Getting Back to Work After the Baby:

A Quantitative Exploratory Study

A thesis

Submitted in fulfilment

Of the requirements for the degree

of

Master of Social Sciences in Psychology

at

The University of Waikato

by

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THE UNIVERSITY OF
WAIKATO
Te Whare Wānanga o Waikato

Abstract

The postnatal period is a time of increased stress and sometimes high levels of anxiety and depression for mothers. While there has been substantial research on postnatal mental health problems and interventions, very little is known about the transition to work after maternity leave, and how work interacts with perinatal emotional distress. This work investigates how the mental health of mothers who are returning to work relates to their demographic characteristics as well as the interpersonal and administrative features of their work. These data were gathered with a comprehensive questionnaire that measured demographics, levels of distress, work characteristics, presenteeism, illness disclosure, co-worker support, manager support, and job quality. A total of 246 working mothers from New Zealand with children under 24 months old were included in the sample. The sample showed significantly higher levels of distress on the Depression, Anxiety, and Stress Scale (DASS-21) than the normative population. Education level and financial situation were negatively correlated with DASS-21 scores, and the experience of previous perinatal distress (PND) and working from home were positively associated with DASS-21 scores. Presenteeism, attitudes to illness disclosure, and co-worker support all had medium strength significant correlations with DASS-21 scores, while manager support showed a weak significant correlation with the DASS-21. A t-test showed that mean DASS-21 scores of Māori mothers were significantly higher than those of Pākehā mothers. Co-worker support, financial situation, being Māori, and job location all contributed significantly to the variance of DASS-21 scores within the full sample. Presenteeism, attitude to illness disclosure, and co-worker support all contributed to the variance of DASS-21 scores

for the sub-sample that reported experiencing PND. These findings provide evidence that work related factors should be a focus in further research into perinatal distress. Future research might also explore these factors in a larger, more diverse sample to allow for examination of the experiences of mothers from a variety of ethnic, cultural, vocational, and socioeconomic groups.

Acknowledgements

Firstly, I would like to thank the participants who gave up their time and shared their experiences with me to make this work possible. I would like to give a special thanks to the mothers who reached out personally to me to share their stories, their struggles, and the need for more support during this stage of life. This feedback has steered me towards further research with the hopes of developing interventions and encouraging provisions for new mothers transitioning back into work.

I would like to give a big thanks to my supervisor Dr Carrie Barber, thank you for sharing your vast experience and expertise within perinatal mental health and research, and for being patient and encouraging as I undertook my first research project.

Thank you also to Dr Anna Sutton for suggesting this topic, and for providing your expertise in the areas of organisational psychology.

Lastly, I would like to thank my family, my partner, and my friends who have shown unwavering support, and with their help in finding mothers to be a part of this work.

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Chapter 1: Introduction

Having a baby can be a time of excitement and joy, where a mother develops a bond with her new baby and understands how to best care for them, and for herself (Hoffenaar et al., 2010). It is also a time of adjustment, where new routines and considerations are necessary in everyday life. This can be an enjoyable, and of course challenging, period for the mother when met with a positive psychological state. For many mothers, however, the perinatal experience can be a time of psychological distress, with the mother feeling isolated, overwhelmed, under supported, and negatively judged (Underwood et al., 2016). The mother's environment, relationships, supports, behaviours, and demographics are all known contributors to her perinatal wellbeing and how perinatal adjustments are experienced (Rouhi et al., 2019). Very little is known, however, about how a mother's work life interacts with the perinatal experience.

This correlational study examines how psychosocial factors in mothers' workplaces interact with perinatal wellbeing.

Literature Review

The perinatal period is defined differently across a range of maternity care and mental health literature (Howard et al. 2014). Within this work the term perinatal is defined as the entire duration of pregnancy, as well as the first two years after giving birth. It is during this time that mothers are at a heightened risk of psychological distress including mood, anxiety, adjustment, and symptoms related

to trauma (Johnson et al., 2012). The current study is focused on how new mothers with different levels of PND experience their return to work. It is, therefore, important to understand the psychosocial factors in a workplace that may be associated with the wellbeing of returning mothers. In this chapter, different types of perinatal distress will be discussed, along with their prevalence, effects, and treatments.

Perinatal Distress

Perinatal depression is often referred to as the most common complication of pregnancy (Toohey, 2012). In a review of 16 longitudinal studies with data from 35,419 women, Underwood et al. (2016) found that an average 17% of pregnant woman experienced antenatal depression, while 13% of new mothers experienced postnatal depression. Thirty nine percent of the sample who experienced antenatal depression went on to experience postnatal depression. These findings suggest that around one quarter of woman experience depression during this perinatal period. Underwood et al. also noted that 6.6% of women experience persistent depressive disorder with peripartum onset, this a mild and chronic form of depression. When perinatal depression is defined more narrowly as a clinically significant diagnosis of major depressive disorder (MDD) with peripartum onset, it has been found to affect 3-6% of women (American Psychiatric Association, 2013). This estimate is supported by Fairbrother et al. (2016), who found that 4.9% of women experience diagnosable MDD with peripartum onset. While rates of depression vary by time period (antenatal or postnatal) and by definitions and methods of assessment, research consistently shows that there is a significant proportion of mothers who

experience low mood during the perinatal period. Analysis of the Growing Up in New Zealand longitudinal study by Waldie et al. (2015) found similar rates of antenatal and postnatal depression (16% and 11% respectively) to Underwood et al. (2016).

In a comprehensive systematic review and meta-analysis of 191 unique studies, Rogers et al. (2020) found that perinatal depression was associated with poorer social-emotional, cognitive, language, motor, and adaptive behaviour in the child. These findings were observed throughout infancy, childhood, and adolescence. These findings were supported in a systematic review of 122 studies by Slomian et al. (2019). Slomian et al. also found relationships between postnatal depression and the child's anthropometry, physical health, and sleep. Slomian et al. also reported maternal outcomes of postnatal depression; these included poor long term physiological and psychological health, interpersonal and relationship problems, and an increase in risky behaviours. Postnatal depression was also associated with less positive mother-child interactions, less bonding, increased difficulty with infant care, and negative effects on breastfeeding behaviours. This evidence supports the notion that significant negative long-term associations exist for both the baby and mother when postnatal depression is experienced.

The rates of depression in a New Zealand sample of 1144 pregnant women were measured by Signal et al. (2017); their findings showed that Māori mothers had significantly higher rates of depression, anxiety, and stress compared to mothers who are not Māori. Signal et al. also found that being younger and a prior history of depression both independently contributed to higher levels of mental distress during pregnancy. During their systematic review, Vanwetswinkel et al.

(2022) reported that young mother age, ethnicity, low education, low income, and having a single or problemed relationship status were all risk factors for perinatal depression.

Anxiety is also a common experience of perinatal distress; Dennis et al. (2017) found in their systematic review and meta-analysis of 102 studies that clinically significant levels of self-reported anxiety symptoms range from 18-25% during pregnancy and dropped to 15% postnatally. In a study with 100 mothers from Sydney (using a similar population and method of anxiety assessment to the current study), Grant et al. (2008) found that 33% of mothers were experiencing clinically significant levels of anxiety in the third trimester. This level continued, as 33% of new mothers were found to have clinically significant levels of anxiety at 25-33 weeks postpartum.

During their narrative review, Field (2018) reported four categories of correlates and risk factors for perinatal anxiety; these included demographic factors, childbirth experience, social support, and a history of mental health issues. The demographic predictors Field's reported were being a young mother, higher education levels, and being employed. Perinatal anxiety can have far reaching consequences for the mother, and for the developing child (Madigan et al., 2018). During their longitudinal study of 7448 mothers in the United Kingdom, O'Connor et al. (2002) found a positive relationship between the level of perinatal anxiety in mothers and behaviour and emotional problems in children at four years of age. Perinatal anxiety has been found to be associated with decreases in mother-child attachment security (Stevenson-Hinde et al., 2011), lower rates of breastfeeding initiation (Fallon et al., 2016), higher risk of emotionally withdrawn babies through

less mother-baby bonding (Stein et al., 2012), and a higher risk of difficult infant temperament (Field, 2018). In their meta-analysis, Madigan et al. (2018) reported a positive relationship between prenatal anxiety and depression and socioemotional problems for the child.

Stress can be experienced in a range of ways during and after pregnancy; these stressful events include mild daily stressors, moderate stress through life and environmental changes, and severe trauma-based stress experiences. Pregnancy-specific stressors are also common; these include concerns around appointments, foetal development, and infant health concerns, as well as traumas associated with pregnancy, birth, and the baby (Coussons-Read, 2013). While stress is not a diagnosable condition, it is a risk factor in many mental and physical health complications; therefore, stress is a factor that is regularly screened for in the perinatal period, along with anxiety and depression (Dunkel-Schetter & Tanner, 2012). Through poor behavioural modelling and insecure attachment, infants (as well as children and adolescents) whose parents experience chronic stress during the perinatal period are at higher risk of poor health and developmental outcomes (Stein et al., 2014).

The above paragraphs introduce the experience of many mothers during and after pregnancy, where depression, anxiety, and stress can be experienced. These experiences in the current study are referred to under the umbrella term ‘perinatal distress’ (PND). Merging these wide ranges of symptoms under the PND term is useful when considering how negative perinatal psychological experiences interact with a range of factors in mothers’ lives.

Mental Health in the Workplace

An individual's workplace interacts with their mental health in a range of ways. Their work may be the source, or a contributing factor of psychological distress; it may be a factor that maintains distress; and it can also be a protective factor that provides an individual with the support and environments necessary to remain in a positive mental state (Wang, 2006). The difference between an individual's workplace being a source of harm or protection can come down to the environment, systems, and relationships within the workplace. During their review of literature in a United Kingdom context, Wilkinson (2021) reported that job demographics, presenteeism, mental illness disclosure, co-worker support, manager relationship and support, and the overall psychological climate of the workplace were significant factors in how mental wellbeing is experienced in the workplace. All of the factors will be reviewed in the following paragraphs.

Illness disclosure

The decision about whether or not to disclose one's mental illness within the workplace can bring a range of outcomes. It can, therefore, be a decision that people suffering from mental illness give careful consideration to. Dewa et al. (2021) found in a nationally representative Dutch sample that a large majority of workplace mental health disclosures resulted in positive outcomes, including support, allowances, and time off. There was also a minority of people who had poor experiences from disclosure, including stigma and perceived judgement, as well as people who reported positive experiences from non-disclosure, including successfully managing their distress alone and successfully continuing their level of

work performance. This highlights the difficulties of deciding whether to disclose or not; even with a likelihood of positive experience through disclosure, there is still risk. Granger (2000) found that individuals who perceived their disclosure as being more harmful to their working life would be more likely to self-manage symptoms and work with their concealed illness.

Gladman and Waghorn (2016) found in their thematic analysis of working and work-seeking Australians with severe mental illness, that perceived stigma is often a reason for mental illness non-disclosure. Often this stigma has been foreseen by individuals who have, or know someone who has, lost a job, failed to get a job, received differential treatment after disclosure, or have been requested to take leave; thus, disclosure is perceived as an unappealing option (Gladman & Waghorn, 2016). Other factors that have been found to associate with mental illness disclosure are organisational policy and social support, manager attitudes and personality, relationships with supervisors, job demographics, and organisational help provided (Hastuti & Timming, 2021). Illness disclosure has been shown to correlate with many positive consequences; these include receiving accommodations to ease workplace distress, and support at the workplace that allow for a more positive working experience in the context of mental illness (Hastuti & Timming, 2021). However, across the literature that Hastuti and Timming (2021) reviewed, the consequences of disclosure were exactly as many individuals feared, and discrimination, labels, adverse reactions, being considered weak, and experiencing prejudice were experienced. Overall, it appears that mental-illness disclosure in the workplace is generally beneficial, however, not essential for positive mental health and work outcomes (Hastuti & Timming, 2021). There is

much room for improvement in terms of mental health literacy and organisational systems in the workplace, to ensure that those who do disclose are not harmed, and those who may benefit from disclosure will feel comfortable in doing so (Gladman & Waghorn, 2016).

Presenteeism

Presenteeism is the act of being present at work when one is unable to carry out the requirements of their job for any reason; thus, they would be better off absent, including when the individual should be at home or seeing a health professional (Lack, 2011). In their review of literature, Lack (2011) explains that reasons for an individual being present at work when they are unwell include perceived job pressure, and the fear of losing income and employment. Presenteeism is a major area of concern economically for businesses as well as individuals, as it results in a loss of business productivity and risks poorer individual health outcomes (Johns, 2010). Stewart et al. (2003) found that depression results in a $44(US) billion loss for business in the United States; 81% of this loss, or $35.7(US) billion is lost by workers underperforming while present at work (presenteeism). Stewart et al. (2003) forecasted that businesses in the United States could save $26.6(US) billion per year in the absence of presenteeism behaviours caused by depression, suggesting low-cost interventions such as medication and psychotherapy as useful tools to achieve this. Lack (2011) found that two of the main consequences of presenteeism were reduced quality of life and poorer health outcomes, both physical and mental. Gatrell (2011), in a qualitative study of 15 United Kingdom working mothers found that presenteeism

is often practiced during the perinatal period by women who are worried they will appear prone to taking leave. This happens even during serious illness and is a potential risk factor for negative mental health outcomes.

Co-worker/manager support

In a longitudinal study using five interviews during the transition to parenthood of 113 dual-working parents, Perry-Jenkins et al. (2011) found that new mothers who perceived their co-workers as supportive experienced fewer depressive symptoms compared to mothers who felt a lack of support. Perry-Jenkins et al. also found that having a high-pressure job that required urgent decision making was positively associated with depressive symptoms; however, this relationship was not seen with participants who had supportive managers. Thus, supportive managers were seen to offset the negative effects of job urgency.

Bronkhorst et al. (2015) systematically reviewed 21 studies concerning employee mental health, and the relationships with organisational psychosocial climate for healthcare workers; they found that positive organisational climates were negatively associated with poor mental health outcomes. Bronkhorst et al. found the most important factor in organisational climate for positive mental health outcomes was group relationships between co-workers; this highlights the mental health benefits of co-worker support. There was also evidence that manager support is positively correlated with mental health outcomes (Bronkhorst et al., 2015). Similarly, in a large cross-sectional study, Geldart et al. (2018) found in a sample of 2000 Canadian postal workers, that negative mental health experiences were far less frequent when workers in the same environments experienced co-

worker support. Kirmeyer and Dougherty (1988) assessed workers after objectively high stress workdays. They found that workers who had supportive managers and co-workers reported significantly fewer depressive and anxious symptoms than workers who did not receive the same support during objectively stressful workdays. This mediating effect was not observed in workers who did not experience high stress work environments. From this information, co-worker and manager support are associated with positive mental health in the workplace, even when the workplace environment includes negative psychosocial factors.

Interventions available and uptake

Interventions for PND consist of both treatment and prevention. It is important for new and expectant mothers, as well workplaces (co-workers and managers) to be aware of these services. Awareness of available services can mean co-worker and manager support is better informed (Bronkhorst et al., 2015); it can make the decision to disclose PND easier (Hastuti and Timming, 2021), and it can mean mothers return to work with less distress (Lamsal et al., 2021).

Czabała et al. (2011) reported during their systematic review that the workplace is an appropriate environment for interventions around stress, skills development, job satisfaction, mental health improvement, and decreases in mental health related absenteeism. This is an important consideration for organisations, as Bender and Farvolden (2008) reported that the workplace can actively contribute to increases in stress, anxiety, depression, and poor quality of life. Based on these findings, it seems likely that perinatal wellbeing could be enhanced or negatively affected depending on the individual's workplace.

There are also many forms of treatment that occur outside of the workplace; In a systematic review, Dennis and Dowswell (2013) found that multiple forms of intervention significantly reduced the risk of postnatal depression within a general population. These interventions included recurring postpartum home visits by midwives and nurses; telephone support provided by women who have lived experience in postnatal depression; and provision of individualised psychotherapy (Dennis & Dowswell, 2013). Branquinho et al. (2021) undertook a systematic review of systematic reviews and meta-analyses on the effectiveness of treatment on perinatal depression; their findings suggest that Cognitive Behavioural Therapy (CBT) was the most effective treatment. This finding was consistent across the seven systematic reviews Branquinho et al. reviewed, with effective results in both short-term and long-term CBT, regardless of the treatment format.

There are many reasons mothers may not choose to receive treatment; In a systematic review of nine qualitative peer-reviewed papers, Rouhi et al. (2019) found that mothers, during the first 12 months after giving birth, often did not seek help for mental health issues. They feared being judged negatively and believed that hardship and distress was part of the motherhood journey. Help was often only sought from family or close friends, while low health literacy and insufficient access to healthcare were significant barriers in seeking help. In a systematic review by Jones (2019), it was found that stigma is a significant barrier in help seeking behaviour, where mothers feared the label of ‘bad mother’, or ‘incompetent’. Similarly, feelings of shame, guilt, and embarrassment were often reported as reasons to avoid seeking help. Interestingly, there was a concern by mothers that help seeking behaviours could lead to having their child taken away from them and

losing parental rights. Many factors, including a lack of social support, lack of understanding around perinatal depression and treatment, mistrust in clinicians, and a lack of self-efficacy were positively associated with avoidance of help seeking (Jones, 2019).

Leave provision for physical/mental health

Leave provision is an important consideration in the perinatal phase. Within their review of 26 studies, Van Niel et al. (2020) found that mothers who have at least 12 weeks of paid maternity leave experienced lower levels of postnatal depression, experienced lower rates of intimate partner violence, and had infants with improved attachment and greater levels of development. The majority of studies included in Van Neil et al.'s work had been controlled for confounding variables including factors such as age, socioeconomic status, education, ethnicity, and relationship status. During their study using a prospective cohort design, Dagher et al. (2014) found a negative relationship between leave provision and levels of depression for the first six months of maternity leave, after six months of leave a positive relationship between leave from work and depression levels were seen, meaning that at this point depression rates increased with further leave from work.

National contexts vary widely when it comes to provision of paid (or unpaid) maternity leave. In New Zealand, 26 weeks of paid maternity leave, equivalent to the national minimum wage, is provided to workers giving birth who have been working for at least 6 months (Employment NZ, 2023). Australia provides 18 weeks of maternity leave, also at the national minimum wage (Service Australia, 2023).

The United Kingdom provides six weeks of maternity leave with 90% of the worker's weekly income paid, followed by 33 weeks of leave with £156.66 weekly payments (Government United Kingdom, 2022). While workers in the United States are entitled to a minimum of 12 weeks unpaid leave, many sectors and businesses do provide paid leave for their employees at their discretion (Department of Labor, 2022). The United States is the only OECD country that does not have mandated maternity leave. Jou et al. (2018) found that mothers in the United States who did not have maternity leave, or took leave without pay, were twice as likely to be re-hospitalised for themselves, and twice as likely to have their infant re-hospitalised. These mothers were also less likely to partake in physical exercise and stress management behaviours. This highlights the importance of having time off work during this period, while also receiving financial support.

Lamsal et al. (2021) found that workers who have access to paid sick leave were more likely to utilize primary and preventative healthcare services; it can, therefore, be expected that the provision of sick leave could help avoid negative mental health outcomes through access to interventions such as medication, support service referrals, and psychological intervention referrals.

Perinatal Mental Health and Work

The intersection between organisational psychology and perinatal psychology is under-researched. Thus, the majority of understanding and practice within this area is informed by isolated studies within these disciplines, along with clinical expertise and lived experience.

Cooklin et al. (2011), analysed data from the Longitudinal Study of Australian Children; by performing logistic regression analysis on their sample of 1300 Australian mothers, they found that four optimal job conditions were associated with significantly lower experiences of psychological distress for new parents while controlling for prior depression, social supports, partner relationship, adverse life events, and sociodemographic characteristics. These four optimal job conditions were job control, perceived job security, flexible start and finish times, and provision of family related leave. Only 21% of mothers had all of these conditions met in their workplaces, suggesting that most mothers are working in conditions that are not ideal. The risk of negative psychological outcomes increased when fewer of these optimal job conditions were met. Cooklin et al. (2015) took this research further to find that long hours, night shifts, and perceived low-level jobs were all associated with psychological distress during the perinatal period.

Using semi-structured telephone interviews with a sample of 26 Australian mothers, Vujinovic (2014) found the factors that allowed mothers to feel ready to return to work included the ability to work from home, having competent childcare close to work, a baby that is weaned and is starting to talk, flexible working hours, less demanding job roles to return to, and a supportive workplace. During their factor analytic study of 286 American women, Gjerdingen and Froberg (1991) found that mothers felt more ready to return to work in a positive mindset at two months postpartum when they were physically in good health, had not had a caesarean section, and were not breastfeeding. These findings by Gjerdingen and Froberg were controlled for important socioeconomic and demographic factors such as financial status, ethnicity, and relationship status. Houston and Marks (2003) found

during their longitudinal study that the return to work after maternity leave was experienced more positively when support was shown to the mother during leave; this included being informed about what was happening at work, and having staff check up on them.

Tucker et al. (2010) performed an ANCOVA on health-related quality of life data collected over 16 months on 286 United States mothers; while controlling for important demographic factors; they found that mothers with higher levels of economic hardship experienced lower quality of life distress compared to mothers with low levels of economic hardship. This was due to stress around paying bills and providing for the family, as well as an early return to work to survive financially. Goyal et al. (2010) similarly found during their quantitative secondary analysis of 198 first-time mothers in California that mothers who had less than a tertiary education, a low monthly income, were unmarried, and were unemployed were at an increased risk for developing postnatal depression from late pregnancy to 3 months after giving birth. Brown and Bifulco (1990) found that mothers who work part-time were at a much lower risk of depression than mothers who worked full-time; however, this study is limited for its lack of control of socioeconomic factors. Similarly, Weston et al. (2019) found, even when controlling for confounding socioeconomic and demographic factors, that female risk of depression continues to increase the more hours that are consistently worked overtime.

To summarise, there appear to be many relationships between work factors and the experience of PND. These include work type, available/utilised leave, work environment, and demographic and socioeconomic factors. Being aware of these

factors provides insight to the areas where interventions can improve perinatal mental health outcomes.

The Current Study

This study used an exploratory, correlational design to examine the experience of new mothers returning to work. This work also sought to focus in detail on the work-related experiences of mothers experiencing perinatal emotional distress. Understanding these experiences in mothers during the perinatal phase will inform future study on directions of this emerging area of research.

After reviewing the literature within this area, a range of hypotheses have been made. Firstly, poorer mental health outcomes would be observed in those who practice presenteeism (hypothesis one). To test this hypothesis, a section of the questionnaire completed by participants measured presenteeism (Stanford Presenteeism Scale). These scores will be compared to the Depression Anxiety and Stress Scale (DASS-21). Secondly, higher DASS-21 scores should be observed in participants with lower illness disclosure at work scores (hypothesis two) (tested using the Attitudes to Disclosure Questionnaire). Thirdly, participants with higher co-worker support should have lower DASS-21 scores (hypothesis three). Co-worker support scale scores should therefore be negatively associated with DASS-21 scores. There should also be a negative correlation found between manager support scores and DASS-21 scores (hypothesis four). Manager support scores will use the co-worker support scale adapted for managers. Participants with higher co-worker support adjusted for managers scores should also have lower presenteeism

scores, as unsupportive managers have been shown to increase presenteeism (Bronkhorst et al., 2015) (hypothesis 4b).

Chapter 2: Method

Study Design

This cross-sectional survey study used an online questionnaire to collect data on work-related factors and maternal well-being in mothers returning to work in the first two years of their child's life. Participants were recruited through convenience sampling.

Participants

Participants in the current study were New Zealand based working mothers whose youngest child was under two years of age. This study does not focus on the impacts of COVID19; however, this sample have all been pregnant and have had a child during COVID19 restrictions, which will be a consideration for discussion of results in this work. Data collection ran from 1/6/2022 to 31/7/2022. During this time participants were recruited from several online platforms and spaces. Personal and public social media accounts across Reddit, Instagram, and Facebook were used to share the recruitment flyer and questionnaire weblink. Emails were sent to a network of contacts interested in perinatal and organisational psychology, who then passed the questionnaire link onto working mothers. Local day-care centres, schools, and cafes in Tauranga, New Zealand also had the recruitment flyer

displayed. The majority of participant, however, were recruited through a single Instagram post on a popular page for new mothers (see Appendix B).

As can be seen in Table 1, only 1% of the sample were under 25, 68% were 25-34, 31% were 35-44, and none were over 45. Baby ages were quite evenly spread from 7-24 months; however, only 8% of mothers had a baby under 7 months. With respect to ethnicity, European mothers made up most of this sample at 93%, and 99% were either married or living with their partner. This sample was highly educated with 84% of mothers having an undergraduate degree, 44% of the sample also had post graduate qualifications.

There were 353 mothers who started this questionnaire; however, only 246 met inclusion criteria and completed all the key measures. The 84 participants who had incomplete questionnaires were removed, along with the 23 participants who were from outside of New Zealand.

Table 1

Participant Demographics

Characteristic	Responses	
	n	%
Age		
Under 18	0	0
18-24	3	1
25-34	169	68
34-44	74	30
45+	0	0
Baby Age		
0-6 months	20	8
7-12 months	90	37
13-18 months	88	36
18-24 months	48	20
M = 13.48		
SD = 5.39		
Ethnicity		
European	228	84
Māori	20	8
Pacific Peoples	8	3
Asian	1	0
Other	14	6
Relationship Status		
Married/living with partner	244	99
Single	2	1
Education		
No formal education	0	0
High school	19	8
Training Certificate	22	9
Undergraduate qualification	98	40
Postgraduate qualification	107	44

Ethical Considerations

The University of Waikato Human Research and Ethics Committee reviewed and accepted this project prior to recruiting and engaging with any participants (HREC(Health)2022#18).

This research was completed through an online and anonymous questionnaire. In order to proceed with the questionnaire, participants were required to confirm they had read the information regarding the purpose of the study and proceeded to voluntarily consent. Participants were informed that their details would be anonymous, that confidentiality is ensured, they had a right to not participate, and that they had a right to withdraw at any point during the questionnaire. Participants were also informed on how the findings would possibly be disseminated, and how to contact the researcher, or the University of Waikato Human Ethics Committee for any reason.

As this is a research project that may deal with, and uncover, psychological distress in mothers, there is an added level of potential vulnerability in the sample. To address this issue, the questionnaire was programmed to alert mothers who were flagged as experiencing psychological distress and provided a list of local support lines and resources.

Measures

The questionnaire that was completed by participants was a combination of six scales measuring mental health, demographic questions, and work-related questions. Demographic factors included the mother's ages, ethnicities, relationship statuses, education, financial situation, and baby age. Maternal mental

health and treatment history were also asked. This included stepped questions where mothers who reported experiencing PND were asked if they have received a diagnosis and treatment. If mothers reported receiving treatment they were then asked about the treatment (medication, therapy, or other). Work-related questions gathered data on work roles, time in role, leave available, leave taken, sick leave entitlement, hours worked pre-baby, hours worked after returning to work, work location, and employment type (employed, manager, owner). The following psychometric tests were included in the questionnaire.

Stanford Presenteeism Scale

The Stanford Presenteeism Scale (SPS6) (Koopman et al. (2002)) measures presenteeism behaviour in terms of the impact of illness on work quality and experience; productivity, and how a person feels about their work using six self-report items rated on a scale from “1 = strongly disagree”, to “5= strongly agree” A higher score indicates higher levels of presenteeism at work.

Examples of items on the SPS6 include: “Despite having my (health problem), I was able to finish hard tasks in my work” and “My (health problem) distracted me from taking pleasure in my work.” In the current study, the term “Perinatal Distress (PND)” replaced (health problem). PND was defined in the questionnaire as any fatigue, stress, anxiety, low mood, or other emotional distress that has occurred since having their baby.

The Stanford Presenteeism Scale has shown high internal consistency (Cronbach’s Alpha = 0.8) (Koopman et al., 2002). Within this study the SPS6 scores had an acceptable internal consistency of r = .67.

Attitudes to Disclosure Questionnaire

The Attitudes to Disclosure Questionnaire (AtDQ), developed by Mayer et al. (2022), measures an individual's attitude towards disclosing their mental illness throughout a range of settings. Part three of the AtDQ, which was used in the current study, focusses on mental health disclosure in the workplace. For the purpose of this study, the term PND (perinatal distress) was used in place of mental illness. The AtDQ (part 3) consists of 7 self-reported questions that are scaled between 1-7. For example, question one in the scale asks; "I don't tell anyone at work about PND and try keep it secret as much as possible". An answer of 1 indicates discomfort with disclosure, while 7 indicates comfort with disclosure. The AtDQ work disclosure subscale showed good internal consistency of $\alpha = 0.83$ (Mayer et al., 2022), and good construct validity in examining associations with related factors. In order to make the AtDQ consistent with the other measures in the questionnaire, it was decided to collect data using the AtDQ questions with five options ranging from 1 (strongly agree) to 5 (strongly disagree), this format is consistent with other questions in the current questionnaire. Because of this change in format, total scores on this scale should not be compared directly with scores using the typical format. The AtDQ scores in this sample had a good internal consistency of $r = .88$.

Co-Worker and Manager Support

The Co-worker Support Scale, developed and tested by Rousseau and Aubé (2010), was used to assess the level of support from co-workers. Rousseau and Aubé found the Co-worker Support Scale to have a Cronbach's alpha of 0.90,

suggesting a high level of reliability. Scoring in this measure works on a 5-point scale including answers from “strongly disagree (1)” to “strongly agree (5)”. For example, “My colleagues care about my physical and mental wellbeing”. Higher scores indicate higher levels of co-worker or manager support. The Co-worker Support Scale scores in this sample had a good internal consistency of r = .87.

The same questions were also used for manager support, replacing the term ‘colleagues’ for ‘manager’. An example item from this scale is “My manager cares about my physical and mental wellbeing”. The Co-worker Support Scale adapted for managers has been adapted for this work, thus, there will be extra validating information concerning the scale in the results section. The Co-worker Support Scale adapted for managers in the current study had a Cronbach’s alpha of .95, suggesting that this measure has excellent internal consistency.

Job Quality Index for Parents

Strazdins et al. (2007) developed the Job Quality Index for Parents (JQIP), as a tool to be used in the Longitudinal Study of Australian Children (Cooklin et al., 2011). This self-report tool measures four optimal characteristics; these are job control, perceived job security, flexible start and finish times, and the provision of paid personal and family leave. An example item from the scale is “Is it possible to change your start and finish times at work? All questions require a yes/no answer. The JQIP is included in the current study to understand the relationship between these four employment characteristics and wellbeing during the transition into work after having a baby. Scores are calculated by assigning 1 point for each work

characteristic a job has, 4 points indicates all four optimal job characteristics are present, while a score of 0 indicates an absence of any optimal job characteristics.

Depression Anxiety and Stress Scale

The DASS-21 was developed and tested by Antony et al. (1998) as a short 21 item version of the Lovibond and Lovibond (1995) 42 item DASS. The DASS-21 has been selected as it was developed in Australasia and has been norm-tested on an Australasian population (Antony et al., 1998); this means the results in the current study can be responsibly compared to tested norms. Each item in the DASS-21 is rated on a four-point scale from “did not apply to me at all (0)” to “applied to me very much, most of the time (3)”. Higher scores indicate higher levels of psychological distress, with a range of 0-126. This score range has been doubled to allow for simple comparison to the DASS-42. The DASS-21 can also be broken down into three subscales of seven items; these subscales are depression, anxiety, and stress, yielding scores between 0-42.

Crawford et al. (2020) found that DASS-21 scores within an adult, non-clinical Australian sample had a mean score of 16.60 (*SD* = 19.66). Crawford et al. (2020) also found mean scores for each subscale, these were: 6.14 (*SD* = 7.72) for depression, 3.48 (*SD* = 5.56) for anxiety, and 7.98 (*SD* = 8.48) for stress. Crawford et al. (2020) found no significant difference between male and females and, therefore, did not include separate data for gender.

The DASS-21 was found to have Cronbach’s alpha scores of 0.94 for depression, 0.87 for anxiety, and 0.91 for stress (Antony et al., 1998). The DASS-21 scores in this sample had an excellent internal consistency of *r* = .92.

Procedure

Interested participants who met the inclusion criteria for the study (working mothers with their youngest child under two), found the questionnaire through the weblink or the QR code on the recruitment flyer. The questionnaire was compatible with both computer and mobile devices.

Once the participants had submitted their consent (non-consent ended the questionnaire) they could complete the questionnaire; this took participants around 15 minutes to complete. Once finished, participants submitted their answers and were then given the option to anonymously request information on the study findings.

Data Analysis

Data were downloaded from Qualtrics to SPSS version 28.0.1.1 (14). Any case that had completed less than 80% of the questionnaire was removed, while any incomplete entries over 80% complete were individually checked and, where possible, completed using their average scores on each scale.

The DASS-21, SPS6, AtDQ, Co-worker Support Scale, adapted Co-worker Support Scale for managers, and JQIP data were summed to provide total scores. No distributions were significantly non-normal, so parametric statistics were used. Descriptive statistics were calculated across a range of demographics, work factors, and total test scores.

Correlations were calculated between the DASS-21 and the following measures: SPS6, AtDQ, Co-worker Support Scale, adapted Co-worker Support Scale for managers, and JQIP using Pearson's r. Correlations between ordinal variables

and DASS-21 scores used Spearman's Rho as the appropriate tool for ordinal data, these ordinal variables included: mother age, baby age, time in work role, leave available, leave taken, sick leave available, hours worked before the baby, hours worked after leave, and work location. Correlations of dichotomous demographic data with the DASS-21 were calculated using biserial and point biserial correlations, these included: education (university graduate or not), work type (employed, self-employed), role change since returning or not, and financial situation (struggling financially or not). Both education and financial variables had been collected as data with multiple responses, however, the lack of less educated and financially struggling mothers meant that dichotomizing the data was necessary to test relationships to DASS-21.

T-tests were used to test the differences in means between the sub-sample that had not experienced PND and the sub-sample that had for DASS-21, co-worker support, manager support, and JQIP. A t-test was also used to find the difference in mean DASS-21 scores for Māori and non-Māori mothers, as well as for European and non-European mothers.

Multiple linear regression analysis was conducted using the DASS-21 as the dependent variable. The following predictor variables were used: education level, financial situation, European ethnicity, Māori ethnicity, JQIP, role change, work location, co-worker support, and manager support. G-Power analysis confirmed that 9 variables was acceptable for the full sample of 229 participants with sufficient data for inclusion (see Appendix F). The SPS and AtDQ were only relevant to those who reported they had experienced PND, so a separate multiple regression was conducted to examine factors that might predict distress within the group who

had experience of PND. This multiple regression used the DASS-21 as the dependent variable with SPS6 scores, AtDQ scores, co-worker support, manager support, JQIP scores, and work location as predictor variables. G-Power analysis confirmed that 6 variables was acceptable for the sub-sample of 76 participants (see Appendix F). Due to the small sample size in this PND sample, socioeconomic and demographic variables were not controlled for.

Chapter 3: Results

Workplace Variables

As can be seen in Table 2, the large majority of the sample were not self-employed and had been in their current role at least six months, and were therefore eligible for paid parental leave, which the majority of mothers used.

Table 2

Participant Workplace Characteristics

Workplace Characteristic	Responses n (%)
Employment Type	
Employed	226 (92)
Self-employed	20 (8)
Role	
Business owner	17 (7)
Manager	32 (13)
Employee	196 (80)
Time in Role	
0-6 months	36 (15)
7-12 months	25 (10)
13-24 months	25 (10)

2-5 years	79 (32)
5+ years	81 (33)
Hours per Week Worked Before Baby	
0-8 hours	3 (1)
9-16 hours	5 (2)
17-24 hours	15 (6)
25-32 hours	28 (11)
33-40 hours	118 (48)
41 + hours	77 (31)
Hours per Week Worked After Baby	
0-8 hours	9 (4)
9-16 hours	31 (13)
17-24 hours	66 (27)
25-32 hours	38 (15)
33-40 hours	82 (33)
41 + hours	20 (8)
Work Location	
Home	27 (11)
Partially home	100 (41)
Away from home	119 (48)
Financial Situation	
Struggling	3 (1)
Uncertain	30 (12)
Stable	127 (52)
Comfortable	86 (35)
Parental Leave Available	
No leave available	19 (8)
12 weeks or less	4 (2)
13-25 weeks	53 (22)
26-32 weeks	141 (57)
33-52 weeks	24 (10)
53+ weeks	5 (2)
Parental Leave Taken	
No leave available	15 (6)
12 weeks or less	6 (2)
13-25 weeks	53 (22)
26-32 weeks	136 (55)

33-52 weeks	28 (11)
53+ weeks	6 (2)
Sick Leave Provision	
No leave available	25 (10)
1-9 days	62 (25)
10-19 days	131 (53)
20 + days	27 (11)

Perinatal Distress

Within the sample, 76 (33%) mothers reported that they had experienced PND. Of these 76, 19 (25%) reported receiving a diagnosis for their distress. Thirteen (17%) reported receiving medication for their PND, 17 (22%) received psychotherapy, and 2 (3%) received another type of treatment. In total 51 participants (67% of the PND sample) received any type of treatment for their PND. In this PND subgroup, 50 (66%) reported that they did not require leave from work for appointments, while 16 (32%) did require leave. Of the 16 mothers that did request leave for PND treatment appointments, only 7 were granted it.

DASS-21 scores

A one sample t-test was performed to compare the DASS-21 scores in the current work against the normative mean provided by Crawford et al. (2020). The mean value of DASS-21 scores in the current study (M = 31.74, SD = 18.44) were significantly higher than the normative mean of 16.60 (SD = 19.66); t (df = 245) = 12.88, $p < .0001$.

Henry and Crawford (2005) provide severity ranges for the subscales of the DASS-21. Table 3 shows how this sample was distributed in these ranges; about one third (33%) reported mild or worse depression; half (51%) reported mild or worse anxiety; and 44% reported mild or worse stress.

Table 3

Subscale scores and distribution within the DASS-21

Severity	Depression	Anxiety	Stress
	n(%)	n(%)	n(%)
Normal	165 (67%)	120 (49%)	138 (56%)
Mild	30 (12%)	22 (9%)	37 (15%)
Moderate	30 (12%)	67 (27%)	49 (20%)
Severe	17 (7%)	21 (9%)	19 (8%)
Extremely Severe	4 (2%)	16 (7%)	3 (1%)

Note. This table displays the DASS-21 sub-scores of the sample used in this study.

Associations Between Variables and Distress

Demographics

There were no significant associations between either mother (r = .01) or baby age (r = .04) with the DASS-21. Any associations between ethnicity or relationship status and level of distress could not be examined to any level of significance because of the small subsamples on those variables.

An independent-samples t-test was used to compare the total DASS-21 scores between Māori mothers and non-Māori mothers. A significant difference was found in scores for Māori (M = 40.00, SD = 22.91) and non-Māori (M = 31.01,

SD = 17.86; *t* (244) = -2.11 *p* = .04, two-tailed). The differences in the means (mean difference = -8.99, 95% *CI:* –-17.41 to -0.58) had a small effect size of *d* = 0.44.

An independent-samples t-test was used to compare the total DASS-21 scores between European mothers and non-European mothers. No significant difference was found in scores for European (*M* = 31.39, *SD* = 18.43) and non-European (*M* = 36.11, *SD* = 18.48; *t* (244) = 1.05, *p* = .30, two-tailed). The differences in the means (mean difference = 4.72, 95% *CI:* -4.17 to 13.61) had a small effect size of *d* = 0.26.

Work Demographic Correlations

As shown in Table 4, the location of work (treated as an ordinal variable of locations either completely at work, a combination of work and home, or completely at home) showed a small significant correlation with the DASS-21, suggesting that mothers who work from home for more hours are more likely to experience distress. No other work demographic factors showed any significant correlations with the DASS-21.

Table 4

Correlations between work demographic and DASS-21 – Spearman's rho

Measure	DASS-21
1. DASS-21	-
2. Time in Role	.03
3. Leave Available [a]	-.09
4. Leave Taken [a]	-.05
5. Sick Leave Available	-.08
6. Hours worked before baby	.02
7. Hours worked after baby	-.02
8. Work Location [b]	.13*

Note. This table displays the correlations between work demographics and DASS-21 scores.

*DASS-21 – Depression, Anxiety, and Stress Scale - 21

[a] Refers to maternity leave available and maternity leave taken.

[b] Locations were either office, a combination of home and office, or home.

*$p < .05$. $n=229$.

Both education level and financial status are ordinal variables that have an underlying continuity (they are binary/dichotomised, but there is continuity to an individual's financial status and education level that needs to be considered), thus, point biserial correlation needed to be converted into biserial correlations. Using a conversion table by Terrell (1989), the biserial correlation for education level and DASS-21 was -.24 ($p < .05$) and the biserial correlation for financial status and DASS-21 was -.27 ($p < .001$). Thus, education level and financial status show significant small strength negative relationships with the DASS-21. Work type (being employed vs self-employed) ($r = .05$) and having a role change since returning from leave ($r = -.125$) did not show any significant relationship to DASS-21 scores.

Associations Between Work Related Measures and DASS-21

Hypothesis one stated that SPS6 (presenteeism) scores will positively correlate with DASS-21 scores. This hypothesis was supported, as shown in Table 5 there was a positive medium strength correlation of $r = .45$ ($p < .01$) between SPS6 and DASS-21 scores in the PND sample.

Hypothesis two predicted that perinatal mental illness disclosure in the workplace (AtDQ scores) would negatively correlate with DASS-21 scores. As shown

in Table 5 there was a negative medium strength correlation of r = -.33 (p < .01) between AtDQ and DASS-21. Thus, hypothesis two was supported.

Hypothesis three stated that co-worker support scores would negatively correlate with DASS-21 scores; thus, mothers who score high in co-worker support will have lower scores on the DASS-21. This hypothesis was supported by the data with a medium strength negative correlation of r = -.36 (p < .01) (Table 5) for the PND sample and r = -.35 (p < .01) for the full sample (Table 6).

Hypothesis four (A) stated that manager support scores in the adapted Co-worker Support Scale would negatively correlate with DASS-21 scores. This hypothesis was supported with a medium strength negative correlation of r = -.23 (p <.05) in both the full sample (see Table 5) and r = .27 (p < .01) PND sample (see Table 6).

Hypothesis four (B) stated that there will be a negative correlation between manager support scores and Stanford Presenteeism scores. This hypothesis was not supported with a non-significant correlation of r = .22.

There was a non-significant correlation between the JQIP and DASS-21 for the full sample of mothers (r = -.13); however, in the subgroup of mothers with PND experiences there was a small negative correlation of r = -.27 (p < .05). This suggests that for mothers who struggle with PND, having a job with more flexibility and benefits was associated with lower levels of distress.

Validity of co-worker support scale adapted for managers

Because this is the first time the co-worker support scale has been modified for managers, its validity has been examined. The co-worker support scale adapted

for manager support measures a similar, yet distinct variable to co-worker support. It showed divergent validity by having small but significant correlation with non-related measures (SPS6 *r* = .22, AtDQ *r* = .27), while a similar construct of co-worker support and JQIP showed concurrent validity of *r* = .69 and *r* = .52. These similarities may be due to managers often being considered co-workers, and managers often implementing the quality of work factors included in the JQIP. Further evaluate of the psychometric properties of this use of the scale might be useful in understanding the interpersonal factors at work.

Table 5

Intercorrelations Between Mental Health and Organisational Measures PND Group

Measure	DASS-21
1. DASS-21	-
2. SPS6	.45**
3. AtDQ	-.33**
4. Co-worker support	-.36**
5. Manager support	-.23*
6. JQIP	-.27*

Note. This table displays the correlations between organisational factors and the DASS-21 in the sub-sample who disclosed perinatal distress.

*DASS-21 – Depression, Anxiety, and Stress Scale – 21, SPS6 - Stanford Presenteeism Scale, AtDQ - Attitudes to Disclosure Questionnaire, JQIP - Job Quality Index for Parents.

***p* < .01. **p < .05, n=75*

Table 6

Intercorrelations Between Mental Health and Organisational Measures

Measure	DASS-21
1. DASS-21	-
2. Co-worker support	-.35**
3. Manager support	-.27**
4. JQIP	-.13

Note. This table displays the correlations between organisational factors and the DASS-21 in the full sample.

*DASS-21 – Depression, Anxiety, and Stress Scale – 21, JQIP - Job Quality Index for Parents.

***p* < .01. *n=229*

Comparing means of self-identified PND and other study variables

An independent-samples t-test was used to compare the total DASS-21 scores for mothers who reported PND and those who did not. As expected, significant difference was found in scores for PND (*M* = 39.37, *SD* = 20.59) and no PND (*M* = 27.85, *SD* = 15.95; *t* (244) = -4.84, *p* < .001, two-tailed). The differences in the means (mean difference = 11.52, 95% *CI:* –16.21 to -6.83) had a medium effect size of *d* = 0.63.

The independent-samples t-test for co-worker support showed no significant differences between PND (*M* = 24.98, *SD* = 4.28) and no PND (*M* = 25.83, *SD* = 3.47; *t* (237) = 1.66, *p* = .10, two-tailed). The differences in the means (mean difference = .85, 95% *CI:* –0.16 to 1.87) had a small effect size of *d* = 0.22.

The t-test conducted to compare the Co-worker Support Scale adjusted for managers also showed no significant differences between the PND group (*M* = 24.14, *SD* = 6.11) and no PND group (*M* = 25.39, *SD* = 5.21; *t* (230) = 1.62, *p* = .07,

two-tailed). The differences in the means (mean difference = 1.25, 95% *CI:* –0.27 to 2.77) had a small effect size of *d* = 0.22.

The JQIP also showed no significant differences in an independent-samples t-test between the PND group (*M* = 2.85, *SD* = 0.96) and no PND group (*M* = 3.01, *SD* = 0.97; *t* (241) = 1.21, *p* = .71, two-tailed). The magnitude of the differences in the means (mean difference = 0.16, 95% *CI:* –0.10 to 0.42) was negligible at *d* = 0.17.

Presenteeism (SPS6 score) was only measured in the PND sample; therefore, mean scores will be compared to normative data provided by Koopman et al. (2002) using a one-samples t-test. The mean value of presenteeism scores in the current study (*M* = 16.86, *SD* = 3.96) were significantly lower than the normative mean of 22.9 (*SD* = 4.00); *t* (*df* = 75) = 13.30, *p* < .0001.

Predicting distress in working mothers

As shown in Table 7, hierarchical multivariate regression was completed with the whole sample using the DASS-21 as the dependent variable and nine demographic, work, and behavioural factors as the independent variables; these were: Education level, financial situation, being Māori, being European, JQIP, role change, job location, co-worker support, and manager support. These factors were split into three blocks, the first block was for demographic variables, second was work related variables, and third was social support variables. The data from the Stanford Presenteeism Scale and Attitudes to Disclosure Questionnaire were not included in this analysis as these variables were only measured in the PND sample. The demographic variables accounted for 7% of the variance in DASS scores, the

work-related variables accounted for an additional 6%, and social support an additional 8%, for a total of 21% of variance accounted for by these factors. In the final model of this analysis, only financial situation, being Māori, job location and co-worker support showed a significant contribution to the variance of DASS-21 results.

A second multiple regression was conducted to explore factors that might predict distress within the group with PND. In this group, two additional variables, SPS6 and AtDQ, were assessed that were not suitable for the non-PND group. Because of the smaller sample size, to retain adequate power, only six predictor variables could be entered, so demographic factors were not evaluated, and the six work-related variables (work location, SPS6, AtDQ, co-worker support, manager support, and JQIP) shown in Table 8 were entered as a single block. Two individual variables were significant, SPS6 and co-worker support, and the model accounted for 30% of the variance in DASS scores in this subsample.

Table 7

Multivariate analysis of DASS-21 with entire sample

	Measure	B	SE B	β	Sig.
Step 1					
	Constant	37.10	5.12		<.001
	Education	-6.73	3.30	-.13*	.04
	Financial	9.45	3.62	.17*	.01
	European	-1.72	4.66	-.02	.73
	Māori	9.95	4.55	.14*	.03
Step 2					
	Constant	41.43	6.93		<.001
	Education	-7.14	3.24	-.14*	.03
	Financial	9.41	3.57	.17*	.01
	European	-.16	4.56	-.00	.97
	Māori	9.86	4.47	.14*	.03
	JQIP	-3.67	1.29	-.19*	.01
	Role Change	-4.48	2.49	-.12	.07
	Job Location	5.11	1.96	.18*	.01
Step 3					
	Constant	71.81	9.57		<.001
	Education	-4.44	3.16	-.09	.16
	Financial	8.12	3.44	.15*	.02
	European	-1.55	4.39	-.02	.73
	Māori	9.12	4.29	.13*	.04
	JQIP	-1.57	1.33	-.08	.24
	Role Change	-3.99	2.40	-.10	.10
	Job Location	4.70	1.89	.16*	.01
	Co-worker Support	-1.14	.41	-.23*	.01
	Manager Support	-3.21	.28	-.10	.26

Note. This table displays the multivariate regression analysis results across three steps for the full sample (229 participants).

R^2 = .07 for block 1, R^2 = .13 for block 2, R^2 = .21 for block 3 *p < .05, n = 228

Table 8

Final Multivariate analysis of DASS-21 with PND disclosed sample

Measure	B	SE B	β	Sig.
Constant	48.96	17.86		.01
Work Location	-1.58	3.34	-.05	.64
SPS6	1.76	.56	.35*	.00
AtDQ	-.63	.37	-.19	.09
Co-worker Support	-1.37	.69	-.28*	.05
Manager Support	.43	.51	.13	.40
JQIP	-1.05	2.62	-.05	.69

Note. This table displays the multivariate regression analysis results for the PND sample (76 participants).

*DASS-21 – Depression, Anxiety, and Stress Scale – 21, PND – Perinatal Distress, SPS6 -Stanford Presenteeism Scale, AtDQ - Attitudes to Disclosure Questionnaire.

$R^2 = .30$ *$p < .05$, n = 76

Chapter 4: Discussion

Review of Findings

The results of this study suggest mothers who are returning to work (after maternity leave?) struggle with symptoms of depression, anxiety, and stress at a higher rate than the general population. This work found significant relationships between these mental health symptoms, using the DASS-21, and a range of demographic, work related, and social environment factors. This discussion section will compare results to current literature, consider future directions and any limitations of these findings. Consideration will also be given to the implications of these findings for how clinicians treat working mothers, the practices and policies

that organisations have in place, and any national policy recommendations for people on maternity leave and mothers who have returned to work.

Demographic and job-related factors

DASS-21 scores indicated that one third of the sample were experiencing at least mild depression. This finding is similar to the systematic review by Underwood et al. (2016) who found that an average of 25% of mothers experience PND. Levels of anxiety within the sample were much higher than depression, at just over half. This supports the findings of Fairbrother (2016) who reported that anxiety is a more common experience than depression during the perinatal period.

In terms of ethnicity, Māori mothers had significantly higher levels of distress than mothers who were not Māori. This supports the findings by Signal et al. (2017) who found Māori mothers were experiencing significantly higher rates of depression, anxiety, and stress during pregnancy. The sample did, however, have a small Māori subsample.

We found that working away from home, having less financial stress, and higher education levels were all associated with decreased distress. This is inconsistent with the findings of Vujinovic (2014) who found that mothers who had the option of working from home had lower average depression scores; it is possible that the time away from their baby and the extra social support of work is a positive factor for PND. These findings support the work of Goyal et al. (2010) who found lower levels of educational qualifications correlated with higher depression scores; and Tucker et al. (2010) who found a relationship between financial status and depression scores in mothers.

Being Māori, struggling financially, and working from home all independently contributed significantly to the variance of DASS-21 scores in the full sample, this suggests that there is an opportunity to decrease the number of mothers who experience PND by targeting interventions for these populations.

Presenteeism and DASS-21

In this work, presenteeism is being present at work when one is unable to carry out the requirements of their job due to mental health. Koopman et al (2002) found a mean score of 22.9 (*SD* = 4) for presenteeism within a general working population with a non-specific health problem. In the current study, only mothers who have indicated they were experiencing PND were asked to complete the SPS6. The mean score of the 76 mothers who completed the SPS6 was 16.86 (*SD* = 3.96). This was an unexpectedly low score, and significantly lower than general population norms. This does not support the findings of Gatrell (2011) who suggested mothers were a population with high potential for presenteeism, however, considering the current study only focusses on PND as a cause for presenteeism, it is understandable that scores are lower than populations who were assessed for any type of presenteeism. In this study, scores on presenteeism were moderately positively correlated with distress as was expected. Causality in this study cannot be determined; however, the results do support the findings by Lack (2011) who found presenteeism to be a risk factor in poor mental health outcomes. Presenteeism was the strongest significant contributor to the total DASS-21 scores in the PND sample of this work.

These findings indicate that organisations may have an opportunity to have an influence on maternal mental health by ensuring an environment is created where presenteeism does not occur. This could be achieved through encouraging a workplace cultural shift where workers to prioritise health over work. This possibility would be mutually beneficial, as Stewart et al. (2003) found presenteeism to cost organisations millions each year through poor work output and poorer health outcomes.

Measures of Social Support and DASS-21

The results of this work showed that working mothers who disclose their PND at work experience less distress during the postnatal period. Gladman and Waghorn (2016) presented a range of reasons why people may, or may not, decide to disclose their mental illness at work; anticipated support was a main reason for disclosure, while anticipated stigma and differential treatment were reasons for non-disclosure. Dewa et al. (2021) reported in their Dutch sample that positive outcomes followed most disclosures, thus, it was expected that those less comfortable with disclosure would be more distressed in the current study.

It is possible that people who are only mildly distressed are more likely to disclose distress than those who are more seriously distressed. Regardless, understanding that illness disclosure is generally beneficial for the mental health of perinatal mothers provides organisational and clinical opportunities for more positive outcomes for perinatal employees and clients. Organisations should provide safe and supportive opportunities for disclosure, which may require menta

health training for managers and staff; while clinicians should support and encourage disclosure at work if it would be beneficial and considered safe to do so.

This study found a medium strength negative relationship between co-worker support and DASS-21 scores, where greater co-worker support correlated with lower levels of reported distress. These results support Perry-Jenkins et al.'s (2011) findings which reported that mothers experienced fewer depressive symptoms when they perceived their co-workers to be supportive.

Co-worker support significantly contributed to the variance in DASS-21 scores for both the full sample and the PND sub-sample of this work. This suggests that the presence of co-worker support can help support mental health for all mothers who have returned to work.

With these results, organisations are encouraged to provide opportunities for supportive environments in the workplace. Wagner et al. (2015) conducted a systematic review that focused on seven articles concerning social support at work. They found moderate evidence that professional development interventions encouraging the provision of social support positively impacted workplace outcomes. Wagner et al. also suggested the use of social support interventions at work need to be meaningful and contextually appropriate for the workplace and its employees. Clinicians can use this information to encourage clients to build relationships at work as a protective factor in their return to work.

A weak relationship between the Co-worker Support Scale adapted for managers and the DASS-21 was found. This relationship was weaker than the relationship between co-worker support and the DASS-21. This supported Bronkhorst et al.'s findings that both co-worker and manager support correlate

with depressive symptoms; however, co-worker support is the stronger relationship. Both Perry-Jenkins et al. (2011) and Kirmeyer and Dougherty (1998) found that manager support appeared to correlate with mental health by offsetting the negative impact of high-pressure jobs. This may indicate that manager support may be of greater value for perinatal mental health outcomes for mothers in jobs with high pressure; however, this variable was not measured in the current study.

Job Quality for Parents and DASS-21

JQIP scores were weakly negatively correlated with DASS-21 scores only in the PND disclosing sub-sample, suggesting that there is a relationship between JQIP and DASS-21 in this sub-sample. This finding for the PND disclosing sub-sample supports Strazdins et al.'s (2007) finding that these four job quality factors (job control, perceived job security, flexible start and finish times, and paid family leave) are significant factors in a mother's work-life and wellbeing. However, it was not supported in the general sample. Strazdins et al. developed the JQIP to provide a tool that can indicate the quality of jobs for parents to benefit their mental health. However, the JQIP may not be an ideal indication of job quality for New Zealand mothers in 2022; this may be due to leave provision being required by law (Employment NZ, 2023), and the prevalence and encouragement of work flexibility and autonomy since COVID-19 workplace changes (Worksafe, 2023).

Challenges and Limitations

The majority of the sample for this project came from one social media post to a large following of New Zealand mothers. All other efforts to recruit participants,

including flyers, emails, other social media, and word of mouth were less effective. This over-representation from one group resulted in a homogeneous sample of mostly New Zealand European, highly educated, partnered mothers. Because of this lack of diversity, further study is required to provide insight and generalisable findings for the New Zealand population. There is also a limitation in the self-reporting nature of the questionnaire used in this study, which might be vulnerable to over or under reporting of distress and past experiences. Other limitations exist in the generalisability of this study, as the sample are all New Zealand based, and therefore, governed by New Zealand's employment laws, which are different to many other countries. The presence of COVID-19 and the country-wide restrictions that have been set in place throughout the sample's pregnancies and first months/year of motherhood may have affected the experience of the mothers' return to work, so replication is particularly important. COVID-19 may have also played a role in the high number of mothers experiencing distress, possibly contributing to the significantly higher DASS-21 scores in this sample compared to pre-COVID-19 norms.

Further research is also needed to understand the differences across industries and types of work mothers are returning to. Finally, this work is cross-sectional, so causal inferences cannot be made, thus, further work that searches for causal relationships are needed to fully understand the effects that the different demographic, work, and social factors have on the wellbeing of mothers who are returning to work. This future work could include following a cohort of women longitudinally from pregnancy throughout the perinatal period to understand the influence different factors have on mothers' mental health and the return to work.

Also, implementing controlled interventions may indicate which factors have a causal relationship to perinatal mental health.

Recommendations

Workplaces have an opportunity to influence the mental health of their employees. Much of this influence can come from education and a change in workplace culture. This may include educating workers about the dangers of presenteeism and encouraging a change in culture around attendance above health. On an organisational, or even a governmental policy level, this may include provision of extra paid leave for mental health, or a paid leave allowance granted to mothers who are transitioning back into the workforce as a measure against presenteeism.

The above recommendations might require a certain level of illness (or at least mental health struggle) disclosure. This is an area that also requires education and a shift in culture, where disclosure is taken seriously, and the discloser is supported and never penalised. Branquinho et al. (2021) found that mothers were only confiding with family members and close friends when it came to distress. The intention of education and culture change should be to have mothers feeling comfortable with disclosing distress to co-workers and managers. As Jones (2019) found, there needs to be education about what to expect from disclosure and how to react to disclosure, as many mothers are afraid of being labelled “bad mother” or having children uplifted by governmental services. This psychoeducation should be provided to all workers, not just mothers, to ensure disclosure is met with support. Jones (2019) also found that many mothers did not know what treatment was

available for their distress, or even how to define their distress. Education in this area could counter stigma, reduce fears and also help mothers understand the signs and types of distress they might encounter before going on leave, and the type of services they can access when needed.

Illness disclosure, co-worker support, and manager support all influence the social environment one might experience at work. This study has found social supports like these to relate to levels of emotional distress for mothers returning to work. Thus, it is recommended that organisation-wide interventions are provided to foster a socially positive workplace environment. Wagner et al. (2015) suggests that these interventions are specific to the organisation, and the individual workers. These interventions should also extend into maternity leave as Houston and Marks (2003) found a significant effect on the mental health of mothers when they had support from co-workers or managers in the form of contact, updates, and visits throughout their maternity leave. For some mothers there is a distrust in clinicians (Jones, 2019) which may mean this social support could be the only help they receive. Of course, effort and education must also go into fostering trust in clinicians, as well as improving clinician competency with a diverse range of clients. Access to services in New Zealand are also limited, meaning many mothers who want support may not be able to receive it (Ministry of Health, 2021).

Professional interventions, especially CBT, have been shown to have a significant positive effect on maternal mental health (Dennis & Dowswell, 2013; Branquinho et al., 2021).

Based on the findings in this study, other workplace interventions or recommendations include opportunities for employees to work from home and

ensuring workers are paid at a level that provides financial security. Further research should also consider focusing on the experience of Māori mothers returning to work, as this population has shown significantly higher levels of distress than non-Māori in this sample, as well as in Signal et al. (2017). Any intervention, education, or cultural shift needs to be culturally responsive and beneficial to Māori.

There is a huge opportunity in future research, organisational practice, and clinical practice to help mothers during the perinatal period to have a more positive experience from the planning of maternity leave right through until a complete transition back into working life.

Conclusion

While there were some limitations in terms of representation, overall, this work has presented significant results. Mothers who are returning to work after maternity leave show a high risk of perinatal mental health struggles. Work related factors such as presenteeism, illness disclosure, co-worker support, and manager support, all correlate with levels of emotional distress. This work has shown that financial situation, being Māori, work location, co-worker support, and presenteeism all contribute significantly to levels of emotional distress. Social supports such as co-worker support, illness disclosure, and manager support were found to play a major role in the experience of transitioning back into work for new mothers, suggesting a major opportunity in education, culture change, and social support interventions in the workplace for this population. The results from this exploratory study suggest that further research into this area is necessary and that

interventions and resources, both organisational and individual, should be provided to assist this population in safely reintegrating back into the workplace after having a baby.

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Appendix A

Perinatal Mental Health in the Workplace Recruitment Research

Information Email

Subject Heading: Getting Back to Work After the Baby.

Kia ora, (Hello for international participants)

We are interested in learning about the workplace experiences of mothers of infants. We have put together an anonymous online survey to understand how different workplace factors interact with emotional wellbeing and stress for mums. If you have a baby under

two years of age and you work at least part time, we would love for you to complete this survey by following the link below.

This research project has been approved by the Human Research Ethics Committee (Health) at the University of Waikato as HREC(Health)2022#18. Any questions or concerns about the ethical conduct of this research may be sent to the Secretary of the Committee, email humanethics@waikato.ac.nz, postal address, Human Research Ethics Committee (Health), University of Waikato, Te Whare Wananga o Waikato, Private Bag 3105, Hamilton 3240.

Here is the link to the survey: https://waikato.qualtrics.com/jfe/form/SV_8jj7CgXkzaldTAG

We really appreciate your time and thoughts!

Nga mihi, (Kind regards for UK participants)

Michael Cochrane,
University of Waikato Masters Student

Carrie Cornsweet Barber, Ph.D.
University of Waikato Trust Board Member, PADA

Appendix B

Perinatal Mental Health and the Return to Work Recruitment Flyer

Returning to Work After the Baby

THE UNIVERSITY OF WAIKATO
Te Whare Wānanga o Waikato

- Do you have a child under two and work at least part time?
- Please share your experience with us in a 15 minute anonymous survey. Follow the QR code or link.

https://waikato.qualtrics.com/jfe/form/SV_8jj7CgXkzaldTAG

We are interested in learning how new mothers transition back into the workplace after having a baby, with a focus on wellbeing and the organisational factors mothers face at work.

This multinational survey is being conducted by Michael Cochrane, a masters student at the University of Waikato, New Zealand. The research supervisors are Dr Carrie Barber, a Clinical Psychologist and Senior Lecturer at the University of Waikato, and Dr Anna Sutton, a Senior lecturer at the University of Waikato. For any questions about the project please contact:

Michael Cochrane - mdc14@students.waikato.ac.nz
Dr Carrie Barber (Supervisor) – carrie.barber@waikato.ac.nz

This research project has been approved by the Human Research Ethics Committee (Health) at the University of Waikato as HREC(Health)2022#18. Any questions or concerns about the ethical conduct of this research may be sent to the Secretary of the Committee, email humanethics@waikato.ac.nz, postal address, Human Research Ethics Committee (Health), University of Waikato, Te Whare Wānanga o Waikato, Private Bag 3105, Hamilton 3240

Appendix C

Information to Consent to participant in Research

Kia ora, and thank you for your interest in this study!

Our team includes a masters student (Michael Cochrane, University of Waikato),

and two supervisors (Carrie Barber and Anna Sutton, both senior lecturers at the

University of Waikato). The goal of this study is to understand the experiences of new mothers in the workplace. We are doing this using a short (less than 15 minutes) anonymous online survey you can complete on a phone or computer. You will be asked a bit about your background, location, and demographics, and then some questions about your experiences with emotional wellbeing and about the processes and environments of your workplace. For the purpose of this survey, "perinatal" is defined as during pregnancy and the first year after a child is born. Your participation in this study is entirely voluntary and anonymous; you may skip questions or stop at any time; however, since it is anonymous, once you have submitted your survey, we cannot omit your data from the study. The results of this study will be used to contribute to further research on how organisations support new parent employees, and to present at professional conferences and in scientific publications. We ask you to participate if you are a mother returning to work with a child under two. You are welcome to complete this survey with support personnel, in a location of your choosing.

If you are interested in receiving a summary of the results of the study, you can enter your contact information in a separate survey link at the end of the survey. Any contact information entered will be stored securely and separately from the survey data.

This research project has been approved by the Human Research Ethics Committee (Health) at the University of Waikato as HREC(Health)20XX#18. Any questions or concerns about the ethical conduct of this research may be sent to the Secretary of the Committee, email humanethics@waikato.ac.nz, postal address, Human Research Ethics Committee (Health), University of Waikato, Te Whare Wananga o

Waikato, Private Bag 3105, Hamilton 3240.

For further information, feel free to contact:

Michael Cochrane - mdc@students.waikato.ac.nz

Dr Carrie Barber - carrie.barber@waikato.ac.nz

- ○ I consent to take part in this research (1)
- ○ I do not consent to take part in this research (2)

Appendix D

Perinatal Mental Health Return to Work Questionnaire

Q1 Are you a mother of a child under two years old, and currently working at least part time?

- ○ Yes (1)
- ○ No (2)

Skip To: End of Survey If Are you a mother of a child under two years old, and currently working at least part time? = No

Q2 What is your age?

- ○ Under 18 (1)
- ○ 18-24 (2)
- ○ 25-34 (3)
- ○ 35-44 (4)
- ○ Over 45 (5)

Q3 How old (in months) is your youngest child now?

_____

Q4 Country in which you currently reside

- ○ Australia (1)
- ○ New Zealand (2)
- ○ United Kingdom and Northern Ireland (3)
- ○ Other (4) _____

Display This Question:

If List of Countries = New Zealand

What is your ethnicity

- ☐ Māori (1)
- ☐ Pacific Peoples (2)
- ☐ Asian (3)
- ☐ European (4)
- ☐ Other (5)

Display This Question:

If List of Countries = United Kingdom and Northern Ireland

What is your ethnicity

- ☐ White (1)
- ☐ Black (2)
- ☐ Asian (3)
- ☐ Other (4)

_____

Display This Question:

If List of Countries = Australia

What is your ethnicity

- ☐ Indigenous and Torres Strait Islander (1)
- ☐ European (2)
- ☐ Asian (3)
- ☐ Pacific Peoples (4)
- ☐ Other (5) _____

Display This Question:

If List of Countries = Other

What is your ethnicity

- ☐ Black (1)
- ☐ White (2)
- ☐ Asian (3)
- ☐ Middle Eastern/Latin American/African (4)
- ☐ Other (6) _____

Q5 What is your relationship status?

- ○ Single (1)
- ○ Widowed (2)
- ○ Married, or living with a partner (3)
- ○ Divorced (4)
- ○ Separated (5)

Q6 What is the highest educational qualification you have completed?

- ○ No formal qualification (1)
- ○ High school (2)
- ○ Training certificate (3)
- ○ Undergraduate (4)
- ○ Postgraduate (5)

Q7 Are you:

- ○ Employed (1)
- ○ Self-employed (2)

Q8 In your workplace, are you:

- ○ Business owner (1)
- ○ Employee (2)
- ○ Manager (3)

Q9 How long have you been in your current role?

- ○ Less than 6 months (1)
- ○ 6-12 months (2)
- ○ 13-24 months (3)
- ○ 2-5 years (4)
- ○ More than 5 years (5)

Q9 What industry do you work in?

- ○ Agriculture, Forestry, and Fishing (1)
- ○ Mining (2)
- ○ Manufacturing (3)
- ○ Electricity, Gas, Water, and Waste Services (4)
- ○ Construction (5)
- ○ Wholesale Trade (6)
- ○ Retail Trade (7)
- ○ Accommodation and Food Services (8)
- ○ Transport, Postal, and Warehousing (9)
- ○ Information, Media, and Telecommunications (10)
- ○ Financial, Scientific, and Technical Services (11)
- ○ Administrative and Support Services (12)
- ○ Public Administration and Safety (13)
- ○ Education and Training (14)
- ○ Healthcare and Social Assistance (15)
- ○ Arts and Recreation Services (16)

- ○ Rental, Hiring, and Real Estate Services (17)
- ○ Professional, Scientific, and Technical Services (18)
- ○ Other Services (19)

Q10 How much paid parental leave was available to you?

- ○ None at all (1)
- ○ 12 weeks or less (2)
- ○ 13-25 weeks (3)
- ○ 26-32 weeks (4)
- ○ 33-52 weeks (5)
- ○ 53 weeks or more (6)

Q11 How much paid parental leave did you take?

- ○ None at all (1)
- ○ 12 weeks or less (2)
- ○ 13-25 weeks (3)
- ○ 26-32 weeks (4)
- ○ 33-52 weeks (5)
- ○ 53 weeks or more (6)

Q12 How much paid leave are you entitled to for illness per year?

- ○ None at all (1)
- ○ 1-9 days (2)
- ○ 10-19 days (3)
- ○ 20 days+ (4)

Q13 Does your employer provide you with paid family or personal leave? (e.g. if your child is sick or you need to go to an appointment?)

- ○ Yes (1)
- ○ No (2)

Q14 How many hours per week did you usually work before having this child?

- ○ 0-8 (1)
- ○ 9-16 (2)
- ○ 17-24 (3)
- ○ 25-32 (4)
- ○ 33-40 (5)
- ○ 41+ (6)

Q15 How many hours a week do you usually work in your job now?

- ○ 0-8 (1)
- ○ 9-16 (2)
- ○ 17-24 (3)
- ○ 25-32 (4)
- ○ 33-40 (5)
- ○ 41+ (6)

Q16 In your current job do you work:

- ○ Entirely away from home (1)
- ○ Partly away from home (2)
- ○ Entirely from home (3)

Q17 Has your job or role changed significantly since returning from parental leave?

- ○ Yes - Please explain how (1) _____
- ○ No (2)

Q18 Now we have some questions on your thoughts and feelings about your current job.

Q19 I have a lot of freedom to decide how I do my own work

- ○ Strongly agree (1)
- ○ Agree (2)
- ○ Neither agree nor disagree (3)
- ○ Disagree (4)
- ○ Strongly disagree (5)

Q20 How secure do you feel in your current job?

- ○ Very secure (1)
- ○ Secure (2)
- ○ Not very secure (3)
- ○ Very insecure (4)

Q21 Is it possible to change your start and finish times at work?

- ○ Yes, I am able to work flexible hours (1)
- ○ Yes, with approval in special situations (2)
- ○ No, not likely (3)
- ○ Definitely not (4)

Q22 Right now, how would you describe your financial situation?

- ○ Comfortable--able to pay bills and still have savings (1)
- ○ Stable--able to pay bills and have a bit extra for emergencies (2)
- ○ Uncertain--barely able to pay bills; vulnerable if something changes (3)
- ○ Struggling--unable to pay some bills (4)
- ○ Seriously concerned--bills piling up (5)

Now we have some questions regarding your wellbeing. For the following items, please read each statement and select a choice which indicates how much the statement applied to you over the past week. There are no right or wrong answers. Do not spend too much time on any statement.

Q23 I found it hard to wind down

- ○ Never (0)
- ○ Sometimes (1)
- ○ Often (2)
- ○ Almost always (3)

Q24 I was aware of dryness of my mouth

- Never (0)
- Sometimes (1)
- Often (2)
- Almost always (3)

Q25 I couldn't seem to experience any positive feeling at all.

- Never (0)
- Sometimes (1)
- Often (2)
- Almost always (3)

Q26 I found it difficult to work up the initiative to do things.

- Never (0)
- Sometimes (1)
- Often (2)
- Almost always (3)

Q27 I tended to overreact to situations

- Never (0)
- Sometimes (1)
- Often (2)
- Almost always (3)

Q28 I experienced breathing difficulty (e.g., excessively rapid breathing, breathlessness in the absence of physical exertion)

- ○ Never (0)
- ○ Sometimes (1)
- ○ Often (2)
- ○ Almost always (3)

Q29 I experienced trembling (e.g., in the hands).

- ○ Never (0)
- ○ Sometimes (1)
- ○ Often (2)
- ○ Almost always (3)

Q30 I felt that I was using a lot of nervous energy.

- ○ Never (0)
- ○ Sometimes (1)
- ○ Often (2)
- ○ Almost always (3)

Q31 I was worried about situations in which I might panic and make a fool of myself.

- ○ Never (0)
- ○ Sometimes (1)
- ○ Often (2)
- ○ Almost always (3)

Q32 I felt that I had nothing to look forward to.

- ○ Never (0)
- ○ Sometimes (1)
- ○ Often (2)
- ○ Almost always (3)

Q33 I found myself getting agitated.

- ○ Never (0)
- ○ Sometimes (1)
- ○ Often (2)
- ○ Almost always (3)

Q34 I found it difficult to relax.

- ○ Never (0)
- ○ Sometimes (1)
- ○ Often (2)
- ○ Almost always (3)

Q35 I felt down-hearted and blue.

- ○ Never (0)
- ○ Sometimes (1)
- ○ Often (2)
- ○ Almost always (3)

Q36 I was intolerant of anything that kept me from getting on with what I was doing.

- ○ Never (0)
- ○ Sometimes (1)
- ○ Often (2)
- ○ Almost always (3)

Q37 I felt I was close to panic.

- ○ Never (0)
- ○ Sometimes (1)
- ○ Often (2)
- ○ Almost always (3)

Q38 I was unable to become enthusiastic about anything.

- ○ Never (0)
- ○ Sometimes (1)
- ○ Often (2)
- ○ Almost always (3)

Q39 I felt I wasn't worth much as a person.

- ○ Never (0)
- ○ Sometimes (1)
- ○ Often (2)
- ○ Almost always (3)

Q40 I felt that I was rather touchy.

- ○ Never (0)
- ○ Sometimes (1)
- ○ Often (2)
- ○ Almost always (3)

Q41 I was aware of the action of my heart in the absence of physical exertion (e.g., sense of heart rate increase, heart missing a beat).

- ○ Never (0)
- ○ Sometimes (1)
- ○ Often (2)
- ○ Almost always (3)

Q42 I felt scared without any good reason.

- ○ Never (0)
- ○ Sometimes (1)
- ○ Often (2)
- ○ Almost always (3)

Q43 I felt that life was meaningless.

- ○ Never (0)
- ○ Sometimes (1)
- ○ Often (2)
- ○ Almost always (3)

Display This Question:

If I found it hard to wind down = Almost always

Or I was aware of dryness of my mouth = Almost always

Or I couldn't seem to experience any positive feeling at all. = Almost always

Or I found it difficult to work up the initiative to do things. = Almost always

Or I tended to overreact to situations = Almost always

Or I experienced breathing difficulty (e.g., excessively rapid breathing, breathlessness in the abse... = Almost always

Or I experienced trembling (e.g., in the hands). = Almost always

Or I felt that I was using a lot of nervous energy. = Almost always

Or I was worried about situations in which I might panic and make a fool of myself. = Almost always

Or I felt that I had nothing to look forward to. = Almost always

Or I found myself getting agitated. = Almost always

Or I found it difficult to relax. = Almost always

Or I felt down-hearted and blue. = Almost always

Or I was intolerant of anything that kept me from getting on with what I was doing. = Almost always

Or I felt I was close to panic. = Almost always

Or I was unable to become enthusiastic about anything. = Almost always

Or I felt I wasn't worth much as a person. = Almost always

Or I felt that I was rather touchy. = Almost always

Or I was aware of the action of my heart in the absence of physical exertion (e.g., sense of heart r... = Almost always

Or I felt scared without any good reason. = Almost always

Or I felt that life was meaningless. = Almost always

The answers you have provided to the previous questions indicate that you may be having a hard time emotionally right now. If you would like someone to talk to, the following numbers will be able to help and point you in the right direction.

- New Zealand: Lifeline 0800 543 354 (0800 LIFELINE) https://www.lifeline.org.nz/ OR Plunketline - 0800933922
- United Kingdom: PANDAS (PND Awareness and Support) 08081961776 - https://pandasfoundation.org.uk/
- Australia: PANDA (Perinatal Anxiety and Depression Australia) 1300 726 306 - https://panda.org.au/

- Worldwide/online: https://www.postpartum.net/

End of Block: DASS for mobile with correct answer codes 0 to 3

Start of Block: Information

Throughout these next questions you will be asked about PND; this stands for postnatal distress. In this questionnaire, PND is defined as any fatigue, stress, anxiety, low mood, or other emotional distress that has occurred since you had your baby.

Q44 Have you experienced PND since you have returned to work after having your baby?

- ○ No (1)
- ○ Yes (2)

Skip To: End of Block If Have you experienced PND since you have returned to work after having your baby? = No

Q98 Because you've experienced some PND, we'd like to ask you some questions about how this has affected you at work, and how you felt about whether or not to tell others about your PND

Q45 Because of PND, the stressors of my job were much harder to handle.

- ○ Strongly agree (1)
- ○ Somewhat agree (2)
- ○ Uncertain (3)
- ○ Somewhat disagree (4)
- ○ Strongly disagree (5)

Q46 Despite having PND, I was able to finish hard tasks at work.

- Strongly agree (1)
- Somewhat agree (2)
- Uncertain (3)
- Somewhat disagree (4)
- Strongly disagree (5)

Q47 PND distracted me from taking pleasure in my work.

- Strongly agree (1)
- Somewhat agree (2)
- Uncertain (3)
- Somewhat disagree (4)
- Strongly disagree (5)

Q48 I felt hopeless about finishing certain work tasks due to PND.

- Strongly agree (1)
- Somewhat agree (2)
- Uncertain (3)
- Somewhat disagree (4)
- Strongly disagree (5)

Q49 At work, I was able to focus on achieving my goals regardless of PND.

- ○ Strongly agree (1)
- ○ Somewhat agree (2)
- ○ Uncertain (3)
- ○ Somewhat disagree (4)
- ○ Strongly disagree (5)

Q50 Despite PND, I felt energetic enough to complete all my work.

- ○ Strongly agree (1)
- ○ Somewhat agree (2)
- ○ Uncertain (3)
- ○ Somewhat disagree (4)
- ○ Strongly disagree (5)

Q51 Since returning to work from parental leave, have you attended work when you really should have been off sick? If yes, why?

- ○ No (1)
- ○ Yes (2) _____

The following questions are related to your feelings around disclosing PND at work.

Q52 I don't tell anyone at work about PND and try keep it secret as much as possible.

- Strongly Agree (1)
- Somewhat agree (2)
- Uncertain (3)
- Somewhat disagree (4)
- Strongly disagree (5)
- I did not experience any form of perinatal distress at work at any point (6)

Q53 I feel very uncomfortable about disclosing PND to people at work.

- Strongly Agree (1)
- Somewhat agree (2)
- Uncertain (3)
- Somewhat disagree (4)
- Strongly disagree (5)

Q54 Disclosing PND to people at work makes me feel very anxious or ashamed.

- Strongly Agree (1)
- Somewhat agree (2)
- Uncertain (3)
- Somewhat disagree (4)
- Strongly disagree (5)

Q55 I feel very comfortable about keeping PND a secret from people at work.

- ○ Strongly Agree (1)
- ○ Somewhat agree (2)
- ○ Uncertain (3)
- ○ Somewhat disagree (4)
- ○ Strongly disagree (5)

Q56 Keeping PND a secret from people at work protects me from discrimination at work.

- ○ Strongly Agree (1)
- ○ Somewhat agree (2)
- ○ Uncertain (3)
- ○ Somewhat disagree (4)
- ○ Strongly disagree (5)

Q57 I expect a lot of discrimination from work if I disclose any/further PND.

- ○ Strongly Agree (1)
- ○ Somewhat agree (2)
- ○ Uncertain (3)
- ○ Somewhat disagree (4)
- ○ Strongly disagree (5)

Q58 I have disclosed PND to people at work.

- True (1)
- False (2)

Skip To: End of Block If I have disclosed PND to people at work. = False

Q59 Due to disclosing PND to this group, I have experienced a lot of discrimination.

- Strongly agree (1)
- Somewhat agree (2)
- Uncertain (3)
- Somewhat disagree (4)
- Strongly disagree (5)

End of Block: Presenteeism and Illness Disclosure

Start of Block: Co-worker Support

Now we have a few questions about your co-workers.

Q60 My colleagues support me when I need them.

- Strongly agree (1)
- Somewhat agree (2)
- Neither agree nor disagree (3)
- Somewhat disagree (4)
- Strongly disagree (5)
- I do not have colleagues (6)

Skip To: End of Block If My colleagues support me when I need them. = I do not have colleagues

Q61 My colleagues care about my physical and mental wellbeing.

- ○ Strongly agree (1)
- ○ Somewhat agree (2)
- ○ Neither agree nor disagree (3)
- ○ Somewhat disagree (4)
- ○ Strongly disagree (5)

Q62 My colleagues recognise my contributions and strengths.

- ○ Strongly agree (1)
- ○ Somewhat agree (2)
- ○ Neither agree nor disagree (3)
- ○ Somewhat disagree (4)
- ○ Strongly disagree (5)

Q63 My colleagues communicate work related information to me.

- ○ Strongly agree (1)
- ○ Somewhat agree (2)
- ○ Neither agree nor disagree (3)
- ○ Somewhat disagree (4)
- ○ Strongly disagree (5)

Q64 My colleagues help me to develop my skills and my competencies.

- Strongly agree (1)
- Somewhat agree (2)
- Neither agree nor disagree (3)
- Somewhat disagree (4)
- Strongly disagree (5)

Q65 My colleagues share their knowledge and their work experience with me.

- Strongly agree (1)
- Somewhat agree (2)
- Neither agree nor disagree (3)
- Somewhat disagree (4)
- Strongly disagree (5)

End of Block: Co-worker Support

Start of Block: Manager Support

Q66 My manager(s) supports me when I need them.

- Strongly agree (1)
- Somewhat agree (2)
- Neither agree nor disagree (3)
- Somewhat disagree (4)
- Strongly disagree (5)
- I do not have a manager or superior (6)

Skip To: End of Block If My manager(s) supports me when I need them. = I do not have a manager or superior

Q67 My manager(s) care about my physical and mental wellbeing.

- Strongly agree (1)
- Somewhat agree (2)
- Neither agree nor disagree (3)
- Somewhat disagree (4)
- Strongly disagree (5)

Q68 My manager(s) recognise my contributions and strengths.

- Strongly agree (1)
- Somewhat agree (2)
- Neither agree nor disagree (3)
- Somewhat disagree (4)
- Strongly disagree (5)

Q69 My manager(s) communicate work related information to me.

- Strongly agree (1)
- Somewhat agree (2)
- Neither agree nor disagree (3)
- Somewhat disagree (4)
- Strongly disagree (5)

Q70 My manager(s) help me to develop my skills and my competencies.

- Strongly agree (1)
- Somewhat agree (2)
- Neither agree nor disagree (3)
- Somewhat disagree (4)
- Strongly disagree (5)

Q71 My manager(s) share their knowledge and their work experience with me.

- Strongly agree (1)
- Somewhat agree (2)
- Neither agree nor disagree (3)
- Somewhat disagree (4)
- Strongly disagree (5)

End of Block: Manager Support

Start of Block: Qualitative

Display This Question:

If Have you experienced PND since you have returned to work after having your baby? = Yes

Q72 Did you receive a diagnosis for the PND you experienced?

- ○ Yes (please specify) (1) _____
- ○ No (2)

Display This Question:

If Have you experienced PND since you have returned to work after having your baby? = Yes

Q73 Have you received treatment for this PND?

- ☐ No (1)
- ☐ Yes - Medication (2)
- ☐ Yes - Therapy (3)
- ☐ Yes - Other (4) _____

Display This Question:

If Have you experienced PND since you have returned to work after having your baby? = Yes

Q74 Are/were you able to take time off work for appointments regarding your PND?

- ○ Yes (1)
- ○ No (2)
- ○ I did not require appointments during work time (3)

Display This Question:

If Have you experienced PND since you have returned to work after having your baby? = Yes

Q75 Was there anything in your job or work setting that was particularly difficult during your experience of PND?

Display This Question:

If Have you experienced PND since you have returned to work after having your baby? = Yes

Q76 What experiences within your job or work setting were helpful during your experience of PND?

Display This Question:

If Have you experienced PND since you have returned to work after having your baby? = Yes

Q77 Do you have any further comments about your experience at work since having a baby?

Appendix E

Participant request for Feedback via Separate Qualtrics Survey

Please enter your email if you wish to receive a summary of the findings from our research.

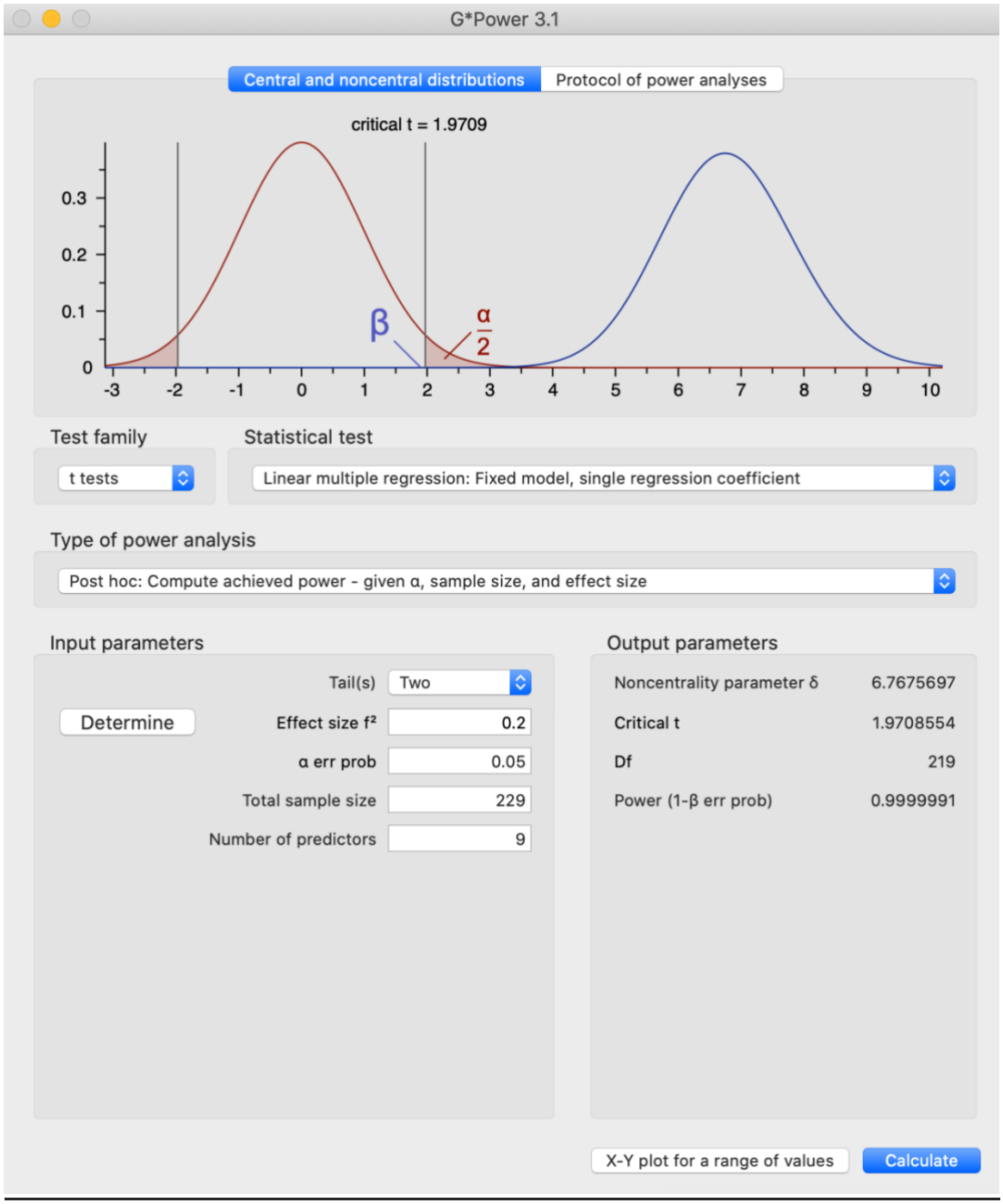
Any contact information entered will be stored securely and separately from the survey data. Your email address is not linked to your survey results.

Please enter your email if you wish to receive a summary of the findings from our research.
Any contact information entered will be stored securely and separately from the survey data. Your email address is not linked to your survey results.

→

Appendix F

G Power Analysis for Multiple Regression for Full Sample



G Power Analysis for Multiple Regression for PND Group