Background

Women's pregnancy has been constructed and handled differently across classes, cultures, and eras (Blom, 1988; Johannisson, 1996; Lupton, 2012a), and social constructions of pregnancy as a state of

health or illness fluctuate in tandem with shifting social constructions of femininity (Johannisson, 1996). For example, in the 19th century women from the higher social classes of many countries were regarded as weak and fragile, and pregnancy was approached as a sickness for which the treatment placed strong emphasis on rest (Johannisson, 1996). But after the 1930s, in parallel with falling birth rates and falling mortality and morbidity rates among women, a new ideal of the healthy, strong and fertile woman emerged (Johannisson, 1996; Lupton, 2012a). This health construction of pregnancy was challenged in the 1960s and 1970s by policies for universal hospitalization for childbirth and the need for regular medical surveillance in pregnancy “just in case” (Lupton, 2012b; Vallgård, 1996). However, the pendulum has swung again to an extent. In both Norway and the UK, the health authorities currently state that healthy pregnant women are not sick and should not be considered as ill (NICE, 2008; Norwegian Directorate of Health, 2018). The emphasis at the policy level, therefore, is on reducing the over-medicalization of normal physiological pregnancy. Indeed, policy in Norway explicitly limits the number of medical consultations for women having a healthy pregnancy and encourages pregnant women to maintain their own health and well-being, and that of their fetus, by exercising and keeping fit (Norwegian Directorate for Health, 2018). This health and fitness construction of pregnancy is also reflected in the antenatal maternity leave policy of both countries. Pregnant women are meant to continue working as usual until three weeks before delivery in Norway. In the UK, paid maternity leave can start up to eleven weeks before term, although women can choose to stop working later in order to save paid maternity leave for the period after the birth. Thus, at a policy level, pregnancy has been re-normalized and is no longer viewed as a limitation in women's lives (Ravn, 2004). In this context, it is a paradox that as many as 75% of Norwegian women take a period of sick leave during pregnancy (Dørheim et al., 2013).

Norway and the UK have comparable health-care systems for pregnancy care. In Norway, pregnant women are entitled to regular consultations with a midwife or a general practitioner. The woman may choose to see a midwife, a general practitioner, or a combination of these two professionals for her pregnancy care. Practitioners in both professions provide referrals to specialists if needed. In the UK, most healthy pregnant women see a midwife for all of their routine antenatal visits, although they can also choose to see an obstetrician. Women with pregnancy complications are usually booked with an obstetrician, but many of their health consultations may still be attended by a midwife. The basic program offered to all women in both countries comprises a minimum of eight consultations over the course of the pregnancy, including one ultrasound screening for fetal abnormality during weeks 17 to 19 in Norway and two in the UK (at booking for fetal gestation and at 16 weeks to screen for fetal abnormality). All care is free of charge. The midwives' or doctors' consultations comprise health checks, information, advice, and support. The woman may bring a companion of her choice to her checkups if she wants. In both countries, women who are unable to continue working because it may be harmful to their health or that of their baby have the right by law to be assigned other work tasks or to receive pregnancy benefits. In Norway, women who experience pregnancy-related health problems may also be eligible specifically for physiotherapy. The midwife, general practitioner, obstetrician, and

physiotherapist have complementary roles and responsibilities vis-à-vis the pregnant woman, but they do not necessarily work in an interdisciplinary team. In the UK, access to any health-care professional that the woman or her fetus/neonate requires is free and is usually actioned by a referral from the lead maternity-care professional (midwife or obstetrician). Sometimes the general practitioner is the referring practitioner.

The authors of this study have used PGP and GD as examples of a pregnancy-related complaint and disease, respectively. PGP is a poorly understood and ill-defined condition that is characterized by pain in the lumbar and pelvic region, which commonly decreases women's capacity for everyday activities such as walking, standing and bending (Bastiaanssen et al., 2005; Vleeming et al., 2008). The diagnosis is often based solely on the woman's own reports of pain and disability. Both its prevalence and its etiology are unclear, and its reported prevalence varies from 4% to 76% globally (Gutke et al., 2018; Vleeming et al., 2008).

In contrast with PGP, GD is an example of a biomedically defined disease that can be diagnosed via objective measures. GD is characterized by high blood sugar levels (glucose) that develop during pregnancy. Blood sugar levels can be measured by way of fasting plasma glucose levels or by performing a glucose tolerance test in a blood sample. In Norway, if the results are above 5.3 mmol/litre in a fasting test or between 9.0 and 11.0 mmol/litre after two hours, the woman is diagnosed with GD (Norwegian Directorate of Health, 2018). The prevalence of GD in Norway has increased from 4.5% in 2015 to 5.0% as of 2018 (Medical Birth Registry of Norway, 2020). The rate cited in the UK is also 5.0%, but this is based on a different threshold for diagnosis: a fasting plasma glucose level of 5.6 mmol/litre or above or a two-hour plasma glucose level of 7.8 mmol/litre or above (NICE, 2015). Disputes over the value of screening, the threshold for treatment and the solutions for GD have meant that some health systems routinely screen and treat all women for GD while others do not.

Methods

To answer the research questions, we used research participants' self-reported responses on two open-ended questions about problems in pregnancy. We used data from two high-income countries, Norway, and the UK, taken from version 1 of the international Babies Born Better (B3) survey.

Data collection

The B3 survey is a mixed-methods web-based questionnaire designed to identify the factors that underpin women's positive experiences of maternity care globally. The B3 project was developed within the framework of the EU COST networking action (IS0907) *Childbirth Cultures, Concerns and Consequences: Creating a dynamic EU framework for optimal maternity care*.

The survey was launched internationally through social media in 2014 and was open for responses until 2015. Women were eligible for inclusion if they had given birth up to five years before they completed the survey (2009 to 2015). The questionnaire comprised 19 questions with sub-questions and was divided into six sections. The first three sections required fixed responses related to demographics and clinical factors. The subsequent two sections invited open responses and were designed to elicit the respondents' views of positive factors and suggestions for change after their experience of care. One of the sections was titled "About your pregnancy and the birth of your youngest child" and comprised six questions. The answers to two of the questions in this section ("Were there any problems with that pregnancy?" and "If yes, please tell us what those problems were") served as the basis for this study.

Sampling

We included all of the Norwegian and UK research participants who answered yes to the question relating to problems in pregnancy if they provided at least one example of their health problems in either Norwegian or English. We excluded research participants who gave accounts of problems that clearly did not relate to their pregnancy. Additionally, we excluded research participants if it was impossible to understand the meaning of their response.

Description of the data

The survey did not provide any explanation or definition of "problem in pregnancy," so it was up to the research participants to decide what they perceived as being a problem. The responses varied from a single word to longer accounts consisting of several sentences. Some of the research participants reported only one problem while others reported up to seven different problems.

Procedure for analysis

Prior to undertaking the analysis, we agreed on several strategies and codes. For example, we decided that every problem related to pelvic girdle problems would be coded as "pelvic girdle pain" (PGP). The codes were partly based on literature addressing women's problems in pregnancy (Helsenorge.no, 2019; Kamysheva et al., 2009; Lukasse et al., 2009; Nazik & Eryilmaz, 2014; Yikar & Nazik, 2019) and partly developed inductively by the authors from the material. The two authors who performed the coding process (ABVN and TSE) are both midwives and researchers within the field of maternity care. We developed the codes as we were working our way systematically through the material. Occasionally, we discovered that a code did not work very well, and we went back and recoded some of the material.

First, we read the full text of the research participants' responses to get an overview of the data. Then we started to condense and organize the data by applying line-by-line coding (Saldaña, 2016). We

coded every problem in each response based on the content. For example, we coded antenatal psychosis as “psychosis” and “I was very tired during my whole pregnancy” as “fatigue.” When migraine was reported as a problem, we did not change it and thus coded it as “migraine,” whilst “the baby didn’t grow for the six last weeks of my pregnancy, so I had to have a scan every week” we coded as “intrauterine growth restriction” (IUGR). We aimed to remain close to the wording the research participants used in their responses when we did the coding. For example, if the research participant used the word “hyperemesis,” we did not change it. Similarly, if the research participant used the word “sickness” to refer to either morning sickness or heavy morning sickness, we did not assess the seriousness of the state but applied the code “sickness” in either case.

In the second step of the coding process, we categorized the reported health problems as either complaint (C) or disease (D). The basis for our development of these two categories was research literature, textbooks, diagnosis registers and the authors’ knowledge of and insights into the subject matter. Category C related to conditions, which in the literature are treated as common (trivial, non-serious) symptoms, unpleasant symptoms, minor symptoms, or so-called normal pregnancy discomfort (Helsenorge.no, 2019; Kamysheva et al., 2009; Lukasse et al., 2009; Nazik & Eryilmaz, 2014; NICE, 2008; Yikar & Nazik, 2019). Category D related to conditions, which are currently generally accepted as medical disorders or diseases (Table 1). These include pregnancy-specific and other medical conditions reported by the research participants.

Table 1. Examples of the coding process; responses, initial codes, and classifications (C or D). 

The research participants' self-reported problems	Initial code	Complaint (C) or Disease (D)
“Bleeding at 8 weeks” “Ante partum bleeds, up to 24 weeks” “Bleeding from 29 weeks due to a hematoma on the placenta” “Bleeding throughout” “Frequent unexplained bleeds”	Bleeding	D
“She wasn’t growing” “Baby didn’t put the weight on” “Baby had stopped growing was small” “Baby’s growth inexplicably slowed to the point where it was safer for him to be out” “IUGR—(symmetrical) small for gestational age discovered at 36.5 weeks”	IUGRa	D

The research participants' self-reported problems	Initial code	Complaint (C) or Disease (D)
"Gestational diabetes" "GD" "Gestational diabetes light" "Diet controlled gestational diabetes" "Insulin dependent gestational diabetes"	GD ^b	D
"Bad back and sciatica" "Back problems" "My back hurt" "Pain in the lumbar region" "Pain in back and neck"	Back pain	C
"Pelvic girdle pain" "SPD" "Symphysis pubis dysfunction/pelvic girdle pain requiring crutches" "Pelvic problems" "Pelvic pain and problems walking"	PGP ^c	C
"Swollen legs" "Generally, much water in my body" "Problems with losing stuff because of swollen hands" "I could hardly walk because my feet were so swollen" "Swollen ankles"	Oedema	C

^aIntra uterine growth restriction.

^bGestational diabetes.

^cPelvic girdle pain.

The authors imported the coded material into version 26 of the SPSS statistical package for Windows (SPSS, Inc., Chicago, USA) and summarized all of the reported complaints and diseases as the total number of complaints or diseases per each research participant. We applied descriptive statistics to explore the proportions of complaints (C) and diseases (D) in the samples.

Research ethics

Ethics approval for the B3 survey study was granted by the Ethics Committee of the University of Central Lancashire (UCLAN) in the UK (Ethics Committee BuSH 222). An application to the Regional Committee for Medical and Health Research Ethics (REC) resulted in the decision that the project did not require ethical clearance in Norway (application ref: 2017/1582). In the present study we used an anonymized dataset. The study was approved by the Norwegian Data Inspectorate (NSD) (ref: 60547/3/HJ/RH).

Results

The total number of women responding to the B3 survey was 8,479 in Norway and 2,140 in the UK. More women in the Norwegian sample reported problems in pregnancy than in the UK sample: 43%, (3,456/8,479) versus 31% (604/2,140). Altogether, 4,060 women (3,456 in the Norwegian sample and 604 in the UK sample) reported at least one health problem related to pregnancy and were included in this study. However, the two groups of respondents were similar in terms of parity and age (Table 2).

Table 2. Norwegian and UK participants with self-reported health problems in pregnancy.



All: N = 4060	Norwegian respondents, n = 3456			UK respondents, n = 604		
	(n)		(%)	(n)		(%)
Primipara	1462		42.3	243		40.2
Multipara	1994		57.7	361		59.8
Age (years)	Mean	Median	(SD) ^a	Mean	Median	(SD) ^a
Primipara	29.3	29.0	(5.1)	31.4	32.0	(4.9)
Multipara	32.9	33.0	(4.8)	33.6	34.0	(5.1)

^aStandard deviation.

Each of the research participants from the Norwegian sample reported one to seven health problems in pregnancy (for a total 5,763 entries), whereas the UK research participants reported one to four health problems each (for a total of 821 entries). Most of the research participants who had given birth in Norway reported up to four health problems, and the majority of the research participants who had given birth in the UK reported up to two health problems.

Table 3 shows the proportions of complaints and diseases among research participants reporting problematic conditions. Of the UK entries, 19.9% were coded as complaints and 80.1% as diseases. In contrast, 63.8% of the Norwegian entries were coded as complaints and 36.2% as diseases. In the UK material, the distribution of complaints and diseases is fairly equal between research participants who had given birth for the first time (primipara) and research participants who had given birth to more than one child (multipara). In contrast, the Norwegian material shows that the primiparous

participants reported more diseases and multiparous participants reported more complaints.

Table 3. Proportions of total number of self-reported health problems coded as complaints and as diseases for all included participants. +

Problems reported:	Norwegian respondents' entries (<i>n</i> = 5763)		UK respondents' entries (<i>n</i> = 821)	
	(<i>n</i>)	(%)	(<i>n</i>)	(%)
Complaints	3679	63.8	163	19.9
Primipara	1493	40.6	57	35.0
Multipara	2186	59.4	106	65.0
Diseases	2084	36.2	658	80.1
Primipara	929	44.6	261	39.7
Multipara	1155	55.4	397	60.3

There were variations within the specific categories. Table 4 provides an example of this based specifically on the reporting of PGP (classified as a complaint (C)) and GD (classified as a disease (D)).

Table 4. Examples of variation between PGP (classified as complaints) and GD (classified as disease) in the two samples for all participants reporting any problems. +

Total: N = 4060	Norwegian responses (<i>n</i> = 3456)		UK responses (<i>n</i> = 604)	
	(<i>n</i>)	(%)	(<i>n</i>)	(%)
PGP^a(C)	1656	47.9	93	15.3
Primipara	658	45.0	29	17.7
Multipara	998	50.1	64	11.9
GD (D)	197	5.7	68	11.3
Primipara	77	5.3	33	13.6
Multipara	120	6.0	35	9.7

^aPGP—every problem related to pelvic problems, no matter how the respondents reported it, was coded as pelvic girdle pain.

This analysis demonstrates that 15.3% of the UK research participants reported any problems included PGP, compared to nearly half (47.9%) of participants in the Norwegian sample. In contrast, twice as many UK research participants reported GD than did Norwegian research participants (11.3% vs. 5.7%). Similar proportions of PGP were reported by parity, but the rate at which GD was

reported was nearly three times as high among primiparous UK participants than among primiparous Norwegian participants, and only about a third higher among multiparous participants.

Discussion

The main findings of our study are the differences in self-reported health problems between two samples of women in two high-income settings. A larger proportion of research participants who gave birth in Norway reported health problems in pregnancy than did those who gave birth in the UK (43% vs. 31%).

The coding of conditions as complaints or diseases revealed differences, with as many as 80.1% of the English research participants reporting conditions that we coded as diseases and 19.9% reporting conditions that we coded as complaints, compared to 36.2% and 63.8% respectively for the Norwegian research participants.

As noted above, the health-care systems for pregnant women in the UK and Norway are fairly similar, so it is unlikely that these differences are driven by the health systems. It is more likely that the women in the two countries and/or the maternity care providers interpret similar health problems differently and give them different emphasis and legitimacy.

On diagnosis and complaints: Lay knowledge versus authoritative biomedical knowledge

We found more frequent reporting of PGP in the Norwegian sample of women than in the UK sample of women, and less frequent reporting of GD in the Norwegian sample of women than in the UK sample of women. GD is a medically sanctioned diagnosis (Norwegian Directorate of Health, 2018), which can be verified by objective biomedical measurements. The diagnosis is based on authoritative biomedical knowledge, which changes over time and by culture, and the threshold for the diagnosis is slightly lower in the UK than in Norway (NICE, 2015; Norwegian Directorate of Health, 2018). However, screening and diagnosing may be associated with iatrogenic harm (Illich, 1975). Some professionals view these procedures as an over-medicalization of pregnancy and dispute the value of screening and the threshold for treatment (Miller et al., 2016).

The situation for PGP is different; this condition, which is characterized as a normal pregnancy complaint in most countries, has largely been neglected by biomedical expertise. As mentioned above, the issue of PGP was raised in Norway in the late 1980s by women who had suffered from PGP during their pregnancies or after delivery and who set up a patient organization. The women struggled for acknowledgement and social rights, and their patient organization attracted a great deal of attention from the media. For example, the women used photos of women sitting in wheelchairs to attract the attention of the population and of health-care professionals. They questioned prevailing medical views,

built alliances between members of their organization, researchers and health-care professionals and lobbied politicians in order to gain access to treatment and social benefits (Fredriksen et al., 2014). This is an example of a lay-driven medicalization process steered by patients who challenged biomedical authoritative knowledge. Other researchers have described similar lay-driven medicalization processes where women's embodied experiences have diverged from the experts' biomedical knowledge (Abel & Browner, 1998; Kaufert, 1998). The process of lay medicalization of PGP in Norway was successful from the perspective of the women; PGP has gone from being viewed as a questionable condition among complaining women to a so-called real problem which is viewed as eligible for treatment and sick leave if needed. In Scandinavia, increasing numbers of women have been diagnosed with PGP over the last few decades; in one study, almost a third of the participants from Norway and Sweden reported sick leave due to PGP during their last pregnancy, whereas only 5% of the UK participants reported sick leave due to PGP during pregnancy (Gutke et al., 2018).

In the UK, PGP has received less attention in the media and among health-care professionals, despite researchers reporting more than a decade ago that women suffering from PGP are dissatisfied with the lack of recognition of their condition and the consequent negative labeling by professionals (Wellock & Crichton, 2007). A recent study reveals that UK women are still far less likely to receive treatment or sick leave for PGP than Norwegian women are (Gutke et al., 2018). Lay women in the UK, in contrast with lay women in Norway, have not been advocating for recognition of PGP-related health problems and these health complaints remain more likely to be neglected by health-care professionals in the UK than in Norway. It is also more likely that pregnant women in Norway will ask for treatment and sick leave than will pregnant women in the UK, where the condition is less acknowledged. The lay medicalization process has not taken place in the UK. Perhaps this health problem is also more visible in Norway than in the UK because the proportion of pregnant Norwegian women (85%) working full-time is greater than the proportion of pregnant women working full-time in the UK (49%) (Gutke et al., 2018). Moreover, unemployment rates among pregnant women are significantly lower in Norway. In a recent study, Gutke et al. (2018) reported that only 2% of the Norwegian participants were unemployed compared to 26% of the UK participants. Hence, our findings related to self-reported PGP in Norway and the UK may be understood as resulting partly from the differing attention to the condition in the two countries and partly from the impact on paid work and the availability of paid sick leave.

On the basis of our interpretation of our findings, we argue that there are three different and/or parallel medicalization processes of pregnancy. The first is a politically driven de-medicalization process of pregnancy in both countries (NICE, 2015; Norwegian Directorate of Health, 2018) that aims to reduce the over-medicalization of physiologically normal pregnancies. This is a parallel process in Norway and the UK. Secondly, there is a biomedically driven medicalization process of measurable physiological conditions, such as GD, in both countries. Thirdly, there is a publicly framed lay medicalization process of so-called normal pregnancy complaints such as PGP. This process has

mainly been driven by Scandinavian women, which has not been the case in the UK.

The existence of different concepts of sickness, and the consequent need for medical attention and relief from employment, in countries with otherwise very similar social and medical systems, raises issues about who determines the legitimacy of experience and at what cost. In this case, so-called sickness is the legitimate tender. As mentioned above, doctors tend to rank medically unexplained symptoms below biomedical diagnoses in the hierarchy of illnesses (Album, 1991). This framing supervalues professional concepts of what is important and reinforces the fact that health-care professionals are responsible for deciding which needs are legitimate for treatment (Lian, 2000). It does not acknowledge that many of these so-called minor health problems are highly problematic and disabling for pregnant women. Lay pressures to medicalize common but uncomfortable or even disabling pregnancy conditions may be an adequate solution for women in the short run; however, translating all of the hard and uncomfortable aspects of the pregnancy experience into conditions that can be taken seriously and, therefore, considered worthy of time away from routine work, only if they are reframed as being inherently pathological raises questions about unintended consequences.

The ambivalence toward recognizing the uniqueness of the pregnant body is also reflected in the way that feminist writings on the body and medicine struggle with the tension between “recognition of the uniqueness of women’s embodied experience and the desire to deny that any such uniqueness exists” (Lupton, 2006⁶³, p. 142). A third space might be one in which notions of equity replace those of equality. Under these conditions, the physiological experiences and stress of pregnant bodies could be seen as somewhat more similar to the experiences of athletes than of aberrant male-normal bodies. Like an athlete, pregnant women are adjusting to increased physiological loads and this can require rest and recuperation at times due to physiological and rather than pathological stresses and strains. We hypothesize that a move in this direction might, over time, reduce the social need to label many pregnancy discomforts as illnesses.

Methodological considerations: Strengths and limitations

Our findings are based on two samples of research participants from the B3 survey: a total of 4,060 women who gave birth between 2009 and 2015 in Norway and the UK. Norway has the highest response rate of all countries involved in the B3 survey to date. Although data collection via online survey can introduce systematic bias, the pregnant population tends to be very used to and engaged with online data gathering. A strength of our study is how the demographic and birth location data of the participants in the B3 survey closely mirrors that of the pregnant population as a whole in both countries. Although different proportions of participants reported problems in pregnancy—40% in Norway versus 28% in the UK—by parity and age (Table 2) the proportions are similar for both samples of women. However, a limitation of our study is the lack of more detailed sociodemographic information about the research participants. For example, information about their employment status

and educational background might have permitted a more nuanced analysis of the results.

The research participants described their problems in open responses in the survey. Our coding of conditions as complaints or diseases could be seen as relatively subjective, although we used triangulation between different sources (Helsenorge.no, 2019; Kamysheva et al., 2009; Lukasse et al., 2009; Nazik & Eryilmaz, 2014; Yikar & Nazik, 2019) and the actual data. We aimed to improve validity through a rigorous coding process, which was performed by two of the authors (ABVN and TSE). In our approach we sought to minimize systematic bias in the way the coding was undertaken between the two countries, but there are gray zones between all of the classifications used. For instance, a small one-off bleed at eight weeks of gestation could just be a physiological sign of placental implantation, but chronic bleeding throughout pregnancy or a large bleed at any time is much more likely to be due to underlying pathology. Our classification system is therefore not precise. However, we applied it equally to both country datasets, so the relative differences between them are likely to be a reflection of real differences in practice.

Concluding comments

We found striking differences in the types and framing of pregnancy problems reported. The health-care systems in Norway and the UK are fairly similar, so it is unlikely that the explanation for these differences is driven by the health systems. It is more likely that the women in the two countries and/or maternity care providers interpret similar health problems differently and give them different emphasis and legitimacy. Three different and/or parallel medicalization processes of pregnancy seem to exist which are expressed to a greater or lesser extent in each country: a de-medicalization of pregnancy rhetoric at the policy level in both countries; a parallel biomedically driven process of defining pathological boundaries for measurable physiological conditions in clinical practice (as in the case of GD); and, in Norway in particular, a service-user process of pathologizing so-called normal pregnancy complaints such as PGP to gain legitimacy for rest and recovery in the context of social norms relating to healthy pregnancy. Our findings related to differences in rates of self-reported PGP and GD in Norway and the UK may partly be understood as a result of the different types of attention the two conditions are paid in the two countries due to the different underlying social norms and consequences as regards what is seen as a legitimate reason or imperative for rest and/or treatment during pregnancy.

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Data availability statement

The data that supports the findings of this study is available on request from the corresponding author, [NN](#)  [\(Comment by Author: delete: , NN\)](#). The data is not publicly available due to restrictions, e.g., its inclusion of information that may compromise the privacy of research participants.

Disclosure statement

The authors declare they have no conflicts of interests.

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