Using a comparative corpus-assisted approach to study health and illness discourses across domains: the case of postnatal depression (PND) in lay, medical and media texts

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Using a comparative corpus-assisted approach to study health and illness discourses across domains: the case of postnatal depression (PND) in lay, medical and media texts.

Karen Kinloch and Sylvia Jaworska

Introduction

In this chapter we highlight the benefits of a comparative corpus-assisted discourse approach to health communication (Jaworska and Kinloch 2018) by examining discursive representations of postnatal depression (PND) in lay, medical and media accounts. PND is an important case to study; it is a highly stigmatised condition which in the UK affects 10-15 in every 100 women and is the leading cause of maternal death (Oates 2003; NHS 2016). Despite the prevalence and seriousness of the condition, PND is significantly under-reported, with research by National Childbirth Trust (NCT) finding that 35% of those who experienced PND in the perinatal period did not seek help from a health care professional. The consequences of unaddressed PND are severe and can cause harm to the wellbeing of the mother and children over a long term (e.g. Brummelte and Galea 2016). One of the major reasons given for not reporting PND is the social stigma attached to the condition (Edhborg et al. 2005, NHS 2016). In many ways, the experience of PND 'contradicts' the social and cultural norms and expectations of what motherhood is about and how mothers should feel and behave. Consequently, little is known about the ways in which PND is talked about and subjectively experienced. The digital medium offers here new possibilities as it seems to encourage women to tell their PND stories but as a source of data has not been much explored, the exceptions being work by Kantrowitz-Gordon (2013), Jaworska (2017), and Jaworska and Kinloch (2018).

Over the last two decades, the lay experience of illness has gained a great deal of importance in healthcare contexts. Whereas previously the authority of the bio-medical model silenced patients' voices beyond 'medical history taking', now patients' everyday accounts are recognised as a valid and critical tool in understanding and treating illness (Bury 2001). The rapid growth of chronic and psychosomatic conditions have magnified the importance of the contingencies of everyday life and the diverse ways in which illness interacts with the life worlds of patients. Thus, patient's everyday accounts of illness rose to the status of lay expertise (Sarangi 2001) and although some scholars are sceptical about lay knowledge as a form of expertise (e.g. Prior 2003), its significance in offering vital insights for a more holistic management of chronic and psychosomatic illness is not disputed.

One of the most widely adopted methods to harness patients' everyday accounts of illness is through examining patient narratives. Narratives offer deep insights into the personal experience of illness revealing ways in which people use stories to make sense of ill-being (Greenhalgh and Hurwitz 1999; Bury 2001). Since narratives are embedded in people's life, they help approach people's illness and recovery in a more holistic manner and uncover experiences that lie outside the dominant bio-medical model but can be critical to a more thorough understanding and management of illness. They can also reveal a connection between the lay understanding of illness and deeper social and cultural meanings that form thinking around health and illness in society (Bury 2001).

Despite the benefits of patient narratives, there are at least three methodological challenges that need addressing (Bury 2001; Seale et al. 2011). Firstly, narratives are normally collected in the presence of a researcher and that presence puts more pressure on the participants to attend to their 'face' needs and that of the researcher. This in turn may deter patients from disclosing details that are embarrassing, intimate or problematic and limit their illness stories

to 'idealised' or socially accepted versions (Seale et al. 2011). This is especially challenging in interactions with patients who suffer from stigmatised conditions.

In recent years, online conversations especially peer-to-peer forums have emerged as a new and valuable source of data offering insights into patients' 'unedited' voices. Because of its anonymity, availability and interactivity, the digital seem to offer safe spaces in which there is less pressure on face needs making it easier to disclose details that might otherwise remain hidden. Thus, several medical sociologists highlight the benefits of studying online interactions, specifically of chronic and stigmatised conditions (e.g. Seale et al. 2011).

Secondly, patient narratives (and also online interactions) are mostly scrutinised with some kind of content-analytical methods to identify general topics (Ziebland and Wyke, 2012). While this approach offers important insights into the themes underlying experience of illness, this perspective is limited because it focuses solely on *what* is said ignoring largely *how* it is said. The now large body of linguistic research in health communication (for a comprehensive overview see Hamilton and Chou 2017) has shown that *how* people talk about their condition and the specific linguistic choices that they make reveal much more about the ways in which illness is conceptualised and experienced than a thematic analysis alone could show (e.g. Hamilton 1998; Harvey 2012; Jones 2013; Jaworska 2017). Paying close attention to discourse and language choices within can therefore offer deeper insights into the ways in which patients conceptualise, negotiate and navigate the experience of illness.

Finally, most research concerned with lay experience of illness is based on analysing just subjective accounts produced by patients, which is understandable given the focus. Yet, patients' experience is multifarious and influenced by not just the subjective experience of illness but the world around them. Becoming unwell involves a status change from a healthy to sick person disturbing the regular flow of life (Becker, 1997). When trying to give meaning to illness, people draw on a variety of (discursive) resources including not only

consultations with medical practitioners but also chats with friends, family members and discourses mediated through (mass) media. They all are important discursive resources, or in other words, flows of meanings, practices and identities that constitute 'bodies of knowledge' about what it means to be a sick person (Jones 2013). The voice of the patient is therefore never one voice but is always polyvocal with multiple voices competing with each other (Jones 2013). One of the important tasks of health communication research is to understand this 'chorus of voices' (Jones 2013: 14) by mapping and analysing the polyvocality and the multiple meanings that it produces. This necessitates comparison and triangulation of lay perspectives with other discursive domains that impact lay accounts, specifically public and authoritarian discourses of the medical profession and the media. Such triangulations of perspectives are important because they allow us to understand better the complex interplay between social and personal factors underlying the lay experience of illness highlighting the ways in which public discourses are taken up and re-contextualised to make sense of ill-being (Jaworska and Kinloch 2018).

Our study endeavours to contribute to a better understanding of the lived experience of PND through a comparative analysis of discourses about the condition produced by mothers in an online discussion forum, the medical profession and the UK print media. We focus specifically on the ways in which the condition – PND – is discursively constructed across different types of texts and the extent to which medical and media discourses around PND are re-contextualised by mothers and how mothers position themselves vis-à-vis the social stigma. To this end, we examine the use of the acronym PND (as opposed to the term postnatal depression) in three large data sets (corpora) including: 1) lay narratives sourced from Mumsnet, 2) information by clinicians for lay people and 3) articles about PND from British newspapers. Analysis of a large dataset of language on a particular topic has clear

potential benefits for the study of health language, particularly in gathering evidence of discursive practices around a particular user group or condition.

In the following sections we examine the intersections between PND, mothering and stigma, describe the methodology in more detail and elucidate the discourses of PND found within the three data sets. The discursive construction of PND, particularly in relation to stigma and mothering, sheds light on the lay experience of the condition and can be used to address some of the communicative challenges faced by practitioners in the field of perinatal mental health.

PND, modern motherhood and stigma

Postnatal Depression (PND) refers to a postpartum mood disorder and is a form of depression which can occur within one year of childbirth (Evans et al. 2012). Symptoms may involve lack of energy, loss of interest in the world, low mood, difficulties in bonding with the baby, suicidal thoughts and self-harm. Although research literature considers history of mental health issues, stressful events and low social support to be strong predictors of PND, the aetiology remains unknown (Evans et al. 2012).

PND belongs to a group of heavily under-reported conditions, with individuals who experience it reluctant to disclose symptoms and seek diagnosis, and one of the reasons for the low level of disclosure is the stigma associated with the condition (Edhborg et al. 2005, NHS 2016). In so many ways, symptoms of PND and particularly the kind of emotions experienced by mothers 'go' against the social 'norms' and expectations of how a woman should feel and behave following childbirth. The dominant and widely disseminated normative or role model to follow is that of a happy, selfless and caring mother who prioritises her newborn child above everything. Hays (1998) describes this model as the ideology of intensive mothering forming rigid expectations to which mothers have to adhere

and for which they are held accountable. If a mother does not conform to this model and demonstrates different feelings and behaviour, she is likely to be socially stigmatised as a bad or deviant mother. As Johnston and Swanson (2003: 23) pointedly summarise: 'a good mother is a happy mother; an unhappy mother is a failed mother'. In this way, the myth of maternal bliss is maintained perpetuating the system of patriarchy that assigns responsibility for the conditions of motherhood to the individual mother and not the social and cultural conditions in which she is located (Johnston and Swanson 2004).

The experience of PND with its underlying feeling of low mood, anxieties and loss of interest in the motherhood lays clearly outside the model of intensive mothering and hence is likely to be seen as 'abnormal' and a 'sin' causing the reluctance to disclose it (Edhborg et al. 2005; NHS 2016). Displaying signs and talking about emotions that run counter to the societal and cultural expectations may result in undue social consequences including feeling of inadequacy, shame, social exclusion, erosion of social status and discrimination, which all are effects of stigma (Goffman 1963; Pinto-Foltz & Logsdon 2008).

Stigma originates from Greek τίγμα 'brand-mark' and the term has been used to "refer to bodily signs designed to espouse something unusual and bad about the moral status of the signifier" (Goffman 1963:11). Goffman (1963) was the first to shed light on the social and relational status of stigma as a phenomenon that exists and is reproduced in social interactions. Stigma can therefore be considered a discursive phenomenon too. Sociological research concerned with stigma distinguishes between two types of stigma: enacted stigma referring to prejudicial attitudes of the public and felt or self stigmatisation understood as the internalisation of the stigmatising attributes that lead to feeling ashamed (Scambler and Hopkin 1986). The major obstacle to disclosing a mental health issue is not so much the kind of stigma enacted in social relations in form of prejudice but the felt stigma which can be as damaging as unfair treatment by others (Pinto-Foltz & Logsdon 2008). Nearly 30% of

mothers who have PND do not disclose it because they are ashamed and fearful of consequences, highlighting the significance of felt stigma in the experience of the condition (NHS 2016).

The media are frequently viewed as vehicles disseminating stigmatising views of PND and fuelling a shame and blame stance. Held and Rutherford (2012) examined changes in the representations of PND in American popular and advice magazines from 1950 to 2004 and identified an increase in the theme of brain and blame and in the representation of distress and sadness as 'abnormal' emotions in motherhood. Apart from a short spell in the 1970s, when the discourse of a good enough mother was emphasised, popular media have been continuously reinforcing the hegemonic model of intensive mothering based on the image of a happy, selfless and attached mum. This has been recently intensified through the increased focus on celebrity or super moms who often, in conflicting ways, reinforce this ideology, while promoting unrealistic expectations that contribute to guilt and frustrations (Johnston and Swanston 2003).

Yet, the large body of research on PND is primarily concerned with clinical aspects, mostly label-based descriptions, bodily symptoms and pharmacological management, while the social and cultural dimension of the conditions are largely neglected. This approach reflects the current thinking about mental health that attempts to reduce psychological illness to neurochemical disorder of the brain, while the impact of social ideologies is paid limited attention (cf. Rose 2007, Lafrance 2007).

One of the first studies that broadened the agenda and considered the social dimension of PND is research by Edhborg et al. (2005). Studying narratives of Swedish women with PND, they identified identity loss as the dominant theme in the narratives. This was intertwined with the ideology of intensive mothering, which was often drawn upon to understand the

condition. Because the experience deviated so much from this model, the women reported feeling inadequate and branded themselves bad mothers.

Social support is key in helping women with PND. Yet, lack of knowledge about available services and the potential stigma deter women from considering face to face support (Kim et al. 2010). Instead, many take to the Internet to talk about PND. Excerpt 1 is an indicative example of a small confession found in our Mumsnet data disclosing the experience of PND which seemed impossible to do in the offline world:

1. I have been feeling like I have postnatal depression for a couple of months now. It's only getting worse but I can't manage to tell anyone. I tried to talk to a health visitor but was scared to say how I really felt so she just said I was fine. I don't know how to tell someone how I'm feeling. I feel so embarrassed.

Online peer to peer support seems to afford new possibilities for disclosure of PND and support mechanisms; the interplay of technosocial factors including anonymity, informality and 24/7 access together with discursive and narrative practices encourage online participation leading potentially to transformative effects of telling and sharing PND stories online (Jaworska 2017). The disclosure of PND is almost always a form of the canonical narrative of confession (Jaworska 2017; Kantrowitz-Gordon 2013), which fulfils simultaneously two functions; it allows the confessing subject to express a hidden experience though arguably this is performed from the subject position of a 'sinner' (felt stigma). But through the same act of confessing, women are able to tell the otherwise untellable and express feelings that lay outside the intensive mothering ideal (Hays 1998).

Research concerned with social and cultural dimensions of PND and discourses around the condition is sparse despite the prevalence of PND and its conjunction with the moral orders of how to 'do' motherhood in contemporary society. This study contributes to this hitherto under-researched area by identifying and comparing discourses of PND produced by

mothers in an online discussion forum, the medical profession and media. Whereas previous

research concerned with discourses around PND is based on a small amount of data

interrogated using qualitative techniques (e.g. Jaworska 2017; Kantrowitz-Gordon 2013), this

study utilises large data sets and a combination of quantitative and qualitative techniques that

are adopted consistently across the data sets. The next section discusses the methodology

including data collection procedures and analytical tools that we used to interrogate the data.

Methodology

This study is primarily interested in identifying and comparing discourses around PND across

lay, medical and media domains. Discourse[1] is not just a referential tool that describes the

social world; it is a symbolic means that constructs social realities through processes of

naming, describing, informing; in short, through using language to give meaning to objects,

situations and people. The choice of language acts as a lens through which people, objects

and situations are constructed. We add to it the dimension of reiteration, specifically repeated

language use, which contributes to the formation, dissemination and perpetuation of social

practices. In fact, any established and accepted social practice becomes so through reiterated

and regulated performance (Butler 1990) including verbal performance and repeated

language use. Studying repeated language choices around PND can therefore shed light on

the established discursive practices around the condition that are disseminated across lay,

medical and media domains.

One way to identify reiterated patterns of language in large quantities of discourse is

through the use of corpus linguistic tools and methods. In the last 20 years the combination of

corpus linguistics and discourse analysis has become more commonplace and there have been

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[1] The notion of discourse underlying this research is grounded in the poststructuralist notion of discourse as used
in Critical Discourse Analysis (CDA) (Fairclough 1989), which, in turn, draws on the Foucauldian definition of
discourse as a form of social practices which "systematically form the object of which they speak" (Foucault
1972: 49).

several studies utilising this approach to study aspects of health communication including young people's health concerns (Harvey et al. 2009), patient and practitioner language around cancer (Semino et al. 2012), NHS feedback (Brookes and Baker 2017) and compassion in mental health (Crawford et al. 2013). The present study into the discourses of PND is situated in this burgeoning area of corpus linguistics for health adding further comparative perspectives.

Using corpus methods to examine a particular topic necessitates the building of a corpus which reflects the focus of the study. What will hereafter be referred as the PND corpus is, in fact, a set of three sub-corpora of texts on PND drawn from four different textual domains; Table 1 shows the composition and relative sizes of the corpora.

Table 1: Corpus Data

Sub-corpus	# of Words	Text Type
MED-LAY	50,113	Texts written by clinicians for a lay audience,
MEDIA	1,585,954	Texts from UK print media which discuss PND
MUMS	4,778,285	Texts from an online forum of lay people (Mumsnet)

Before continuing to analysis, some contextual information and justification of the data we selected is necessary. The MED-LAY sub-corpus was to act as an exemplar of medical information for lay people produced by clinicians and disseminated online and offline. The decision to include such texts was grounded in the authors' experience with mothers' groups and personal encounters with women who had PND. Through the engagement with the participants, it became clear that mothers learn about PND primarily through consultations with medical professionals (GPs, health visitors, midwifes) and by reading materials produced by medical professionals for lay people, many of which are distributed online and mothers are often directed to consult these resources. These included data from NHS and the private healthcare providers BUPA as well as charities such as National Childbirth Trust

(NCT), National Collaborating Centre for Mental Health (NCCMH), PANDA and Association for Post Natal Illness (APNI). Websites of the organisations were consulted and relevant material retrieved to compile the MED-LAY sub-corpus.

The MUMS sub-corpus comprises posts including the term PND or postnatal depression made by individuals on the Mumsnet Talk, an online discussion forum for (predominantly) mothers which receives over 6million unique visits per month and is recognised as the most popular parenting website in the UK.

The MEDIA sub-corpus was collected using the Nexis database[2] and comprises articles from UK national newspapers in the period 2000 to 2015, which contain the search term 'postnatal depression'. We decided to include media articles because media play a significant role in the dissemination of discourses around health and illness with direct consequences for positive or negative changes in attitudes and behaviors (e.g. Hornik 2002; Wakefield 2010; Leung and Cheng 2016). This significance became also apparent when engaging with mothers' groups.

Since we are primarily interested in reiterated discourses around PND, we selected the analytical corpus tool of *collocation* to interrogate the data sets. Our approach is rooted in a comparative corpus-assisted discourse study and we centre our analysis on the examination of the term PND and its collocations. We understand collocations in corpus linguistics terms as recurrent word combinations that point to lexical choices frequently associated with the studied concept (in our case PND). These choices, in turn, can indicate salient or typical ideas or dominant ways of viewing the studied phenomenon that would be otherwise difficult to detect in a small scale analysis of a single text or a few texts (Baker, 2006). For the purpose of our study, we used the corpus linguistic software programme Sketch Engine (Kilgarriff et al. 2004) to retrieve collocations of the term PND from all three sub-corpora. The statistic

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[2] https://www.nexis.com/

used for retrieval was Log Dice. In contrast to other commonly used statistics such as Mutual Information or T-test, Log Dice is a ratio with a maximum value (theoretically 14, but practically 10 or below) and it does not depend on the total size of the corpus (Rychlý 2008). This allows the researcher to have a consistent comparison measure across data sets of unequal sizes, as is the case in the present study data. Collocations with the ratio value of 7 and above are considered examples of strong association. Thus, we analysed the top 30 lemma collocates of PND with a value of 7 or above in each corpus, deliberately including grammatical (structural words such as and, but, my) and lexical terms (words which carry meaning such as nurse, help, mum) as both can provide salient points for investigation. In order to identify dominant discourses around PND, we group the strongest word associations into categories of words which cluster around a particular theme. These were initially identified by each researcher and then iteratively developed into the categories used in the chapter. Selected words from each category were analysed in context using the Concordances feature in SketchEngine, to identify repeated patterns of use across a longer stretch of text.

Discursive Constructions of PND across Sub-corpora

In this section the dominant discourses of PND in each sub-corpus will be examined and exemplified both individually and in comparison with each other, in order to map how discourses around PND 'travel' intertexually. As the focus in this chapter is on the lived experience of PND, the main bulk of the analysis will be on the MUMS sub-corpus which shows personal accounts of PND with analysis of the other two sub-corpora in a comparative role.

PND in the MUMSNET Corpus

The collocates of PND in the MUMSNET sub-corpus reflect the more personal, experiential lens through which the condition is talked about, which is not surprising given the context of online interactions, their anonymity and interactivity. However, it shows that the language around PND in this sub-corpus differs from the two other sub-corpora offering unique insights into the lay perspective which mothers with the condition foreground. This lexis includes personal pronouns as seen in the actor category in Table 2, coupled with a high frequency of experiential and explanatory terms, particularly modals of uncertainty. The examples which follow show the sophisticated argumentation strategies which are employed in order to manage and justify experiences of perinatal mental distress, whether or not a diagnosis of PND is given or accepted.

Table 2 Top 30 lemma collocates by category in the MUMS Corpus

Category	Collocates
experience	suffer, have, think, get, experience
identification	diagnose
management	help
medical label/descriptor	severe, depression, bad, illness
actor	woman, my, I, who
explanation	but, cause, if, not, may, might, or
grammatical	with, after, from, about, of, and, when, do

The most frequent collocate in the experiential category is the verb *suffer* which foregrounds the pain of the lived experience. While it can be read as passivizing the person suffering, it also acknowledges extent of the problem (see Extracts 2 and 3):

2. Through my sessions it became apparent that not all women suffer PND in the same way.

3. You do sound like you could be suffering from PND, not being able to bond is a "classic" symptom. I had terrible, crippling, PND but I did bond so thought I didn't have it.

The lemma suffer most commonly occurs in the phrases *suffer from,* and *suffer with,* again showing the person being acted upon. Interestingly the focus of these phrases is the experience of suffering when undiagnosed, and the retrospective acknowledgement of suffering as evidenced in Extracts 4 and 5 below:

4. I suffer from PND, but it wasn't diagnosed until ds [darling son] was 18mths old (about 6weeks ago). I hid it very well from the HV [health visitor]!!

5. When dd2 [darling daughter number 2] was born I suffered with PND but didn't admit it until she was 1 years old

It is clear that despite considerable distress, stigma around a diagnosis of PND is felt by mothers, along with a desire in some cases to hide or minimise symptoms. Extract 6 is an indicative example of such a discourse that we found in abundance in the corpus:

6. I suffer from PND, I have since dd1 [darling daughter number 1] was born (6 years ago) I went to get help when she was 5 months old. but the doctor just said that because I had put on make up and had straightened my hair, I can't be that bad.

The example above indicates expectations around behaviours which indicate how "bad" PND is in order to justify intervention. This may indicate an expectation of being dismissed as not seriously ill by professionals, which in turn leads to uncertainty towards one's own perspectives on their experience of PND. In the examples (7–9) below women describe a high level of emotional distress but are still loath to engage fully with a diagnosis of PND.

7. I'm not sure if I suffered with PND but I came close. It is exhausting and hard and it does totally change your life and your identity

8. I nearly didn't reply to this as I didn't suffer from PND proper - just a few weeks of feeling like the most miserable failure and wanting to put dd [darling daughter] up for adoption

9. I never had PND as such but suffered a huge amount of stress surrounding the time of my DD's birth

The self-perceived severity, or otherwise, of the PND experience is drawn upon as a mark of experiential expertise and used in the advice given to others in managing the experience, this is particularly noticeable in the concordances of the collocate *severe*, which is an example of a medical label used to classify forms of depression:

10. Along with a lot of other posters I've been there too, and PND was more severe than any of the other bouts of depression I have suffered from previously.

11. I had severe PND after DD2 [darling daughter number 2], I must say AD's [anti-depressants] helped a lot but I also had counselling with a psychiatric nurse who came to my house.

12. I also had severe PND and was an inpatient in a psych hospital (not a great experience), so I have some insight.

The use of the collocate *my* (extracts 13-15) also include retrospective self-diagnosis, as well as an acknowledgement of the potential causal factors for PND including lack of sleep, birth trauma, poor medical care, and distressing life events, which in some cases are used as explanations of missed diagnosis.

13. I had lots going on, bereavement, illness, debt worries - which is why I think my PND was missed, that and a USELESS HV

14. They had to do a crash section under a GA so I missed it all. I think that contributed a lot to my PND.

15. I never got medication for my PND and it improved when I was able to get some decent sleep. In hindsight, I see how bad it really was.

The use of the possessive pronoun *my* also indicates a very personal relationship with PND emphasising the uniqueness of the individual experience. The fact that many women use this

possessive pronoun suggests that there are in fact diverse PNDs and it would be more appropriate to use the term in plural. Interestingly, the medical discourse constructs PND as a singular condition and the multiplicity of PND is not considered. While in the MED-LAY sub-corpus linguistic hedging around possible causes, triggers and explanations for PND indicates multiple possible experiences, this serves to create uncertainty rather than embracing the notion of a multiplicity of PNDs (see next section).

Another key aspect of the MUMSNET corpus is the desire for explanations and causal models of the experience of PND, both in self-reflection and as a way to advise others. This is most clearly seen in the examples of the term *cause*, and in use of the conditionals *if/but* that are strong collocates of PND (see Table 2). The main potential causes to which PND is attributed include lack of sleep, and breastfeeding, which were seen repeatedly in this corpus and are exemplified below (see Extracts 16 and 17).

16. My PND was certainly caused/exacerbated by extreme sleep deprivation.

17. So yes - the pressure of bf can cause PND. It doesn't work the same for everyone.

If/but are used in the discursive construction of the experience of PND, as something which is not fixed but mutable. They can be used to seek validation, offer validation and potentially minimise the individual's experience vis a vis PND. Several types of linguistics negotiation around the experience of PND emerged from these examples including uncertainty about accepting a diagnosis of PND and exploration of other possible causal models such as normalised experiences of new motherhood, and sleep deprivation (18-19).

18. How do you know if it's PND or just sleep deprivation combined with the difficulties of having a young baby?

19. I don't think I had PND but was very close to it (possibly because I chose to hide how I felt from the doctor), struggling with extreme lack of sleep

Interestingly, several examples (20-22) showed rejection or questioning of the term PND but more willing acceptance of other mental illness diagnostic terms such as depression, stress and anxiety.

20. So hard to say if PND or just straightforward depression caused by being worn down by stress.

21. I, for example don't believe I suffered PND but I did become depressed after my DSs [darling sons] were born.

22. I haven't got PND, but I would definitely say that the hormones that breastfeeding produces make me very very anxious.

The rejection of the label of PND is manifest in negotiation between HCP (health care practitioner) diagnosis of PND and an individual perception of the situation, again with the focus around the problems of new parenthood, particularly lack of sleep.

23. It was I horrible time and the GPs I saw assumed I had PND but I KNEW I didn't, I just needed to sleep and then I'd be fine. Eventually when DD was 11 months old I admitted defeat.

24. The HV was concerned I may have PND, but I don't think I did, I think I was just exhausted & stressed.

The discourses around the condition also indicates potential rejection of diagnosis of PND in light of knowledge of symptoms or others' experiences. This is manifest in both advice to others (Extracts 26 and 27) and in personal reflection on whether an individual experienced PND, or whether they are experiencing normalised responses to new motherhood (Extracts 25 and 28).

25. From what other people have said about PND, I don't have 'classic' PND, if there is such a thing.

26. Don't worry too much because what you're feeling is completely normal. Having said that, if you suspect you have PND, please get that checked out.

27. If she is over-anxious, PND could be an issue and she should be encouraged to talk to her midwife/health visitor.

28. I did wonder if I had PND at one point but looking at symptoms they didn't seem to apply to me.

It is evident that there is a level of unwillingness at the time of the experience/potential for diagnosis to engage with biomedical models of PND and instead to view mental distress at this time as a normalised part of the parenting experience. While we support absolutely mothers right to reject the bio-medical/diagnostic model, a concern is that this may also stem from stigma around a diagnosis of depression, specifically the intensive mothering ideal, which portrays motherhood as a time of joy, potentially leading women to hide, minimise or blame themselves if positive emotions are absent.

29. I found out that many of them had suffered from PND but didn't admit it to anyone at the time.

30. Reading this all back I do see reasons why I have/may have PND but at the time it just all seems my own fault.

As seen in the examples from the MUMSNET sub-corpus, delayed diagnosis, reluctance to admit to severity and reluctance to engage with health professionals all indicate a level of felt stigma around PND and is part of its discursive construction. There is no agreement about what can be classified as PND and the discourse around the condition is strongly intertwined with discourses of what "normal" motherhood is and issues surrounding the day to day activities that mothers need to engage with such as breastfeeding, which has also been a matter of controversies and discursive struggles (Koerber 2013). The current imperative 'breast is best' might pressurise women who find difficult or are unable to breastfeed and

contribute to or intensify PND symptoms (Brown et al. 2015). Given the emphasis on the

multiple and circumstantial ways in which PND is experienced, PND should rather be talked

about in plural as PNDs. What the lay accounts have in common with the medical discourse

specifically MED-LAY is the theme of uncertainty around definitions and diagnosis of PND

but in contrast to the other corpora, women with PND engage in discussion about possible

causes by drawing on their experience. The emphasis on self-management and diagnosis also

reflects the biomedical discourse found in the MED-LAY sub-corpora.

PND in the MED-LAY Sub-corpus

One aspect of the discursive construction of PND is the need for identification and

management and the construction of PND as a health risk, however the MED-LAY collocates

in Table 3 also bring in experiential lexis such as *develop, suffer* and explanatory lexis in the

form of modals *can* or *may* and the conditional *if*.

Table 3. Top 30 lemma collocates by category in the MED-LAY Corpus

Category	Collocates
grammatical	of, with, for, on, be, at, the, from, in, that
experience	have, develop, experience, suffer, impact
identification	symptom
explanation	can, if, may, not
risk	risk
management	treat, treatment
medical label	severe, depression, postnatal
actor	woman, mother

A key facet of the MED-LAY sub-corpus is the construction of PND as a potential risk,

addressed to the potential receivers of the texts, people experiencing PND (Extract 31 and

32).

31. Can I prevent PND? We don't know. Some doctors may prescribe antidepressants immediately after the birth if you are at high risk of PND.

32. If you experience any of these in addition to having a baby, this can increase your risk of getting PND.

The representation of the risk of PND intersects with the imperative for self-awareness in order to collaboratively manage this risk, along with health care practitioners, as seen in examples 33-35 below. Thus, support is offered but is potentially conditional on self-management and self-identification of the symptoms of PND.

33. In this way, women who may be more at risk of developing PND can have extra support and care to reduce the chance of becoming ill.

34. The symptoms of PND can be tricky for doctors to diagnose as it is very common to feel out of your depth and alone after having a baby.

35. Our section on postnatal depression has further information on the symptoms of PND and treatments for PND.

This discursive construction is also found in the concordances of prepositional phrases containing PND; *of PND, with PND.*

Despite embracing a bio-medical model (Wade, 2004) of PND, the MED-LAY lexis includes more personal and experiential terms such as; *women, mother, suffer.* Indeed the majority of collocational patterns relate to the lived experience of PND acting upon women who have, develop, suffer, experience, and are impacted on by the condition.
One aspect which is new in this corpus is the focus on explanations of how the experience of PND may manifest but in a rather cautious way (see Extract 36 and 37):

36. Women experiencing PND may go through one or more of the following experiences, although it's extremely unlikely that they will go through all of them.

37. Every mum experiences PND differently and some specific symptoms may not be listed here but if you're aware that you don't feel quite 'right' within yourself, seek professional help.

As seen in the examples above the use of the modals; *can* and *may* and the if-conditional in the sub-corpus point to a discourse of ambiguity and uncertainty around these explanations. This is also evident in the texts below where these modals are used to reinforce the sense of ambiguity and lack of uniformity, around experience, diagnosis and treatment in the management of PND (see Extracts 38-40).

38. If you have PND, the anxiety can be overwhelming.

39. Talking to a trained professional can also be a very useful treatment for PND. You may benefit from talking therapies however; you may also require antidepressants, with or without a talking therapy, to treat PND

40. If you have mild PND, your GP may suggest self-help strategies, and recommend a book that could help.

In addition to the variation and uncertainty in the diagnosis of PND, the MED-LAY sub-corpus also shows an absence of a causal explanation for PND, or certainly an unwillingness to attribute a particular cause, despite references to risk factors, and a rejection of the hormonal model of explanation as evidenced in Extracts 41 and 42 below that show the use of two PND collocates *develop* and *suffer*:

41. A single cause for PND is not known and many women suffer from PND when there is no obvious reason.

42. There is no one cause for PND, but you are more likely to develop PND if you have had depression before (especially during pregnancy), you do not have a supportive partner, your baby is unwell, you had a difficult labour, you lost your own mother when you were a child, or if you have had several stresses in a short time.

The texts in this corpus foreground an individualistic approach to PND, which places the onus on women and their families to monitor for the possibility of a range of symptoms. The level of uncertainty around symptoms may be a factor in the reluctance to help-seeking as women may not identify their experience with the models presented or may minimise the severity of their experience. It seems ironic that the problematic nature of diagnosis for health care professionals is acknowledged while simultaneously stressing self-management in the identification and treatment of PND. This echoes, to some extent, a rather neo-liberal stance and self-governmentality (Jones, 2013) emphasised in current bio-medical models of health and in approaches to public health, in which individuals are morally responsible for their own health. The question arises how, in light of the uncertainty around causes of PND and the multiple and circumstantial ways in which PND is experienced, mothers can be expected to adhere to the principle of self-governance.

PND in the MEDIA Sub-corpus

The discursive construction of PND in the MEDIA sub-corpus presents the condition as something which acts upon the person, particularly shown in the collocates of the experience category e.g. *affect*, *develop*, *suffer*. It frequently draws on biomedical perspectives and lexis including medical labelling, glossing the condition with the full label of postnatal depression (examples 43-44):

43. They fall beyond the blues, becoming clinically depressed. Postnatal depression affects 10 per cent of mothers. Symptoms are the same as those of depressive episodes not related to pregnancy and birth.

44. Postnatal depression is known as the 'silent epidemic' and affects up to 100,000 women a year. Its exact cause is not known, but hormonal imbalances are believed to play a part.

However PND is also framed as something to be acted upon by medical professionals in the categories of identification and management which mirror the verbs found in the MED-LAY sub-corpus. Explanations of the occurrence of PND in the MEDIA sub-corpus adopt a public health approach, normalising the condition through quantification of its occurrence throughout the population in the use of words such as *common* and *per cent* (see Table 4).

Table 4. Top 30 lemma collocates by category in the MEDIA Corpus

Category	Collocates
experience	affect, develop, suffer
explanatory	cause, usually, common, experience, cent, trigger, likely
identification	diagnose, address, recognise, identify
management	untreated, treat
actor	sufferer, counsellor, Stacey, partner, mum, man
medical label	postnatal, severe, mild, depression, illness, serious, maternal, male

The main construction of PND in the MEDIA sub-corpus is as an entity which acts upon women, as a threat to both individuals, and mothers' wellbeing as exemplified in Extracts 45-46:

45. PND affects about 10 per cent of women and, in severe cases, threatens the health of mums.

46. PND affects 10-15 per cent of new mothers and develops about six weeks after they give birth.

The 'suffering' of PND is quantified, and thus is framed as both a public health risk in terms of the general population and a common occurrence for women, potentially destigmatising the experience (see Extracts 47-48).

47. It sounds as though you may be suffering from Postnatal Depression (PND), which affects at least 10% of women after pregnancy.

48. A Royal College of Midwives survey last year found 20% of new mothers suffer from postnatal depression (PND)

In the examples of the lemma *suffer* there is acknowledgement of the potentially stigmatising nature of PND and the impact this may have on maternal help-seeking (see Extracts 49-50).

49. Many more new mothers may be suffering from postnatal depression (PND) than was thought because some are lying to health visitors about their symptoms, a survey suggests.

50. Yet despite the fact that one in 10 mothers suffers from PND, mental illness is a taboo that still silences many of them.

This reluctance to reveal mental distress is also found in the examples from the MUMSNET sub-corpus, in section 4.1. Due to the possibility it will discourage help-seeking, the experience of (felt) stigma is presented as a risk factor in its own right for maternal wellbeing.

The examples of collocates in the explanatory category, *cause* and *trigger* reiterate the uncertain aetiology of PND with both hormonal and situational explanations offered (see Extracts 51-52).

51. Doctors are still not clear on the causes of PND but believe the stress of coping with a new child and changing hormones can all play a part.

52. It is not clear what causes PND, though it is thought a combination of hormonal changes, the stress of looking after a baby and sleep disruption may trigger it in susceptible people.

This explanatory model draws on the bio-medical model of the potential to identify "risk factors" or susceptible people, in particular in the example of previous mental health problems. This has the clear potential to both stigmatise those who identify as experiencing PND by placing them in the 'othered' category of the mentally ill and as risky individuals (Goffman, 1963). It can also encourage the idea that if an individual is not susceptible then one cannot have PND, an attitude which is, as shown below, prevalent in the MUMSNET

Corpus. However, in the identification and management categories in the MEDIA Corpus, help-seeking is strongly advocated as the responsible choice, particularly noticeable in a collocate unique to this corpus, *untreated,* which foregrounds the potentially chronic nature of PND.

53. If it goes untreated, PND can continue for months, or sometimes longer

The construction of PND in the MEDIA sub-corpus reinforces a passive position for those individuals who experience it, as the condition acts upon the 'sufferer', despite the onus on individuals to take responsibility to self-monitor and disclose distress. Through the quantification of suffering and the high incidence of PND which is described in the examples above the experience is also collectivised and normalised. There is a discursive contradiction between the encouragement to help-seek, and reporting of both the uncertain aetiology of PND, and the low levels of disclosure.

Implications for healthcare practice

The systematic study of language around a condition, such as PND, using corpus linguistics methods can provide practitioners with an insight into the prevalent discourses which are accessed by people who may be experiencing the condition. Previous work by Crawford and Brown (2010) has suggested that the use of corpus linguistics to study health communication is as a source of data-driven learning for healthcare practitioners and students. For example, this study of discourses around PND would prove beneficial to midwives, health visitors and GPs in understanding the lived experience of people who may be experiencing the condition, especially in light of aetiological uncertainty and possible stigma. Specifically, the awareness of multiplicity of PND and the conjunction of PND with

wider social and contested notions of 'normal' motherhood and related everyday practices such as breastfeeding seem to be some of the key issues about which mothers talk but are largely absent from medical accounts. This suggests that healthcare practitioners need to move beyond seeing PND as a medical case but as a condition which is situated in a complex net of social struggles around what constitutes 'good' motherhood. Given the low levels of disclosure, more emphasis should be placed on getting the message across that PND affects quite a large number of women and not just the ones who are 'susceptible' because of history of mental illness. A key aspect of the analysis in this chapter exemplifies how stigma is manifest in language and improved knowledge of this could be used to encourage better awareness of, and thus reduced usage of stigmatising language in practitioner to lay communication. Going beyond the exemplar of PND, this method can be used to gain insight into other potentially stigmatised or contested conditions, provide confirmatory evidence of language use and discourses about the lived experience of such conditions that lie outside the dominant bio-medical model.

Conclusions

Our comparative corpus-based discourse approach has shown a number of similarities and differences in the ways in which PND is discursively constructed across medical, media and lay domains. All corpora to a greater or lesser extent draw on biomedical perspectives as the primary explanatory model of PND and while the model has been criticised for being too reductionist because it portrays depression as a biological condition independent of cultural and social factors (e.g. Kantrowitz-Gordon 2013), it can have some benefits for lay people specifically in case of stigmatised conditions such as PND. It can help people recognise PND as a real illness in need of treatment and potentially encourage them to seek medical

attention. On a methodological note, while similar semantic domains and in some cases identical lexis are found across corpora this is not always indicative of identical discourses, and it is only by looking more closely at textual examples that more or less subtle variations in the discursive construction of PND come to light.

It appears from both diagnostic uncertainty, varied aetiology and the absence of a clear screening strategy that the overarching label of PND may not be particularly helpful, there may in fact be many possible PNDs, each unique to an individual's experience or circumstance and this is something which the medical professions needs to take on board. It is clear from the MUMSNET, and to a lesser degree MED-LAY and MEDIA sub-corpora, that identification with the commonly described symptoms of PND is not readily accepted and the kind of 'one size fits all' discourse of PND in the medical accounts seems inappropriate from the lay perspective.

Despite the difference in explanatory models there are common factors, in particular sleep deprivation and the many negative emotional and cognitive consequences of it which is seen as commensurate with new parenthood. Precisely because this experience is so normalised in discourses of maternal experience, yet at odds with the intensive mothering ideal, a kind of cognitive dissonance occurs. If everyone is sleep deprived and stressed how can I possibly have PND? Thus the perception of self as a failed mother may be more likely used as an explanation instead of accepting a biomedical explanation. The relationship between stigma and decreased help-seeking for mental illness is well documented (Schnyder et al. 2017), however PND appears to have an especially problematic position as both stigmatised and normalised.

References

Baker, P. (2006), *Using Corpora in Discourse Analysis*, London: Continuum.

Brookes, G. and P. Baker (2017), 'What does Patient Feedback Reveal about the NHS? A Mixed Methods Study of Comments Posted to the NHS Choices Online Service', *BMJ Open,* 201.

Brown, A., Rance, J. and P. Bennett (2015), 'Understanding the Relationship Between Breastfeeding and Postnatal Depression: The Role of Pain and Physical Difficulties', *Journal of Advanced Nursing*, 72 (2): 273–282.

Brummelte, S. and L. A. Galea (2016), 'Postpartum Depression: Etiology, Treatment and Consequences for Maternal Care', *Hormones and Behaviour*, 77: 153–166.

Bury, M. (2001), 'Illness Narratives: Fiction or Fact', *Sociology of Health and Illness*, 23 (3): 263–285.

Butler, J. (1990), *Gender Trouble: Feminism and the Subversion of Identity*, New York: Routledge.

Coates, R., De Visser, R. and S. Ayers (2015), 'Not Identifying with Postnatal Depression: A Qualitative Study of Women's Postnatal Symptoms of Distress and Need for Support', *Journal of Psychosomatic Obstetrics and Gynecology,* 36 (3): 114–121.

Crawford, P. and Brown, B. (2010), 'Health Communication: Corpus Linguistics, Data Driven Learning and Education for Health Professionals', *International English for Specific Purposes Journal*, 2: 1–26.

Crawford, P., Gilbert, P., Gilbert, J., Gale, C. and K. Harvey (2013), 'The Language of Compassion in Acute Mental Health Care', *Qualitative Health Research*, 23 (6): 719–727.

Evans, M., Donelle, L. and L. Hume-Loveland (2012), 'Social Support and Online Postpartum Depression Discussion Groups: A Content Analysis', *Patient Education and Counseling*, 87 (3): 405–410.

Edhborg, M., Friberg, M., Lundh, W. and A. Widström, (2005), 'Struggling With Life: Narratives from Women with Signs of Postpartum Depression', *Scandinavian Journal of Public Health*, 33 (4): 261–267.

Fairclough, N. (1989), *Language and Power*, Harlow: Longman.

Foucault, M. (1972), *The Archeology of Knowledge and the Discourse on Language*, New York: Pantheon.

Goffman, E. (1963), *Stigma. Notes on the Management of Spoiled Identity*, Englewood Cliffs: Prentice-Hall.

Greenhalgh, T. and B. Hurwitz (1999), 'Why Study Narrative?', *BMJ: British Medical Journal*, 318 (7175): 48–50.

Hamilton, H. E. and W. S. Chou (2017), *The Routledge Handbook of Language and Health Communication*, London and New York: Routledge.

Hays, S. (1998), *The Cultural Contradictions of Motherhood*, New Haven: Yale University Press.

Harvey, K. (2012), 'Disclosures of Depression: Using Corpus Linguistics Methods to Interrogate Young People's Online Health Concerns', *International Journal of Corpus Linguistics*, 17 (3): 349–379.

Held, L. and A. Rutherford (2012), 'Can't a Mother Sing the Blues? Postpartum Depression and the Construction of Motherhood in late 20th-century America', *History of Psychology*, 15: 107–22.

Koerber, M. (2013), *Breast or Bottle? Contemporary Controversies in Infant-Feeding Policy and Practice*, Columbia: University of South Carolina Press.

Jaworska, S. (2017), ''Bad' mums tell the 'untellable': narrative practices and agency in online stories about postnatal depression on Mumsnet', *Discourse, Context and Media,* available online https://doi.org/10.1016/j.dcm.2017.11.002

Jaworska, S. and K. Kinloch (2018), 'Using Multiple Data Sets', in C. Taylor and A. Marchi, (eds), *Corpus Approaches to Discourse: A Critical Review*, 110–129, Routledge: London.

Jones, R. (2013), *Health and Risk Communication*, London and New York: Routledge.

Johnston, D. and D. Swanson (2003), 'Invisible Mothers: A Content Analysis of Motherhood Ideologies and Myths in Magazines', *Sex Roles*, 49 (1-2): 21–33.

Kantrowitz-Gordon, I. (2013), 'Internet Confessions of Postpartum Depression', *Issues in Mental Health Nursing*, 34 (12): 874–882.

Kilgarriff, A., Rychlý, P., Smrz, P. and D. Tugwell (2004), 'The Sketch Engine', *Proc EURALEX 200*, 105–116, Lorient: France.

Lafrance, M. (2007), 'A Bitter Pill. A Discursive Analysis of Women's Medicalized Accounts of Depression', *Journal of Health Psychology*, 12 (1): 127–140.

NHS (2016), 'Postnatal Depression', available online: http://www.nhs.uk/Conditions/Postnataldepression/Pages/Introduction.aspx (accessed 21 December 2017).

Oates, M. (2003), 'Suicide: The Leading Cause of Maternal Death', *The British Journal of Psychiatry*, 183 (4): 279–281.

Pinto-Foltz M. D. and M. C. Logsdon (2008), 'Stigma Towards Mental Illness: A Concept Analysis Using Postpartum Depression as an Exemplar', *Issues in Mental Health Nursing*, 29 (1): 21–36.

Prior, L. (2003), 'Belief, Knowledge and Expertise: The Emergence of the Lay Expert in Medical Sociology', *Sociology of Health and Illness*, 25: 41–57.

Rose, R. (2007), *The Politics of Life Itself: Biomedicine, Power and Subjectivity in the Twenty-First Century*, Princeton: Princeton University Press.

Rychlý, P. (2008), 'A lexicographer-friendly association score', in P. Sojka and A. Horák, (eds), *Proceedings of Recent Advances in Slavonic Natural Language Processing*, 6–9, Brno: Masaryk University.

Sarangi, S. (2001), Editorial: On Demarcating The Space Between 'Lay Expertise' and 'Expert Laity', *Text – Interdisciplinary Journal for the Study of Discourse*, 21 (1-2): 3–11.

Scambler, G. and A. Hopkins (1986), 'Being Epileptic: Coming to Terms with Stigma', *Sociology of Health & Illness*, 8 (1): 26–43.

Schnyder, N., Panczak, R., Groth, N. and F. Schultze-Lutter (2017), 'Association between Mental Health-Related Stigma and Active Help-Seeking: Systematic Review and Meta-Analysis', *The British Journal of Psychiatry*, 210 (4): 261–268.

Seale, C., Charteris-Black, J., MacFarlane, A. and A. McPherson (2010), 'Interviews and Internet Forums: A Comparison of Two Sources of Qualitative Data', *Qualitative Health Research*, 20 (5): 595–606.

Semino, E., Demjén, Z., Demmen, J., Koller, V., Payne, S., Hardie, A. and P. Rayson (2015), 'The Online Use of Violence And Journey Metaphors By Patients With Cancer, As Compared with Health Professionals: A Mixed Methods Study', *BMJ Supportive & Palliative Care*, 7(1): 60–66.

Ziebland, S. and S. Wyke (2012), 'Health and Illness in a Connected World: How Might Sharing Experiences on the Internet Affect People's Health?', *Milbank Quarterly*, 90 (2): 219–249.

Bio notes

Karen Kinloch is a Researcher in Health Communication and Corpus Linguistics at Lancaster University and Edge Hill University. Following on from an ESRC funded PhD on the comparative discourses around infertility across a range of text types, her research interests are in Corpus Assisted Discourse Studies, health and identity, human reproduction, health and science communication and perinatal mental health.

Sylvia Jaworska is an Associate Professor in Applied Linguistics in the Department of English Language and Applied Linguistics at the University of Reading. Her main research interests are Discourse Analysis and Corpus Linguistics and the application of both methods to study (new) media, health and business communication. She has published widely on these topics in Applied Linguistics, Journal of Pragmatics, International Journal of Corpus

Linguistics, Corpora, Discourse & Society, Language in Society and International Journal of Business Communication.