

**Perfectionism and its relationship
with mental health difficulties and
their disclosure in antenatal women**


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Thesis declaration form

I confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.

Signature: 

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Date: 18/06/2021

Overview

Whilst much research has focused on mental health difficulties in the postnatal period, limited research has looked at this antenatally, especially in the context of clinical perfectionism and disclosure. It has been suggested that personality traits such as perfectionism play a role in the development of postnatal mental health difficulties (Milgrom et al., 2008). Clinical perfectionism has also been identified as a predictor of being worried about disclosure of mental health difficulties (Grice et al., 2018a). **Part 1** of the thesis provides a conceptual introduction to perfectionism and disclosure of mental health difficulties. Theoretical frameworks of perfectionism are reviewed, as well as the literature pertaining to disclosure of mental health difficulties. Consideration is given to how this applies in perinatal women. **Part 2** of the thesis presents a novel empirical study of perfectionism in antenatal women and how it relates to mental health difficulties and their disclosure. The study aims to investigate clinical perfectionism amongst antenatal women and how this relates to anxiety, depression and potential disclosure of mental health difficulties. Secondly, to investigate specific pregnancy-related factors and how these relate to anxiety, depression and perfectionism. Lastly, to develop a new 5-item measure of pregnancy specific perfectionism and explore whether this accurately captures women's experience of perfectionism in pregnancy. The results showed that clinical perfectionism was positively correlated with anxiety and depression. Perfectionism had no bearing on likelihood of disclosure. Pregnant women were more likely to disclose to personal rather than professional contacts. Women scoring high on perfectionism were more likely to exercise greater concerns about disclosure of mental health difficulties. The results have clinical implications for identifying those

at risk of perinatal mental health difficulties in whom early intervention and overcoming barriers to accessing support may be of benefit.

Impact Statement

The findings of this thesis could be of use both academically and clinically. There has been a call from researchers in the field for more studies focused on understanding perfectionism in antenatal women and the development of reliable measures to assess for this. Perfectionism is not routinely screened for in maternal health or psychology services, and yet may have a significant impact on the development and maintenance of mental health difficulties in perinatal women. This thesis explored the role of perfectionism in antenatal women in the development and disclosure of mental health difficulties. Perfectionism has been established as a risk factor for the development of post-natal mental health difficulties (Milgrom et al., 2008), and a predictor of concerns about disclosure of mental health difficulties in other populations (Grice et al., 2018). Despite this, no research has looked at these two factors together in antenatal women. The empirical study conducted as part of this thesis provided the first evidence of the existence of a relationship between perfectionism and antenatal mental health difficulties and less favourable attitudes to disclosure. The results have the potential for significant clinical impact and hold relevance across disciplines including psychology, midwifery, health visiting and obstetrics and gynaecology. They hold implications for the assessment of a personality factor which increases vulnerability for perinatal mental health difficulties, as well as for how professionals and families can support women in accessing and overcoming barriers to psychological support. Perinatal mental health difficulties affect 20% of new and expectant mothers. Left untreated, they can have significant and prolonged impact on mothers, their babies and their families. Improving access to psychological support and outcomes for perinatal women and their babies is of national public health importance, evidenced by the recent roll out

of maternal and perinatal mental health services as part of the NHS Long Term Plan. If these barriers can be overcome, offering interventions for those demonstrating clinical perfectionism in the antenatal period have the potential to mitigate far reaching negative postnatal outcomes for mothers and babies alike.

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Part 1: Conceptual Introduction

Perfectionism and its relationship with mental health difficulties and their disclosure
in antenatal women

Abstract

Whilst much research has focused on mental health difficulties in the postnatal period, limited research has looked at this antenatally, especially in the context of clinical perfectionism. It has been suggested that personality traits such as perfectionism play a role in the development of postnatal mental health difficulties (Milgrom et al., 2008). Clinical perfectionism has also been identified as a predictor of being worried about disclosure of mental health difficulties (Grice et al., 2018a). This conceptual introduction will review the literature related to clinical perfectionism and its role in the development and disclosure of mental health difficulties, with particular attention to antenatal women. It is suggested that perfectionistic beliefs may place perinatal women at greater risk of mental health difficulties and also make them more reluctant to disclose and seek help due to a combination of mental health stigma and high expectations placed on expectant mothers. The importance of mitigating barriers to disclosure and resolving perinatal mental health difficulties is outlined, and theoretical predictions and research questions are proposed. The critical appraisal offers a reflection on the thesis, its limitations, and recommendations for future research.

Introduction

Clinical perfectionism has been found to contribute to the development of mental health difficulties, but also to reduced disclosure of these difficulties due to factors such as self-criticism and fear of stigma. Perinatal women, i.e. those who are pregnant or within the first-year post birth, are at increased risk to mental health difficulties, due to the changes and uncertainties which pregnancy and motherhood bring, physical symptoms, the support they have (or lack of it), and other stressful events they may be facing during this time (Royal College of Psychiatrists, 2020). They also often worry about how they will cope with pregnancy, birth or having a baby, yet may be reluctant to disclose difficulties to others due to stigma and shame.

Perfectionism amongst postnatal women has been established as a risk factor for mental health difficulties including anxiety (Maia et al., 2012; Milgrom et al., 2008) and depression (Gelabert et al., 2012), yet little is known about how these manifest in the antenatal period, and how women's attitudes to disclosure might affect whether they seek others' support for difficulties as they arise.

This introduction will explore the concepts of clinical perfectionism and disclosure of mental health difficulties. It will begin by giving an overview of mental health difficulties in the perinatal period, a description of our theoretical understanding of clinical perfectionism, followed by a description of how clinical perfectionism relates to the disclosure of mental health difficulties. Finally, the role of clinical perfectionism in the perinatal period will be outlined, and disclosure of mental health difficulties amongst perinatal women.

The literature was approached by separating the three components of the research subject: perfectionism, perinatal mental health difficulties and lastly

disclosure. A broad review of the literature was conducted to familiarise myself with the area, before then funnelling this to link to the specific research questions. The sections on perfectionism focus on defining and measuring the construct. The literature on mental health disclosure was largely guided via similar studies in other populations. Sparse literature exists on perfectionism and perinatal mental health difficulties and so could be studied and reported more thoroughly.

Rationale: Why focus on perfectionism and its relationship with disclosure for mental health difficulties in the perinatal period?

Widespread evidence exists for the prevalence of perinatal mental health difficulties (O’Keane & Marsh, 2007), with population-based studies reporting rates of between 14% and 25% (Dennis et al., 2013; Figueiredo & Conde 2011; O’Hara & Wisner., 2014), plus their contribution to global morbidity and mortality (Atif et al., 2015). Perinatal mental health difficulties can have detrimental effects for mothers (Bansil et al., 2010; Muzik & Borovska, 2010), the foetus (Grote et al., 2010) and for the child as they grow older (Bauer et al., 2014; Glover, 2014; Graignic-Philippe et al., 2014). Yet despite these long-term adverse outcomes, perinatal mental health difficulties are often under-reported, under-diagnosed and untreated (Bauer et al., 2014; Byatt et al., 2012; Jarrett, 2017). Research has demonstrated the role of perfectionism in reduced disclosure of mental health difficulties, yet the impact of stigma and need for early intervention are arguably more profound amongst perinatal women.

Foetal programming theories have shown the link between poor maternal mental health and child outcomes. Antenatal anxiety has been linked to adverse child outcomes including impaired cognitive development, behavioural problems and

anxiety and depression (Glover, 2014; O'Connor et al., 2002), indicating that physiological changes caused by anxiety may affect brain development in foetuses. In depressed mothers, their newborns have shown behavioural differences and developmental difficulties compared to children born to mothers who were not depressed (Grace et al., 2003; Lundy et al., 1999; Weinberg & Tronick, 1998). Additionally, children born of depressed mothers have demonstrated impaired neonatal outcomes (for example, low birthweight; Accortt et al., 2014, or lower APGAR scores; Davalos et al., 2012), poor emotional regulation and social skills, delays in cognitive development, increased risk of emotional instability when older and increased likelihood of insecure or avoidant attachment (Galler et al., 2000; Goecke et al., 2012; Murray & Cooper, 1997a; Newport et al., 2002). These associations between perinatal mental health difficulties and child outcomes may not be causal and are also likely to be due to contextual factors such as socio-economic deprivation, relationship difficulties, isolation, or physical health difficulties. Buist et al. (2009) explain these difficulties in the context of women who struggle to recognise their symptoms as mental health difficulties as opposed to the 'normal' adjustment to parenthood, or for fear of shame or their children being removed into care.

Beyond the implications of mother's mental health difficulties for child outcomes, symptoms of depression and anxiety have been found to be persistent during the perinatal period (Norhayati et al., 2015). Depression in pregnancy is a risk factor for postnatal depression (Robertson et al., 2004), but beyond this, for those women with the onset of symptoms in the initial postnatal months, they have an increased risk of persistent depression throughout the first postnatal year (Beeghly et al., 2002). In the UK, suicide remains the leading cause of maternal death in the first

postnatal year (MBRRACE-UK, in Austin et al., 2007; Knight, 2019; Oates, 2003;). Whilst most studies have found the risk of depression to be stable throughout pregnancy, some studies suggest there may be increased prevalence in the third trimester, potentially reflecting increased anxiety about childbirth (Vigod et al., 2016).

Anxiety disorders in the antenatal period are a stronger predictor of postnatal depression and anxiety than depression alone during this time (Lee et al., 2007; Matthey et al., 2003). Some personality dimensions and trait anxiety have been linked to increased risk of suicidal ideation in perinatal women (Enatescu et al., 2020). Women experiencing anxiety in pregnancy have three times greater risk of postnatal depression symptoms (Austin et al., 2007). Yet anxiety in the perinatal period is far less researched, accounted for by the focus on depression in screening (Goodman et al., 2014). This emphasises the importance of screening including measures for anxiety in addition to depression.

Despite these outcomes, research suggests that treatment of perinatal mental health difficulties can improve child development outcomes, with reduced depressive symptomatology positively affecting both mothers and children, with fewer internalising and externalising disorders exhibited (Weissman et al., 2006). A Cochrane systematic review of various psychological therapies treating post-natal depression provided support for their efficacy (Dennis & Hodnett, 2007), with other research supporting the application of CBT and medication.

Perfectionism

Perfectionism has been defined in various ways and regarded as a positive quality to greater and lesser extents. Certainly, there are aspects of perfectionism that are considered socially desirable such as setting and aiming to achieve high personal

standards for performance. These relate to goal motivation, conscientiousness, organisation skills and attention to detail (see Stoeber & Otto, 2006 for a review). However, if these high standards become excessively demanding and the individual measures their self-esteem by their ability to achieve them, there is scope for the development of psychological difficulties (Frost et al., 1993; Shafran et al., 2002).

Perfectionism: Two dimensions?

Much research has explored perfectionism as a dyad, separating adaptive versus maladaptive perfectionism. The concept of 'clinical perfectionism' has been put forward as having excessive concern about errors and the resulting critical self-evaluation (Slaney et al., 2002). The role of self-criticism in differentiating between adaptive and maladaptive perfectionism was outlined by Frost et al. (1990) who state perfectionism has been defined as "high standards of performance which are accompanied by tendencies for overly critical evaluations of one's own behaviour" (p. 450).

To understand the dyadic nature of perfectionism it is helpful to first understand it as a multidimensional construct. Frost et al. (1990) and Hewitt and Flett (1991) produced formative research detailing the multiple dimensions of perfectionism. Frost and colleagues (1990) established six core dimensions of perfectionism. These include personal standards, organisation, concerns over mistakes, doubts about actions, parental expectations and parental criticism. Those considered to be perfectionistic were thought to set high personal standards and consider mistakes as global personal failings. These processes derived from early expectations of excellence from their parents and the resultant criticism when these standards were not achieved. From this, the first multidimensional measure of

perfectionism was developed, the Frost Multidimensional Perfectionism Scale (FMPS; Frost et al., 1990).

A multidimensional measure of perfectionism was subsequently developed, the Hewitt Multidimensional Perfectionism Scale (HMPS; Hewitt & Flett, 1991) which outlined three further dimensions of perfectionism. These were described as self-oriented perfectionism, wherein the individual has an expectation of themselves to be perfect, other-oriented perfectionism, wherein the individual requires perfection from others, and lastly socially prescribed perfectionism, characterised by the perception that others require the individual to be perfect. Notably, the authors found that self-oriented perfectionism was associated with pursuing high standards in a helpful way, whereas socially-prescribed perfectionism, or feeling that others have high demands, is the dimension most strongly correlated with anxiety and psychotic depression. Frost et al. (1993) later developed two higher-order factors from these multidimensional models; positive striving and maladaptive evaluation concerns. The former encompasses high personal standards and a preference for order and organisation, self-oriented perfectionism and other-oriented perfectionism, which were associated with increased positive affect, efficiency and healthy striving for achievement. The latter, which covered high parental expectations, high parental criticism, socially-prescribed perfectionism and most importantly concern about mistakes, were significantly correlated with depression and linked to increased psychological distress (Frost et al., 1990, 1993; Hewitt & Flett, 1991).

As well as considering conceptualisations of the multiple dimensions of perfectionism and how these manifest within individuals, research has also explored the interpersonal nature of perfectionism (Hewitt et al., 2003). The term perfectionistic self-presentation, developed by Hewitt et al. (2003), suggested that

perfectionism could also be driven by a desire to appear perfect to other people. This ‘impression management’ highlights the importance for such individuals of presenting a perfect image to others. Perfectionistic self-presentation comprises three aspects: perfectionistic self-promotion (attempts to present a perfect image and publicising parts of the self they consider to be perfect), non-display of imperfection (concealing and avoiding demonstrations of being imperfect), and non-disclosure of imperfections (avoiding talking about perceived imperfections). Each of these serve to elicit and maintain perfectionism. The authors found that increased scores on each of these factors were associated with poor self-esteem, feeling like an impostor, increased need for approval, self-consciousness, and concerns about being evaluated negatively by others.

In their review, Stoeber and Otto (2006) took forward the dimensional understanding of perfectionism and proposed two dimensions of perfectionism; perfectionistic strivings (positive) and perfectionistic concerns (negative). Perfectionistic strivings relate to the pursuit of perfection and incorporates ‘high standards’ and ‘order’ from the Almost Perfect Scale-Revised (APS-R; Slaney et al., 2001), ‘personal standards’ and ‘organisation’ from the FMPS (Frost et al., 1990), and ‘self-oriented’ and ‘other-oriented’ perfectionism from the HMPS (Hewitt & Flett, 1991). Perfectionistic concerns encompass ‘doubts about actions’ and ‘concern over mistakes’ from the FMPS (Frost et al., 1990), ‘socially-prescribed perfectionism’ from the HMPS (Hewitt & Flett, 1991), and ‘discrepancy’ from the APS-R (Slaney et al., 2001). Here, scoring high on perfectionistic strivings and low on perfectionistic concerns were related to healthy/adaptive perfectionism and greater functioning. Conversely, scoring high on perfectionistic concerns alone and both perfectionistic concerns and strivings together were considered to show

unhealthy/maladaptive perfectionism and were linked to poorer functioning and psychological health.

Defining perfectionism

There has been some debate in defining clinical perfectionism. Shafran, Cooper and Fairburn (2002, 2003) argued that a purely multidimensional view of perfectionism fails to differentiate between perfectionism itself and its accompanying features. The result of this meant little progress in the treatment or theoretical understanding of perfectionism when applied in a clinical context. Consequently, they proposed a move away from a multidimensional perspective on understanding perfectionism and instead towards a cognitive-behavioural model of ‘clinical perfectionism’, conceptualising it as a clinical construct in itself. The authors proposed that the key aspect of clinical perfectionism associated with mental health difficulties is “the overdependence of self-evaluation on the determined pursuit and achievement of personally demanding standards, in at least one domain that is of importance to the individual” (Riley & Shafran, 2005, p369). The authors found three features that were prevalent in those considered to show clinical perfectionism compared to individuals who did not. Firstly, self-imposed dysfunctional standards, secondly, continual striving, and lastly, significant adverse consequences as a result of striving.

Further, Shafran et al. (2002) suggested that this understanding of clinical perfectionism is maintained by six mechanisms; (1) failure will be reacted to with self-criticism; (2) there will be an absence of a positive emotional reaction to success; (3) cognitive biases; (4) the setting of strict rules and adhering to them stringently; (5) avoiding challenging tasks for fear of failure; (6) escape from situations where failure may be imminent.

Dunkley et al. (2006) responded to Shafran et al. (2002, 2003) by considering two higher-order dimensions of perfectionism: personal standards and self-critical evaluative concerns. The authors argued that self-criticism accounted for the relationship between perfectionism and symptoms of anxiety, depression and eating disorders. Thus, they argued that high personal standards alone were insufficient for the development of unhealthy perfectionism. In fact, self-critical evaluative concerns were more pertinent to the critical processes Shafran et al. (2002) proposed as maintenance factors in clinical perfectionism.

Perfectionism and the development of mental health difficulties

Mental health difficulties can be understood as ‘psychological and behavioural difficulties that diminish capacity for coping with ordinary demands of life’ (O’Hara & Wisner, 2014). The link between maladaptive perfectionism and the development of mental health difficulties has been well documented (see Limburg et al., 2017 for a review). However, key to our understanding of perfectionism and its link with mental health difficulties is our consideration of perfectionism as a transdiagnostic construct. A review by Egan et al. (2011) highlights the transdiagnostic nature of perfectionism, which is key to considering how perfectionism might be identified in health settings. In considering transdiagnostic processes, these are the cognitions and behaviours that serve to maintain multiple disorders (Harvey et al., 2004) and highlight the intersection between personality and mental health difficulties (Rodriguez-Seijas, 2015). Egan et al. (2011) identified the role of perfectionism as a maintenance factor in anxiety, depression and eating disorders (Shafran & Mansell, 2001) and found elevated incidences of perfectionism in such populations compared with healthy controls. Accordingly, clinicians should routinely assess for perfectionism, as this important maintenance factor may be

missed if depression and anxiety are assessed alone. Notably, offering interventions to treat perfectionism itself may be beneficial in instances of comorbidity (Bieling et al., 2004; Egan et al., 2014).

Limburg et al. (2017) conducted a review exploring the relationship between maladaptive perfectionism and mental health difficulties. The authors found perfectionistic strivings and perfectionistic concerns to be connected with various mental health difficulties including depression, obsessive-compulsive disorder, social anxiety and eating disorders (DiBartolo et al., 2008; Egan et al., 2011; Frost et al., 1990; Limburg et al., 2017; Sassaroli et al., 2008). Perfectionistic concerns held the largest effects across all outcomes, with the exception of eating disorders.

Limburg et al. (2017) found a positive association between both dimensions of perfectionism; strivings and concerns, and subsequent outcomes across mental health difficulties. Their findings corroborate the notion of perfectionism as a transdiagnostic construct by suggesting consistency with the view that perfectionism is not specific to certain symptoms or disorders (Frost & Steketee, 1997; Rhéaume et al., 1995).

Research has established the role of perfectionistic self-presentation as a transdiagnostic process associated with the development of mental health difficulties including anxiety, depression and suicidal ideation. Hewitt et al. (2003) found that, in both a clinical sample and amongst university students, the three aforementioned aspects of perfectionistic self-presentation were positively associated with depression. These three aspects have also been linked to increased levels of anxiety across various populations.

Research focusing on treating perfectionism recognises its transdiagnostic nature and contribution across mental health difficulties with Cognitive Behavioural

Therapy (CBT) the dominant treatment model (see Suh et al., 2019 for a review). CBT interventions focus on promoting adaptive forms of perfectionism, whilst modifying unhelpful cognitions and behaviours associated with maladaptive perfectionism. A number of recent meta-analyses looking at the effectiveness of interventions for perfectionism have found reductions in maladaptive perfectionism occurred alongside reductions in depressive symptomology, anxiety, obsessive-compulsive disorder, and eating disorders (Lloyd et al., 2014; Suh et al., 2019).

Perfectionism in the context of perinatal mental health

How can the unremittingly high standards which perfectionists strive for be met in the perinatal period, a time of huge adjustment, uncertainty and often unrelenting demands? Perinatal mental health covers new onset and pre-existing mental health difficulties that occur in the period from conception until one-year post birth (Austin, 2004). The transition to motherhood has been described as fraught with conflicts regarding self-esteem, identity, and self-evaluation (Cowan & Cowan, 1992). Research has established the function that personality traits such as perfectionism take in developing postnatal mental health difficulties including anxiety (Maia et al., 2012; Milgrom et al., 2008), depression (Gelabert et al., 2012), and post-traumatic stress responses after childbirth (Price et al., 2020). Perfectionism in pregnancy has only previously been explored in relation to post-natal depression, anxiety, and maternal bonding (Egan et al., 2017; Oddo-Sommerfeld et al., 2016). Women with perfectionist traits may experience difficulty coping with the surge in demands and responsibilities of pregnancy, leaving them more vulnerable to increased stress (Milgrom et al., 1999).

Perfectionism is a noteworthy independent risk factor related with high maternal anxiety, making women vulnerable to the often unremitting, inflexible and

unpredictable stressors of parenthood (Milgrom et al., 2008). Women with perfectionist traits may also struggle antenatally as they are more likely to experience self-critical doubts about their ability to be ‘a good mother’, to take care of their child, and still maintain high standards in their professional and social life (Buist et al., 2006; Macedo et al., 2009; Maia et al., 2012). These authors go on to explain how a key component of clinical perfectionism is not just the striving for high standards, but the adverse impact on self-esteem of not meeting these standards.

Whilst perfectionism may act as a risk factor for postnatal depression, it is likely to also act as a maintenance factor. Mothers who were depressed demonstrated more concern about mistakes, higher performance standards, had more recurrent doubts about their actions and greater concerns about their own parents’ evaluations when compared to non-depressed mothers (Gelabert et al., 2012). The authors suggested that it was specifically concern over mistakes that was the key factor in linking perfectionism to major post-natal depression. In a clinical context, unrelenting high standards may relate to birth by, for example, beliefs that the birth must be ‘natural’, or go as planned without complications. Qualitative reviews reveal that a significant number of women develop ‘birth plans’ and read educational resources in preparation for birth (Divall et al., 2017), which may require careful expectation management in instances where these ‘plans’ are not met. In pregnancy, women may be concerned with their diet or buying equipment, feeding into a belief about doing the ‘right’ thing. Women may be preoccupied with ensuring no harm or suffering impacts their baby, thus internalising a belief that if they do things perfectly their child will have a ‘perfect’ life and be happy.

In exploring specific vulnerabilities to the development of postnatal depression (as distinguished from depression not within the perinatal period), Vigod

et al. (2016) identified specific themes in postnatal depression. One of these was ‘incongruity between expectations and reality’; though not identified in the literature, clinical perfectionism or ‘high standards’ may play a part in this incongruence.

Considering the interpersonal dimension of perfectionism, for some women their perfectionism may be born out of the perception of others’ high standards and expectations, i.e. the aforementioned ‘socially-prescribed perfectionism’. Perhaps unique to the perinatal period are the swathes of guidance and advice women receive, not only from family and friends, but also from society at large and the idealised messages of motherhood that are promulgated. Research suggests sociocultural expectations of the ‘perfect’ pregnancy and birth may influence women’s transition to motherhood (Henderson et al., 2016). In general, socially-prescribed perfectionism is the dimension of perfectionism that most research has associated with maladaptive reactions to poor mental health outcomes and stress (Shafran & Mansell, 2001). Specific to the perinatal period, socially-prescribed perfectionism has been associated with increased depression both pre- and postnatally (Dimitrovsky et al., 2002; Maia et al., 2012). One of the few studies exploring the role of perfectionism antenatally and its relationship with depression found a negative correlation between antenatal self-acceptance (a component of perfectionism) and depression, suggesting its role in the development of post-natal mental health difficulties (Dimitrovsky et al., 2002). Socially-prescribed perfectionism was associated with anxiety, depression and anger (Macedo et al., 2009).

Evidence has demonstrated the role of maladaptive perfectionism in the perinatal period and it being a risk factor for later postnatal mental health difficulties, including postnatal depression (Rosan et al., 2016). They drew upon Shafran et al’s.

(2002) cognitive behavioural model of perfectionism to propose a CBT model of clinical perfectionism in the mother-infant relationship (see Figure 1).

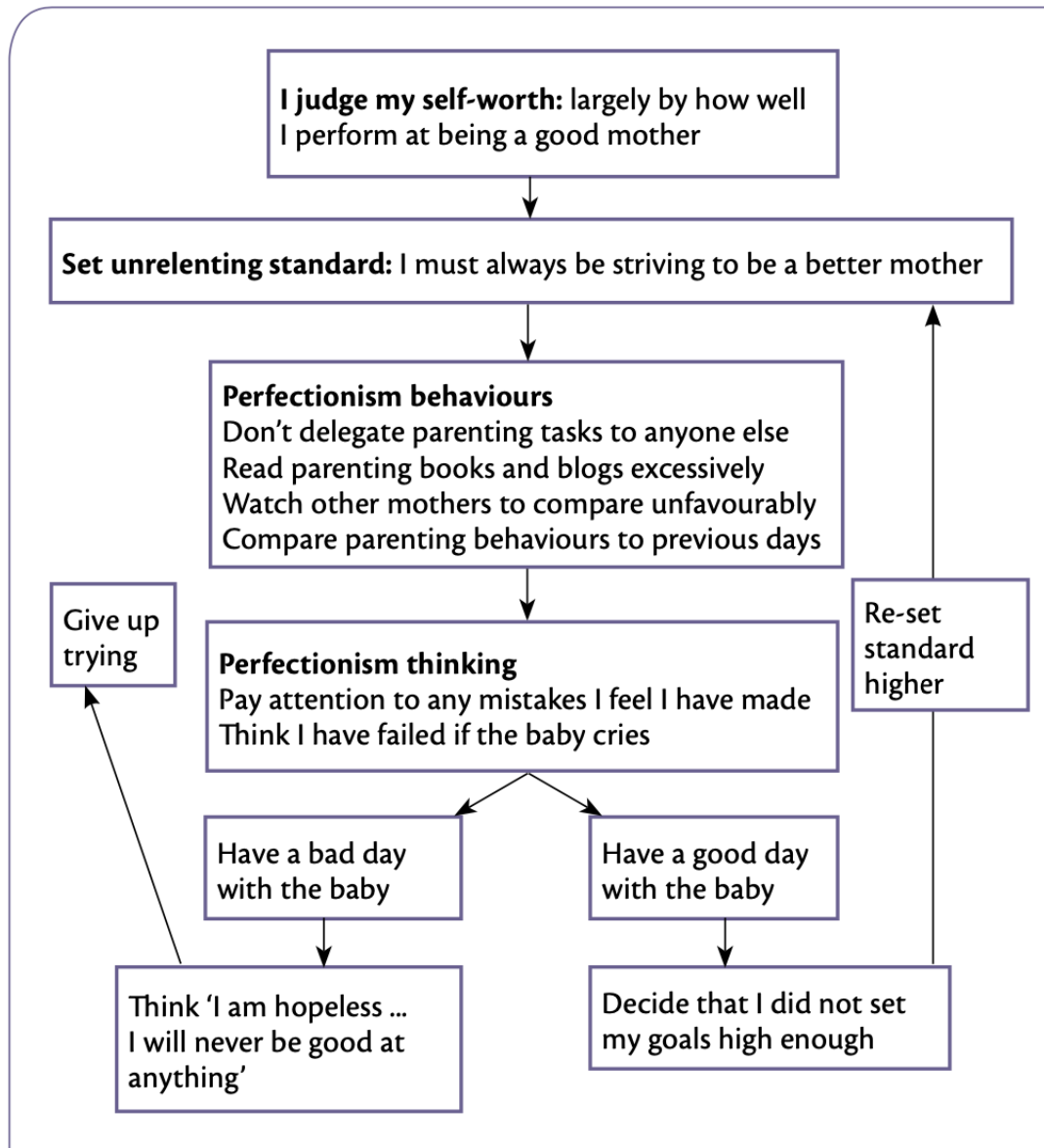


Figure 1. A cognitive behavioural model of clinical perfectionism in a mother–infant relationship

As stated earlier, central to our understanding of clinical perfectionism is the notion that one’s self-worth is dependent on one’s ability to achieve high standards of performance. It is therefore understandable that perfectionistic behaviours (such as avoidance or excessive checking) and cognitions (black and white thinking) can be

activated in the post-natal period (Shafran et al., 2002). This is a context marked by the significant demands of a baby and shifts in the individual's ability to work towards their goals and gain a sense of achievement. The authors made an argument for early intervention for perfectionism as a means to prevent the development of more severe presentations in the postnatal period.

Much research has focused on identifying factors which might predict the development of postnatal mental health difficulties. Antenatal anxiety and depression, as well as neuroticism and low self-esteem, have been established as significant contributors to the development of postnatal difficulties (Beck, 2002; O'Hara & Swain, 2009; Righetti-Veltema et al., 1998; Robertson et al., 2004). Anxiety has been identified as one of the key features of perinatal depression (Beck, 2002; Matthey et al., 2003; Ross et al., 2003; Stuart et al., 1998). Steiner and Born (2002) proposed that anxiety may relate to concern about the individuals' parenting ability or the welfare of the baby. Importantly, anxiety disorders in the perinatal period have received far less attention than depressive disorders, with little known about their prevalence. Increased anxiety in the antenatal period has been found to predict the incidence of depressive symptomology. Neuroticism was found to be a risk factor for depression, and neuroticism has been closely linked to trait perfectionism (Robertson et al., 2004). Here neuroticism is conceptualised as a means of managing anxiety, which might manifest as perfectionist cognitions and behaviours. However, it is important to go further and particularly consider any transdiagnostic processes, such as perfectionism, that might be underlying antenatal difficulties, as herein may lie the most effective route for intervention. Whereas perfectionism may manifest antenatally as anxiety, this may evolve to depression postnatally once the perfectionism-specific cognitions are activated.

While clinical perfectionism has been established as a predictor of depression, some controversy exists in the context of postnatal depression (Gelabert et al., 2012; Macedo et al., 2009; Vliegen et al., 2006). An association was found between clinical perfectionism, specifically concern over mistakes, and postnatal depression (Gelabert et al., 2012). However, other studies have found no increased risk for postnatal depression in those scoring high on clinical perfectionism (Maia et al., 2012; Sweeney & Fingerhut, 2013). Interestingly, it has been reported that those deemed 'highly persistent' (a feature of perfectionism) have a greater risk of anxiety (Cloninger et al., 2012), yet research has not investigated the effect of clinical perfectionism on postnatal anxiety. In their research, Oddo-Sommerfeld et al. (2015) proposed that postnatal depression and anxiety were influenced indirectly by clinical perfectionism via antenatal anxiety and depression, highlighting the importance of the consideration of clinical perfectionism as a mitigating factor in the development of mental health difficulties in the perinatal period.

Incidence of perinatal mental health difficulties and perfectionism

The incidence of women struggling with mental health difficulties relating to perfectionism in the perinatal period may have increased over time. A meta-analysis by Curran and Hill (2017) found an increase in multidimensional perfectionism in UK and US college students between 1989 and 2016. As this age group reaches child-bearing age, the increased incidence of perfectionistic traits may place antenatal women not only at greater risk of developing mental health difficulties but also of reluctance to disclose such difficulties to others. There is therefore a strong rationale to intervene early (i.e. antenatally rather than waiting for difficulties to manifest postnatally) to mitigate a potential surge in perinatal mental health difficulties.

Disclosure of mental health difficulties

Despite the fact that effective treatments are available for mental health difficulties, less than 40% of people seek help (Vogel et al., 2006). For those experiencing mental health difficulties, various factors may influence their decision to disclose or conceal their difficulties. On the one hand, disclosing may act as means to accessing support, both formally and informally. Yet the benefits of disclosure go beyond mere access to support. Research suggests that talking about mental health difficulties helps to increase trust and perceived social support, improves physical health, and helps to process emotional experiences, thus ameliorating distress (Bos et al., 2009; Corrigan et al., 2013; Ignatius & Kokkonen, 2007; Kahn & Hessling, 2000; Rüsçh et al., 2019).

Despite the benefits to disclosing mental health difficulties, drawbacks exist. Society's stigmatised views of mental health difficulties mean that affected individuals may be viewed as weak or dangerous, which in turn negatively impacts their wellbeing and inhibits likelihood of disclosure (Angermeyer & Dietrich, 2006; Clement et al., 2015; Corrigan et al., 2010; Rüsçh et al., 2012). Stigmatised views may lead to discrimination against those struggling with mental health difficulties across contexts (Ilic et al., 2012). Concealing mental health difficulties in turn has been found to lead to increased isolation, avoidance, and feelings of shame, and greater preoccupation with one's difficulties (Pachankis, 2007). Not disclosing mental health difficulties may therefore lead to reduced access to support and the risk of difficulties becoming further entrenched or more severe.

Cultural factors have also been found to impact disclosure. The level of mental health stigma varies across cultural contexts, with research suggesting increased stigma amongst individuals of non-Western backgrounds, leading to

greater concealment (Abdullah & Brown, 2011; Memon et al., 2016). Those from non-Western backgrounds have also been found to disclose less frequently but in more depth (Ignatius & Kokkonen, 2007). There is also an interpersonal component to disclosing mental health difficulties. Individuals are more likely to talk about mental health difficulties to partners and immediate family members (Bos et al., 2009; Grice et al., 2018a, 2018b; Jones, 2011).

For individuals struggling with mental health difficulties, their increased perception of social and emotional support, and trust in the recipient, can reduce concealment (Grice et al., 2018a). Further, they found that more stigmatised views of depression were associated with lower likelihood of disclosing, whereas those who believed “people with depression deserve support from friends and/or family” and “anybody can suffer from depression” were more willing to share difficulties with others.

Perfectionism and disclosure of mental health difficulties

Despite research outlining the links between maladaptive perfectionism and mental health difficulties, limited research has explored the role perfectionism plays for such individuals in disclosing their difficulties. Given that perfectionists commonly hold beliefs of needing to appear perfect, and mental health stigma is endemic, it is plausible that those exhibiting maladaptive perfectionism may have less favourable attitudes to talking about mental health difficulties and be less likely to disclose them.

Concealing negative personal information is a significant contributor to psychological distress in individuals with maladaptive perfectionism (Kawamura & Frost, 2004). In a study of undergraduates, those scoring high on perfectionism concealed negative personal information in order to maintain a flawless appearance

and avoid negative evaluation by others (perfectionistic self-presentation). They drew upon Hewitt and Flett's (2002) paper suggesting a predominant factor leading to the maintenance of stress is the unwillingness of those with perfectionism to disclose their difficulties to others when struggling, thus inhibiting their access to social or professional help. Paradoxically, despite attempting to avoid negative consequences, the long-term implications of concealment of these difficulties may be increased psychological problems. The authors went further to look at how willingness to disclose difficulties might be impacted by the recipient and found that willingness to discuss problems with family and friends was negatively correlated with self-concealment and maladaptive perfectionism. It follows that challenging beliefs about self-concealment and fears of negative evaluation may be a helpful intervention in supporting those with maladaptive perfectionism who are experiencing psychological difficulties.

Maladaptive perfectionism is related to reduced preventive health behaviours and increased psychological distress, with self-concealment acting as a partially mediating factor (Williams & Cropley, 2014). Adaptive perfectionism on the other hand, was found to have an association with increased engagement with preventive health behaviours.

Those scoring high on self-critical perfectionism ('discrepancy') were less likely to disclose when under stress, i.e. a time when disclosure might be most beneficial, than those with low scores (Richardson & Rice, 2015). More recently, Kahn et al. (2021) demonstrated findings that 'discrepancy', i.e. perfectionism associated with the perception that the individual falls short of their standards, was negatively related to disclosure of distress. The authors support the notion that those high on perfectionism are more likely to refrain from disclosing emotions when

distressed, as revealing their shortcomings is equated with revealing their imperfections (Hewitt et al., 2003). They account for this by drawing on evidence that perfectionists show deficits in emotion regulation (such as via emotional suppression) (Malivoire et al., 2019). Importantly in the context of encouraging individuals to seek psychological support, Cepeda-Benito and Short (1998) found that those high on self-concealment were the most likely to avoid seeking professional psychological support.

One challenge of reliance on the self-concealment scale (SCS) (Larson & Chastain, 1990), used by the above studies, is that although it demonstrates utility in establishing how maladaptive perfectionists are less likely to disclose negative personal information to others, its usefulness is questioned when pertaining to their disclosure of mental health difficulties specifically. Though the measure might capture motivations behind concealment, it neglects to provide insight about someone's willingness to talk about their psychological distress. Whether mental health difficulties come under the remit of negative personal information is debatable.

One attempt to address this is the use of the Distress Disclosure Index (DDI; Kahn & Hessling, 2001). This is a mood-specific measure of disclosure assessing a general tendency to share or conceal negative thoughts and emotions. Whilst the measure offers insight into the attitudes of those with maladaptive perfectionism and the extent to which they are willing to share personally distressing information with others, it stops short of directly examining their willingness to talk about mental health difficulties.

The above studies do not explore specific attitudes of those with maladaptive perfectionism regarding talking about mental health difficulties. Subsequently,

research has attempted to address this by examining whether maladaptive perfectionism influences how likely one is to disclose a mental health difficulty. D'Agata and Holden (2018) explored risk factors for suicide to recognise those who are more likely to conceal their feelings. Looking at the relationship between self-concealment and perfectionistic self-presentation and the concealment of suicidal ideation and 'psychache' (unbearable psychological pain derived from unmet psychological needs), the authors found both factors were predictive of suicidal ideation. Those scoring high on both factors, and specifically on non-disclosure of imperfections were more likely to report 'psychache' and concealment of 'psychache'. Importantly, the extent to which psychological distress is concealed differs depending on whether the motivation is to demonstrate a perfect image, or merely the avoidance of appearing imperfect. The authors propose that by concealing 'psychache' from others suicidal ideation is increased due to underlying difficulties not being addressed formally or informally.

Studies looking at how perfectionism amongst trainee clinical psychologists impacted on disclosure of mental health difficulties found it depended on the recipient, be they someone in the personal or professional sphere (Grice et al., 2018). Supporting Kawamura and Frost's (2004) findings, trainees were more likely to talk about their mental health difficulties with friends or family than those in professional contexts. The authors found that as maladaptive perfectionism increased, the likelihood of talking about mental health difficulties reduced. This finding applied to disclosure of all types of mental health difficulties, and regardless of recipient (with one exception being specific phobia discussed with a friend). These findings demonstrate the importance of interpersonal and contextual factors that influence disclosure of mental health difficulties in those with maladaptive perfectionism.

Perfectionism and disclosure of mental health difficulties in perinatal women

Research demonstrates that few women with perinatal mental health difficulties seek help (Bauer et al., 2014; Fonseca et al., 2015; Prevatt & Desmarais, 2018), despite the fact that they are more likely to have undiagnosed mood disorders than non-pregnant peers (Ko et al., 2012). National Institute for Health and Care Excellence [NICE], (2014) guidelines outline the need for recognition by health care professionals that perinatal women who experience mental health difficulties may be concerned about stigma and disclosure. Specifically they note “1.5.1 Recognise that women who have a mental health problem (or are worried that they might have) may be: unwilling to disclose or discuss their problem because of fear of stigma, negative perceptions of them as a mother or fear that their baby might be taken into care” (p.27).

Perfectionistic ideals or beliefs may place women at greater risk of mental health difficulties and also make them more reluctant to disclose and seek help due to a combination of mental health stigma and high expectations placed on expectant mothers by society and often by themselves. For example, a woman who experiences challenges with breast feeding may feel or be treated as a failure and have self-critical thoughts which in turn could lead to depression and anxiety around breast feeding. Subsequently, they may struggle to access help due to fears of being perceived a failure due to social expectations. A report by Bauer et al. (2014) into the costs of perinatal mental health difficulties concluded that new or expectant mothers may be hesitant to disclose mental health difficulties, even if asked by a professional. Boots Family Trust (2013) conducted a survey of women who had experienced some perinatal mental health difficulty and found the biggest barrier to accessing help was resistance to talking about their feelings, with less than a fifth saying that they had

been honest. Almost a third had never told a health professional that they were struggling with poor mental health. More than a quarter stated that they were concerned that their baby might be taken away if they were to reveal their true feelings. The predominant reason cited for mental health difficulties by the women was trying to live up to unrealistic expectations.

Perfectionism has an inherent stigma attached to it because midwives and obstetricians may see women as having unrealistic expectations. The discourse around this is critical, often resulting in women being dismissed as perfectionists rather than offered support and understanding. Added to this are societal pressures women face, leading to a conflict about mixed messages and expectations. For example, such women may receive messages of “don't be a perfectionist about pregnancy, labour and birth” whilst at the same time ante-natal classes may give the impression that the ‘right’ birth is a baby delivered ‘naturally’ and ‘breast is best’.

Managing societal expectations and stigma is key to encouraging women who experience mental health difficulties to seek support. Shannon et al.'s (2018) findings that perfectionistic self-presentation (which assesses self-promotion and non-disclosure of imperfection) is associated with unfavourable attitudes to mental health difficulties, indicate that direct interventions to tackle stigma should be personalised to address the concerns and beliefs of perfectionistic people who are vulnerable to distress. Ante-natal women would come under this category of potentially vulnerable people.

The role of stigma amongst this population has been explored further and reiterated the impact it has on disclosure, reduced help-seeking from services and less support being received from friends and family (Byatt et al., 2013; Santora & Peabody, 2010). Numerous studies with other populations have asserted the external

and internalised stigma and discrimination that those experiencing mental health difficulties face (Knight et al., 2003; Green, 2003), even from health professionals (Lefley, 1989; Deegan, 1990; Schulze & Angermeyer, 2003). This results in feelings of shame, loss of identity and concerns about discrimination manifesting in acts such as children being removed or being socially isolated, thus deterring disclosure of such difficulties (Brohan et al., 2012; Clement et al., 2015; Grice et al., 2018a; Jarrett, 2016; Jones, 2011). It also delays access to services (Dinos et al., 2004). Edwards and Timmons (2005) conducted a qualitative exploration of stigma amongst women struggling with postnatal mental health difficulties and found that all of them reported feeling their symptoms were an indicator that they were unable to cope as a mother. Some reported feeling distraught about this and that their baby would or should be removed.

Societal expectations of motherhood compound perinatal mental health difficulties, with women reporting feelings of being unable to live up to “supermom” standards, leading to further feelings of failure and stigma turned toward the self (Brown et al., 1997). This notion of being a ‘bad mother’ exemplifies self-stigma (Corrigan & Watson, 2002).

Within professional contexts, there is recognition that women may have experienced mental health difficulties in the past without seeking help. Robertson et al. (2004) highlighted the difficulty of assessing symptoms of anxiety and depression in antenatal women, especially when women view such feelings as a normal consequence of pregnancy rather than pathological. Having said this, the authors supported the benefit of an awareness of mood during pregnancy and enquiring with women about their mood.

In their study, Yawn et al. (2012) emphasised the importance of early detection via screening to increase access to treatment and improve outcomes for mothers and babies alike. Longitudinal studies demonstrate evidence that 30-40% of pregnant women showed ongoing symptoms of depression from pregnancy to five years postnatally (Giallo et al., 2015; van der Waerden et al., 2015). Despite the recognition of the adverse impact of untreated mental health difficulties in the perinatal period and recent efforts to introduce screening for these, research has shed light on some barriers for women in disclosing. Kingston et al. (2015) investigated women's willingness to disclose mental health difficulties during screening. Whilst most women were willing to be open about mental health difficulties, factors related to stigma and the way in which they were screened impacted their willingness to disclose. Whilst demographic factors and mental health history had no bearing on disclosure, those women who were worried the professional would view them as a bad mother were less likely to talk openly. Postnatally, research by Reilly et al. (2014) suggests that those concerned about stigma prefer to share their mental health difficulties with friends and family rather than healthcare professionals. The research lends support to the importance of reducing stigma during screening, educating women and their families about mental health in order to prevent misinformation (Griffiths et al., 2014), and providing reassurance about available help (Evans-Lacko et al., 2013) in order to promote early recognition of antenatal mental health difficulties.

The method and timing of screening for mental health difficulties in the antenatal period is worth consideration and is likely to be impacted by attitudes to disclosure. In the UK, pregnant women are screened for depression at their booking appointment, which is typically during the first trimester. NICE (2014) guidelines

have more recently recommended use of the GAD-2 after recognition of anxiety being poorly identified. Darwin et al. (2016) sought to validate the widely used Whooley questions (modified PHQ-2) (Whooley et al., 1997) and Arroll 'help' question (Arroll et al., 2003) and explored women's views of assessment. The authors also administered the Edinburgh Postnatal Depression Scale (EPDS). They found that the Whooley questions missed half the cases identified by the EPDS, falling to nine out of ten when adopting the Arroll help question. Hewitt et al. (2009) established there was insufficient evidence for the clinical use of the Whooley questions and NICE guidelines have been criticised for not recommending the use of the EPDS (which is also validated for use in pregnancy), the most widely used screening tool for perinatal depression (Martin & Redshaw, 2009; Murray & Cox, 1990).

The context of booking appointments also influenced disclosure, with women generally perceiving this time limited, midwifery-led appointment as focused on physical health concerns, rather than mental health (Darwin et al., 2016). Other research described some women held perceptions of help-seeking as a sign of weakness (Bayrampour et al., 2017), and suggested women may prefer less interactive screening as a means to protect themselves from exposing their emotions or being perceived as vulnerable. The same study went on to state that women described confusion about whether their symptoms were 'normal' and showed uncertainty and pessimism about what support would look like. The majority interpreted screening as an assessment for risk of harm as opposed to an opportunity to explore their distress and elicit support. Though not discussed in the research, previous studies have also found increased rates of both depression and anxiety in the final trimester, meaning current assessment practices which focus on symptoms

in the first trimester are likely missing even more cases. The research identified the importance of the context of assessment impacting upon disclosure, and how relevant women felt such assessment was in maternity settings. Suggestions have been made to ensure assessment for mental health difficulties occur in an enabling environment with consideration of work pressures to mitigate the impact of their influence on women's seeking help for depression within maternity settings (Bennett et al., 2009). Recommendations have been made for further training of midwives on perinatal mental health to improve confidence in enquiring about such difficulties and resolve barriers to women in accessing support.

Within this study, examining how ante-natal anxiety specifically may relate to perfectionism is particularly of interest. Anxiety is a diagnostic category which encompasses several sub-categories of anxiety disorders. In clinical contexts, if practitioners focus specifically on anxiety rather than considering the link to perfectionism, a trans-diagnostic category, there may be missed opportunities to provide treatment and support women. Further, practitioners may be missing opportunities to encourage women to access help.

Summary and aims of the thesis

This introduction has provided a description of the literature relating to perfectionism, its link with mental health difficulties and their disclosure, and how these may play out in the context of perinatal women. However, it remains underexplored how this pertains to antenatal women specifically. The overall aim of this thesis was to investigate clinical perfectionism amongst antenatal women and how this relates to anxiety, depression and the disclosure of mental health difficulties.

These research questions were as follows:

Research Question 1.a: Amongst antenatal women (identified through an online sample), what is the distribution of scores for clinical perfectionism?

Research Question 1.b: Can a new 5-item measure of clinical perfectionism in the ante-natal period capture women's experience of perfectionism in pregnancy?

Research Question 2: Are increased anxiety and depression in the ante-natal period associated with clinical perfectionism?

Research Question 3: Does perfectionism influence willingness to disclose mental health difficulties?

Improving our understanding of clinical perfectionism in antenatal women and how this relates to disclosure of mental health difficulties can assist our understanding of any increased vulnerability these women face, and the barriers they might experience in accessing support. We know that undiagnosed and untreated mental health difficulties in perinatal women can have profound implications for both mothers and children, thus the necessity for reducing barriers to disclosure and early intervention are paramount.

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Part 2: Empirical Paper

Perfectionism and its relationship with mental health difficulties and their disclosure
in antenatal women

Abstract

Background: Whilst much research has focused on mental health difficulties in the postnatal period, limited research has looked at this antenatally, especially in the context of clinical perfectionism and disclosure. It has been suggested that personality traits such as perfectionism play a role in the development of postnatal mental health difficulties. Clinical perfectionism has been identified as a predictor of concern about disclosure of mental health difficulties in other populations.

Methods: Pregnant women (N = 676) completed an online questionnaire shared via several pregnancy-related websites at the start of the first UK Covid-19 lockdown. Five measures were administered to assess depression, anxiety, perfectionism, anticipated likelihood of disclosure and attitudes to disclosure.

Results: Seventeen percent of participants stated they were struggling with depression, and 23% with anxiety. Clinical perfectionism was positively correlated with depression and anxiety. Participants were more likely to disclose mental health difficulties to a personal rather than professional contact. Women scoring high on perfectionism were more likely to hold negative attitudes to disclosure. There was no impact of perfectionism on anticipated likelihood of disclosure.

Limitations: Over 90% of women in this study were highly educated, partnered, white women. As such, generalisability of the study findings may be limited.

Conclusions: The Covid-19 lockdown led to high self-reported anxiety and depression. Clinical perfectionism is associated with antenatal anxiety and depression. The assessment of perfectionism should be considered in order to improve detection of those at risk of mental health difficulties, who may benefit from early intervention. Strategies aimed at reducing barriers to disclosure to healthcare providers are recommended to facilitate access to support.

Introduction

Antenatal women may hold the belief that they should not disclose a mental health difficulty (Shakespeare et al., 2003), due to stigma, but also due to specific fears such as their baby being removed into care (Jarrett, 2016). Perfectionism has been identified as another barrier to disclosing mental health difficulties (Grice et al., 2018a). These factors may ultimately prevent disclosure and help-seeking for mental health difficulties. The repercussions of untreated mental health difficulties for both mothers and babies in the perinatal period are significant (Glover, 2014). Consequently, it is essential to identify mental health difficulties amongst antenatal women, as well as barriers to disclosure that inhibit help-seeking and early intervention.

Research has established the role that perfectionism plays in postnatal mental health difficulties including anxiety (Maia et al., 2012; Milgrom et al., 2008), depression (Gelabert et al., 2012), and post-traumatic stress responses after childbirth (Price et al., 2020). Perfectionism in the antenatal period has previously been studied in relation to antenatal psychological distress (Macedo et al., 2009) and longitudinal studies related to post-natal depression, anxiety, and maternal bonding (Egan et al., 2017; Oddo-Sommerfeld et al., 2016). Perfectionism is defined as the setting of high standards paired with overly critical self-evaluation in pursuit of these standards (Frost et al., 1990).

Multidimensional constructs of perfectionism (Frost et al., 1990; Hewitt & Flett, 1991) show some dimensions of perfectionism, such as socially-prescribed perfectionism, are more strongly associated with mental health difficulties than others (Shafran & Mansell, 2001). This lends support to conceptualisations of perfectionism as having positive and negative domains (Hawkins et al., 2006).

Conversely, multidimensional constructs of perfectionism have been criticised for failing to differentiate between perfectionism itself and its associated features. This supports a cognitive-behavioural model of 'clinical perfectionism', conceptualised as a clinical construct in itself (Shafran et al., 2002, 2003). Recognising perfectionism as a transdiagnostic construct is key to understanding how it can be identified within health settings (Egan et al., 2011). Transdiagnostic processes in perfectionism reveal the underlying cognitions and behaviours that serve as maintenance factors across multiple disorders (Harvey et al., 2004), including anxiety, depression and eating disorders (Shafran & Mansell, 2001). Within health settings, if depression and anxiety alone are assessed, these risk missing perfectionism as an important maintenance factor. Treating perfectionism may be more effective in instances of comorbidity and may tackle this maintenance factor for both anxiety and depression.

Pregnancy is a time associated with biological and psychosocial change, with significant role changes (Riecher-Rossler & Rohde, 2005). Women with perfectionist traits may experience difficulty coping with the surge in demands and responsibilities of pregnancy, leaving them more vulnerable to increased stress (Milgrom et al., 1999) and mental health difficulties. Perfectionistic traits may lead to increased vulnerability to fears such as their ability to be a 'good mother' or care for one's baby (Buist et al., 2006), as well as fears about performing professional or social roles to a previous standard. The key component of clinical perfectionism is not simply striving for high standards, but the adverse impact of not meeting these standards on self-esteem (Macedo et al., 2009; Maia et al., 2012). It is hypothesised that perfectionism is more likely to manifest as anxiety in the antenatal period, but as depression in the post-natal period due to the inability to maintain standards and thus the activation of core beliefs associated with perfectionism.

If perfectionists hold beliefs of needing to appear perfect against a background of common stereotypes of mental health difficulties as indicating weakness and failure (Judd et al., 2008), combined with mental health stigma, those exhibiting clinical perfectionism may be reluctant to disclose mental health difficulties. Concealing negative personal information was found to contribute to psychological distress in those showing maladaptive perfectionism (Kawamura & Frost, 2004). Few women with perinatal mental health difficulties seek help (Bauer et al., 2014; Fonseca et al., 2015). This is despite the fact that they are more likely to have an undiagnosed mental health disorder than their non-pregnant peers (Ko et al., 2012). NICE (2014) emphasises that healthcare professionals should recognise that perinatal women with mental health difficulties may be concerned about stigma and disclosure, specifically related to negative views of them as a mother or fears of their baby being taken into care.

Not only do perfectionistic beliefs place women at greater vulnerability to mental health difficulties, they may also leave them more reluctant to disclose these or seek help due to stigma and high expectations placed on expectant mothers by themselves and society. Women report being unable to live up to societal standards of the “supermom”, leading to increased feelings of failure and self-stigma (Brown et al., 1997).

Postnatal women concerned about stigma prefer to share mental health difficulties with friends and family rather than healthcare professionals (Reilly et al., 2014). This is likely to hold true for antenatal women and has implications for how women are screened in healthcare settings and consideration of barriers to accessing support. Early detection of mental health difficulties via screening of antenatal women is imperative, in order to increase access to treatment and improve outcomes

for mothers and babies (Yawn et al., 2012). Ongoing symptoms of depression persisted five years postnatally in 30-40% of pregnant women with symptoms of depression (Giallo et al., 2015).

Research aims and questions

The aim of the study was to investigate clinical perfectionism amongst antenatal women and how this relates to anxiety, depression and potential disclosure of mental health difficulties. Secondly, to investigate specific pregnancy-related factors and how these relate to anxiety, depression and perfectionism. Lastly, to develop a new 5-item measure of pregnancy specific perfectionism and explore whether this accurately captures women's experience of perfectionism in pregnancy.

Between 10 and 20% of women develop mental health difficulties throughout pregnancy and the first postnatal year (Bauer et al., 2014) and it was hypothesised that similar rates would be found amongst this sample. Previous research has found episodes of depression occur more frequently during the first and third trimester of pregnancy, compared with the second (Marchesi et al., 2009) and it was hypothesised that participants would demonstrate increased anxiety and depression in the first and last weeks of pregnancy. The role of parity in antenatal anxiety is mixed. Some studies have suggested nulliparous (never given birth), and primiparous (pregnant for the first time) women are more at risk of antenatal anxiety (Raisanen et al., 2014), whereas others state multiparous (having had more than one child) women are at increased risk (Redshaw & Henderson, 2013). We therefore had no hypothesis about the role of parity in antenatal anxiety and wished to explore this amongst the sample.

The prevalence of high perfectionism was found to be 34% in a sample of women with postnatal depression, compared to 11% amongst controls (Gelabert et

al., 2012). It was hypothesised that perfectionism amongst this sample would be similar to that of the above control group, given the non-clinical sample from which participants were recruited. It was hypothesised that clinical perfectionism would be positively correlated with anxiety and depression. No prior research has investigated the role of perfectionism on method of conception. Based on several decades of clinical experience working as the lead psychologist in obstetrics and gynaecology, my supervisor and I hypothesised that increased perfectionism would relate to more 'active' means of conception such as use of ovulation kits (compared to spontaneous conception or IVF).

It was hypothesised that perfectionism would be associated with reduced likelihood of disclosure, due to perfectionistic individuals' concerns about choosing not to talk about negative personal information in order to maintain a flawless appearance (Kawamura & Frost, 2004). It was anticipated that participants would be more likely to disclose mental health difficulties to a personal rather than professional target, as found by previous research with other samples (Grice et al., 2018). Additionally, it was hypothesised that those scoring higher on perfectionism (CPQ) would be more likely to endorse statements on the COMIS.

Method

Participants

Participants were pregnant women between the ages of 18 and 46. The survey was piloted on three antenatal women. The feedback was considered, and the survey adjusted accordingly. Information about the study, including details of the measures and ethical approval, were sent to communications teams of the below organisations with a request to advertise the survey on their social media channels.

Measures

Participants provided demographic information for age, ethnicity, marital status, employment status and highest educational attainment. They were also asked about their experience of pregnancy to include factors which may have influenced their attitudes to disclosure and reported mental health difficulties. This included their week of gestation, whether this was their first baby or how many children they had (aside from current pregnancy), and whether it was achieved spontaneously or through ovulation kits or fertility treatment. Participants then completed measures examining common mental health difficulties ($n = 706$), clinical perfectionism ($n = 676$) and factors associated with disclosure of mental health difficulties ($n = 319$). All measures can be found in Appendix A.

Following measures of anxiety, depression and perfectionism, all participants were asked '*Are you currently experiencing emotional difficulties such as worries, anxiety or low mood?*', with a 'yes' or 'no' response. Those who responded 'yes' ($n = 323$) were then invited to complete further questions about disclosure of their mental health difficulties. For those who stated they were experiencing an emotional difficulty, they were asked '*have you talked to some of your family, friends or acquaintances about these?*', with a 'yes' ($n = 279$) or 'no' ($n = 44$) response. They were then provided with Rüsçh et al.'s (2011) amended measure looking at anticipated likelihood of disclosure amongst various targets. For those participants who stated they had not disclosed to family, friends or acquaintances ($n = 44$), they were invited to complete the adapted COMIS scale (Corrigan et al., 2010), identifying participant's reasons for choosing not to talk about their mental health difficulties.

Mental health difficulties. Depression was measured using the Patient Health Questionnaire (PHQ-9). The PHQ-9 is a nine-item widely used self-report measure with good psychometric properties (Kroenke et al., 2001). Total scores can range from 0 to 26, with a clinical cut off of nine. The PHQ-9 comprises five categories of severity; with 0-4 indicating no symptoms of depression, 5-9 mild symptoms, 10-14 moderate, 15-19 moderately severe and 20-27 severe depressive symptoms (Kroenke et al., 2001).

Anxiety was measured using the Generalized Anxiety Disorder Assessment (GAD-7). The GAD-7 is a seven-item widely used self-report measure with good psychometric properties (Spitzer et al., 2006). Total scores can range from 0 to 21, with a clinical cut off of seven. A cut off of five indicates mild severity, ten indicates medium severity and 15 indicates severe anxiety (Kroenke et al., 2001). On both measures, respondents indicate whether they have experienced any of the given symptoms on a four-point scale (0 = 'not at all' to 3 = 'nearly every day'). The PHQ-9 and GAD-7 were selected based on their use in numerous research samples, as well as broad use in clinical settings.

Perfectionism. Perfectionism was measured using the Clinical Perfectionism Questionnaire (CPQ; Fairburn et al., 2003), a self-report 12-item measure. Items include questions such as '*Have you pushed yourself really hard to meet your goals?*' and '*Have you raised your standards because you thought they were too easy?*'. The CPQ uses a four-point scale (1 = 'not at all' to 4 = 'all of the time') to measure perfectionism as striving to meet standards and effects on self-evaluation when standards are not met. Items two and eight are reverse scored. Total scores range from 12 to 48, with higher scores indicating higher levels of perfectionism and no specified clinical cut off. Internal consistency of the CPQ is good ($\alpha = .74$; Shafran et al., 2017),

including in a community sample ($\alpha = .83$; Chang & Sanna., 2012) and eating disorder samples (Egan et al., 2016; Steele et al., 2011). The CPQ was selected based on its use in the above community sample, as well as its approach to perfectionism as a clinical construct itself, which differs to other perfectionism measures more grounded in theory.

Secondly, a new five-item measure of pregnancy-specific perfectionism (PSP) was developed by the author and supervisors based on clinical experience. This aimed to capture perfectionism as it manifests specifically in the antenatal period. The measure used a four-point scale (1 = 'not at all' to 4 = 'all of the time') mirroring the scoring on the CPQ, and included items such as '*since becoming pregnant, have you found yourself concerned about doing the right/best thing for you and baby in terms of nutrition, exercise or other advice and guidance you have received?*' Total scores range from five to 20, with higher scores indicating higher levels of pregnancy-specific perfectionism and no specified clinical cut off.

Disclosure. Anticipated likelihood of disclosure was measured using a question adapted from a previous study by Rüsçh and colleagues (2011). In the original version, participants were asked to rate how comfortable they would feel talking to a friend or family-member about their mental health on a 7-point scale (1 = 'very uncomfortable' to 7 = 'very comfortable'). For this study, the question was adapted to ask about anticipated likelihood of disclosure instead of comfort. Participants were asked to rate how likely they would be to disclose mental health difficulties they might experience during the course of their pregnancy to various personal and professional targets.

Coming Out with Mental Illness Scale (COMIS). The COMIS (Corrigan et al., 2010) is a 21-item measure examining the experience of people disclosing mental

illness, on a 7-point agreement scale (1 = strongly disagree, 7= strongly agree). For this study, the original measure was shortened to 13 items and adapted through careful discussion with the research team to add relevance for an antenatal population and included items such as *'I concealed my emotional difficulties during pregnancy for fear my baby would be taken away'*. Total scores ranged from 13 to 91, with higher scores indicating greater concerns about revealing mental health difficulties, and no specified clinical cut off.

Procedure

Pregnant women were invited to participate in an anonymous online questionnaire via advertisements placed on social media channels focused on expectant mothers, including National Childbirth Trust (NCT) ($n = 127$), Baby Buddy ($n = 11$), Bumps and Burpees ($n = 377$) and Mumsnet ($n = 2$) (Appendix B). Data was collected between March and November 2020 as the first UK lockdown of the coronavirus pandemic started and restrictions to maternity services began. Participants who identified as meeting inclusion criteria for the study were invited to complete an online questionnaire. Prior to starting the questionnaire, they were presented with a full information sheet and consent form (Appendix C). Once consented, participants completed a series of demographic questions, the PHQ-9 and GAD-7 and perfectionism measures.

In total, 905 antenatal women accessed the survey. Sixty-eight respondents were screened out at the beginning of the survey due to not meeting inclusion criteria (<18 years old or pregnancy less than 12 weeks). A further 161 respondents began but did not complete the survey. The final sample of those completing the minimum dataset comprised 676 participants, resulting in a completion rate of 75%. As per

inclusion criteria, participants could read and write English and were not involved in any safeguarding procedures.

Ethical considerations

Ethical approval for this study was granted by the University College London (UCL) Research Ethics Committee (Project ID CEHP/2019/576, see Appendix D) and complied with the ethical principles of research with human participants. There was a clear statement that participation was on a voluntary basis and that participants had the right to withdraw from the study at any time. Once participants completed the survey, they were presented with details of how to contact the researchers to further discuss issues related to the study.

Power analysis

Power analysis for this study was informed by Shannon et al. (2018), who found a correlation of $r = .22$ (small to medium) for the relationship between attitudes towards help-seeking and perfectionistic self-presentation (a sub-measure of Hewitt and Flett's (1991) Multidimensional Perfectionism Scale) amongst university students. A power calculation was carried out using G*Power (Faul et al., 2007), giving a required sample size of 159 participants to provide 80% power with an alpha level of 5% to detect a small to medium effect size.

Statistical analysis

Analyses were conducted using JASP (version 0.14). Each measure was checked (PHQ-9, GAD-7, CPQ, PSP) for assumptions of normality using the Shapiro-Wilks test. Where normality was established, further correlations between variables were conducted using Pearson's r test or Spearman's ρ tests.

To investigate whether increased anxiety and depression in the antenatal period were associated with clinical perfectionism, the data was first explored using

descriptive statistics. The role of specific factors (such as trimester and pregnancy number) in increased risk of developing antenatal anxiety and depression was investigated using two one-way ANOVA's. If the ANOVA revealed a significant main effect of group, post-hoc Tukey corrected pair-wise comparisons were conducted to determine where any differences lay between groups. Spearman's rho correlations were conducted to investigate the correlation of composite scores on anxiety and depression, and both perfectionism measures. The strength of these two comparisons were compared using a z test to investigate whether anxiety or depression were more strongly correlated with perfectionism.

Participants' perfectionism scores were initially investigated using descriptive statistics. Efforts were made to validate the new measure using Cronbach's alpha to see whether the 5-item measure of antenatal perfectionism (PSP) accurately captured women's experience of perfectionism in pregnancy. Cronbach's alpha was computed for the five items in order to assess internal consistency (above 0.7 is good internal consistency). A one-way ANOVA was used to investigate any differences in the means of perfectionism (for the CPQ and PSP) between each method of conception. If the ANOVA revealed a significant main effect of group, post-hoc Tukey corrected pair-wise comparisons were conducted to determine where any differences lay between groups.

The role of perfectionism in influencing antenatal women's disclosure of mental health difficulties was initially explored using descriptive statistics to identify the proportion of the sample who had disclosed any difficulties. A one-way ANOVA was used to compare differences in perfectionism scores for those who did and did not disclose mental health difficulties. Further descriptive statistics were used to identify whom antenatal women were most likely to disclose to (target). Spearman's

rho correlations were conducted to investigate the correlation between scores on perfectionism (CPQ) and the COMIS.

In order to reduce the risk of type I error, caution was taken in interpreting *p* values; only those at or below .01 were interpreted as indicating significant findings. Findings between $p = 0.01$ and 0.05 have been reported but the need for caution has been stressed in each instance.

Results

Demographic information

The majority of participants (60%) were between 30 and 35 years of age, were white (96%), married (75%) or cohabiting (21%), a university graduate (85%), employed full time (68%), undergoing their first pregnancy (65%), conceived spontaneously (52%) and evenly spread across gestational stage (see Table 1).

Table 1. Participant demographic information ($N = 676$)

	<i>n</i>	%
AGE (years)		
18-23	6	1%
24-29	171	25%
30-35	402	59%
36-41	92	14%
42+	5	1%
ETHNICITY		
White	641	95%
Asian	17	2%
Other	16	2%
Black/African/Caribbean	1	1%
Middle Eastern	1	1%
MARITAL STATUS		
Married or civil partnership	513	76%
Cohabiting	138	20%
Single (never married)	24	4%
Separated	1	0%

Divorced	0	0%
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EDUCATIONAL ATTAINMENT

University graduate	576	85%
A-level or equivalent	75	11%
GCSE or equivalent	25	4%

EMPLOYMENT STATUS

Full time employment	457	68%
Part time employment	125	18%
Self-employed	51	8%
Full time carer/parent	23	3%
Unemployed	18	3%
Student	2	0%

GESTATIONAL AGE

12-18 weeks	160	24%
19-25 weeks	201	30%
26-32 weeks	160	24%
33-42 weeks	155	23%

PREGNANCY NUMBER

First	437	65%
Second	184	27%
Third	40	6%
Fourth	10	1%
Fifth +	5	1%

METHOD OF CONCEPTION

Planned - spontaneous	347	51%
Planned - use of ovulation kits	223	33%
Planned - IVF/fertility treatment	54	8%
Unplanned	52	8%

RECRUITMENT CHANNEL

Instagram/Bumps & Burpees	357	53%
NCT	126	19%
Facebook	101	15%
Word of Mouth	71	11%
Baby Buddy	10	1%
Twitter	8	1%
Mumsnet	2	0%

Anxiety and depression in the antenatal period

The Shapiro-Wilks test revealed that scores on both the PHQ-9 ($M = 5.61$, $SD = 3.58$) and GAD-7 ($M = 4.55$, $SD = 3.97$) were not normally distributed ($p < .001$), both showing a negative skew.

Participants' ($n = 676$) scores on mental health difficulties showed 17% ($n = 123$) scored above clinical cut-offs for depression, and 23% ($n = 162$) for anxiety. This compared to 48% ($n = 323$) who subjectively stated they were currently experiencing emotional or mental health difficulties.

Specific antenatal factors associated with depression and anxiety

Week of gestation and anxiety. A one-way ANOVA revealed no main effect of group ($F(3, 702) = 2.40$, $p = .06$), suggesting no difference in anxiety scores depending on week of gestation. No statistically significant differences were found in any other pairwise comparisons.

Week of gestation and depression. Women in the final weeks of pregnancy (33-42 weeks) demonstrated higher means on depression than those in all earlier weeks of pregnancy. The results of a one-way ANOVA revealed a main effect of group (week of pregnancy) on depression scores ($F(3, 702) = 4.68$, $p = .03$), not significant though at the 1% level. Post-hoc Tukey corrected pair wise comparisons revealed a significant difference between those 19-25 weeks pregnant and those in their final weeks of pregnancy (weeks 33-42), ($t = 3.64$, $p = .002$). Those in the latter group had higher PHQ-9 scores than women who were 19-25 weeks pregnant. No other statistically significant differences were found in pairwise comparisons.

Number of pregnancies and anxiety. A one-way ANOVA revealed a significant main effect of group (number of pregnancies) ($F(4, 701) = 5.24$, $p =$

.001), indicating a significant difference in anxiety between women with different numbers of pregnancies. Post-hoc Tukey corrected pair wise comparisons revealed a significant difference between groups 1 (first pregnancy, $n = 437$) and both 3 (third pregnancy, $n = 40$) and 4 (fourth pregnancy, $n = 10$), such that those in group 3 ($t = 3.14, p = .015$) and 4 ($t = 3.30, p = .009$) had higher anxiety scores than group 1. Further, those in group 4 showed higher anxiety scores than those in group 2 (second pregnancy) ($t = 2.87, p = .034$). Some of these results risk Type I error and may be accounted for by the differences in sample size between groups and may be underpowered to detect true effects.

Clinical perfectionism in antenatal women

Participants' ($n = 676$) CPQ scores ($M = 25.20, SD = 5.37$) suggested variability in the sample and a slight negative skew in the distribution of scores. A total of 26% ($n = 175$) participants scored in the top quartile on the CPQ. The Shapiro-Wilks test revealed that the data were not normally distributed ($p < .001$). On the PSP ($M = 11.54, SD = 2.43$), 34% of participants ($n = 233$) scored in the top quartile. The Shapiro-Wilks test indicated that scores on the PSP were not normally distributed ($p < .001$), with a slight negative skew.

Validating the PSP. As the PSP is a new measure, before using it in further analysis, its psychometric properties were explored. Correlations between individual items can be found in Table 2. Measures of internal consistency using Cronbach's alpha indicated relatively low internal consistency, $\alpha = .530$. Removal of no single item increased the internal consistency.

Table 2. *Correlations for items on the PSP (N = 676)*

Variable	<i>M</i>	<i>SD</i>	PSP1	PSP2	PSP3	PSP4
PSP1	2.22	0.74	-			

PSP2	2.53	0.76	.371***	-		
PSP3	1.94	0.84	.091*	.118**	-	
PSP4	2.49	0.90	.073	.268***	.238***	-
PSP5	2.37	0.87	.249***	.152***	.132***	.159***

* $p < .05$, ** $p < .01$, *** $p < .001$

A principal component analysis (PCA) was conducted on the five items with oblique rotation (direct oblimin). The Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy value of $>.88$ indicated that the sample size was very good for the purposes of these analyses. All five items of the PSP loaded onto the same factor and the model fit was significant (Appendix E). While these analyses indicate the PSP needs refinement before it is deemed a sound measure, it has been included in analysis and the findings herein related to the PSP are treated tentatively.

Perfectionism and method of conception. One way ANOVA revealed no significant differences in perfectionism (CPQ) scores by method of conception (planned spontaneous, use of ovulation kits, IVF, unplanned). The results of a one-way ANOVA revealed a main effect of group (method of conception) on PSP scores ($p = .030$). Post-hoc Tukey corrected pair wise comparisons revealed a significant difference between groups 1 (spontaneous planned, $n = 347$) and 2 (ovulation kits, $n = 223$). Those in group 2 (ovulation kits) had higher ante-natal perfectionism (PSP) scores than group 1 (spontaneous planned) ($t = -2.82$, $p = .025$). Caution is needed in interpreting the results due to the risk of Type I error. There were no statistically significant differences found between any other pairwise comparisons.

Relationship between anxiety, depression, and perfectionism. Depression was positively correlated with perfectionism on both the CPQ ($r_s(705) = .273$, $p < .001$) and PSP ($r_s(705) = .343$, $p < .001$), (see Table 3). Further, anxiety was

positively correlated with perfectionism, on both the CPQ ($r_s(705) = .379, p < .001$) and PSP ($r_s(705) = .415, p < .001$).

Table 3. *Correlations between PHQ, GAD, CPQ and PSP total scores*

Variable	<i>n</i>	<i>M</i>	<i>SD</i>	PHQ9	GAD7	CPQ	PSP
PHQ9	676	5.61	3.58	-			
GAD7	676	4.55	3.97	.637***	-		
CPQ	676	25.20	5.37	.273***	.379***	-	
PSP	676	11.54	2.43	.343***	.415***	.398***	-

* $p < .05$, ** $p < .01$, *** $p < .001$

In identifying whether anxiety or depression might be more correlated with perfectionism, the strength of the two comparisons was compared. The z score showed anxiety was more strongly correlated with perfectionism on the CPQ than depression ($Z = -2.23, p = .03$). There was no significant difference between depression and anxiety on the PSP ($Z = -1.58, p = .11$).

Perfectionism and antenatal women’s disclosure of mental health difficulties

Disclosure of antenatal women’s mental health difficulties. Of those who subjectively stated they were experiencing mental health difficulties during pregnancy ($n = 323$), 86% ($n = 279$) had disclosed, and 14% ($n = 44$) had not disclosed this to another person.

Targets of antenatal women’s disclosure of mental health difficulties.

Participants were most likely to disclose mental health difficulties to their partner, followed by a close friend (see Table 4). Overall, participants were more likely to disclose to personal (partner, family and friends), rather than professional targets (midwife, GP).

Table 4. Likelihood of antenatal women's disclosure of mental health difficulties by target

Target	Mean Score
Partner	6.336
Close friend	5.350
Family member	5.211
Midwife	4.897
Obstetrician	4.418
GP	4.276
Ante-natal class leader (e.g. NCT)	3.835

Perfectionism and disclosure of mental health difficulties in antenatal

women. A one-way ANOVA showed no significant difference in perfectionism scores (CPQ) between women who had or had not disclosed emotional difficulties ($F(1, 321) = .73, p = .39$).

Factors influencing antenatal women's concealment of mental health

difficulties. Among women who reported experiencing mental health difficulties but had not disclosed these ($n = 44$), a positive correlation between perfectionism and COMIS scores was observed ($r_s(43) = .362, p = .026$).

Discussion

This study sought to investigate clinical perfectionism amongst an antenatal population, and how it relates to common mental health difficulties and their disclosure. The key findings can be summarised as follows; 23% experienced anxiety and 17% depression. Participants in their final trimester showed higher anxiety and depression scores than those at earlier stages of pregnancy, partially supporting our hypothesis. Multiparous women demonstrated significantly greater anxiety scores than primiparous women. The majority of participants showed low levels of clinical and pregnancy related perfectionism. As hypothesised, increased anxiety and

depression in the antenatal period were both positively associated with clinical perfectionism when measured using both the CPQ and the PSP. Additionally, antenatal perfectionism (measured by the PSP) was also positively correlated with more 'active' means of conception, i.e., use of ovulation kits.

The novel measure of pregnancy-specific perfectionism (PSP) had poor internal consistency, yet did appear to capture a distinct aspect of perfectionism to the CPQ. PSP scores did positively correlate with anxiety and depression scores. The majority of women who stated that they were experiencing a mental health difficulty ($n = 323$) had disclosed this (86%, $n = 279$). They were most likely to have disclosed to their partner, and overall more likely to have disclosed to a personal rather than a professional contact, as expected. However, contrary to our hypothesis, perfectionism had no bearing on whether someone had disclosed their difficulties. Lastly, as hypothesised, participants with higher perfectionism scores were more likely to endorse the need to not reveal mental health difficulties as measured on the COMIS. The findings and their implications are discussed below.

Perfectionism in antenatal women

The results showed a negatively skewed distribution of scores for clinical perfectionism on both the CPQ and PSP. This suggests that the majority of participants scored low on perfectionism, with 26% ($n = 175$) of participants in the top quartile of perfectionism CPQ scores, as might be expected in a non-clinical sample. Of note though, the CPQ and PSP do not have clinical cut offs.

When examining specific aspects such as method of conception, those who had used ovulation kits to assist conception were found to have higher PSP scores than those who conceived spontaneously. This corroborates hypotheses from clinical practice that women who take active measures to plan or control pregnancy may be

more likely to demonstrate perfectionistic traits. Previous research has identified perfectionism as a transdiagnostic construct associated with increased need for control and neuroticism (Egan et al., 2011), as well as a relationship between neuroticism and perfectionism (Enns et al., 2005). This is here exemplified in a construct related to antenatal women's experience.

The novel five-item measure of pregnancy-specific perfectionism (PSP) had low internal consistency. Values as low as 0.5 have been deemed sufficient in the early stages of research (Nunnally, 1978). The figure is understandably low given the few items on the PSP scale and further work is warranted by adding additional items to increase the internal consistency (Cortina, 1993). The principal component analysis found all five items of the PSP loaded onto the same factor and the model fit was significant, yet the measure requires development before further application.

There has been a call for a revised measure of perfectionism (Chang et al., 2008), less based in theory, but more grounded in clinical observation. Rather than identifying whether a woman displays an "adaptive" or "maladaptive" type of perfectionism, Macedo et al. (2009) stated it would be more beneficial to identify whether high levels of antenatal perfectionism are associated with mental health difficulties, or act as a risk factor for later post-natal depression. The development of the PSP was an attempt at developing such a measure, which could be used in screening and therapeutic contexts. In view of its low internal consistency in the present study, further work is needed to develop such a measure.

Perfectionism is associated with anxiety and depression in antenatal women. As anticipated for a non-clinical sample, the distribution of scores for both anxiety and depression showed a negative skew. Of those who completed the PHQ9 and GAD7, 17% ($n = 123$) scored above clinical cut-offs for depression, and 23% (n

= 162) for anxiety. This compares to 4.3% of adult women nationally for depression and 7.5% for anxiety (NHS Adult Psychiatric Morbidity Survey, 2014), and 10 to 20% reported by previous research on women in the perinatal period (Bauer et al., 2014). When accounting for those who subjectively stated they were experiencing emotional or mental health difficulties, this figure rose to 48% ($n = 323$), indicating almost half of the women surveyed were subjectively experiencing psychological distress. These findings should be understood in the context of recruitment for the study taking place during the early stages of the Covid-19 pandemic, with women facing significant uncertainty about their birth and changes to routine antenatal appointments such as fewer appointments and partners not being able to attend, as well as increased risk to their physical health by uncertainties of being placed within a vulnerable health category (Sanders & Blaylock, 2020). National maternity support groups reported high levels of anxiety among women accessing maternity care within weeks of Covid-19 service changes (National Childbirth Trust [NCT], 2020).

There is evidence that mental health difficulties are under-identified and under-treated in the perinatal period (Coates et al., 2004), where less than 33% of women with substantial anxiety or depression symptoms were detected. This may be due to a lack of knowledge about what constitutes typical changes in pregnancy (physically and psychologically). Whilst the proportion of participants who had accessed formal support for psychological difficulties was not investigated, future research would benefit from identifying this.

Some specific antenatal factors such as week of gestation and number of pregnancies were examined to identify any potential association with anxiety or depression. When investigating week of gestation, women in the final weeks of pregnancy showed significantly higher depression scores than those in earlier weeks

of gestation. This corroborates previous research findings demonstrating greater incidence of anxiety and depression in the final trimester as women approach childbirth (Marchesi et al., 2009). This is particularly likely to be the case as women approached birth in the context of Covid-19 and the UK's first lockdown, and the stressors and uncertainties associated with this period.

Previous research has suggested that primigravida women are likely to show higher incidences of anxiety than multiparous women (Biaggi et al., 2016). However, the present findings did not support this; those undergoing their third and fourth pregnancies demonstrated higher levels of anxiety than first-time mothers. These findings could be interpreted in the context of the Covid-19 pandemic whereby women's experiences of pregnancy and upcoming birth were very different to earlier pregnancies, whilst also facing uncertainties about schooling and childcare for older children. These results may also be accounted for by the differences in sample size between groups and the study may have been underpowered to detect a true effect.

Research with postnatal women has demonstrated a relationship between clinical perfectionism and postnatal anxiety and depression (Gelabert et al., 2012), and a similar hypothesis relating to antenatal women was confirmed in this study. Depression and anxiety were positively correlated with clinical perfectionism (as measured on both the CPQ and the PSP). This study also sought to identify whether anxiety or depression have a stronger association with perfectionism antenatally. It was hypothesised that amongst antenatal women, perfectionism was more likely to manifest as anxiety. Considering a cognitive-behavioural model of perfectionism (Shafran et al., 2002), perfectionism in the antenatal period may manifest as high goal setting, anxious thoughts, over-preparing or preoccupation with control, factors

linked to anxiety. In contrast, postnatally perfectionism may be more strongly associated with depression when aspects of perfectionism, for example unattainability of goals and the resultant self-critical thinking and unrelenting standards are understandably unachievable. The findings supported this hypothesis, such that antenatally anxiety was more strongly correlated with perfectionism on the CPQ than depression amongst this sample.

Perfectionism and disclosure

Previous research has found that women who experience stigma postnatally may show a preference for sharing their mental health difficulties with friends and family, rather than a healthcare professional (Chew-Graham, et al., 2009; Reilly et al., 2014). Similar findings were reported by pregnant women (Kingston et al., 2015), and corroborated in this study. Participants' greater likelihood to disclose mental health difficulties to their partner may also be understood in the context of Covid-19 where women had less social contact with others outside their household. Regardless, the findings suggest a need to promote more openness about mental health difficulties and challenge stigma within antenatal services, such as reframing the language used by healthcare professionals about indicators of perfectionism. Expectant mothers should be supported to speak freely and pursue help for mental health difficulties. Pregnant women and their support network should be educated about perinatal mental health and how this may manifest in pregnancy so that early intervention can be provided for women.

Strengths and Limitations

This is the first study, to my knowledge to investigate perfectionism and disclosure of mental health difficulties in antenatal women. The sample size achieved exceeded the power analysis.

The development of the PSP has several limitations and should be regarded as a preliminary study in need of further refinement. There is likely to be some overlap of items in the PSP with anxiety more generally, which may affect its validity. Further steps to develop a reliable and valid measure are required. A first draft could be further developed via pilot qualitative interviews. Subsequent drafts could be developed via testing on the target population, i.e., antenatal women who score highly on perfectionism (as measured via other perfectionism measures). Reliability and factor analyses could be run on the pilot sample to examine items to be added or removed. Once an initial measure has been developed, a formal reliability study would be needed on a large sample of the target population. Item characteristics, internal consistency and factor structure could then be examined. Test-retest reliability could be assessed via offering the measure twice to some participants. If the reliability and factor structure were deemed satisfactory, validity studies could be conducted to examine the measure's correlations with other criteria and constructs. The PSP would then require administering alongside similar and different measures, such as a social desirability measure and a measure to establish discriminant validity. The self-report measure could be delivered alongside observer ratings to overcome the limitations of self-report only measurement.

To improve its internal consistency, future research may benefit from identifying a larger pool of items that might tap into the construct of antenatal perfectionism and then run an exploratory factor analysis to find common items that all tap into a similar latent factor. This could then be tested in a new sample via a confirmatory factor analysis to validate whether those highly related items are indeed related.

All measures in the study are self-report measures. This runs the risk of impacting validity and inflating associations between measures. In this example, the subjectivity of self-report measures could mean that those who were more concerned about reporting mental health difficulties, perhaps due to factors related to perfectionism, were more likely to under-report items on the PHQ-9 and GAD-7.

Some studies cited here looked at perfectionism and disclosure of mental health difficulties in students or (trainee) mental health professionals. It may be that antenatal women are an inherently different cohort with materially different concerns about disclosing mental health difficulties. It may be that the stakes are higher in antenatal women such that women are therefore more or less likely to disclose difficulties when weighing up the potential benefits and repercussions of not doing so. It may also be the case that whilst students or trainees who score highly for perfectionism have less to lose through disclosing mental health difficulties, antenatal women may conversely feel there is much at stake, particularly those who are concerned that disclosure may lead to consequences such as their baby being removed into care. Despite the studies anonymity, those concerned about disclosing mental health difficulties would potentially be more likely to under-report on measures in the study.

When compared with the ONS (2011) census, the sample was not representative of the national population. In 2011 census, 14% of the population identified as Black, Asian or Other minority ethnic (BAME), compared to 7.5% of the present sample. For educational attainment, in the 2011 census 27% identified as university graduates, whereas in this study the figure was 85.4%. Reports from previous research suggest that both women with few years of education (Gurel & Gurel, 2000) and highly educated women (Yonkers et al., 2001) are at increased risk

of perinatal depression. Given the high proportion of highly educated women in this sample, there may therefore be some bias in the findings. Women were recruited to the study online, which commonly attracts young, educated, middle-class individuals, leaving others less represented (Hewson, 2015). The organisations from which women were recruited are likely to have played a key factor in the homogeneity of the sample. Most participants were recruited via ‘Bumps & Burpees’ (a pre- and post-natal fitness website), and it is possible that those using this website during pregnancy exhibit greater perfectionistic tendencies than those who do not use such websites. Women of BAME backgrounds were under-represented yet are likely to face increased mental health stigma and barriers to disclosure of mental health difficulties (Eylem et al., 2020). This means that the findings related to perfectionism and disclosure of mental health difficulties in this study are not generalisable to individuals from different cultures and are likely to be impacted by other factors such as previous experience of disclosure in other settings. The study found that most women had disclosed their mental health difficulties to at least one other person. However, given that the sample was not representative, the findings may not be generalisable to the general population of expectant mothers. The measures used to investigate disclosure of mental health difficulties cannot account for the unique, context-specific factors that may influence the decision to share or to keep private personal information during pregnancy.

Participants in the study were not asked about any history of mental health difficulties, or whether they were currently supported by mental health services. Whilst clinical perfectionism could be regarded as a stable underlying personality trait, the data on mental health difficulties is merely a snapshot at a point in time, with no contextual information on history or comorbidity. It is not possible to

account for all potential factors contributing to antenatal anxiety and depression. In Biaggi et al.'s (2016) systematic review, the authors found multiple factors influence antenatal anxiety and depression including history of mental health difficulties, lack of social support, history of abuse or domestic violence, other adverse life experiences, present/past pregnancy complications and pregnancy loss.

Finally, the correlational design means we cannot deduce if perfectionism plays a causal role, i.e. whether perfectionism causes anxiety and depression or renders one less willing to disclose mental health difficulties. Stigma and stereotypes of pregnancy and motherhood may mean that experiencing mental health difficulties leads to a desire not to reveal imperfection.

Implications

Anxiety and depression are well-known risk factors for postnatal depression, with consequences for parents, babies, and the mother-infant relationship (Beck, 2002; Milgrom et al., 2008; O'Hara & Swain, 1996; Robertson et al., 2004). Perfectionism has been established as a transdiagnostic construct underpinning these common mental health difficulties (Egan et al., 2011). The present study has established a relationship between perfectionism and anxiety and depression in antenatal women. Even amongst a non-clinical sample, 17% ($n = 123$) scored above clinical cut-offs for depression, and 23% ($n = 162$) for anxiety. This compared to 48% ($n = 323$) who subjectively stated they were currently experiencing emotional or mental health difficulties. Pregnant women experience increased contact with health services via antenatal screening appointments, and a precious opportunity may be missed to identify women with perfectionistic personality traits and offer them psychological support to improve their capacity to manage difficulties associated with perfectionism, potentially before these become significantly exposed or severe.

That being said, identifying such women in clinical contexts is not straightforward, and as evidenced by the current research, not only are women more likely to disclose psychological difficulties to their friends and family rather than professionals, but they may also face greater internal fears and barriers to disclosing difficulties, perhaps due to feelings of anxiety or depression being at odds with expectations of pregnancy as a time of happiness (Marcus, 2009). Attention should be paid to the timing of mental health screening in pregnancy, mindful of the fact that difficulties may be more likely to present in the first and final trimesters, or that women may only develop symptoms later (Biaggi et al., 2016). Maternity professionals could identify women at risk of mental health difficulties, with awareness of risk factors such as high perfectionism and offer preventative interventions during pregnancy (Milgrom & Gemmill, 2015). Being mindful of factors such as mental health stigma that influence disclosure of mental health difficulties, using language with antenatal women such as having ‘high standards’ may be more helpful than using psychiatric terminology, which research has found inhibits women sharing with health professionals (Marcus, 2009). In their paper, Rosan et al. (2016) make suggestions for health visitors on ways in which to identify and work with perfectionism in antenatal women.

Even if standardised measures to screen for perfectionism in pregnancy are not warranted, there is an argument for maternity care providers to understand dispositional personality factors placing women at risk of developing perinatal mental health difficulties. This could be coupled with raising awareness of how such personality factors may influence disclosure and interact with stigma, to inhibit women’s willingness to discuss their difficulties. During antenatal appointments,

where increased perfectionism is suspected, education could be provided according to recommendations outlined in *Implementing Better Births* (NHS England, 2017).

There is a danger of locating the ‘problem’ of mental health difficulties within women, most notably as this leads to professionals such as clinical psychologists targeting their interventions to a diagnosis. Clinical psychologists could also work to raise awareness and target the broader systemic factors such as socio-economic difficulties or social isolation that play a key role in the development of perinatal mental health difficulties. This work could be done at an individual level, but also a broader level such as via lobbying for changes in policy.

A societal and cultural shift is required to manage expectations around pregnancy, birth and parenthood. This may better prepare women for the transition to parenthood, especially in instances where they hold idealised views or very high standards. Given the recent expansion of specialist perinatal mental health services (see *The Perinatal Mental Health Care Pathways*, National Collaborating Centre for Mental Health (2018)), clinical psychologists are in an ideal position to challenge outdated views. The recent introduction of national maternal mental health services will provide support to such women, yet consideration should be paid to their title given the role of stigma and increasing access to support. These services are designed to preventatively address perinatal mental health difficulties. This research identified that many women reported experiencing emotional distress yet did not reach clinical criteria for diagnosis. Maternal mental health services need to consider ways in which they can deliver support to women who may not satisfy diagnostic criteria that are traditionally used to access services, or who may score highly on transdiagnostic constructs such as perfectionism. Healthcare providers should also

consider targeted interventions for managing unhelpful perfectionist beliefs specific to the perinatal period.

Recommendations for future research

Future research would benefit from replicating the current study following Covid-19 restrictions to identify whether the findings hold true. Further replication would also be beneficial with women of more diverse ethnic and educational backgrounds, in order to examine any alternative findings pertaining to disclosure of mental health difficulties. There is a need for longitudinal research to examine if treating clinical perfectionism in pregnancy can reduce common mental health difficulties throughout the perinatal period and increase the likelihood of help seeking for mental health difficulties. It may also be worthwhile examining other personality factors (such as neuroticism) that may influence the development of perinatal mental health difficulties and disclosure. Further, it would be helpful to investigate whether perfectionism is more likely to manifest as depression rather than anxiety in the postnatal period. Other research has called for a more specific measure of clinical perfectionism that is adapted for the perinatal population (Price et al., 2020). It would be worthwhile developing the PSP to create a psychometrically sound measure that accurately captures perfectionism in the perinatal period.

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Part 3: Critical Appraisal

Introduction

This critical appraisal is a reflection on my experience of conducting the conceptual introduction described in Chapter 1 and the study described in Chapter 2, and the challenges I encountered in this process. Firstly, it includes my reflections on selecting this topic and my background to the research, including consideration of how perfectionism and disclosure in antenatal women came to be the focus; Secondly, I discuss my reflections on the conceptual introduction; Thirdly, I reflect on the methodological and analysis process and the challenges that arose; Fourthly, an expansion of the limitations of the research and implications, and finally, I discuss personal learning points and which aspects I would alter if the study were to be repeated.

Reflections on selection of subject area

Perfectionism in antenatal women has been a longstanding interest of mine. This interest evolved with my clinical work on the D Clin Psy, specifically on my placements within women's health (obstetrics and gynaecology), a mother and baby unit, and a community perinatal mental health team. Throughout this clinical experience I witnessed first-hand the ways in which personality characteristics such as perfectionism influenced women's development and maintenance of mental health difficulties in the perinatal period. This was corroborated by clinical supervisors who anecdotally noticed similar themes in their practice, with significant numbers of women demonstrating cognitive and behavioural characteristics of perfectionism. My thesis supervisor (Dr Sarah Finnis) expressed her interest in exploring this within her service. We began to routinely assess for perfectionism, in addition to pre-existing routine measures of depression and anxiety, discovering that a great many service users showed high perfectionism scores. Dr Finnis had published on the topic

of antenatal perfectionism previously (Rosan et al., 2016), identifying perfectionism as a risk factor for later mental health difficulties such as postnatal depression, and was keen to develop this research further.

In practice, there appeared to be a specific way in which perfectionism manifested in antenatal women. Women were referred to psychology for difficulties such as ‘anxiety’ or ‘difficulties adjusting to pregnancy’. I listened during assessments to women describe excessive worries about whether to deliver via caesarean section or vaginally or wondering how they would be able to maintain their standards in their career and personal life on top of taking care of a baby. They reported spending hours researching pregnancy nutrition and advice, purchasing the ‘best’ equipment, and developing elaborate birth plans. All these reports painted a picture of women’s idealised views of pregnancy, birth and the transition to parenthood, fed to them by mainstream society, their families or even their ante-natal classes, and feeding a narrative that there was a ‘right’ or a ‘best’ way to ‘do’ motherhood. Whilst certain aspects of perfectionism might have been advantageous to these women throughout their lives thus far, allowing them success academically or in their careers, something about the unique unpredictability and uncertainty of pregnancy and new parenthood ignited novel anxieties and frantic attempts to manage them.

Where anxiety led, shame soon followed. As we attempted to unpick the socially constructed narratives around pregnancy and motherhood, women spoke of prolonged periods of not telling another person about their inner worries or feelings. As they described all the ‘should’s’ and ‘musts’ of what new mothers were ‘supposed’ to be feeling, they simultaneously described fears of being judged negatively by friends, family and professionals. A pattern began to emerge depicting

something socially unacceptable about experiencing a mental health difficulty in pregnancy and at the far end of the spectrum, worries that it would lead to their baby being removed into care. This made it difficult for women to discuss their feelings with others, let alone seek support. Often when women did seek professional support, it was after months of suffering in silence, left until the cusp of delivering their babies. Professor Katrina Scior has longstanding expertise in stigma and disclosure research, more recently examining this in the context of perfectionism. Antenatal women were a distinct group of people for whom mental health stigma and fears about disclosure were pertinent. Thus, the marrying of the two concepts came to be, investigating perfectionism and its relationship with mental health difficulties and their disclosure in antenatal women.

Reflections on conceptual introduction

As I set about the conceptual introduction, my eyes were opened to new ways of understanding clinical perfectionism. Up until that point, my understanding of perfectionism was solely grounded in clinical experience as a construct which could be understood in the cognitive-behavioural terms outlined by Shafran et al., (2002). As I delved into the literature, I familiarised myself with the multidimensional and socially prescribed theories of perfectionism within academic literature (Frost et al., 1990; Hewitt and Flett, 1991). A cognitive-behavioural model undoubtedly influenced the lens with which I studied the literature and the design of the research questions for the empirical paper, as well as selection of the perfectionism measure (CPQ, Fairburn et al., 2003). My clinical work with antenatal women certainly also influenced my focus on the literature describing perfectionism as a transdiagnostic construct, and how this related to anxiety in pregnancy.

I began the research with no previous knowledge or experience of the theory relating to disclosure of mental health difficulties. Therefore initially there was a significant task of sufficiently familiarising myself with this literature in order to narrow the focus on its applicability to antenatal women, as well as consider the development of my research questions and select appropriate measures.

Reflections on methodology, analysis and challenges

It had originally been intended that recruitment for this study would have two recruitment channels, one via social media to recruit a non-clinical population and one via the NHS, with the latter being recruited from an existing maternity service. However, due to factors associated with Covid-19, the study was adapted to recruit exclusively online. Whilst this provides more generalisable findings on rates of perfectionism and common mental health difficulties in the general population, it missed an opportunity to identify these amongst those already engaged within a maternity system with an established pathway for psychological support.

Conducting the survey online offered advantages and disadvantages. It offered a cost-effective and timely means of participating, it reached a nationwide sample, allowed anonymity and facilitated straightforward data collection (Benfield, 2006). In fact, the majority of participants were recruited within days of the initial advertisement being placed on social media. This was likely facilitated by the UK recently entering its first Covid-19 lockdown, with many women facing uncertainties about their maternity care and probable higher usage of social media. However, completing an online survey did not allow participants the opportunity to clarify queries with the items. Though reliability analyses of the published measures used showed good internal consistency, participants interpreting items differently may have reduced the reliability of the study.

The Clinical Perfectionism Questionnaire (CPQ, Fairburn et al., 2003) was selected to measure perfectionism based on it having good internal consistency, its existing use in clinical services, and its brevity. The items are grounded in clinical practice and application and I had familiarity having used it clinically. However, having studied the literature on perfectionism further following publication of the survey, I reflected it may have been helpful to have included additional measures of perfectionism. Multidimensional constructs of perfectionism (Frost et al., 1990; Hewitt & Flett, 1991) show socially-prescribed perfectionism is more strongly associated with mental health difficulties than others (Shafran & Mansell, 2001), and its inclusion would have been beneficial.

Use of the Coming out with Mental Illness Scale (COMIS, Corrigan et al., 2010) as a disclosure measure in hindsight offered to narrow a focus. It failed to account for the multiple factors that may influence disclosure such as the setting of disclosure, cultural beliefs, or previous experiences of mental health or disclosure.

A further challenge existed in asking participants about a concept that they may not have considered to be problematic, i.e. perfectionism. In fact, they may have viewed this as a helpful trait. This may in itself have acted as a factor which inhibited disclosure of mental health difficulties. Care was paid to attempt to overcome this by using non-stigmatising language and the all-encompassing term of 'emotional difficulties' rather than using diagnostic terms.

My enthusiasm for the topic meant that there were numerous avenues for exploration I wished to consider. My clinical experience meant I had hypotheses about the obstetric factors that were likely to be related to perfectionism, such as means of conception. Indeed, previous research had established links between factors such as gestational age and mental health difficulties, and I wished to explore the

role perfectionism played. Unfortunately this also meant I increased my risk of making type 1 errors. It may have been better to be more selective in my analyses or use these findings as an exploratory platform from which further research could be conducted.

Having never conducted quantitative research previously, I was nervous about feeling at sea as I embarked on this research. It remains fair to say that throughout much of the analysis I was figuring it out as I went along, and the support and guidance of my supervisor and friends who were better versed in statistics was invaluable. This lack of familiarity meant that designing the study itself and anticipating the analysis was challenging and has meant that there are several changes I would make if I were to repeat the study again.

Reflections on limitations and implications

The research benefited from a large sample size, offering the opportunity to explore the concepts amongst a non-clinical population and having achieved statistical power. However, the study had several limitations as outlined in the empirical paper and expanded upon here.

Many of the studies cited concern perfectionism and disclosure of mental health difficulties in trainees/mental health professionals. How applicable these findings are to antenatal women was debated. Whilst research has found mental health professionals fear disclosure may negatively influence career progression or professional standing (Cohen, Winstanley, & Greene, 2016; Huet & Holttum, 2016; Sawyer, 2011; Tay, Alcock, & Scior, 2018), other factors apply in antenatal women, all of which are likely to impact decisions about disclosure. What was not investigated, and would benefit from further qualitative analysis, was which factors bolstered antenatal women's disclosure of mental health difficulties. Some

hypotheses are that such women may feel a sense of urgency to seek support in the antenatal period given the impact not only on themselves but also their baby. Whilst perhaps less concerned with the impact of disclosure on their careers, such women may have more concerns about stigma related to judgements about their ability to be a 'good' mother, or how professionals may respond to disclosure of mental health difficulties in the antenatal period. It is also possible that antenatally highly perfectionistic women may seek to get as much help as possible as a means of doing pregnancy 'right'. This may be a factor in the relationship between perfectionism and mental health disclosure, in so far as disclosure may be a strategy to manage anxiety.

In terms of representativeness of the sample, the organisations from which women were recruited were likely to be the biggest factor impacting on the demographics of women completing the survey. This makes it impossible to explore the cultural factors that might influence women's disclosure, for example factors that might make it more difficult within certain cultures to disclose mental health difficulties to one's family.

Given the difficulty women may have talking about mental health difficulties in the antenatal period, it is important for professionals to consider their language, tone and how to frame questions when exploring perfectionism and mental health difficulties. How comfortable women are made to feel could make all the difference in a decision to disclose or not. In recognising signs of perfectionism, it is helpful for professionals to hold in mind that it does not solely apply to the stereotypical middle-class, high-achieving mother, but can present across backgrounds. Even using the word 'perfectionist' may feel stigmatising for some women, so using alternative language such as 'high standards' or 'doing your best' may be more acceptable.

Achieving a socio-cultural shift in how we construct expectations around pregnancy, birth and parenthood is likely to take time. The role of social media and television can perpetuate unrealistic and idealised views. Whilst psychologists are in a position to challenge such views, there is a role for all professionals, and all women to share a more realistic and forgiving narrative about pregnancy and parenthood. This would reduce stigma around perinatal mental health difficulties and likely facilitate discussions and help-seeking when women recognise they are struggling.

Recommendations for future research

Future research would benefit from including greater diversity in ethnic and education backgrounds. This would help to shed more light on cultural and socio-economic factors that may influence disclosure of mental health difficulties. We know that perfectionism is often stereotyped as pertaining to middle class, high-achieving women, and so understanding the breadth of reasons why women may want the ‘best’ for their baby would help to mitigate this stereotype. Importantly, more inclusive research would help to understand cultural factors influencing disclosure of mental health difficulties, and whom they are more comfortable disclosing to.

Longitudinal research could explore the link between interventions for perfectionism in the antenatal period and the impact this has on postnatal outcomes (as suggested by Austin et al., 2007 and Milgrom, 2008). Arguably, preventative interventions for perinatal women are doubly important, with the potential for better outcomes for mothers, babies and their families. Antenatal women are well-engaged with services, whether it be through standard maternity care or antenatal classes such as NCT, and there are ample opportunities to identify and educate women about perinatal mental health difficulties. This would enable better and earlier

identification of difficulties by women and their families and familiarise them with opportunities for help-seeking.

Other research has called for a specific measure of perfectionism adapted for the perinatal population (Price et al., 2020). Further research to develop the PSP or a pregnancy-specific measure of perfectionism is warranted. This could be done in partnership with antenatal women, working to accurately identify warning signs preventatively.

Personal learning points and changes to a repeated study

The limitations of the study have been detailed above. Beyond this, there are a number of things I would do differently if I were to conduct this study again. Firstly, I would include a question asking about women's history of mental health difficulties or if there were currently or historically supported by a mental health service. This would have provided further indication of the proportion of women who had sought help. It might also help to identify those with a history of mental health difficulties versus those whose initial onset was during the perinatal period. Secondly, I would have spent time conducting preliminary qualitative analysis to find themes in those scoring high on antenatal perfectionism and mental health difficulties in order to develop the measure of pregnancy-specific perfectionism (PSP). It would have been beneficial to compile a whole list of many items related to these factors and then conducted a broader factor analysis to identify those that best fit. Lastly, I would have designed the questionnaire differently to allow all participants to complete the entire questionnaire, rather than filtering out those who stated they were not experiencing a mental health difficulty or who had already disclosed this. This would have allowed greater data in order to study the construct in more detail.

Conclusion

This study has attempted to further understanding of the role of perfectionism in influencing disclosure of mental health difficulties amongst antenatal women. It has highlighted key findings in the relationship between perfectionism and mental health difficulties. Initial steps have also been taken to develop a measure that could be used in clinical settings to capture this. Numerous avenues for further research are possible. It is hoped this will build on the findings of this study to produce further evidence supporting the need for better understanding of the factors influencing women's mental health during pregnancy and how these needs can best be recognised and met. It is hoped that the findings could be used to inform professionals of considerations required for women struggling with perfectionism and mental health difficulties, and the need for additional care in encouraging their access to support. This could prove instrumental in providing preventative care to those women vulnerable to developing perinatal mental health difficulties.

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Appendices

Appendix A

Survey on perfectionism and its relationship with mental health difficulties and their disclosure in antenatal women

Introduction

The 'perfect' pregnancy, the 'perfect' birth, 'get it right'... pregnant women can be overwhelmed by opinions and advice about how they should feel from friends and family, the media and even themselves. We wish to explore how these expectations can impact women's emotions during pregnancy. Does this make it easier or harder to talk about how you're feeling with others? We would welcome hearing about your experiences.

Screener

Before we begin we want to ensure you qualify for our study.
Please indicate you are 18 or over

- I am 18 or over (1)
- I am under the age of 18 (2)

Skip To: End of Survey If Before we begin we want to ensure you qualify for our study. Please indicate you are 18 or over = I am under the age of 18

Please indicate whether you are over 12 weeks pregnant

- I am 12 weeks or over in my pregnancy (1)
- I am under 12 weeks pregnant (2)

Skip To: End of Survey If Please indicate whether you are over 12 weeks pregnant = I am under 12 weeks pregnant

Information sheet Please read the information sheet attached before proceeding.

[Information sheet](#)

Consent form

- I am happy to take part (1)
- I do not wish to proceed (2)

Skip To: End of Survey If Thank you for participating in our study. Please review our consent form before proceeding. Consent != I am happy to take part

To begin, we would like to ask some demographic information about you and your experience of pregnancy.

What is your age group?

- 18-23 (1)
- 24-29 (2)
- 30-35 (3)
- 36-41 (4)
- 42-46 (5)
- 47+ (6)

How would you define your ethnicity?

- Asian/British Asian (1)
- Black British/African/Caribbean (2)
- Middle Eastern (3)
- White British/White Other (4)
- Other (5) _____

What is your marital status?

- Single (never married) (1)
- Married or civil partnership (2)
- Cohabiting (3)
- Separated (4)
- Divorced (5)
- Widowed (6)

What is the highest level of education you have completed?

- Primary school (1)
- GCSE's or equivalent (2)
- A-levels or equivalent (3)
- University graduate (4)

What is your employment status?

- Full time employment (1)
- Part time employment (2)

- Full time carer/parent (3)
- Self-employed (4)
- Unemployed (5)
- Student (6)
- Retired (7)

Stage of Gestation

- 12-18 weeks (1)
- 19-25 weeks (2)
- 26-32 weeks (3)
- 33-42 weeks (4)

Is this your first pregnancy?

- First (1)
- Second (2)
- Third (3)
- Fourth (4)
- Fifth + (5)

How did your pregnancy come about?

- Planned – Spontaneous (1)
- Planned - use of ovulation kits/apps (2)
- Planned – IVF or other fertility treatment (3)
- Unplanned (4)

How did you hear about this survey?

- NCT (1)
- Baby Buddy (2)
- Mumsnet (3)
- Twitter (4)
- Facebook (5)
- Word of Mouth (6)

UCL (7)

Other (8) _____

PHQ9 Over the last 2 weeks, how often have you been bothered by any of the following problems?

	Not at all (1)	Several days (2)	More than half the days (3)	Nearly every day (4)
Little interest or pleasure in doing things (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Feeling down, depressed, or hopeless (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Trouble falling or staying asleep, or sleeping too much (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Feeling tired or having little energy (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Poor appetite or overeating (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Feeling bad about yourself — or that you are a failure or have let yourself or your family down (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Trouble concentrating on things, such as reading the newspaper or watching television (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Moving or speaking so slowly that other people could have noticed? Or the opposite — being so fidgety or restless that you have been moving around a lot more than usual (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Thoughts that you would be better off dead or of hurting yourself in some way (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Feeling nervous, anxious or on edge (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Not being able to stop or control worrying (11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Worrying too much about different things (12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Trouble relaxing (13)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Being so restless that it is hard to sit still (14)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Becoming easily annoyed or irritable (15)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Feeling afraid as if something awful might happen (16)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

This questionnaire is concerned with “perfectionism”. By perfectionism, we mean trying to meet really high standards whether or not you actually succeed in reaching them. In this questionnaire we are only concerned with perfectionism that affects areas of life other than your eating, weight, or appearance. Please mark in the column below which best describes you over the past month.

	Not at all (1)	Some of the time (2)	Most of the time (3)	All of the time (4)
Have you pushed yourself really hard to meet your goals? (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Have you tended to focus on what you have achieved, rather than on what you have not achieved? (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Have you been told that your standards are too high? (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Have you felt a failure as a person because you have not succeeded in meeting your goals? (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Have you been afraid that you might not reach your standards? (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Have you raised your standards because you thought they were too easy? (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Have you judged yourself on the basis of your ability to achieve high standards? (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Have you done just enough to get by? (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Have you repeatedly checked how well you are doing at meeting your standards (for example, by comparing your performance with that of others)? (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Do you think that other people would have thought of you as a “perfectionist”? (10)

Have you kept trying to meet your standards, even if this has meant that you have missed out on things? (11)

Have you avoided any tests of your performance (at meeting your goals) in case you failed? (12)

Antenatal perfectionism - Experience of pregnancy

	Not at all (1)	Some of the time (2)	Most of the time (3)	All of the time (4)
Since becoming pregnant, have you felt worried or anxious about how to cope with pregnancy, labour or birth? (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Since becoming pregnant, have you found yourself concerned about doing the right/best thing for you and baby in terms of nutrition, exercise or other advice and guidance you have received? (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If you have created a birth plan, how important to you is it that your labour/birth follows this plan? (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do you think about or partake in research / preparation about the best way to care for your baby? For example, how to feed, best equipment, checking with others (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do you feel you should do more to maintain your standards (e.g. chores, socialising), even if symptoms of pregnancy such as tiredness make this more difficult? (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q22 Are you currently experiencing emotional difficulties such as worries, anxiety or low mood?

- Yes (1)
- No (2)

Skip To: End of Survey If Are you currently experiencing emotional difficulties such as worries, anxiety or low mood? = No

Have you talked to some of your family, friends or acquaintances about these?

- Yes, I have told my family / friends / acquaintances (1)
- No, I have not talked to others about my emotional difficulties (2)

How likely is it that you would talk to the following people about emotional difficulties that you are currently experiencing?

	Under no circumstances (1)	Very Unlikely (2)	Somewhat Unlikely (3)	Undecided (4)	Somewhat Likely (5)	Very Likely (6)	I've already disclosed to them (7)	Not applicable (8)
Partner (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Family member (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Close friend (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Acquaintance (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Midwife (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Obstetrician (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
GP (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ante-natal class leader (e.g. NCT) (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Display This Question:

If Have you talked to some of your family, friends or acquaintances about these? = No, I have not talked to others about my emotional difficulties

I concealed my emotional difficulties during pregnancy:

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)	N/A (8)
To avoid being labelled (as a person experiencing emotional difficulties) (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To avoid negative impact on my job (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To avoid worrying my family (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To hide my personal life (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To avoid self-shame (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To avoid public shame (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To avoid discrimination (e.g. at work) (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To avoid being seen as vulnerable (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Because I feared negative reactions from others (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For fear my baby would be taken away (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To conform with societal demands (11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

To maintain control in my life (12)

To avoid health professionals referring me for support (13)

Appendix B

Advertisement for recruitment

Participate in our Research Study

Call the midwife? Discussing emotional wellbeing in pregnancy



The ‘perfect’ pregnancy, the ‘perfect’ birth, ‘get it right’... pregnant women can be overwhelmed by opinions and advice about how they should feel from friends and family, the media and even themselves. We wish to explore how these expectations can impact women’s emotions during pregnancy. Does this make it easier or harder to talk about how you’re feeling with others? We would welcome hearing about your experiences.

We are looking for

- pregnant women who are at least 12 weeks pregnant
- 18 years old or over
- Able to complete an online survey in English

Unfortunately, you are unable to take part if you are currently involved in any safeguarding procedures.

If you are eligible to take part you will be invited to complete an anonymous online questionnaire. This will involve questions about yourself, your experience of pregnancy, expectations of yourself and any current or historical emotional difficulties you may or may not have experienced. (NB it is not a requirement to have experienced any emotional difficulty in order to take part).

You will be entered into a prize draw to win a £100 John Lewis voucher, or to donate to a charity of your choice for taking part in the study.

If you are interested in the study, please click on the below link which will take you to some further information about the study and a consent form.

Link: [Call the Midwife?](#)

(This study has obtained UCL ethical approval and adheres to GDPR guidelines)

Appendix C

Participant information sheet

UCL DIVISION OF
PSYCHOLOGY AND
LANGUAGE SCIENCES



Participant Information Sheet for Ante-Natal Women

UCL Research Ethics Committee Approval ID Number: 266606

Title of Study:

Investigating Perfectionism & its Relationship with Disclosure & Help-Seeking for Mental Health Difficulties in Ante-Natal Women

Department: UCL Department of Clinical, Educational and Health Psychology

Name and Contact Details of the Researcher(s): Mrs Alexandra Lomas
(alexandra.lomas.14@ucl.ac.uk)

Dr Katrina Scior (k.scior@ucl.ac.uk)

Dr Sarah Finnis (sarah.finnis@nhs.net)

Invitation to participate in a research study

You are being invited to take part in a doctoral research study that will involve completing an online survey. Before you decide, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss with others if you wish. If you would like more information or have any questions, please contact the researchers.

Participation is voluntary, and you have the option to opt out of the study any time during the research. All data will be handled in accordance with the Data Protection Act 1998 and GDPR and will remain anonymous.

What is the purpose of the study?

The study aims to find out how common perfectionism is in pregnant women, whether this relates to feeling anxious in the antenatal period and whether perfectionism impacts how likely pregnant women are to talk about any emotional difficulties they may be having and seek help for them.

Why have I been invited to take part?

The study is open to all pregnant women who wish to take part, whether you identify as feeling emotionally well or not.

In order to participate you need to be:

- Currently at least 12 weeks pregnant
- 18 years old or over
- Able to complete an online survey in English

Unfortunately, you are unable to take part if you are currently involved in any safeguarding procedures.

Do I have to take part?

It is up to you to decide whether or not to take part. If you do take part, you will be able to access this information sheet and will be asked to sign a consent form. You will be free to withdraw at any time without giving a reason. A decision to withdraw or not to take part in the study will in no way impact you negatively. As you will be completing an anonymous survey, there will be no way to link the information provided to you individually, however this means that if you do withdraw from the survey, such information cannot be deleted.

What will happen to me if I take part?

To take part in the study you will be asked to:

- Complete an anonymous online survey
- You will be able to complete the survey in multiple sittings within a period of 7 days
- The survey should take a total of 10-15 minutes to complete
- You will be asked for some demographic information such as your age, ethnicity and experience of pregnancy, as well as some other questions relating to your mood and thoughts.
- On completion of the survey you will be entered into a prize draw to win a £100 John Lewis voucher or donation to a charity of your choice.

What are the possible disadvantages and risks of taking part?

During the study, we will be asking you about your personal experiences of mental health difficulties, experiences relating to perfectionism and about your experience of pregnancy, which may generate some distress for some participants. At the end of the survey, we will provide information about support that can be accessed to help with some of the distress experienced, if needed.

What are the possible benefits of taking part?

Previous studies have explored the role of perfectionism and its links to mental health difficulties in the post-natal period. However, no research has yet explored how perfectionism relates to the experience and disclosure of mental health difficulties in the antenatal period.

It is hoped that this study may shed some light on these factors to lend support to the argument for providing emotional support for women antenatally, and thus mitigating the potential development of mental health difficulties post-natally.

What if something goes wrong?

If you wish to raise a complaint about the study, please contact:

Dr Katrina Scior
Doctorate in Clinical Psychology
University College London
Gower Street
London
WC1E 6BT
United Kingdom
+44 (0)20 7679 1845

If you feel that the above individual was unable to handle your complaint to your satisfaction, please contact the Chair of the UCL Research Ethics Committee (ethics@ucl.ac.uk).

Will my taking part in this project be kept confidential?

The information in this study will be collected through an online web survey, hosted using a programme called Qualtrics. All the information collected during the course of this research will be kept strictly confidential and will be anonymous, in line with the Data Protection Act 1998, and data will only be accessed by the research team. You will not be asked any questions that could make you identifiable, though in order to link your responses, we will ask you to generate a unique identifier at the start of the survey. You will also not be identifiable in any ensuing reports or publications.

Please note that confidentiality will be maintained as far as it is possible, unless evidence of wrongdoing or potential harm is uncovered. In such cases, the university may be obliged to contact relevant statutory bodies.

What will happen to the results of the research project?

The study aims to collect data on perfectionism in ante-natal women, in addition to attitudes to disclosure and help-seeking for mental health difficulties. The findings will give insight into these factors and how they relate to various demographic factors, including women's experience of pregnancy. This will highlight the benefit of supporting women with such difficulties antenatally in order to mitigate any potential post-natal mental health problems.

The results will be written by Alexandra Lomas as part of their DClinPsy thesis and will also aim to be published in a peer-reviewed journal. No participants will be identified in any publication. Once the study has ended you may request a written summary of the findings.

Local Data Protection Privacy Notice

Notice:

The controller for this project will be University College London (UCL). The UCL Data Protection Officer provides oversight of UCL activities involving the processing of personal data, and can be contacted at data-protection@ucl.ac.uk

This 'local' privacy notice sets out the information that applies to this particular study. Further information on how UCL uses participant information can be found in our 'general' privacy notice, which can be found [here](#)

The information that is required to be provided to participants under data protection legislation (GDPR and DPA 2018) is provided across both the 'local' and 'general' privacy notices.

The categories of personal data used will be as follows:

Gender
Age
Ethnicity
Qualification level
Experience of pregnancy

The lawful basis used to process your *personal data* will be for scientific and historical research or statistical purposes.

Your personal data will be processed so long as it is required for the research project. If we are able to anonymise or pseudonymise the personal data you provide we will undertake this, and will endeavour to minimise the processing of personal data wherever possible.

If you are concerned about how your personal data is being processed, or if you would like to contact us about your rights, please contact UCL in the first instance at data-protection@ucl.ac.uk.

Who is organising and funding the research?

This research is being organised by the Research Department of Clinical, Educational and Health Psychology, University College London (UCL).

Contact for further information

If you have any further questions about this study before or after participation, please feel free to contact us and we will be happy to answer any questions:

Dr Katrina Scior, Dr Sarah Finnis & Alexandra Lomas
Doctorate in Clinical Psychology
University College London
Gower Street
London
WC1E 6BT
+44 (0)20 7679 1845

Thank you for reading this information sheet and for considering taking part in this research study.

Consent form

CONSENT FORM FOR ANTENATAL WOMEN IN RESEARCH STUDIES

Please complete this form after you have read the Information Sheet.

Title of Study: Investigating Perfectionism & its Relationship with Disclosure & Help-Seeking for Mental Health Difficulties in Ante-Natal Women

Department: Department of Clinical, Educational & Health Psychology

**Name and Contact Details of the Researcher(s): Alexandra Lomas
(alexandra.lomas.14@ucl.ac.uk)**

**Name and Contact Details of the Principal Researcher: Dr Katrina Scior
(k.scior@ucl.ac.uk)**

**Name and Contact Details of the UCL Data Protection Officer: Lee Shailer
(data-protection@ucl.ac.uk)**

This study has been approved by the UCL Research Ethics Committee: Project ID number: 266606

Thank you for considering taking part in this research. The person organising the research must provide information about the project to you before you agree to take part. If you have any questions arising from the Information Sheet, please ask the researcher before you decide whether to join in. You will be able to access a copy of this Consent Form to keep and refer to at any time.

I confirm that I understand that by ticking the box I am consenting to this study.

1.	I confirm that I have read and understood the Information Sheet for the above study. I have had an opportunity to consider the information and what will be expected of me. I have also had the opportunity to ask questions which have been answered to my satisfaction. I would like to take part in the online survey.
2.	I consent to participate in the study. I understand that my personal information (<i>demographic details such as age/ethnicity/information about pregnancy will be collected</i>) will be used for the purposes explained to me. I understand that according to data protection legislation, ‘public task’ will be the lawful basis for processing.
3.	Use of the information for this project only I understand that all personal information will remain confidential and that all efforts will be made to ensure I cannot be identified. I understand that my data gathered in this study will be stored anonymously and securely. It will not be possible to identify me in any publications.
4.	I understand the potential risks of participating and the support that will be available to me should I become distressed during the course of the research.
5.	I understand the direct/indirect benefits of participating.
6.	I understand that the data will not be made available to any commercial organisations but is solely the responsibility of the researcher undertaking this study.
7.	I hereby confirm that I understand the inclusion criteria as detailed in the Information Sheet.
8.	I hereby confirm that: I understand the exclusion criteria as detailed in the Information Sheet and explained to me by the researcher; and I do not fall under the exclusion criteria.
9.	I am aware of who I should contact if I wish to lodge a complaint.
10.	Use of information for this project and beyond: I understand that data will be stored on an encrypted device and will only be stored for the duration of the research project. I understand that other authenticated researchers will have access to my anonymised data.

Appendix D

Letter confirming UCL ethical approval

Approval from the Departmental Ethics Committee

(Approval cannot be given by the principal researcher of this project – if necessary the application must be sent to an Ethics Officer from a different Research Department, or to the College Ethics Committee, for approval)

Declaration by the Research Department Ethics Chair: I have reviewed this project and I approve it. x

The project is registered with the UCL Data Protection Officer and a formal signed risk assessment form has been completed.

Allocated Departmental Project ID Number for the approved application:

CEHP/2019/576

Name of the Research Department Ethics Chair (type in): Jean-Baptiste Pingault

Date: 02/07/2019



Appendix E

Data analysis for principal component analysis

PCA of PSP

Component Loadings

	RC 1 Uniqueness	
Antenatal.perfection_1	0.664	0.559
Antenatal.perfection_2	0.716	0.487
Antenatal.perfection_3	0.445	0.802
Antenatal.perfection_4	0.564	0.681
Antenatal.perfection_5	0.549	0.699

Note. Applied rotation method is oblimin.

Component Correlations

	RC 1
RC 1	1.000

Chi-squared Test

	Value	df	p
Model	211.099	5	< .001

Scree Plot

