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MAJOR RESEARCH PROJECT

Alexa Duff BSc Hons MSc

WELLBEING IN WORKING MOTHERS

Section A: literature review

A review of wellbeing in working mothers

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Summary of the portfolio

This thesis examines the relationship between work and mothers' wellbeing.

Section A: This section provides a systematic review of the empirical literature on working mothers' wellbeing. A total of 19 papers were reviewed and the results implied that work has a positive impact on working mothers' wellbeing. There are a number of predictors and mediators of this relationship such as income, social support, work quality and culture.

While the papers made an attempt to address gaps in the literature, there were a number of limitations which meant that more research is needed to fully understand working mothers' wellbeing. Specifically, more research is needed which explores the predictors of wellbeing and the mediators and moderators of these relationships.

Section B: This section is an empirical paper which aimed to explore psychological distress when returning to work after maternity leave. Correlations, mediation and moderation analyses were used to explore the relationship of several variables with psychological distress during this period. Although there were biases in the sample, which may have affected the results, returning to work after maternity leave does not appear to have negative implications for women's psychological distress. The variables contributing to this are discussed, with implication for clinical and occupational practice.

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Major research project

Section A: Literature Review
A Review of Wellbeing in Working Mothers
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Abstract

Work plays a significant part in many mothers' lives. While evidence to date shows that work has a beneficial impact on wellbeing, little is known about the specific factors which influence this wellbeing. This paper aimed to review whether research, conducted since an earlier review on working mothers' wellbeing (Elgar & Chester, 2007), has added more to our knowledge. Electronic database searches of PsychInfo, Assia, Web of Science and Google Scholar were conducted and 19 papers were identified for this review. The papers in this review support the conclusions of previous research; that work is beneficial for mothers' wellbeing. A number of important moderators and predictors, such as social support, children and childcare, work quality, working hours, income and culture have been elaborated on. Clinical, occupational, theoretical and research implications are discussed.

Key words: Mothers, work, employment, wellbeing, mental health, physical health.

Introduction

Work, in this context, being synonymous with employment, is a job or task that requires effort in exchange for remuneration. Almost 75% of the UK working age adult population are employed, the highest rate since records began (Office for National Statistics; ONS, 2016). However, in the UK poor mental and physical health result in sickness absence and unemployment costs of over £100 billion a year (Black, 2008). For this reason, much of the research into the impact of work has focused on the negative influences that work can have on mental and physical health. Ill health affects people's ability to work, but unemployment has also been associated with higher mortality and poorer health (Waddell & Burton, 2006).

There is also a body of work which has focused on the more positive influences of work and how work can impact on wellbeing. Wellbeing tends to be portrayed as either an absence of distress or the presence of happiness. However, wellbeing is dynamic, encompassing a range of both positive and negative emotions, which influences interactions with others and helps people to cope with their experiences (Headey, 2006). A number of reviews have shown that work contributes positively to mental wellbeing and is associated with increased resources, social status and opportunities for personal development (Modini et al, 2016). Additionally, work can meet psychosocial needs in societies where employment is the norm (Waddell & Burton, 2006). However, it seems unclear what particular job factors impact directly on wellbeing (Modini et al, 2016). A range of factors such as quality and stability of employment (Broom et al., 2006; Kim & von dem Knesebeck, 2015; Van Aerden, Puig-Barrachina, Bosmans & Vanroelen, 2016) and conflicting work and family demands (Amstad, Meier, Fasel, Elfering & Semmer, 2011) mediate the relationship between work and wellbeing.

While the specific job factors that impact on wellbeing are as yet unclear, there may also be differences in those that affect men and women and the degree of impact that they have.

Almost seventy percent of women in the UK are employed (Office for National Statistics [ONS], 2016) and while the numbers of working men have decreased since records began, the numbers of working women have increased (ONS, 2013). Despite this there are still differences in the way the sexes are treated and there is still a pay gap (Arulampalam, Booth & Bryan, 2007). Historically, the literature on working women seemed to take the starting position that work is bad for women, possibly because of the social perception of their roles and more recent entry into workforce. However, a number of large scale reviews have looked at the impact of work on women (Klumb & Lampert, 2004; Repetti, Matthews & Waldron, 1989) and they found that work has, at best, benefits for women's wellbeing and at worst, neutral impact.

Work influences women differently than men. For example, role stability has more of an impact on women's wellbeing than it does on men's (Van Aerden et al., 2016). While conflict between work and family roles varies between men and women, it has more of an impact in women (Jansen, Kant, Kristensen & Nijhuis, 2003). There may be a number of reasons for this, including; higher time demands. When both paid and unpaid work are included in studies, women work more hours than men (Gjerdingen, McGovern, Bekker, Lundberg & Willemsen, 2001). Additionally, women may value the roles that they perform differently from men and also have different coping mechanisms (Byron, 2005; Hill, 2005).

While the UK has relatively high numbers of working women, the number of working mothers is comparatively low (Institute for Public Policy Research [IPPR], 2014). This may be due to the different roles that they perform, and the unique social and cultural factors which impact on mothers. There is huge variation in the numbers of mothers who work depending on their relationship status and age of their child (ONS, 2013). As women still do

the majority of childcare they will be particularly affected by access to childcare (IPPR, 2014; Sullivan, 2013). Borg and Stocks (2013) found that “amongst families reporting that they wanted to work more, the most common reason for not doing so was difficulty finding work with suitable hours, followed by not being able to afford formal childcare” (p. 5).

Theoretical perspectives of work and wellbeing

Most research around the impact of work has been based on either role-enhancement theories (Greenhaus & Powell, 2006) or role-strain theories (Goode, 1960). Both these theories draw on social identity theory (Tajfel and Turner, 1979), as most of the different roles adopted by humans are social in nature and decisions taken in relation to these roles are socially motivated. Waddell and Burton (2006) found that, in our society, work is central to individual identity. Having a coherent social identity and role give meaning to behaviour and protect against poor mental health (Thoits, 1983).

The role-strain hypothesis postulates that humans have a finite number of resources, and that these are increasingly drained by the number of roles they assume (Goode, 1960). Goode (1960) hypothesised that role strain will increase rapidly the more roles that are involved, particularly when these seem incompatible. He argued that it would be normal to have difficulty fulfilling the demands of different roles, as the pay-off from each does not increase in line with the demands and so individuals would be continually behaving in ways that attempt to reduce role strain (Goode, 1960). However, the empirical evidence does not wholly support strain theory, and subsequent work has suggested that the interaction between roles is more nuanced than a struggle for finite resources (Marks, 1977). Some roles will create more energy than they consume (Marks, 1977) by conferring direct benefits, status, personal enrichment and by providing buffers against failure in one particular area, (Seiber,

1974). Building on these ideas, the theory of work-family-enrichment (Greenhaus & Powell, 2006) postulates that experiences in one role will enhance quality of life in the other roles.

What has already been done?

Most research into working mothers has focused on the impact that their work has on children. We have relatively limited knowledge of the impact of work on mothers themselves.

While Marks (1977) hypothesised that human resources were flexible and renewable, little was empirically known in the 1970s about individuals' commitment priorities and demands as they were not being measured in studies. A review by Elgar and Chester (2007) looked at research on working and stay-at-home mothers. Their research was theoretically driven, exploring support for role-strain or role-enhancement theories. They concluded that this theoretical dichotomy did not account for all the findings. Similarly, in researching groups of other women, Klumb and Lampert (2004) found that while maternal employment seemed to impact positively on psychological wellbeing, the mediators and moderators of this are less clear.

Elgar and Chester (2007) concluded that more research was needed in a number of areas to more fully understand the impact of work on women's wellbeing. They suggested that more studies examining workplace factors, such as working hours, were needed. They also identified some methodological approaches which needed to be expanded. Like the Klumb and Lampert (2004) review, Elgar and Chester (2007) suggested more longitudinal studies looking at causality were needed. Elgar and Chester (2007) also found that depression was the main measure of wellbeing, and that few studies used any other measures. Establishing causal relationships is difficult, and most studies looking at work and wellbeing have argued

that more information is needed on predictors and moderators (Elgar & Chester, 2007; Gjerdingen et al, 2001; Klumb & Lampert, 2004; Modini et al, 2016).

Scope of current review

This review seeks to build on the earlier review by Elgar and Chester (2007) and explore what is currently known about the impact of work on mothers' wellbeing and whether this adds weight to any particular theory of wellbeing. However, as Elgar and Chester (2007) gave very little description of their methodology and no date parameters for their review or search terms, the current review will look at all papers that have been published since the last systematic review of working women (Klumb & Lampert, 2004) which covered 1950-2000.

Specifically, this review aims to add to our knowledge of the impact of work on mothers' wellbeing, particularly whether there are any obvious predictors of wellbeing that can be identified. It also wishes to identify whether the work that has been done adds greater weight to either the role-strain or enrichment hypotheses.

Why is this review important?

We still have a limited understanding of how work impacts on mental and physical health. Black (2008) argued that greater understanding is needed, particularly of the impact on mental health, so as to allow the government to create an evidence-based framework that would better support people to engage in enhancing work. Understanding and improving the links between wellbeing and work will allow us to make adaptations for a more productive workforce (Black 2008).

Dodge, Daly, Huyton and Sanders (2012) proposed a model of wellbeing where resources and challenges have to be balanced for wellbeing to occur. Within this model it is important

to understand the contribution that different experiences make to an individual's wellbeing. In the UK, 67.5% of mothers work (IPPR, 2014) and a greater understanding of the complex factors influencing their wellbeing would provide healthcare professionals with more information to tailor support.

Method

The aim of this study was to build on previous work. However, since it was unclear how systematic the most recent review (Elgar & Chester, 2007) had been, the date parameters for this review were any paper from 2000, when the Klumb and Lampert (2004) search ended. However, those papers included in the Elgar and Chester (2007) review were not included in this one. The inclusion and exclusion criteria can be seen in Table 1.

Literature searches were completed using the electronic databases; PsychInfo, Web of Science and Assia and a further search was done using Google Scholar to identify any papers that were not identified through the other database searches. The search terms that were used are outlined in Table 2 and the full search process can be seen in figure 1.

Table 1.
Inclusion and exclusion criteria for literature search

Exclusion criteria	Inclusion criteria
Looking at impact on children	Empirical primary studies
Not mothers	Sample mainly working mothers or working mothers specifically examined as a discrete group
Focus on the impact of something other than work	Focus on impact of employment or work
Looking at postpartum depression	Studies published in English
Evaluating benefits of a welfare to work programme	
Parents of children with disabilities	
Specific issues such as being in prison or leaving prison	
Unemployed	
Specifically examining an element of work-family conflict	
Included in Elgar & Chester (2007) paper	

Table 2.
Search terms for literature search

Mothers		Impact		Work		Wellbeing
Or	And	Or	And	Or	And	Or
Mother		Implications		Employment		Mental
Or				Or		health
Women				Employ		

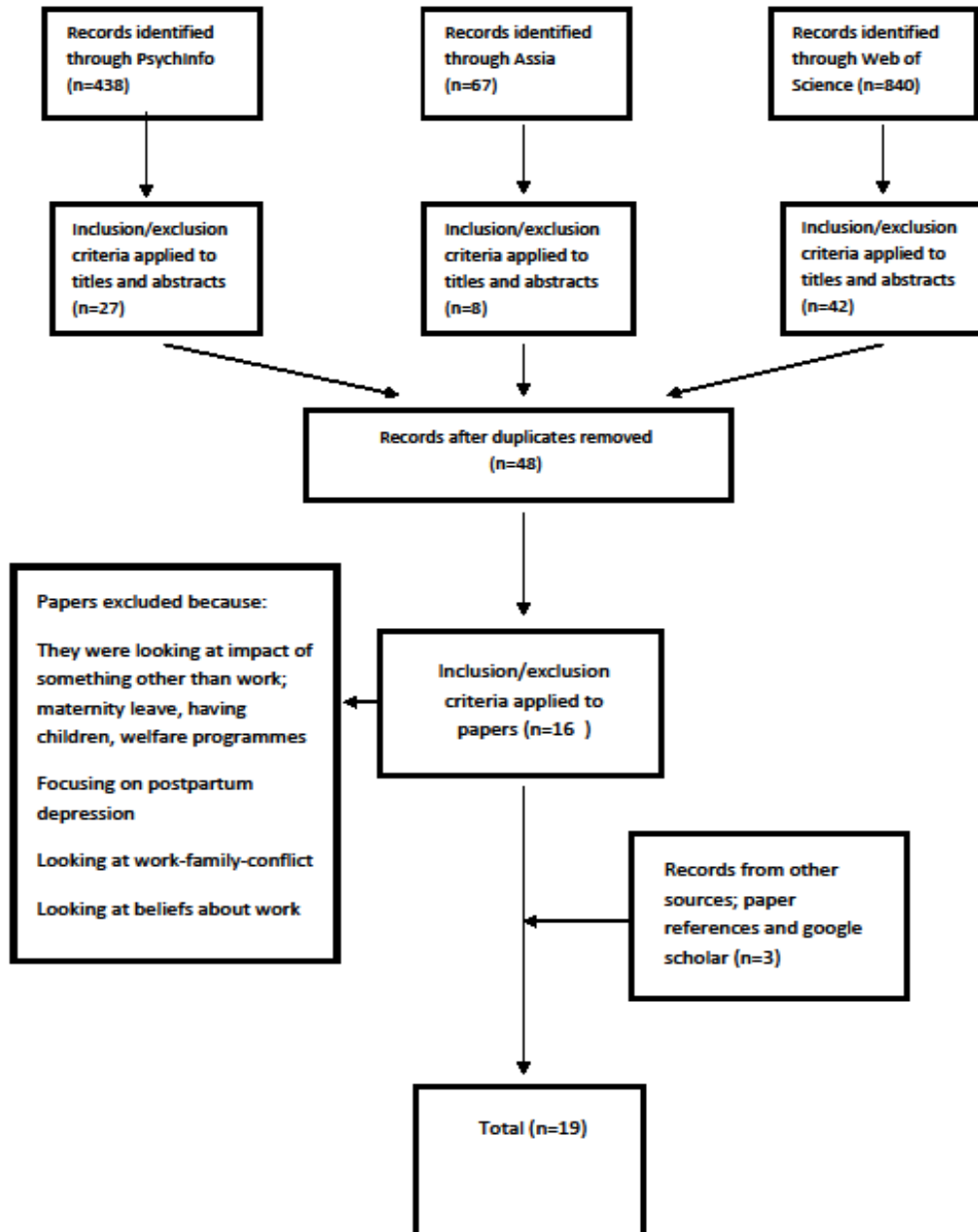


Figure 1. Flow diagram showing paper search strategy

Results

The search generated 19 papers, a complete list of which can be seen in Table 3. The majority were cross sectional but seven were longitudinal in design. Four papers had been missed from the Elgar and Chester review and were dated before 2007, the rest had been published since 2007.

Most studies found that employment was beneficial for mother's wellbeing, although they were not unequivocal. Additionally, there was variety between the papers in the variables that they identified as important predictors and moderators of the relationship between work and wellbeing. A summary of the papers can be seen in Table 3. The most common predictors of wellbeing were economic factors and partnership status. The findings from the papers have been summarised below, based on the themes that emerged from their findings.

Table 3
Details of review articles

Authors	Date	Sample	Location	Type of study	Measures related to wellbeing	Predictors of wellbeing	Type of analysis	Suggested mediators/moderators of interaction between work and wellbeing	Quality score
Buehler and O'Brien	2011	1364 mothers at baseline. Numbers at follow ups not given. Authors commented that attrition was high	USA	Longitudinal	Centre for epidemiological studies depression scale- CES-D Single item measure of overall health.	Employment status and hours	MANCOVAs-co-variates stated	None reported	17/22
Bull	2009	Scandinavian mothers; see Bull & Mittlemark (2009) Southern Europe 382 partnered mothers 79 single mothers	Southern Europe and Scandinavia	Cross sectional	World Health Organisation Wellbeing index Questions on life satisfaction	WFC. Confidant support. Financial hardship.	Descriptive statistics T-tests Mann-Whitney Hierarchical multiple regressions-variables given	Region Partnership status	20/22
Bull and Mittlemark	2009	73 Single mothers 432 Partnered mothers	Scandinavia	Cross sectional	See above; Bull (2009)	Financial hardship. WFC.	See above; Bull (2009)	Partnership status	20/22
Coley and Lombardi	2014	2400 Low income mothers at baseline. 1586 at final follow up	USA	Longitudinal	Brief symptom inventory (BSI)	Finances	Hierarchical linear modelling	Not significant/reported	22/22
Cooklin, Canterford, Strazdins and Nicholson	2011	1300 mothers of infants	Australia	Cross sectional	Kessler-6	Number of unfavourable work conditions	T-tests Chi-squares Logistical regression-variables given	Prior depression	21/22
Dziak, Janzen and Muhajarine	2010	438 partnered mothers 236 single mothers	Canada	Cross sectional	Psychological distress-Kessler-6	Partnership status Financial stress	Descriptive statistics T-tests Chi squares Multiple regressions-variables given	Income inadequacy, Psychosocial work quality, WFC	21/22
Eek and Axmon	2013	962 mothers 590 fathers	Sweden	Cross sectional	Perceived stress scale. Lund subjective health complaints. Swedish occupational fatigue inventory. Self-rated health questions.	Work attitudes to parenthood	ANOVAs Stratified analyses	None reported	20/22
Erlandsson and Eklund	2003	100 mothers	Sweden	Cross sectional	Goteborg Quality of life scale Sense of coherence scale Single item from SF 36	Number of 'hassles'	Descriptive statistics Spearman's rank correlation Kruskal Wallis	Sense of mastery	18/22

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							Mann-Whitney Logistic regression- variables given		
Gyamfi, Brooks-Gunn and Jackson	2001	93 employed, low income mothers 95 non-employed mothers	USA	Cross sectional	Centre for epidemiological studies depression scale- CES-D	Education Financial stress	Descriptive statistics T-tests chi squares ANCOVA-co-variates given Multiple regression-predictors given	Employment	22/22
Gareis and Barnett	2002	51 mothers working full time 47 mothers working part time	USA	Cross sectional	Original scale to measure anxiety and depression	Work hours	Descriptive statistics Multiple regressions-variables given	Perceived job demands. Parenting role quality	17/22
Haggag, Geser, Ostermann and Schusterschitz	2011	248 mothers	Austria	Cross sectional	Beck depression inventory	Employment status and hours	T-tests ANCOVA Moderated regression analysis-variables given	Work role quality	15/22
Harkness	2016	1318 single mothers and 6614 partnered mothers at baseline. 2154 single mothers and 9507 partnered mothers at follow up.	UK	Longitudinal	General health questionnaire.	Employment status Welfare support	Descriptive statistics Mulvariate analyses	Partnership status	22/22
Holmes, Erikson and Hill	2012	1141 mothers	USA	Longitudinal	Centre for epidemiological studies depression scale- CES-D	Education Partnership status Social support Ideal vs actual preferences Income Work hours	Multi linear growth curve	None reported	19/22
O'Brien, Del Pino, Yoo, Cinamon and Han	2014	105 Israeli mothers, 298 Korean mothers, 305 American mothers	USA, Korea and Israel	Cross sectional	Centre for epidemiological studies depression scale- CES-D	Spousal support	Structural equation modelling	Spousal support, WFC, WFE	19/22
Raver	2003	146 low income mothers at baseline 94 at final testing	USA	Longitudinal	Centre for epidemiological studies depression scale- CES-D	Months employed	Descriptive statistics T-tests Structural equation modelling	Financial remuneration Quality of work	19/22
Robinson, Magee and Caputi	2014	200 single mothers 793 partnered mothers	Australia	Cross sectional	Short form-36 health questionnaire. Kessler scale.	Relationship status	Descriptive statistics ANOVA General linear modelling-covariates given	Social support. Working hours.	22/22
Tucker, Grzywacz, Leng, Clinch and Arcury	2010	217 new mothers at baseline 191 at final testing	USA	Longitudinal	Medical outcomes study questionnaire-SF 12	Economic hardship	Descriptive statistics ANCOVAs-co-variates stated	Number of months postpartum	19/22

Wellbeing in working mothers

Turner	2007	508 Rural single mothers	USA	Cross sectional	Centre for epidemiological studies depression scale- CES-D	Employment. Partnership status. Financial stress Parenting stress	Descriptive statistics t-tests Regression analyses	Financial stress	17/22
Zabkiewicz	2010	718 low income single mothers	USA	Longitudinal	Depression-Brief symptom inventory	Income Partnership status Months of employment	Chi squares Generalised estimating equation modelling-variables given	Family support Number of children Hours of work	21/22

Partnership status

Six of the papers (Bull, 2009, Bull & Mittelmark, 2009, Dziak et al, 2010, Harkness, 2016; Holmes et al., 2012 Robinson et al, 2014) directly compared single and partnered working mothers and found that single mothers had poorer mental health and wellbeing than partnered mothers. Additionally, Robinson et al. (2014) found that single mothers had poorer physical health. However, employment still seems to be protective for single mothers, as employed single mothers had less stress and fewer depressive symptoms than those who were not employed (Gyamfi et al, 2001; Harkness, 2016; Turner, 2007). This held true even when the papers factored for directionality (Harkness, 2016; Raver, 2003; Turner, 2007). In fact, Harkness (2016) found that work, under favourable conditions (a supportive welfare system), conferred greater mental health benefits for single than partnered mothers. However, single mothers are disproportionally affected by income inadequacy and psychosocial factors, such as work stress and social support which may explain greater psychological distress (Bull, 2009; Bull & Mittelmark, 2009, Dziak et al, 2010; Holmes et al, 2012; Robinson et al, 2014).

Social support

The presence of a partner may provide women with the emotional or practical support needed to meet the demands of work roles. Raver (2003) found that cohabiting mothers were more likely to increase their working hours. O'Brien et al. (2014) found that, although levels of spousal support varied between countries, it was important everywhere. Conversely, when working mothers' partners do not provide this support, the relationship is associated with psychological distress (Cooklin et al, 2011). This may be because social support generally is important, rather than support exclusively from a partner. A number of the studies found that levels of social support were significantly related to depression (Cooklin et al, 2011; Holmes et al, 2012; Zabkiewicz, 2010) and wellbeing (Bull, 2009, Bull & Mittlemark, 2009). Social support seems to be particularly important for single mothers. In a study comparing

Scandinavian mothers with those from Southern Europe, Bull (2009) found that levels of confident support were the same for all working mothers but that it had greater impact on wellbeing in single mothers (Bull, 2009). Similarly, Robinson et al. (2014) found that social support moderated differences between single and partnered women in relation to mental health and that this relationship was stronger for single mothers. There was a suggestion in some of the papers that social support was the mechanism by which work was conferring benefits, as the effects of social support were greater than the benefits of work (Zabkiewicz, 2010).

Work-family conflict and enrichment

Work-family-conflict (WFC) exists when the requirements of one role make it difficult to fulfil the requirements of another (Greenhaus and Beutell, 1985). Conversely, work-family-enrichment (WFE) is the extent to which experiences in one role improve the quality of life in the other role (Greenhaus and Powell, 2006). Both work-family-conflict and work-family-enrichment operate from work to family and family to work, and can be broken down into strain-based, time-based and behaviour-based interactions (Carlson, Kacmar & Williams, 2000). A number of the studies addressed this interaction between work and family, with varying results. Two papers found that there were no differences in WFC between single and partnered mothers in Scandinavia (Bull, 2009, Bull & Mittlemark, 2009). However, there were differences in WFC between mothers in Scandinavia and Southern Europe (Bull, 2009). This is in contrast to O'Brien et al.'s (2014) finding that WFC was the same between countries. Single mothers may experience conflict in specific areas. Dziak et al, (2010) found that single mothers had greater time-based work-family-conflict and strain-based family-work-conflict than partnered mothers. Beuhler & O'Brien (2011) found that WFC was lower in mothers who worked part time than those who did not work or worked full time but there were no differences in WFE between mothers who worked part and full time,

suggesting that work confers benefits independent of hours worked. However, other studies found a greater association between WFC and depression than between WFE and depression (O'Brien et al., 2014). A limited number of studies looked at factors that may impact on WFC, but Eek and Axmon (2013) found that the ability to exercise during the day and the opportunity to bring children to work, were associated with lower WFC.

Multiple demands

While the impact of work-family conflict was not examined by many of the papers, the burdens placed by various roles were. The findings suggest that childcare is an important factor when considering a mother's ability to work. Turner (2007) found that the relationship between childcare stress and employment was the strongest of the variables that they examined. Mothers who were employed had older (Turner, 2007) or fewer children (Gyamfi et al., 2001), which suggests that childcare difficulties may be a barrier to employment.

Where barriers can be overcome, working seems to contribute to wellbeing even when children are young (Buchler & O'Brien, 2011; Cooklin et al., 2011; Gyamfi et al., 2001) or independent of age of children (Harkness, 2016). However, the papers often did not mention the age range of the children and how this might affect the mother's ability to work.

Few of the studies looked at how the number of children in the household impacted on work and wellbeing. Those that did had mixed findings, from no association (Holmes et al., 2012) to an association when mothers had more than 2 (Erlandsson & Eklund, 2003) or 3 children (Zabkiewicz, 2010). One of the papers found that mothers who were not employed had significantly more children (Gyamfi, et al., 2001) but none of the studies looked at what impact the number of children had on women's ability to work.

Childcare stress seems distinct from parenting stress, the latter being a source of stress for all mothers, whereas the former was not (Turner, 2007). The quality of childcare would also

seem to be important as mothers who have access to good quality childcare will be more able to increase their working hours (Raver, 2003). Additionally, mothers who were working in the context of welfare systems which include support with childcare had better mental health (Bull, 2009; Harkness, 2016). However, while childcare may be a source of stress or a barrier to employment, the impact of childcare difficulties on wellbeing is less clear. Cooklin et al. (2011) found no association between the number of hours that a child was in care or type of childcare (parental versus non parental) and psychological distress.

Workplace factors

Employment seems to be protective. Those who were working had lower depressive symptoms than those who were not (Beuhler and O'Brien, 2011), and a number of studies found that psychological distress in mothers was independent of working hours (Cooklin et al., 2011, Gareis & Barnett, 2002, Beuhler & O'Brien, 2011). In contrast, Zabkiewicz (2010) found that lower depressive symptoms were found in mothers who consistently worked full time when compared to those in part-time or irregular work. However, they did not determine if this was due to mothers with poorer employment records or fewer working hours having had worse pre-existing mental health. Whereas Harkness (2016) found that any working hours were associated with better mental health than being unemployed, although mental health was best in those who were employed full-time. Harkness (2016) assessed for directionality and concluded that unemployment rather than a pre-existing mental health problem influenced the mental health of lone working mothers. Robinson et al. (2014) found that for partnered women, physical health was independent of working hours, but single women's physical health was associated with working hours.

The role of workplace factors in wellbeing seems to be a more complicated picture than merely working hours. Zabkiewicz (2010) found that it was not until mothers have been

employed consistently for more than 10 months that they experience the mental health benefits. In addition, a number of papers found that workplace support and attitudes were important for wellbeing, from employer support (O'Brien et al., 2014), to managers' attitudes (Eek & Axmon, 2013) and workplace stressors (Erlandsson & Eklund, 2003).

There also appeared to be wellbeing implications around job transitions and stability.

Mothers with longer work history had fewer depressive symptoms even when previous mental health history was taken into account (Raver, 2003). Gaining employment seems to contribute as much, or more, to wellbeing than even being in consistent employment (Harkness, 2016; Zabkiewicz, 2010). However, regular transitions in and out of work were associated with decreased financial stability which in turn was associated with poorer mental health (Coley & Lombardi, 2014). This may be due to the cumulative impact of job loss, which was significantly associated with depression (Zabkiewicz, 2010). Job stability was associated with better mental and physical health (Coley & Lombardi, 2014). There may also be factors which make certain mothers more vulnerable to transitions, such as economic hardship or returning to work earlier in the postpartum period (Tucker et al., 2010).

Role quality

While work, independent of the professional status of the job (Harkness, 2016), seemed to be beneficial for mental health, poor work quality was associated with poorer mental health (Haggag et al, 2011; Cooklin et al, 2011; Raver, 2003; Zabkiewicz, 2010). This was true when role quality was self-assessed (Cooklin et al, 2011; Haggag et al, 2011) or by remuneration levels (Raver, 2003; Zabkiewicz, 2010). There seem to be numerous factors contributing to role quality, and the more negative factors that are present, the more of an impact it has on psychological distress (Cooklin et al., 2011). Cooklin et al. (2011) also found that there were significant differences in job conditions, such as job control, security or

flexibility, in those with chronic depression and those without. However, as these studies were cross-sectional, directionality could not be assessed. Therefore, we do not know whether this was because women with depression were less able to access jobs of higher quality or if low quality caused poorer mental health.

Control over work seemed to be an important variable in mothers' wellbeing. Erlandsson and Eklund (2003) found mastery to be the only significant variable in relation to health. Certain groups of mothers, for example single mothers (Dziak et al, 2010) or those with less education (Holmes et al., 2012; Robinson et al., 2014) have less control over their roles which may explain differences in psychological wellbeing, Holmes et al (2012) looked at differences between mothers' ideal and actual work conditions and found that the mismatch between actual and ideal work situation was biggest predictor of depression. Mothers who wanted full time work but were at home were at highest risk of depression, while those who wanted to be at home but were in full time work did not have such high depression scores (Holmes et al, 2012). Flexibility in working conditions increased women's sense of work related control (Eek & Axmon, 2013).

Cultural context

Although they were from a range of countries, the papers all found comparable benefits of work. However, this similarity in findings is perhaps unsurprising as most of the papers were from the developed world. Despite this, there were some differences between regions. Bull (2009) found that differences between single and partnered mothers were greater between Scandinavia and Southern Europe than they were within these regions. Mothers in Southern Europe, but not Scandinavia, differed on positive affect, confidant support and social participation (Bull, 2009), suggesting that work and partnership status may interact and impact on wellbeing differently between social and cultural environments. O'Brien et al

(2014) looked at how work, family and employer support impact upon depression in mothers in Korea, Israel and USA. They found that Korean mothers had the highest levels of depression and American mothers the lowest. They identified a number of explanations for this, such as Korea having a higher wage gap between men and women, having a more traditional society and lower spousal support. Even within a single country there are differences related to varying political systems; Harkness (2016) found that employed women, and employed single women in particular, had better mental health when there was a more supportive welfare system in place. It would seem that cultural attitudes within and between countries are important when looking at the impact of work.

Education and income

There was a trend in almost all the studies that working mothers with higher education had more positive outcomes. Higher education was associated with more enriching jobs (Bull & Mittlemark, 2009), partnered status and work hours (Robinson et al, 2014), income (Turner, 2007), lower parenting stress (Gyamfi et al, 2001), and lower levels of depression (Gyamfi et al, 2001; Holmes et al, 2012). However, Erlandsson and Eklund (2003) found that women with more education reported more stressors which were associated with poorer quality of life.

Most studies found that work was associated with better financial outcomes for mothers, resulting in higher income and work benefits. A number found that financial stress was one of the key predictors of mothers' wellbeing (Bull, 2009, Bull & Mittlemark, 2009, Coley & Lombardi, 2014; Dziak et al, 2010; Raver, 2003, Turner, 2007). However, financial stress is only alleviated by adequate remuneration, as financial strain was similar in mothers who were on welfare and those in low income jobs (Gyamfi et al., 2001). Raver (2003) found that the effect sizes for the benefits of work were small and it was removal from financial hardship

that was important for psychological wellbeing. Lack of adequate income is potentially why Zabkiewicz (2010) found that work only had psychological benefits when it was full time as it was only at this level that it provided women with a living wage. In contrast, Harkness (2016) found that the benefits of work were independent of income, although she was looking at income in the context of a welfare system that ensured working was financially advantageous. This is in line with findings from Southern Europe and Scandinavia; women were more protected from financial stress in Scandinavia, where there is a more comprehensive welfare system (Bull & Mittlemark, 2009). Turner (2007) found that financial stress in the context of employment was more distressing than financial distress in the absence of employment. Work may not be contributing to wellbeing through income alone as, even in the absence of improved income, employed mothers had significantly fewer depressive symptoms and parental stress (Gyamfi et al, 2001).

Summary

This review aimed to explore how work affects mothers' wellbeing and the predictors and moderators of this wellbeing. Like previous research (Klumb & Lampert, 2004; Modini et al, 2016), and specifically research with mothers (Elgar and Chester, 2007), this review indicated that the net impact of work on mother's wellbeing is positive. It provides greater information about particular factors which contribute to wellbeing in working women, such as social support, work demands and hours, role quality and cultural factors. Additionally it identifies differences for specific groups of mothers, for example, single mothers or those with low income. Only one study (Eek & Axmon, 2013) included fathers and it found differences between the impact of work and home related factors on mothers and fathers which would suggest that there are different influences at work.

Quality

While the reviewed papers have added to our information about how work contributes to the wellbeing of women, there were differences in the quality of the research. Twelve of the studies used a cross-sectional design and seven used a longitudinal design. The quality assessment criteria for evaluating primary research papers (Kmet, Lee & Cook, 2004, see appendix A) was used to assess the quality of both kinds of study. The quality scores generated using these criteria (Kmet, Lee & Cook, 2004) can be seen in Table 3. Overall, most of the studies had good descriptions of their method, participants and analysis: see Table 3 for more details. Analysis of the design, sample size and biases are discussed in greater detail below.

Design

As recommended by Elgar and Chester (2007), the studies were designed to focus on the processes and mediators involved in the relationship between employment and psychological wellbeing. The question that this review aimed to answer was how does work impact on wellbeing. While the search strategy for papers reflected the idea that wellbeing can encompass many things, many of the studies limited their research to an absence of depression or anxiety, although some attempted to extend this by including measures of physical health or quality of life (see Table 3). Seven of the papers (Buelher & O'Brien, 2011; Bull, 2009; Bull & Mittlemark, 2009; Coley & Lombardi, 2014; Dziak et al, 2010; Eek & Axmon, 2013; Holmes et al, 2012) specifically postulated that they were researching wellbeing and yet only four of them used any measures apart from a mental or physical health symptom scale. The reductive methods for measuring wellbeing are a design limitation for those that specifically aimed to research wellbeing.

The variables used by the studies were diverse, which expands our ability to understand which factors are important when considering the impact of work on mothers. However, it

makes it harder for direct comparison of effects between studies. As the cross-sectional studies involved investigations at specific time points, this allowed for novel factors to be investigated. A number of studies used original measures (Erlandsson & Eklund, 2003; Haggag et al, 2011) but in doing so, left themselves open to criticism for using measures that had not been previously validated or are not robust. However, some provided good justification for why they selected these measures (Erlandsson & Eklund, 2003).

The designs of a number of studies limited the conclusions that the authors were able to make (Cooklin et al., 2011; Erlandsson & Eklund, 2003; Tucker et al., 2010). Erlandsson and Eklund (2003) aimed to examine the impact of occupation on health and wellbeing in working women. However, their design allowed women to identify a select number of 'hassles' (stressors) and comment on them. Women did not always pick work related stressors and therefore this was not directly addressing the impact of work. The measure of job quality used by Cooklin et al (2011) meant that they were unable to answer their own research question. Tucker et al (2010) aimed to look at differences in working women's wellbeing based on different levels of economic hardship. However, their measure of economic hardship was not robust which meant that their conclusions were open to criticism.

While cross-sectional designs allow for specific variables to be examined at a point in time, this design also meant that the 12 cross-sectional studies could not make directional conclusions about working and health. However, seven of the papers were longitudinal in design, which did allow for these directional conclusions to be drawn. Comparisons within and between individuals, over time, provides greater information about the conditions under which work is beneficial. The longitudinal studies could make inferences about changes in working mothers' wellbeing as their child aged (Buehler & O'Brien, 2011; Tucker et al, 2010), how pre-existing mental health problems interacted with work and wellbeing (Harkness, 2016; Raver, 2003; Zabkiewicz, 2010) and how changing work experiences

impacted on wellbeing (Coley & Lombardi, 2014; Holmes et al., 2012; Raver, 2003; Tucker et al. 2010, Zabkiewicz, 2010)

There were also a number of potentially important variables that few, if any, studies addressed. For example, some studies did not measure the age of children and those that did had varying criteria for inclusion; from mothers of infants under 12 months (Cooklin et al., 2011) to mothers of children under 20 years old (Dziak et al, 2010). Only one study used the child's age as a variable (Harkness, 2016) and only four used the number of children as a variable.

None of the papers in this review used qualitative methods and, like much of the work before (Elgar & Chester, 2007; Klumb and Lampert, 2004), many of the papers concluded that more qualitative research was needed to improve understanding of the different dimensions impacting on working mothers. This conclusion suggests that we still lack information in this area, which should be addressed by future qualitative papers.

Sample size

There was great variability in sample size, from 7932 (Harkness, 2016) to to 98 (Gareis & Barnett, 2002), although this was sometimes related to the specificity of the population they were examining, such as, Gareis and Barnett's (2002) study of work hours for doctors. In other papers, convenience sampling resulted in variation between groups, which will have meant that, in some cases, their comparison of mean calculations were underpowered. The numbers of single mothers were often much smaller than partnered mothers (Bull, 2009; Bull & Mittlemark, 2009; Robinson et al, 2014), although realistically, this is partly because of real life availability of samples, since there are many fewer single mothers than partnered mothers (ONS, 2016). However, there also was disparity in numbers in the cross-cultural

studies for which this ecological availability does not necessarily apply (Bull, 2009; O'Brien et al, 2014).

Additionally, for the longitudinal studies, problems related to attrition had to be accounted for. Some studies had better retention than others. Beuhler & O'Brien (2011) and Raver (2003) had high attrition, which potentially led to bias in the sample dependent on the characteristics of those who remained over time. However, Raver (2003) examined differences in groups who continued and those who did not and found no significant differences. Additionally, Buehler and O'Brien (2011) struggled with the varying employment status of their participants, 1.8% of whom were consistently employed part time, 11.2% full time and 2.8% consistently unemployed. Zabkiewicz (2010), Tucker et al (2010) and Coley and Lombardi (2014) all had good retention which may have been because of the way they selected their participants. They selected those who had already completed household or population data and so had shown themselves to be willing to participate in research.

Biases

Comparisons between studies were made more complicated due to biases with samples. It is difficult to compare high income (Holmes et al, 2010; O'Brien et al, 2014) with low income (Coley & Lombardi, 2014; Gyamfi et al., 2001; Tucker et al, 2010; Zabkiewicz, 2010) samples, or those with unusually high levels of education (Cooklin et al, 2011; Haggag et al, 2011; Holmes et al, 2010) with those with standard education.

Biases in samples were often not commented on, particularly when bias was introduced through recruitment or selection strategies, such as removing participants from ethnic minorities (Haggag et al., 2010), sampling via university contacts (O'Brien et al., 2014) or selecting a particularly young sample (Turner, 2007). Only two studies reported differences

between those who completed the study and those who did not. Cooklin et al, (2011) found that more educated mothers were more likely to complete the study and Erlandsson and Eklund (2003) postulated that busier mothers were more likely to have dropped out of their study.

Discussion and future work

Waddell and Burton (2006) hypothesised that the mechanisms for wellbeing in employment and unemployment are complicated as stress increases the likelihood of mental health problems but absence of this stress does not necessarily increase wellbeing. Studies in this review would also support this hypothesis as the benefits of work can occur in the presence of stress or mental health problems. Work does not result in an absence of stress but may provide other benefits. This review provides more information about the predictors and moderators that might be significant specifically for working mothers such as income, social support, work hours and quality, cumulative burdens and childcare. These were similar to mechanisms found by previous reviews (Klumb and Lampert, 2004; Modini et al, 2016; Waddell and Burton, 2006). However, no review has been able to identify any particular variable which alone would predict the impact of work on wellbeing.

Single mothers have poorer mental health than partnered mothers (Cooper, Bebbington, Meltzer & Bhugra, 2008). Working single mothers in this review had poorer wellbeing than partnered mothers, yet work still had benefits for their wellbeing. Being a single working mother may not be a risk to wellbeing per se, but they may experience more of the cumulative risks which are commonly associated with poorer mental health, such as poverty, childcare stress, lack of spousal support and lower control, all of which this review found to be associated with poorer wellbeing. Previous studies have found that once certain risks are controlled for, such as income and poor social support, single mothers have similar rates of

mental health (Cooper et al., 2008). Resilience work indicates that the cumulative effect of multiple stressors at any particular point in time impacts on individuals' ability to cope (Richardson, Neiger, Jensen & Kumpfer, 1990). Additionally, different support will be needed at different time points and with different levels of stress (Richardson et al. 1990). Consideration should be given to how and when problems are assessed and what support mechanisms are in place.

In line with previous work (Ahmad, 2002; Gjerdingen et al, 2001), this review has identified that the cultural context of the study is important. Differences between the work roles that men and women hold are fairly consistent across cultures, with women taking lower paid positions and doing more unpaid work than men (Altintas & Sullivan, 2016; Gjerdingen et al, 2001). This review suggests that the impact that work has on mothers is inconsistent across cultures, which may be because of social structures or values around motherhood which enable women to work. A number of the studies suggested that more supportive welfare systems enable mothers to work without having a negative impact on their wellbeing (Bull, 2009; Bull & Mittlemark, 2009; Harkness, 2016). The social context is important in relation to inequalities of health and deprivation (Waddell & Burton, 2006). The cultural importance of particular roles may mediate the impact of work on mothers (Ahmad, 2002; O'Brien et al, 2014). The value of certain roles vary between men and women within cultures (Eek & Axmon, 2013), and where there are perceived inequities in roles, wellbeing will be lower (Eek & Axmon, 2015).

The mental health benefits of work are particularly apparent when workplace conditions are favourable (Modini et al, 2016) or job quality is high (Broom et al, 2006). However, while job quality has been found to be important in wellbeing, previous reviews have concluded that there is insufficient evidence as to which characteristics define quality (Waddell & Burton, 2006). While this review supported the idea of job quality being important, it also

highlighted the significance of particular quality indicators, such as income. Income seemed to predict differences in wellbeing or moderate the impact of working hours and wellbeing. However, while income and wellbeing may be highly associated, there appear to be differences in the association between countries and gender (Furnee, Groot & Pfann, 2011). It would be important for future work to take account of income as a key dimension of work quality.

There are differences in the way work interferes with family and how family interferes with work, although they can occur simultaneously (Byron, 2005). While this review did not examine specific areas of work-family-conflict (WFC), some studies did consider WFC as a variable. WFC seemed to vary dependent on working hours (Buehler and O'Brien, 2011) and partnership status (Bull, 2009; Bull and Mittlemark, 2009), but did not necessarily vary between cultures (O'Brien et al, 2014). Within a WFC model (Michel et al, 2011) family-role overload, including number of children, contributes to WFC. However, this review could not provide evidence to support this, as only two studies found an effect due to the number of children, and none included the age of children as a variable. This would seem to be a limitation of the papers in this review as other reviews have found that impact of work on women's wellbeing differs depending on whether or not they had young children at home (Gjerdingen et al, 2001). Little information was gained from this review about how work and family life interact but it does highlight the need to examine multiple factors separately.

Since work seems to be beneficial for wellbeing, it would be important to examine what factors act as barriers to mothers accessing work. While housework has become more equally shared between men and women over time (Altintas & Sullivan, 2016) division of childcare has not (Sullivan, 2013). Therefore issues with childcare may disproportionately impact on mothers' relationships to work and should be counted separately from other unpaid work (Sullivan, 2013). This review provides some evidence that access to childcare is of

significance to mothers' ability to work, in that working mothers tended to have older children (Turner, 2007), fewer children (Zabkiewicz, 2010) and access to childcare (Harkness, 2016; Raver, 2003). Childcare stress was most significantly associated with wellbeing (Turner, 2007). Access to childcare may impact on when mothers access work, or whether they access it at all.

Unemployment is bad for wellbeing (Broom et al, 2006; Kim & von dem Knesebeck, 2015; Waddell & Burton, 2006), but unstable employment has been found to have similar effects to unemployment (Broom et al., 2006; Kim & von dem Knesebeck, 2015). This review would support this, as unstable employment was not found to confer the same wellbeing benefits as stable employment. Additionally, transitions may be significant for wellbeing. Zabkiewicz (2010) and Harkness (2016) found that gaining employment had as great or greater impact on wellbeing than being in consistent employment. Transitions back into work become more difficult and incur greater penalties with longer time out (Arun, Arun, & Borooah, 2004) and with mental health problems (Schuring et al., 2013). Therefore, maintaining some work may be protective and facilitate transitions by protecting from depression. This review suggests that childcare may be one of the barriers to women doing this, however, further work should address why mothers might not be able to remain in or transition back into work.

Theoretical implications

This review aimed to comment on how the review findings related to the theories that are influential in this area. Like reviews that have come before (Elgar & Chester, 2007; Klumb & Lampert, 2004), the results of this review found evidence consistent with role-strain theory, such as single mothers having more cumulative burdens. However, it also found evidence to support role-enhancement theory, such as the significance of income or social support provided by work. While this review has contributed to the understanding about work and

wellbeing in mothers, the conclusion, like those of other reviews (Elgar and Chester, 2007; Klumb & Lampert, 2004), is that the interaction between work and wellbeing is a complex picture and that neither role-strain nor enhancement wholly explains the relationship between work and wellbeing. There are a number of gaps in the theories influencing work and wellbeing. Firstly, the role strain and role enhancement theories ignore the complexity of different roles and how burden or enrichment might vary under different circumstances. For example, the papers in this review highlighted social support, working hours and financial remuneration as important in understanding the relationship between work and wellbeing however, these would not fit well into the role strain or enrichment theories. This is not a new idea, Marks and MacDermid (1996) proposed that role balance and organisation are important and should be the focus of further work and yet developments to the role strain and enrichment theories have been limited. The second limitation of the literature is that wellbeing is used interchangeably with other concepts and clearer definitions and theories are needed. Dodge et al. (2012) proposed a model of wellbeing as a balancing act of challenges and resources which could be a useful basis for building a model of work and wellbeing in mothers. It would allow for the measures of mental and physical health used by most of the studies in this review to have their place in the wellbeing model. However, it would allow for the other predictors and mediators that this review found to be important, such as social support and work demands, to be included and would highlight more clearly where the gaps in our understanding lie.

Research implications

There were a number of methodological limitations of the studies that have been done in this area. While many of the papers in this review concluded that a qualitative understanding of the variables that contribute to wellbeing would greatly aid our understanding of wellbeing in working mothers, no papers seem to have addressed this. While this review included a

number of longitudinal studies, which allowed for more causal comparisons to be made, they were still few in number and had limitations. More longitudinal studies would contribute to the field.

The work on mothers' wellbeing still mainly relies on the association between depression and a number of variables. Taking a wider view of wellbeing, such as including anxiety, stress and physical health, would help us to understand the impact of work more broadly. There are a number of models which are helpful when considering work and wellbeing, such as models of resilience (Richardson et al., 1990) and wellbeing (Dodge et al., 2012). However, they are general models, rather than work-specific, which do not account for all the variables that influence work and wellbeing. Further research exploring predictors of work and wellbeing and the mediators and moderators of these relationships would enable more detailed models of work and wellbeing to be developed. Research done with both mothers and fathers would allow for identification of which factors contribute to the wellbeing of both and which are unique to mothers.

Little research to date seems to have focused on the life stage and age of mothers and how this impacts on their relationship with wellbeing and work. Even studies which focused on infants, which will have younger mothers as participants, do not seem to include commentary on it. The Klumb and Lampert (2004) systematic review of working women made no comment on the varying ages of the samples between studies. As motherhood and work (Wepfer, Brauchli, Jenny, Haemmig & Bauer, 2015) and work-family-conflict (Huffman, Culbertson, Henning, & Goh, 2013) vary in impact and burden across the life span, it seems as if a breakdown of the impact of the interaction at different life stages would be a worthwhile focus.

More work is needed to identify and compare the differences and similarities between cultures. Black (2008) argued for government policy to be based on research, therefore it is concerning that there appears to have been only one UK paper examining the impact of work on mothers wellbeing since 2000. As 72% percent of UK mothers work (ONS, 2013), this is clearly a gap that needs to be addressed.

Implications for clinical and occupational practice

Mental health problems are the biggest cause of disability among working age adults (World Health Organisation, 2008). One of the drivers behind ‘Improving Access to Psychological Therapies’ was to prevent people with anxiety and depression leaving employment or to support them back into it (The Centre for Economic Performance’s Mental Health Policy Group, 2006). This review suggests that supporting mothers with mental health problems to access work could be beneficial for their wellbeing, although thought would need to be given to what psychological support would be needed to promote this.

Employers should consider how they support mothers in the workplace as employees with poorer mental health impose a greater cost on the organisation (McDaid, King, Park & Parsonage, 2011). For this reason, workplace interventions to promote wellbeing are an increasing priority, such as exercise interventions (Conn, Hafdahl, Cooper, Brown, & Lusk, 2009) or stress management interventions, such as mindfulness (Virgili, 2015). Flexibility at work is associated with better wellbeing (Casey & Grzywacz, 2008), particularly for women (Byron, 2005). As women take more responsibility for childcare (Sullivan, 2013) workplace policies which allow them to negotiate this successfully may be more important to them.

In clinical practice, psychologists should consider the role of employment, or lack of, when formulating women’s ability to cope. This review would also suggest that considering the

hierarchy of needs (Maslow, 1943), particularly in relation to income, would be important with working women as, in the absence of sufficient income, their work may be causing stress without providing benefits.

Conclusions

A number of reviews (Klumb & Lampert, 2004; Modini et al., 2016) have found that work has positive influences on wellbeing. This review sought to investigate how work influences mothers' wellbeing. Despite the limitations of the studies, this review concludes that, similar to research with other populations, work contributes positively to mothers' wellbeing. This seems to apply even when mothers are disadvantaged in certain ways such as having low income or no partner or social support. However, the advantages of work are limited by poor work quality or poor remuneration. More research is needed to fully understand working mothers' wellbeing. In particular, research exploring the predictors of wellbeing and the mediators and moderators of these relationships would allow for more specific models of wellbeing to be developed. There are clinical and occupational implications to the findings, however, the cross-cultural differences suggest that more UK-based research is needed to inform work and health policies.

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Major research project

Section B: Returning to work after maternity leave: An exploration of factors influencing women's psychological distress during this period.

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Abstract

Background: Becoming a mother is a period of transition for women and during this period many of them return to work.

Aims: The aim of the study was to explore psychological distress when returning to work after maternity leave. Variables such as work-family conflict, work-family balance, social support and income and their relationship to psychological distress during this period were explored.

Method: 195 women completed an online questionnaire, with demographic questions as well as measures assessing psychological distress, work-family-conflict, work-family-balance and social support. Correlations, t-tests, mediation and moderation analyses were used to explore the results.

Results: Psychological distress was not found to be elevated in mothers returning to work after maternity leave. However, they did have high levels of work-family-conflict and work-family-balance. Social support acted as a mediator of the relationship between work-family-conflict and work-family-balance and psychological distress.

Conclusions and implications: Returning to work after maternity leave does not have negative implications for women's psychological distress. Both work-family-conflict and balance are important for psychological wellbeing at this period and therefore the implications for managing work-family-conflict and work-family-balance are discussed.

Key words: Mothers, maternity leave, returning to work, mental health, work-family conflict, work-family balance.

Introduction

The impact of motherhood

A significant proportion of women become mothers (Office for National Statistics [ONS], 2016) which means an adjustment to “living in a new and overwhelming world” (Nystrom & Orhling, 2004, p. 327). New mothers experience changing self-concept (Darvill, Skirton & Farrand, 2010; Nelson, 2003; Nystrom & Orhling, 2004) and struggle to find time for themselves (Nystrom & Orhling, 2004). In the postnatal period, there are a significant number of new skills to be learnt in the context of fatigue (Nelson, 2003; Nystrom & Orhling, 2004). Struggling to learn these can leave women feeling ill-equipped or out of control (Darvill et al., 2010). The postnatal period seems to be one of significant unmet needs even when mothers have people around them, and adjustment to these new experiences may take longer than expected (Darvill et al, 2010).

Social support seems to contribute to positive adjustment during this period. It has been found to act as a buffer to postpartum depression (Leger & Letourneau, 2015) and to promote self-efficacy (Shorey, Chan, Chong & He, 2015). However, it has been suggested that the challenge of dealing with a new baby acts as a barrier to accessing social support in this period (Barkin, Bloch, Hawkins, & Thomas, 2014), which might explain why many mothers experience difficulties in their relationships with others, particularly partners (Nelson, 2003; Nystrom & Orhling, 2004) during this period. There are also variations in the benefits gained from support depending on its origin. Sampson, Villarreal & Padilla (2015) found that the support from the child’s father was the most important in reducing stress. However, mothers also describe feeling judged by others as to their maternal competency (Wilkins, 2006) and struggling with contradictory advice from their support networks (Nystrom & Orhling, 2004).

The postpartum period is commonly defined as the six weeks following birth, but studies have shown that the mental and physical impact can last much longer. Studies have shown that elevated anxiety and depression (Yelland, Sutherland & Brown, 2010) and poor physical health (Gjerdingen, Froberg, Chaloner, McGovern, 1993) can last for up to a year postpartum. Bearing in mind the adjustments that take place in this period, it is perhaps unsurprising that it can be a time of considerable mental and physical health difficulties. Elevated depression is predicted by stressful life events (O'Hara & Swain, 1996; Yelland et al. 2010) income, social support, age (Gjerdingen & Chaloner, 1994; O'Hara & Swain, 1996) and early return to work after maternity leave (Chatterji & Markowitz, 2012). Depressive symptoms have been linked to poorer quality of life in women during this period (Darcy et al., 2011). However, although some studies have looked at predictors of anxiety during this period (Wenzel, Haugen, Jackson & Brendle, 2005; Yelland et al., 2010), much less is known about how anxiety impacts on women's adjustment.

The impact of work on wellbeing

Work is associated with autonomy, wellbeing, reduced depression and anxiety, resources and social status (Modini et al., 2016). However, the scale of the benefits of work seem to depend on a number of factors, such as job quality (Van Aerden, Puig-Barrachina, Bosmans, Vanroelen, 2016) and security (Kim & von dem Knesebeck, 2015). 67.5% of mothers work (Institute of Public Policy Research [IPPR], 2014) and certain factors have been found to have particular influences on working women's wellbeing, such as stability (Coley & Lombardi, 2014), social support (Bull, 2009; Cooklin et al, 2011; Holmes et al, 2012; Zabkiewicz, 2010), support from managers (Eek & Axmon, 2013) and income (Coley & Lombardi, 2014; Gyamfi, Brooks-Gunn & Jackson, 2001).

Periods of transitions in employment have been shown to have negative impacts on psychological well-being (Thomas, Benzeval & Stansfeld, 2005). Despite this, only limited work has been done around women re-entering the work place following maternity leave. Some qualitative work suggests that women struggle with “Readjusting one’s life in the tension inherent in work and motherhood” (Alstveit, Severinsson & Karlsen, 2011, p. 1). This tension may be because of the difficulty in adjusting to dual identities (Millward, 2006) particularly so if they perceive there to be a conflict between the roles of employee and mother (Alstveit et al., 2011; Neslon, 2003). Several factors may affect the success of this adjustment, such as the timing of return to work, control that they had over the decision (Nelson, 2003), reasons for returning (Morris, 2008), quality of childcare arrangements (Buzzannell et al., 2005) and social support (Gjerdingen, McGovern, Attanasio, Johnson, & Backes Kozhimannil, 2014). New mothers also perceive themselves to be under more scrutiny than they were previously and feel anxious about judgements being made about them following their return from maternity leave (Millward, 2006).

Mothers who take a longer maternity leave have been found to have better mental (Chatterji & Markowitz, 2012; Staehelin, Coda Berteau & Zemp Stutz, 2007) and physical health (Chatterji & Markowitz, 2012). Studies looking at women’s return to work after maternity leave have mainly originated in the USA, where their ‘Family and Medical Leave’ law only mandates 12 weeks of unpaid leave. This is in comparison to the UK where statutory maternity leave can be up to 52 weeks and is paid, at varying rates, for 39 of these weeks (GOV.UK, 2016). So, while mental health has been found to improve over the first year postpartum (Gjerdingen & Chaloner, 1994) little work has been done on the interaction between mental health and return to work in an environment where longer maternity leave is the norm. Additionally, research looking at the psychological impact on working mothers has tended to focus on depression, rather than wellbeing more broadly, despite the fact that

job strain has been shown to contribute to multiple mental health problems, including anxiety (Stansfeld & Candy, 2006).

A problematic transition back to work will impact on both the employee and the organisation, and there can be perceived conflicts between the needs of the employee and the needs of the organisation as the organisation has to manage maternity-related absence. However, it is in employers' interest to promote the health of their employees, as poor mental and physical health have a high cost for the organisation (McDaid, King, Park & Parsonage, 2011).

Women have a variety of reasons for returning to work, including financial, needing an intellectual challenge, wanting social contact and time away from children (Morris, 2008).

However, evidence shows that women are often not given enough support to return to work after maternity leave (Morris, 2008). While this will be problematic for the individual, it will also cause problems for the organisation as poor mental and physical health predicts turnover (Carlson et al, 2011) and leads to greater absenteeism (Darr & Johns, 2008).

The relationship between work and family

The interplay between the demands of work and family has received considerable attention (Amstad, Meier, Fasel, Elfering & Semmer, 2011; Byron, 2005; McNall, Nicklin & Masuda, 2010; Michel, Kotrba, Mitchelson, Clark & Baltes, 2011), although most research has focused on conflict between the two roles. Work-family-conflict exists when the requirements of one role make it difficult to fulfil the requirements of another (Greenhaus & Beutell, 1985). Work-family-conflict appears to be bidirectional, with both work-interference-with-family and family-interference-with-work (Byron, 2005, Michel et al., 2011). A number of variables seem to be associated with work-family-conflict, such as younger age of child (Marshall, Tracy, Orthner & Rose, 2009), social support (Allen et al.

2000), the demands and characteristics of individual roles (Michel et al., 2011), stress caused by roles (Byron, 2005) and income (Amstad et al., 2011).

Thus, a focus on conflict is at odds with idea that work contributes greatly to wellbeing.

While most studies have examined conflict between work and family, an increasing number have looked at whether having multiple roles enriches people's lives (McNall et al., 2010).

Frone (2003) suggested a theory of work-family-balance which proposed that work-family balance was an absence of work-family-conflict and presence of enrichment. However, outcomes of studies looking at enrichment and conflict have suggested that this theory does not explain all of the variance in wellbeing. Therefore, Grzywacz & Carlson (2007) proposed a theory of work-family-balance, which they explained as the 'accomplishment of role-related expectations that are negotiated and shared between an individual and his/her role-related partners in the work and family domains' (Grzywacz & Carlson, 2007, p. 458).

Work-family-conflict seems to be an important variable in mental wellbeing (Amstad et al., 2011). A couple of meta-analyses of the outcomes of work-family-conflict found that it was closely associated with stress, depression and physical health problems (Allen et al., 2000; Amstad et al., 2011). However, they also found that while certain variables were associated with work-family-conflict, their relationship with wellbeing was less clear (Allen et al., 2000; Amstad et al., 2011). They proposed that certain variables had moderating effects on the relationship between work-family-conflict and wellbeing, including time at work, (Amstad et al., 2011) parenthood (Allen et al., 2000; Amstad et al., 2011) and social/spousal support (Allen et al., 2000), although the only variable for which either study found enough evidence was 'time spent at work'. There has been one meta-analytic review of enrichment and its findings also suggest that social support could be an important moderator of the relationship with wellbeing (McNall et al., 2010). More information is needed on how moderators impact on relationship to wellbeing (Allen et al., 2000; Amstad et al., 2011; Marshall et al., 2009;

McNall et al. 2010). Little is known about the influence of work-family-balance on wellbeing and Grzywacz and Carlson (2007) argued for more studies to be done to provide this understanding.

Rationale

Few studies have examined how work-family-conflict relates to women returning from maternity leave and none appear to have looked at enrichment or balance. Research that has been done has suggested that different factors will impact on women at this particular life stage (Marshall et al., 2009). The present study will contribute to the literature on working women and how multiple roles can impact on women differently at this particular life stage. Alstveit et al. (2011) identified three kinds of studies on women returning to work after maternity leave; those looking at the experience of returning to work, those looking at the effects on professional status, and those looking at mother's health in relation to the work-family interface. This study combines two of these areas by looking at both the mental health experience and the work-family interface.

As so many women now contribute to the workforce, it is important to understand what makes this period easier or harder for them so as to provide better support for them. Greater understanding will allow health professionals and employers to promote health and wellbeing for women at this important stage of life.

Aims and Hypotheses

Bearing in mind that the transition to work after maternity leave occurs in the context of adjusting to motherhood, this research aims to provide broader information about the psychological distress of women at this time. Hypotheses one to five and eight (see Table 1) are about how psychological distress is affected by the variables. As outlined above, there

appears to be much cross-over between the variables which are associated with work-family-conflict and psychological distress. Hypotheses six and seven (see Table 1) predict similar variables will influence work-family-conflict and psychological distress. Little is known about work-family-balance as a separate concept, but predictions have been made about its interactions based on the idea of work-family-balance being an absence of conflict; see Table 1, hypotheses five to seven. The direct relationships between psychological distress and work-family-conflict and work-family-balance are outlined in Table 1, hypotheses four to five.

Table 1
Hypotheses

Number	Hypothesis
1	Women returning to work after maternity leave will have elevated psychological distress.
2	Psychological distress will be correlated with working hours, number of children and childcare hours.
3	Psychological distress will be negatively correlated with maternity leave, income and social support.
4	Work-family-conflict will be correlated with higher psychological distress
5	Work-family-balance will be correlated with lower psychological distress.
6	Work-family-conflict will be positively correlated with working hours, number of children and childcare hours. Work-family-balance will be negatively correlated with working hours, number of children and childcare hours.
7	Work-family-conflict will be negatively correlated with maternity leave, income and social support. Work-family-balance will be positively correlated maternity leave, income and social support.
8	The impact of social support, income, age, number of children, working hours and length maternity leave on the relationship between work-family-conflict, work-family-balance and psychological distress will be explored.

Hypothesis 8 is an exploratory one, where relationships between work-family-conflict and work-family-balance and psychological distress and a number of variables are proposed.

These variables were selected from suggestions in the existing literature on variables influencing the relationship between work-family-conflict and work-family-balance and psychological distress. Multiple regressions, mediation and moderation analyses will be used

to explore relationships associated with working women's wellbeing in greater depth. These will allow the relationship between two variables to be explored and mediation and moderation allow for exploration of the interaction between predictors (Field, 2013).

Method

Procedure

A correlational design was used, with one group of participants and no control group. Participants were recruited from online forums and they completed the study through an online survey platform (Qualtrics). With the permission of the site moderators, the study was advertised through online forums such as; Mumsnet, Netmums, community forums and mother and baby Facebook groups. Potential participants were directed to information about the study (see appendix C) before deciding whether they wished to participate.

Participants

The inclusion and exclusion criteria can be seen in Table 2. To limit the number of confounding variables, partnered women were selected as single mothers are known to have poorer mental health (Crosier, Butterworth & Rodgers, 2007). Additionally, those who were self-employed, stay-at-home mothers, or who had had longer than 13 months (maternity leave plus any accrued annual leave) out of work were excluded. Participants had to have had a baby within the last 18 months and returned to work within the last 6 months. This was to allow for the mothers to have taken up to the 52 weeks of statutory maternity leave and have returned to work in last 6 months. As all measures were in English, participants were required to have a good level of English.

Table 2

Inclusion and exclusion criteria for participants

Inclusion criteria	Exclusion criteria
<p>Partnered mothers</p> <p>Had a baby within the last 18 months and returned to work within the last 6 months</p> <p>English speaker</p> <p>Employed</p>	<p>Single mothers</p> <p>Unemployed, stay at home mother or self-employed</p> <p>More than 56 weeks out of work</p>

One hundred and ninety-five women took part in the study and 176 fully completed all measures. They had a mean age of 33.76 years (sd 4.27), ranging from 25-48 years. All the participants had between 1 and 3 children and the mean was 1.41 children. The child for whom participants had taken maternity leave, had a mean age of 13.36 months.

The mean length of maternity leave was 10.05 months and there was little variation in the amount of time women had taken (sd 2.52). There was a mean of 3.31 months from the time that women returned to work, and 68.6% of them worked part-time and 31.4% full time.

Table 3

Household income of participants

Household income per annum	Number of participants	Percentage of sample
Under £25000	8	4.1
£25000-£50000	49	25.3
£50000-75000	63	32.5
£75000-100000	37	19.1
Over £100000	37	19.1

The household income of participants can be seen in Table 3. More than 70% of the sample had an income over £50000 per annum.

Measures

Participants completed all measures through a short, online questionnaire. The questionnaire included demographic questions, questions about childcare arrangements, household income, length of time since return to work, working hours, job/position held and age and number of children (See appendix E.). In addition, a number of standardised measures for psychological distress, work-family-conflict, work-family-balance and social support were used. These are described in greater detail below.

Psychological distress: The Depression, Anxiety and Stress Scales (DASS 21; Lovibond & Lovibond, 1995) were used to measure psychological distress. This is a 21 question measure, with separate items for depression, anxiety and stress, each rated on 4 point Likert scales. The Cronbach alpha values for the scales, as calculated by Lovibond & Lovibond, (1995) were; depression: 0.91, anxiety: 0.84, stress: 0.90. In this study the Cronbach alphas were slightly lower but similar; depression: 0.87 anxiety: 0.67, stress: 0.86.

Social support: This was measured using the Multidimensional Scale of Perceived Social Support (PSS, Zimet, Dahlem, Zimet & Farley, 1988). This is a 12 item measure and each item is rated on 7 point Likert scales. An overall score of perceived social support is produced and this can be broken down into separate scores for 'family support', 'friend support' and 'significant other support'. Zimet et al. (1988) reported the overall Cronbach alpha as 0.88 and the Cronbach alpha's for the individual subscales as; significant

other=0.91, family=0.87, friends=0.85. The Cronbach alphas for the subscales in this study were slightly higher but similar; significant other=0.928, family=0.901, friends=0.907.

Work-family-conflict: The multidimensional scale of work-family-conflict (WFC; Carlson, Kacmar & Williams, 2000) was used to rate the conflict between work and family. This is an 18 item measure, with 6 subscales. Three of these are combined to form a work-interference-with-family (WIF) score and the other three are combined to form a family-interference-with-work (FIW) score. Each question is scored on 5 point Likert scales. Carson et al. (2000) reported the Cronbach alphas for the subscales as being high; the WIF scales ranged from 0.79 to 0.87 and the FIW scales range from 0.78 to 0.87. The Cronbach alphas in this study were similarly high; ranging from 0.72 to 0.84 for the WIF scales and 0.78 to 0.88 for the FIW scales.

Work-family-balance: Balance between roles was assessed using a measure of work-family-balance (Carlson, Grzywacz & Zivnuska, 2009). This is a 6 item measure, scored on 5 point Likert scales. The Cronbach alpha reported by Carlson et al (2009) was 0.93 and in this study it was 0.91.

Analysis

A priori power calculations using G* power (Faul, Erdfelder, Buchner & Lang, 2009) were conducted for each statistical test and the highest number of participants was required by the independent samples t-tests. For the t-tests, 128 participants were needed to detect a medium effect size of $\delta=0.5$, with power of $\beta=0.8$, $\alpha=.05$ and a two tail test.

All statistical analysis was done using SPSS (v23). Descriptive statistics were used to analyse the range, medians and means of the demographic information, childcare hours, household income, length of time since returned to work, working hours, age and number of children, DASS, PSS, WFC and WFB. Histograms with skewness and kurtosis calculations were used to check for normality and revealed that while most of the data was normally distributed, WFB and PSS were negatively skewed (see appendix J). Pearson correlations were used to examine associations between the variables, except for calculations involving WFC and PSS, where Spearman correlations were used.

Independent t-tests were performed on anxiety, depression and stress based on working hours and on median splits of PSS, WFC and WFB. This provided further information on the significance of the relationship between psychological distress and PSS, WFC and WFB.

Multiple regressions were conducted to establish the predictive relationship of PSS, WFC and WFB on psychological distress. Assumptions were checked for and as some assumptions were mildly violated in relationships with anxiety, all regressions were calculated with bootstrapping. While the differences between the bootstrapped and non-bootstrapped calculations were negligible, the bootstrapped calculations were given for more robust reporting.

Mediation analyses examine static relationships, while moderation analyses examine whether the relationship varies at differing levels of the moderating variable (Field, 2013). Using the PROCESS add on (Hayes, 2013) to SPSS, mediation and moderation analyses were performed for any correlated relationships to explore how variables influenced WFC and WFB's association with depression, anxiety and stress.

Ethical considerations

This project was approved by the Salomons division of the Christ Church Canterbury ethics committee (see appendix B). Participants were asked to indicate consent on the online questionnaire by ticking a number of boxes to indicate consent (see appendix D). Filters were applied to the online survey so that participants could not proceed with the questionnaire without consenting.

The information sheet asked participants to consider whether they could cope with the emotional content of questions and contained the numbers of helplines to call if they felt distressed (See appendix C.).

There is public permission to use DASS and PSS scales. Permission was sought from the authors to use WFC and WFB scales (see appendix F.).

Participants were enrolled into an optional prize draw, to win one of 4 £25 vouchers, if they provided their email address on completion of the study. Email addresses were stored securely, separately from the data.

Results

Results of standardised tests

The mean scores for psychological distress can be seen in Table 4. One sample t-tests revealed that the mean depression score ($t=0.937$, $p=0.350$) was not significantly different from the normative score for women, reported by Lovibond & Lovibond (1995). However, anxiety was significantly lower ($t=-3.36$, $p=0.001$) and stress was significantly higher ($t=4.24$, $p<0.000$) and close to the threshold for mild stress. Despite this, the mean scores for depression, anxiety and stress were all within the normal range (Lovibond and Lovibond, 1995) which suggests that although the stress levels were slightly elevated, the first study

hypothesis, that women returning to work after maternity leave will have elevated psychological distress, was not confirmed.

The mean scores were not reported for the PSS (Zimet et al., 1988), WFC scale (Carlson et al., 2000) or WFB scale (Carlson et al., 2009). However, as can be seen from Table 4, the PSS, WFC and WFB scores were all high, meaning that while participants had high levels of conflict between roles, they also had strong social support and could achieve balance.

However, the standard deviations were also high meaning that there was great variability in the levels of PSS, WFC and WFB within the sample.

Table 4
Scores of standardised scales

Scale	Mean (score range) ¹	Standard deviation
Depression	6.63 (0-42)	7.27
Anxiety	3.68 (0-42)	4.64
Stress	12.81 (0-42)	8.27
PSS	71.24 (7-84)	9.74
WFC	51.32 (18-90)	12.03
WFB	22.78 (6-30)	4.51

Correlations with psychological distress

A number of variables were hypothesised as being correlated with psychological distress.

However, the only variables that were associated with all measures of psychological distress were PSS, WFC and WFB.

¹ Severity range for scales are as follows

Depression: normal =0-9, mild=10-13

Anxiety: normal=0-7, mild=8-9

Stress: normal=0-14, mild=15-18

There are no cut-offs for the PSS, WFC or WFB but a higher score indicates higher levels on each of these

As can be seen in Table 5, stress ($r=-0.417$, $p<0.000$), anxiety ($r=-0.310$, $p<0.000$) and depression ($r=-0.433$, $p<0.000$) were negatively correlated with PSS, and with the PSS subscales, suggesting that when PSS is lower, psychological distress will be higher. When psychological distress was correlated with the individual PSS subscales, the strongest correlation was with 'friends' and the weakest was with 'significant other'. The differences were most remarkable for correlations with anxiety. This suggests that friends make the most significant contribution to wellbeing, with partners making less of a contribution.

The only other significant relationship was between income and depression. Income was negatively correlated with depression ($r=-0.173$, $p=0.016$), meaning that when participants had higher income, they were less likely to be depressed. However, income was not significantly correlated with either stress or anxiety which suggests that it does not influence all domains of psychological distress in the same way.

There were no significant correlations between psychological distress and the length of time since returning from maternity leave, length of maternity leave, working full or part time, the number of children or the age of the baby.

Table 5
Correlations between DASS, WFC, WFB and PSS and subscales

	Significant other	Family	Friends	PSS
Depression				
Spearman's rho correlation	-0.322	-0.326	-0.366	-0.433
Significance (2-tailed)	0.000	0.000	0.000	0.000
Anxiety				
Spearman's rho correlation	-0.158	-0.266	-0.321	-0.310
Significance (2-tailed)	0.030	0.002	0.000	0.000
Stress				
Spearman's rho correlation	-0.318	-0.350	-0.356	-0.417
Significance (2-tailed)	0.000	0.000	0.000	0.000
WFC				
Spearman's rho correlation	-0.166	-0.217	-0.181	-0.224
Significance (2-tailed)	0.027	0.004	0.016	0.003
WIF				
Spearman's rho correlation	-0.128	-0.199	-0.105	-0.162
Significance (2-tailed)	0.091	0.008	0.166	0.031
FIW				
Spearman's rho correlation	-0.179	-0.181	-0.218	-0.238
Significance (2-tailed)	0.017	0.016	0.004	0.001
WFB				
Spearman's rho correlation	0.341	0.408	0.364	0.444
Significance (2-tailed)	0.001	0.000	0.000	0.000

Correlations with work-family-conflict and work-family-balance

As can be seen in Table 6, the hypotheses that work-family-conflict (WFC) would be associated with higher depression, anxiety and stress scores, and work-family-balance (WFB), with lower depression, anxiety and stress scores, are supported. Stress ($r=0.454$, $p<0.000$), anxiety ($r=0.321$, $p<0.000$) and depression ($r=0.355$, $p<0.000$) were significantly correlated with WFC and the subscales although there were differences in the strength of the relationship. Work-interference-with-family (WIF) was more strongly correlated with

psychological distress than family-interference-with-work (FIW), suggesting that WIF is more important in psychological distress than FIW. WFB was negatively correlated with depression ($r=-0.425$, $p<0.000$), anxiety ($r=-0.342$, $p<0.000$) and stress ($r=-0.449$, $p<0.000$) and the strength of the relationships were stronger than with WFC.

Table 6
Correlations between DASS and WFB and WFC

	Depression	Anxiety	Stress
WFB			
Spearman's rho correlation	-0.425	-0.342	-0.449
Significance (2-tailed)	0.000	0.000	0.000
WFC			
Pearson correlation	0.355	0.321	0.454
Significance (2-tailed)	0.000	0.000	0.000
WIF			
Pearson correlation	0.347	0.325	0.404
Significance (2-tailed)	0.000	0.000	0.000
FIW			
Pearson correlation	0.284	0.247	0.404
Significance (2-tailed)	0.000	0.001	0.000

Of the other variables that were tested, relationships were only supported between two. As can be seen from the correlation matrix in Table 5, PSS was negatively correlated with WFC ($r=-0.224$, $p=0.003$) as were the subscales, and WFB was positively correlated with PSS ($r=0.444$, $p<0.000$). The correlation between WFB and PSS was stronger than between WFC and PSS. This suggests that while PSS is important for both WFC and WFB, it plays a more important role in WFB.

The other variable that was significantly associated with WFC or WFB was the number of children. Number of children was significantly correlated with WFC ($r=0.211$, $p=0.005$), indicating that when women had more children they were more likely to have greater conflict. Conversely, the number of children was negatively correlated with WFB ($r=-0.263$, $p<0.000$) suggesting that it is easier to achieve balance with fewer children.

There were no significant correlations between income, the length of time since returning from maternity leave, length of maternity leave, working full or part time or the age of the baby and WFC or WFB.

These correlations indicate that there are differences in the variables that influence WFC, WFB and psychological distress.

Exploring relationships in greater depth

Relationships that were shown to be correlated with psychological distress were explored in greater depth using t-tests, multiple regressions, mediations and moderations.

As can be seen from Table 4, the standard deviations for PSS, WFC and WFB were high. For this reason, t-tests based on a median split of WFC, WFE and PSS were performed to establish whether there were differences in psychological distress based on low and high scores on these scales. There were significant differences in stress ($t=-5.569$, $p<0.000$), depression ($t=-4.70$, $p<0.000$) and anxiety ($t=-4.718$, $p<0.000$) based on a median split in WFC, and all had strong effect sizes (cohen's $d >0.7$). There were significant differences in stress ($t=5.323$, $p<0.000$), depression ($t=4.813$, $p<0.000$) and anxiety ($t=3.411$, $p=0.001$) based on a median split in WFB. The effect sizes for stress and depression were strong (cohen's $d >0.7$) but the effect size for anxiety was less strong (cohen's $d=0.5$). There were significant differences in stress ($t=4.526$, $p<0.000$), depression ($t=5.237$, $p<0.000$) and anxiety ($t=2.584$, $p=0.011$) based on a median split in PSS, but there was variance in the effect sizes; small for anxiety (cohen's $d =0.3$), medium for stress (cohen's $d=0.6$) and strong for depression (cohen's $d=0.8$). The results of these t-tests suggest that the observed variability in WFC, WFB and PSS has a significant impact on psychological distress. Psychological distress will be lower at high levels of WFB and PSS and at low levels of WFC.

Multiple regression

Table 7
Predictive value of PSS, WFC and WFB on psychological distress

	F	Df	Significance	Variance explained by variable(R^2)
Depression	18.592	4, 170	0.000	0.304
Anxiety	9.064	4, 170	0.000	0.176
Stress	22.927	4, 170	0.000	0.350

The results from table 7 show that together PSS, WFC and WFB have a significant impact on psychological distress. They predicted 30% of the variation in depression, 18% of the variation in anxiety and 35% of the variation in stress.

Table 8 shows the impact each individual variable has on psychological distress. Only PSS and WIF were significant predictors of psychological distress. FIW was not a significant predictor of psychological distress which suggests that FIW and WIF operate differently on psychological distress. WFB only acted as a predictor of depression which suggests that different variables act as predictors for the different dimensions of psychological distress.

Table 8
Influence of PSS, WFC and WFB on psychological distress

		b coefficient	β standardised coefficient	Significance	Tolerance
Depression	PSS	-0.226	-0.346	0.000	0.840
	WIF	0.186	0.196	0.018	0.611
	FIW	0.022	0.023	0.775	0.624
	WFB	-0.252	-0.177	0.024	0.676
Anxiety	PSS	-0.118	-0.256	0.001	0.840
	WIF	0.170	0.251	0.005	0.611
	FIW	0.030	0.045	0.612	0.624
	WFB	-0.011	-0.011	0.894	0.676
Stress	PSS	-0.267	-0.338	0.000	0.840
	WIF	0.221	0.192	0.016	0.611
	FIW	0.202	0.178	0.024	0.624
	WFB	-0.197	-0.115	0.130	0.676

Mediation effects.

As PSS was the only variable that was significantly correlated with psychological distress, WFC and WFB, it was the only mediator that was subsequently used for these analyses.

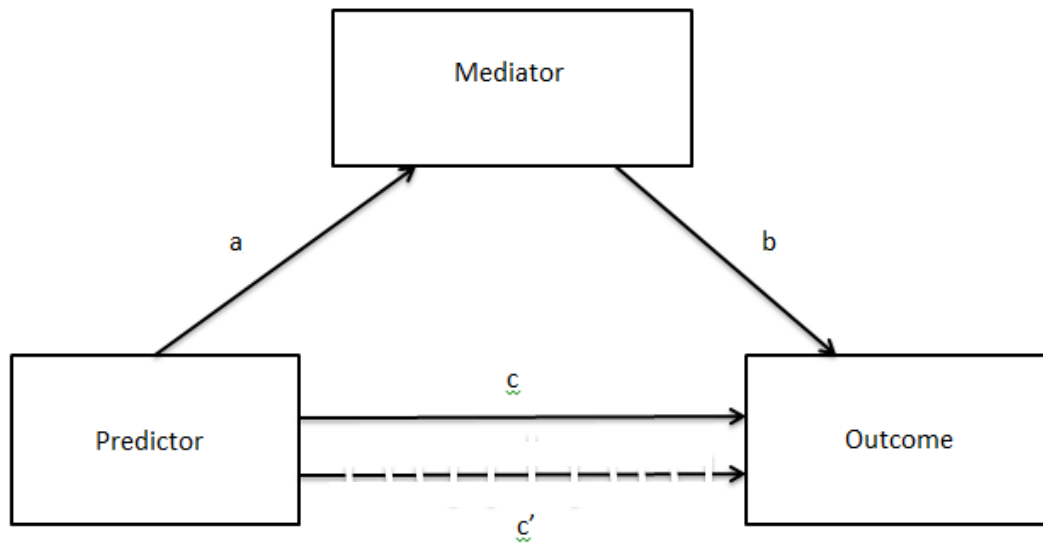


Figure 1.
Mediated relationships. Diagram adapted from Field (2013)
Path c indicates the direct relationship between the predictor and outcome and path c' indicates the mediated relationship between predictor and outcome.

Mediated relationships on depression.

Table 9.
Variables influencing depression

Variable	Variance in depression explained by variable (R^2 value)	Variance in depression explained by variable combined with PSS (R^2 value)
PSS	21% ($R^2=0.206$)	-
WFC	13% ($R^2=0.126$)	28% ($R^2=0.276$)
WIF	12% ($R^2=0.120$)	28% ($R^2=0.281$)
FIW	8% ($R^2=0.081$)	24% ($R^2=0.244$)
WFB	17% ($R^2=0.168$)	27% ($R^2=0.269$)

The variance explained by a single variable, the middle column in Table 9, represents path c in the mediation diagram in figure 1. As can be seen from Table 9, PSS was the strongest individual predictor of depression. While WFC and WFB also had direct effects on

depression, the effect of WFB was stronger than WFC, suggesting that achieving balance has more of an influence on depression than conflict. WIF explains more of the variance in depression than FIW, suggesting that work interfering with family has more of an impact on depression than family interfering with work.

While there were differences in the direct effects of the variables, when PSS is included as a mediator in the relationship between WFC, WFB and depression, path c' in figure 1, the variance in depression was similar. PSS had a mediating effect on the relationship between WFC and depression ($b=0.085$, BCa CI [0.026, 0.160]) and this relationship remained when WFC was broken down into WIF ($b=0.069$, BCa CI [0.010, 0.138]) and FIW ($b=0.086$, BCa CI [0.021, 0.164]). The relationship between depression and WFB was also mediated by PSS ($b=-0.137$, BCa CI [-0.227, -0.068]).

Mediated relationships on anxiety

Table 10.
Variables influencing anxiety

Variable	Variance in anxiety explained by variable (R^2 value)	Variance in anxiety explained by variable combined with PSS (R^2 value)
PSS	10% ($R^2=0.098$)	-
WFC	10% ($R^2=0.103$)	17% ($R^2=0.166$)
WIF	11% ($R^2=0.105$)	17% ($R^2=0.174$)
FIW	4% ($R^2=0.044$)	13% ($R^2=0.133$)
WFB	6% ($R^2=0.059$)	11% ($R^2=0.114$)

As can be seen from Table 10, PSS, WFC nor WFB were particularly large predictors of anxiety and none had as great an influence as they did over depression. Despite the presence of variability in anxiety scores it is still possible that anxiety scores were restricted and that different patterns of results would be observed at higher levels of anxiety scores. WFC is a stronger predictor of anxiety than WFB and this relationship continues when PSS is included as a mediator, suggesting that conflict has a greater influence over anxiety than achieving balance. Additionally WIF has a greater impact on anxiety than FIW, suggesting that interference from work is more strongly related to anxiety than interference from family.

Combined, WFC and PSS account for greater variance in anxiety than either alone, and there was a mediation effect of PSS on the relationship between WFC and anxiety ($b=0.055$, BCa CI [0.018, 0.116]), as was the relationship between WIF ($b=0.045$, BCa CI [0.010, 0.098]) and FIW ($b=0.057$, BCa CI [0.015, 0.120]) and anxiety. The relationship between anxiety and WFB was also mediated by PSS ($b=-0.101$, BCa CI [-0.201, -0.037]).

Mediated relationships on stress.

Table 11.
Variables influencing stress.

Variable	Variance in stress explained by variable (R^2 value)	Variance in stress explained by variable combined with PSS (R^2 value)
PSS	21% ($R^2=0.207$)	-
WFC	21% ($R^2=0.206$)	34% ($R^2=0.341$)
WIF	16% ($R^2=0.163$)	32% ($R^2=0.316$)
FIW	16% ($R^2=0.164$)	31% ($R^2=0.307$)
WFB	17% ($R^2=0.166$)	27% ($R^2=0.268$).

As can be seen from Table 11, PSS is an important predictor of stress as well as being a mediator of the relationship between WFC, WFB and stress. WFC had a stronger direct relationship on stress than WFB, suggesting that conflict has a greater effect on stress than achieving balance. Unlike the influence of WFC on stress and anxiety, both WIF and FIW have similar effects on stress.

There was a mediation effect of PSS on the relationship between WFC and stress ($b=0.080$, BCa CI [0.025, 0.152]). When WFC was broken down into WIF ($b=0.068$, BCa CI [0.010, 0.134]) and FIW ($b=0.081$, BCa CI [0.023, 0.158]), PSS was still a mediator. The relationship between stress and WFB was also mediated by PSS ($b=-0.137$, BCa CI [-0.434, -0.112]).

A comparison of Tables 9 and 11 shows that PSS has a similar direct relationship on stress and depression. However, when either are compared to Table 10, the relationships with anxiety are not as strong. WIF had stronger effects on psychological distress than FIW, but both had the greatest effect on stress. WFB had a similar predictive influence on depression and stress but much less on anxiety. The mediated relationships always accounted for more of the variability in psychological distress than any single variable. The strongest of the observed relationships was of WFC on stress, mediated by PSS. When PSS was included in the relationship, the influence of WFC on psychological distress was always stronger than WFB. However, no relationships accounted for more than 34% of variance in psychological distress, meaning that there are still other influences that are important.

Moderation effects.

The median split t-tests revealed that there were differences in the individual relationships of PSS, WFC and WFB on psychological distress, based on high and low levels of these variables. Moderation analyses showed that these relationships were not more complex than

this. None of the variables acted as moderators between the others and psychological distress.

Relationships between depression ($b=0.0004$, 95% CI $[-0.007, 0.008]$ $t=0.099$, $p=0.92$), anxiety ($b=0.0041$, 95% CI $[0.000, 0.008]$ $t=1.96$, $p=0.051$), stress ($b=0.0053$, 95% CI $[-0.001, 0.012]$ $t=1.56$, $p=0.12$) and WFC were not moderated by PSS.

Relationships between stress ($b=-0.011$, 95% CI $[-0.043, 0.021]$ $t=-0.688$, $p=0.492$), anxiety ($b=-0.006$, 95% CI $[-0.023, 0.011]$ $t=-0.731$, $p=0.466$), depression ($b=-0.0046$, 95% CI $[-0.023, 0.014]$ $t=-0.492$, $p=0.623$) and WFB were not moderated by PSS.

Discussion

Work and wellbeing

The first hypothesis; that women returning to work after maternity leave would have higher levels of depression, anxiety and stress, was rejected as psychological distress was not elevated. This would suggest that returning to work has similar neutral or positive benefits that have been found for working women at other life stages (Klumb & Lampert, 2004; Repetti, Matthews & Waldron, 1989). Kaitz (2007) found that mothers' concerns decreased over the first postpartum year. Since the women in this study had mainly passed this period, it may have contributed to the reasons they did not have elevated levels of psychological distress. The low anxiety scores were also in line with research that has shown working mothers to have fewer anxiety symptoms than women who were not mothers (Floderus, Hagman, Aronsson, Marklund, Wikman, 2009).

Other studies have found income to be an important variable in the wellbeing of working women (Bull, 2009; Tucker et al., 2010). However, in this study, income was only found to be associated with depression, but not with anxiety and stress. High income is commonly

used as a measure of job quality and has been found to have a positive influence on psychological distress (Raver, 2003; Zabkiewicz, 2010), which may explain why the results showed no correlation with anxiety and stress. While the quality of roles is associated with psychological wellbeing (Broom et al., 2006; Van Aerden et al., 2016), it also allows women greater autonomy and control (Eek & Axmon, 2013) which may have protected participants from some of the difficulties associated with returning to work, such as adjusting to working hours and providing childcare.

In this study, while two thirds of the participants worked part time, there seemed to be no difference in WFC, WFB or psychological distress based on whether women worked full or part time. This is reflective of studies that have found that working any number of hours contributes to wellbeing (Harkness, 2016). However, some of the literature reports differences in the importance of working hours. While some studies have found there to be differences in women's wellbeing based on working hours (Beulher & O'Brien, 2011; Cooklin et al, 2011;), others have found working hours to have only moderate (Amstad et al., 2011) or no effects (Gareis & Barnett, 2002). The lack of psychological distress among participants indicates that returning to work either full or part time protects women from negative influences of unemployment (Kim & von dem Knesebeck, 2015; Waddell & Burton, 2006). Additionally, the high income or job quality of the sample may have allowed women to work part time and be protected from stressors such as job instability (Kim & von dem Knesebeck, 2015) and financial stress (Selenko & Batinic, 2011), which have been shown to mediate the relationship between work and mental health. These findings are in line with theories of role enrichment which suggest that experiences in one role can contribute to quality of life in other roles by conferring benefits between roles (Greenhaus & Powell, 2006; Marks, 1977).

Other studies have found significant associations between social support and wellbeing in working women (Cooklin et al, 2011; Holmes et al, 2012; Zabkiewicz, 2010). Similarly, social support was important for women in this study. While the average social support was high, there was considerable variability and the differences had a significant impact on women's psychological distress. Thoits (2011) argued for social support acting as a buffer for the impact of stress, and research with working women has supported the mediating effects of social support (Robinson, Magee & Caputi, 2014). The results of this study indicate that social support allows women to negotiate conflict and balance by acting as a mediator between both work-family-conflict and work-family-balance and psychological distress. One way in which social support could aid with this regulation might be through providing trusted childcare, which research has shown to be important in allowing women to feel comfortable working (Buzzannell et al., 2005).

Relationship between work and family

As evidenced by other research (Allen et al., 2000; Amstad et al., 2011; Marshall et al., 2009), the variables which were associated with work-family-conflict were not always linked to psychological distress. While the number of children contributed to greater work-family-conflict and lower work-family-balance, it was not correlated with psychological distress. Despite this, both work-family-conflict and work-family-balance were related to psychological distress, but only to a limited extent.

This study supports other research (Allen et al., 2000), demonstrating that work-family-conflict had the strongest impact on stress. However, the differences in how work-family-conflict correlated with the separate domains of psychological distress adds weight to the argument that wellbeing as an outcome of work-family-conflict should be researched more broadly (Amstad et al., 2011). Like other research (Amstad et al., 2011) work-interference-

with-family had a stronger impact on psychological outcomes than did family-interference-with-work, although both were significant. Parents experience more work-interference-with-family than do those who are not parents (Byron, 2005). Women returning to work after maternity leave may experience more psychological distress as a result of work interfering with family as they also have the domestic strain of creating a new family identity (Darvill et al., 2010). While this would support role strain theory (Goode, 1960) which postulates that individuals are drained as they have an increasing number of roles to perform. However, the results of this study would suggest that this strain would seem to be unidirectional as psychological distress was only higher when work role demands interfered with family.

Investment in both work and family has been found to be more beneficial to quality of life than greater investment in either one (Greenhaus, Collins & Shaw, 2003), which suggests that achieving balance between work and family will be beneficial for wellbeing. This is in line with the model of wellbeing proposed by Dodge, Daly, Huyton & Sanders (2012) where wellbeing is a result of balance between resources and challenges. While the psychological outcomes of work-family-conflict have been examined in other studies, the outcomes of work-family-balance have not. The results of this study indicated that the associations between work-family-balance and psychological distress were stronger than the associations between work-family-conflict and psychological distress. This supports the idea that gains in wellbeing result in a reduction in ill health (Keyes, Dhingra & Simoes, 2010). While returning to work after maternity leave is positive for women's mental health, achieving balance between their work and family roles is also important.

Limitations and future research

There were a number of factors which made the women in this study unrepresentative of the UK female population. The average income of those in the study was above the average

income of those of similar age in the UK (GOV.UK, 2012), even taking onto account that many of the participants will have been recruited from the Greater London area and that the London average income is greater than rest of country. Future research should include more fiscally and geographically diverse participants. While the high income and related job quality may explain why there were no correlations between anxiety, stress, work-family-conflict or work-family-balance and income, it is a limitation that has been noted in previous research (Cooklin et al., 2011; O'Brien et al., 2014).

Studies have found that work brings mental health benefits, when either it does not improve women's financial situation (Gyamfi, Brook-Gunn & Jackson, 2001, Raver, 2003) or when it does (Robinson et al., 2014). While the income measured in this study was household, rather than individual income, high income may confer certain benefits, such as the opportunity to work part time, which has been shown to reduce work-family-conflict (Buehler & O'Brien, 2011). Additionally, high income may allow women to manage childcare, which Buzzannell et al. (2005) found to be very important for the wellbeing of women returning to work. More childcare variables should be included in future research.

The age of mothers in this study was likely to be higher than the average. The average age of first time mothers in UK is 28.5 years (ONS, 2014) and in this study was 33.8 years.

Although the mothers in this study were not necessarily first time mothers, many of them were. Younger mothers have poorer mental health (Aasheim et al, 2012) which may have contributed to why elevated psychological distress was not observed.

Despite limitations, it might be that this was a representative sample of women who found it possible to return to work. In the UK, mothers of young children are less likely to work (ONS, 2013). While single mothers have poorer mental health, financial hardship and less social support (Crosier et al., 2007) this sample was of partnered women, who are more able

to increase their working hours (Raver, 2003). The characteristics of the sample, such as being older, having higher income, better quality jobs and good social support may have been the variables that allowed women to return to work. This could have implications for accessing work policies and should be considered in future research.

A recent review of mental health and maternity leave found that longer paid maternity leave was beneficial for mental health (Aitken et al, 2015), although the results of this study did not support an association between the length of maternity leave and psychological distress. This may have been because most participants had a lengthy maternity leave and the absence of elevated psychological distress may therefore suggest that longer maternity leave contributes to good mental health. On the other hand, longer maternity leave has been shown to have a negative impact on women's careers even in countries where huge emphasis is placed on equal opportunities (Aisenbrey, Evertsson & Grunow, 2009). Since social inclusion is important for wellbeing (Slade, 2010) and work is a key part of this (Waddell & Burton, 2006), more research is needed on the varying impacts of the length of maternity leave.

To my knowledge, this is the only study comparing work-family-conflict and work-family-balance with multiple psychological outcomes. The results indicate that multiple ways of measuring the outcomes of work-family-conflict and work-family-balance are important in providing a more complete perspective of wellbeing. However, meta-analyses (Allen et al, 2000; Amstad et al. 2011) have shown that the variability in outcomes measures of work-family-conflict makes the literature difficult to compare. Developing a consistent method of measuring wellbeing would allow for more accurate comparisons to be made.

Bearing in mind the importance of social support, it would be valuable for future research to explore the sources of this support. Women in this study had high levels of social support, but they were all recruited through online support groups, which may have made for a self-

selecting sample. The items on the PSS ask about support from significant individuals which suggests that support from online networks was not being measured, but this source of support cannot be ruled out. Interestingly, in this study, the relationship between psychological distress, particularly anxiety, and social support was strongest when support originated from friends, rather than from family or partner. This may be reflective of difficulties that mothers experience in their relationships with partners when adjusting to motherhood (Nelson, 2003; Nystrom & Orhling, 2004). However, more research would be needed to explore this further. Women cite social interaction as one of their reasons for returning to work (Morris, 2008), and evidence suggests that support from colleagues is beneficial for women's health (Grice et al., 2007). The PSS measure did not distinguish the nature of social support provided by work, and it could be important to consider in future work.

The results of this study support the idea that work-family-balance is distinct from a lack of work-family-conflict (Carlson et al., 2009). Carlson et al. (2009) found that the measure of work-family-balance explained more variance in affective outcomes than in behavioural outcomes. This study would support the idea that work-family-balance is important in understanding psychological distress, possibly more than work-family-conflict. Few studies have included a measure of work-family-balance, and further work is needed to explore the influence that it has over wellbeing.

The results of this study provide some support for existing theories of work-family-balance, namely work-family-enrichment (Greenhaus & Powell, 2006) and role strain (Goode, 1960) theories. However, neither of these theories encompass all the findings of this study, such as the importance of social support or influence of work-family balance. A new theory of work and wellbeing would appear to be needed. Dodge et al. (2012) proposed a definition of wellbeing that argued that wellbeing exists when resources and challenges balance. While

this theory of wellbeing has flexibility and allows multiple different elements of individuals' experience to be included, there is no work specificity which might limit its utility in this area. It would be useful to have a new theory which includes some of the variables that we know are important to balance in the relationship between work and wellbeing, such as social support.

The study's cross-sectional design meant that it was not possible to evaluate whether women's psychological distress was lower as a result of having returned to work or whether it improved as part of the natural progression of the postpartum period (Kaitz, 2007).

Longitudinal research would allow for more exploration of how workplace factors may influence this, as distinct from a natural progression. While work transitions have been found to present mental health challenges (Thomas et al., 2005), the women in this study appear to have negotiated their transition successfully and further research exploring what allowed them to do this would allow the development of occupational policies based on promoting wellbeing.

Implications

Clinical

The results of this study have implications for clinicians working in primary care, who have the most contact with women in the postpartum phase. Clinicians should bear in mind the idea that 'Employment and health form a virtuous circle' (Mental Health Taskforce, 2016, p. 16) and consider the work-related outcomes of the support that they are providing for women at this stage. Fahey & Shenassa (2013) proposed a perinatal health promotion model where they highlighted the need for clinicians to promote social support, positive coping, realistic expectations and self-efficacy. The results of this study suggest that similar support would be useful for women returning to work after maternity leave. Clinical psychologists could draw

on this model to help their clients assess whether they have sufficient resources to successfully negotiate the transition back to work.

Workplace

Promoting health and wellbeing in the workplace may prevent turnover (Carlson et al, 2011) and absenteeism (Darr & Johns, 2008). Achieving work-family-balance and negotiating work-family-conflict appear to be important for wellbeing. Employers should consider how best to support these. One method might be greater flexibility, which is associated with better wellbeing (Casey & Grzywacz, 2008) and is particularly important in allowing women to negotiate work-family-conflict (Byron, 2005). Additionally, as social support is important both for wellbeing and as a mediator of relationships between psychological distress and work-family-conflict and work-family-balance, facilitation of social support in the work place should be considered. Eek and Axmon (2013) concluded that positive attitudes of managers and colleagues had a particular influence on women's wellbeing.

Conclusions

This was the first study to test the relationships between psychological distress, work-family-conflict and work-family-balance in mothers returning to work after maternity leave.

Psychological distress was not elevated in women returning to work after maternity leave, although the participants had certain characteristics such as high income, which may have protected them from stressors. Social support, work-family-conflict and work-family balance all contributed to the psychological distress of women returning to work after maternity leave, and social support had a particular role as a mediator. However, as none explained all of the variance, more research is needed to explore this transition. Since returning to work seems to have positive effects for women's wellbeing, both clinicians and employers should consider how to facilitate this transition.

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Appendices

Appendix A: Quality assessment criteria for evaluating the quality of quantitative studies (Kmet, Lee & Cook, 2004)

How to calculate the summary score

Total sum = (number of “yes” * 2) + (number of “partials” * 1)

Total possible sum = 28 – (number of “N/A” * 2)

Summary score: total sum / total possible sum

Quality assessment

1. Question or objective sufficiently described?

Yes: Is easily identified in the introductory section (or first paragraph of methods section). Specifies (where applicable, depending on study design) all of the following: purpose, subjects/target population, and the specific intervention(s)/association(s)/descriptive parameter(s) under investigation. A study purpose that only becomes apparent after studying other parts of the paper is not considered sufficiently described.

Partial: Vaguely/incompletely reported (e.g. “describe the effect of” or “examine the role of” or “assess opinion on many issues” or “explore the general attitudes”...); or some information has to be gathered from parts of the paper other than the introduction/background/objective section.

No: Question or objective is not reported, or is incomprehensible.

N/A: Should not be checked for this question.

2. Design evident and appropriate to answer study question?

(If the study question is not given, infer from the conclusions).

Yes: Design is easily identified and is appropriate to address the study question/objective.

Partial: Design and /or study question not clearly identified, but gross inappropriateness is not evident; or design is easily identified but only partially addresses the study question.

No: Design used does not answer study question (e.g., a comparison group is required to answer the study question, but none was used); or design cannot be identified.

N/A: Should not be checked for this question.

3. Method of subject selection (and comparison group selection, if applicable) or source of information/input variables (e.g., for decision analysis) is described and appropriate.

Yes: Described and appropriate. Selection strategy designed (i.e., consider sampling frame and strategy) to obtain an unbiased sample of the relevant target population or the entire target population of interest (e.g., consecutive patients for clinical trials, population-based random sample for case-control studies or surveys). Where applicable, inclusion/exclusion criteria are described and defined (e.g., “cancer” -- ICD code or equivalent should be provided). Studies of volunteers: methods and setting of recruitment reported. Surveys: sampling frame/strategy clearly described and appropriate.

Partial: Selection methods (and inclusion/exclusion criteria, where applicable) are not completely described, but no obvious inappropriateness. Or selection strategy is not ideal (i.e., likely introduced bias) but did not likely seriously distort the results (e.g., telephone survey sampled from listed phone numbers only; hospital based case-control study identified all cases admitted during the study period, but recruited controls admitted during the day/evening only). Any study describing participants only as “volunteers” or “healthy volunteers”. Surveys: target population mentioned but sampling strategy unclear.

No: No information provided. Or obviously inappropriate selection procedures (e.g., inappropriate comparison group if intervention in women is compared to intervention in men). Or presence of selection bias which likely seriously distorted the results (e.g., obvious selection on “exposure” in a case-control study).

N/A: Descriptive case series/reports.

4. Subject (and comparison group, if applicable) characteristics or input variables/information (e.g., for decision analyses) sufficiently described?

Yes: Sufficient relevant baseline/demographic information clearly characterizing the participants is provided (or reference to previously published baseline data is provided). Where applicable, reproducible criteria used to describe/categorize the participants are clearly defined (e.g., ever-smokers, depression scores, systolic blood pressure > 140). If “healthy volunteers” are used, age and sex must be reported (at minimum). Decision analyses: baseline estimates for input variables are clearly specified.

Partial: Poorly defined criteria (e.g. “hypertension”, “healthy volunteers”, “smoking”). Or incomplete relevant baseline / demographic information (e.g., information on likely confounders not reported). Decision analyses: incomplete reporting of baseline estimates for input variables.

No: No baseline / demographic information provided. Decision analyses: baseline estimates of input variables not given.

N/A: Should not be checked for this question.

5. If random allocation to treatment group was possible, is it described?

Yes: True randomization done - requires a description of the method used (e.g., use of random numbers).

Partial: Randomization mentioned, but method is not (i.e. it may have been possible that randomization was not true).

No: Random allocation not mentioned although it would have been feasible and appropriate (and was possibly done).

N/A: Observational analytic studies. Uncontrolled experimental studies. Surveys. Descriptive case series / reports. Decision analyses.

6. If interventional and blinding of investigators to intervention was possible, is it reported?

Yes: Blinding reported.

Partial: Blinding reported but it is not clear who was blinded.

No: Blinding would have been possible (and was possibly done) but is not reported.

N/A: Observational analytic studies. Uncontrolled experimental studies. Surveys. Descriptive case series / reports. Decision analyses.

7. If interventional and blinding of subjects to intervention was possible, is it reported?

Yes: Blinding reported.

Partial: Blinding reported but it is not clear who was blinded.

No: Blinding would have been possible (and was possibly done) but is not reported.

N/A: Observational studies. Uncontrolled experimental studies. Surveys. Descriptive case series / reports.

8. Outcome and (if applicable) exposure measure(s) well defined and robust to measurement / misclassification bias? Means of assessment reported?

Yes: Defined (or reference to complete definitions is provided) and measured according to reproducible, "objective" criteria (e.g., death, test completion – yes/no, clinical scores). Little or minimal potential for measurement/misclassification errors. Surveys: clear description (or reference

to clear description) of questionnaire/interview content and response options. Decision analyses: sources of uncertainty are defined for all input variables.

Partial: Definition of measures leaves room for subjectivity, or not sure (i.e., not reported in detail, but probably acceptable). Or precise definition(s) are missing, but no evidence or problems in the paper that would lead one to assume major problems. Or instrument/mode of assessment(s) not reported. Or misclassification errors may have occurred, but they did not likely seriously distort the results (e.g., slight difficulty with recall of long-ago events; exposure is measured only at baseline in a long cohort study). Surveys: description of questionnaire/interview content incomplete; response options unclear. Decision analyses: sources of uncertainty are defined only for some input variables.

No: Measures not defined, or are inconsistent throughout the paper. Or measures employ only ill-defined, subjective assessments, e.g. “anxiety” or “pain.” Or obvious misclassification errors/measurement bias likely seriously distorted the results (e.g., a prospective cohort relies on self-reported outcomes among the “unexposed” but requires clinical assessment of the “exposed”). Surveys: no description of questionnaire/interview content or response options. Decision analyses: sources of uncertainty are not defined for input variables.

N/A: Descriptive case series / reports.

9. Sample size appropriate?

Yes: Seems reasonable with respect to the outcome under study and the study design. When statistically significant results are achieved for major outcomes, appropriate sample size can usually be assumed, unless large standard errors ($SE > 1/2$ effect size) and/or problems with multiple testing are evident. Decision analyses: size of modeled cohort / number of iterations specified and justified.

Partial: Insufficient data to assess sample size (e.g., sample seems “small” and there is no mention of power/sample size/effect size of interest and/or variance estimates aren’t provided). Or some statistically significant results with standard errors $> 1/2$ effect size (i.e., imprecise results). Or some statistically significant results in the absence of variance estimates. Decision analyses: incomplete description or justification of size of modeled cohort / number of iterations.

No: Obviously inadequate (e.g., statistically non-significant results and standard errors $> 1/2$ effect size; or standard deviations $> _$ of effect size; or statistical non-significant results with no variance estimates and obviously inadequate sample size). Decision analyses: size of modeled cohort / number of iterations not specified.

N/A: Most surveys (except surveys comparing responses between groups or change over time). Descriptive case series / reports.

10. Analysis described and appropriate?

Yes: Analytic methods are described (e.g. “chi square” / “t-tests” / “Kaplan-Meier with log rank tests”, etc.) and appropriate.

Partial: Analytic methods are not reported and have to be guessed at, but are probably appropriate. Or minor flaws or some tests appropriate, some not (e.g., parametric tests used, but unsure whether appropriate; control group exists but is not used for statistical analysis). Or multiple testing problems not addressed.

No: Analysis methods not described and cannot be determined. Or obviously inappropriate analysis methods (e.g., chi-square tests for continuous data, SE given where normality is highly unlikely, etc.). Or a study with a descriptive goal / objective is over-analyzed.

N/A: Descriptive case series / reports.

11. Some estimate of variance (e.g., confidence intervals, standard errors) is reported for the main results/outcomes (i.e., those directly addressing the study question/objective upon which the conclusions are based)?

Yes: Appropriate variances estimate(s) is/are provided (e.g., range, distribution, confidence intervals, etc.). Decision analyses: sensitivity analysis includes all variables in the model.

Partial: Undefined “+/-“ expressions. Or no specific data given, but insufficient power acknowledged as a problem. Or variance estimates not provided for all main results/outcomes. Or inappropriate variance estimates (e.g., a study examining change over time provides a variance around the parameter of interest at “time 1” or “time 2”, but does not provide an estimate of the variance around the difference). Decision analyses: sensitivity analysis is limited, including only some variables in the model.

No: No information regarding uncertainty of the estimates. Decision analyses: No sensitivity analysis.

N/A: Descriptive case series / reports. Descriptive surveys collecting information using open-ended questions.

12. Controlled for confounding?

Yes: Randomized study, with comparability of baseline characteristics reported (or non-comparability controlled for in the analysis). Or appropriate control at the design or analysis stage (e.g., matching, subgroup analysis, multivariate models, etc). Decision analyses: dependencies between variables fully accounted for (e.g., joint variables are considered).

Partial: Incomplete control of confounding. Or control of confounding reportedly done but not completely described. Or randomized study without report of comparability of baseline characteristics. Or confounding not considered, but not likely to have seriously distorted the results. Decision analyses: incomplete consideration of dependencies between variables.

No: Confounding not considered, and may have seriously distorted the results. Decision analyses: dependencies between variables not considered.

N/A: Cross-sectional surveys of a single group (i.e., surveys examining change over time or surveys comparing different groups should address the potential for confounding). Descriptive studies. Studies explicitly stating the analysis is strictly descriptive/exploratory in nature.

13. Results reported in sufficient detail?

Yes: Results include major outcomes and all mentioned secondary outcomes.

Partial: Quantitative results reported only for some outcomes. Or difficult to assess as study question/objective not fully described (and is not made clear in the methods section), but results seem appropriate.

No: Quantitative results are reported for a subsample only, or “n” changes continually across the denominator (e.g., reported proportions do not account for the entire study sample, but are reported only for those with complete data-- i.e., the category of “unknown” is not used where needed). Or results for some major or mentioned secondary outcomes are only qualitatively reported when quantitative reporting would have been possible (e.g., results include vague comments such as “more likely” without quantitative report of actual numbers).

N/A: Should not be checked for this question.

14. Do the results support the conclusions?

Yes: All the conclusions are supported by the data (even if analysis was inappropriate). Conclusions are based on all results relevant to the study question, negative as well as positive ones (e.g., they aren't based on the sole significant finding while ignoring the negative results). Part of the conclusions may expand beyond the results, if made in addition to rather than instead of those strictly supported by data, and if including indicators of their interpretative nature (e.g., “suggesting,” “possibly”).

Partial: Some of the major conclusions are supported by the data, some are not. Or speculative interpretations are not indicated as such. Or low (or unreported) response rates call into question the validity of generalizing the results to the target population of interest (i.e., the population defined by the sampling frame/strategy).

No: None or a very small minority of the major conclusions are supported by the data. Or negative findings clearly due to low power are reported as definitive evidence against the alternate hypothesis. Or conclusions are missing. Or extremely low response rates invalidate generalizing the results to the target population of interest (i.e., the population defined by the sampling frame/strategy).

N/A: Should not be checked for this question.

Appendix B: Ethical approval from the Salomons ethics committee

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Appendix C: Information sheet for participants

Information about the research

Influences on maternal mood on returning to work after maternity leave

Hello. My name is Alexa Duff and I am a trainee clinical psychologist at Canterbury Christ Church University. I would like to invite you to take part in a research study. Before you decide whether to take part, it is important that you understand why the research is being done and what it would involve for you.

Talk to others about the study if you wish. Part 1 tells you the purpose of this study and what will happen to you if you take part. Part 2 gives you more detailed information about how the study will be conducted.

Part 1

What is the purpose of the study?

The purpose of this study is to better understand how the return to work following maternity leave impacts on women's mood.

Why have I been invited?

You are being asked to take part in this study because you have returned from work following maternity leave in the last 6 months.

Do I have to take part?

It is up to you to decide to join the study. If you agree to take part, you will be asked to show consent by clicking on a box to say that you agree to take part and have read and understood the consent form. You are free to withdraw at any time, without giving a reason.

Who can take part?

You will be

- Female
- Have had a baby in the last 18 months
- Have returned to work from maternity leave in the last 6 months

This research study is at the impact of returning to work for a specific group of women, therefore we ask you not to take part if you are

- Self employed
- Single (not cohabiting or in a relationship, however the relationship does not have to be with the father of the child)

What will happen to me if I take part?

If you decide to take part you will be asked to answer a series of questionnaires. There will be some questions about your life circumstances, e.g. your age and job, as well as questions about your mood, feelings, support and stress levels. The questionnaires will take less than 30 minutes to complete.

Expenses and payments

If you complete the study and provide your consent, you will be entered into a prize draw to win one of four £25 vouchers. You will have to give your email address to be entered into the prize draw but it will be kept separate from the other information we ask you to give us.

What are the possible disadvantages and risks of taking part

This study will be asking you questions about your well-being, relationships and mental health. If you have had any problems in any of these areas you may wish to think about whether taking part may cause you distress. Some questions may provoke thoughts that could be upsetting. If you have any concerns about this, think carefully about whether this is a good time for you to take part in this study.

What are the possible benefits of taking part?

There are no individual benefits to taking part in this study. You will be contributing to our understanding of mood changes for women returning to work after maternity leave.

Will my taking part in the study be kept confidential?

Yes. We will follow ethical and legal practice and all information about you will be handled in confidence. The details are included in Part 2.

This completes part 1.

If the information in Part 1 has interested you and you are considering participation, please read the additional information in Part 2 before making any decision.

Part 2

What will happen if I don't want to carry on with the study?

You are free to withdraw from the study at any point. If you withdraw while doing the questionnaires, your responses can be removed from the study, if you wish. Once your responses have been submitted, it will not be possible to remove them from the study as they will have been anonymised and we would not be able to identify your particular response sheets.

What if there is a problem?

While there is no intent to cause harm with this study, sometimes problems can arise as a result of taking part in the study.

If you have a concern about any aspect of this study, you should email me and I will do my best to answer your questions [a.c.duff440@canterbury.ac.uk]. If it would be helpful, we could arrange a time to discuss any concerns or queries that you might have. If you do not wish to speak with me about it you can contact my supervisor; Dr Alex Hassett, email address: alex.hassett@canterbury.ac.uk, phone:03330117093.

If you have any complaints about the study, these should be addressed to the Research Director; Professor Paul Camic; paul.camic@canterbury.ac.uk

Sometimes people find that thinking about their emotions can make them more distressed. If you are feeling low in mood, you should think about talking to your GP. If you have any thoughts of suicide or self-harm, please think about contacting the Samaritans on 08457 90 90 90. If you wish for some advice about worries or mental health concerns, you could consider checking the MIND website (www.mind.org.uk) or calling the MIND infoline: 0300 123 3393.

Will my taking part in this study be kept confidential?

All information which is collected about you during the course of the research will be kept strictly confidential.

All data collected will be kept separate from any identifying information. Confidential information that is kept electronically will be encrypted and paper information will be kept in a locked cabinet.

The information will be kept for 10 years and disposed of after this.

What will happen to the results of the research study?

The results of the study will be used as part of a doctoral thesis. Doctoral theses that are submitted to Canterbury Christ Church University are published on an online forum called CReaTe, the thesis would be publically available on this site. Additionally the aim would be to publish the results of this study in a scientific journal once the doctorate is finished. You will not be identified in any way in these publications. If you would like to receive information about the results of the study we can send you this information, however we cannot provide you with individual results.

Who is organising and funding the research?

This research is being undertaken as part of a clinical doctorate in clinical psychology which is supported by the NHS and Canterbury Christ Church University.

Who has reviewed the study?

This study has been reviewed and approved by the Salomons ethics panel of Christ Church Canterbury University.

Further information and contact details

If you have any further questions about the research, you can contact me on a.c.duff440@canterbury.ac.uk or you can leave a message for me on a 24-hour voicemail phone line at 01892 507673. Please say that the message is for Alexa and leave a contact number so that I can get back to you.

If you wish for some time to consider this information or to ask questions, you can leave this page and return to the study at a later time.

Appendix D: Format for online consent

CONSENT FORM

Title of Project: Is returning to work following maternity leave a period of psychological vulnerability for women?

Name of Researcher: Alexa Duff

Please tick boxes

1. I confirm that I have read and understand the information sheet for the above study. I have had the opportunity to consider the information and to ask questions.
2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason, without my medical care or legal rights being affected.
3. I agree to take part in the above study.
4. I understand that the results of the study will be publically published but that I will not be identifiable from the results.
5. I wish to be entered into the prize draw. At the end of the study you will redirected to a secure site to enter your email address
6. I wish to receive the general results of this study once they have been analysed. At the end of the study you will redirected to a secure site to enter your email address.

Appendix E: Questions for participants

Depression, Anxiety and stress scales (Lovibond & Lovibond, 1995)

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Multi dimensional scale of perceived social support (Zimet et al, 1988)

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Multi dimensional scale of work–family conflict (Carlson et al, 2000)

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Work–family–balance measure (Carlson et al, 2009)

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Demographic questions

What age are you?

.....

What ethnicity do you identify with?

.....

Relationship status (pick the one that best applies)

Married

Cohabiting

In a relationship but not cohabiting

Single

How long has it been since you returned to work?

1 month 2 months 3months 4months 5months 6months

How long did you have off on maternity leave?

0-3months 3-6months 6-9months 9-12months more than 1 year

What is your job?

.....

How many hours a week do you work?

Full time

Part time (please state number of hours).....

What is your household income?

Less than 25000 25000-50000 50000-75000 75000-100000 More than 100000

What age is your child?

.....

What is the sex of your child (the one that you have been on maternity leave with)?

Male

Female

Who is providing your childcare?

Family member

Child minder

Nursery

Other.....

How much time is your child spending in childcare per week?

Less than 1 day 1day 2 days 3days 4days 5days

Appendix F: Correspondence with author of measures

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Appendix G: Feedback to ethics committee

Dear Professor Callanan,

Thank you for approving my study 'Is returning to work following maternity leave a period of particular psychological vulnerability for women'. I am writing to inform you that the above study has now been completed. Please see the attached document for a summary of the research findings. Please do not hesitate to contact me if you have any questions about the research or require further information.

Yours sincerely,

Alexa Duff

Trainee Clinical Psychologist

Title: Returning to work after maternity leave: An exploration of factors influencing women's psychological distress during this period.

Background information: Becoming a mother is a period of adjustment (Nystrom & Orhling, 2004) which many mothers struggle with (Darvill, Skirton & Farrand, 2010). During this period of personal adjustment, many mothers return to work. Work seems to contribute to mother's wellbeing generally (Elgar & Chester, 2007). Little is known about whether it also has positive influences when returning to work after maternity leave. This deserves further attention as period of work transition have been found to be particularly stressful (Thomas, Benzeval & Stansfeld, 2005). The interplay between the demands of work and family and the impact on wellbeing has received considerable attention (Amstad, Meier, Fasel, Elfering & Semmer, 2011). However, the specific variables influencing this relationship need further research and no research has focused on this relationship when returning to work after maternity leave

Research aim: The aim of the study was to explore psychological distress when returning to work after maternity leave. Variables such as work-family conflict, work-family balance, social support and income and their relationship to psychological distress during this period were explored.

Method: 195 women completed an online questionnaire, with demographic questions as a number of measures assessing psychological distress, work-family-conflict, work-family-balance and social support. Correlations, t-tests, mediation and moderation analyses were used to explore the results.

Results: Psychological distress was not found to be elevated in mothers returning to work after maternity leave. However, they did have high levels of work-family-conflict and work-family-balance. Social support acted as a mediator of the relationship between work-family-conflict and work-family-balance and psychological distress.

Conclusions and implications: This was the first study to test the relationships between psychological distress, work-family-conflict and work-family-balance in mothers returning to work after maternity leave. Psychological distress was not elevated in women returning to work after maternity leave, although the participants had certain characteristics such as high income, which may have protected them from stressors. Social support, work-family-conflict and work-family balance all contributed to the psychological distress of women returning to work after maternity leave, and social support had a particular role as a mediator. However, as none explained all of the variance, more research is needed to explore this transition. Since returning to work seems to have positive effects for women's wellbeing, both clinicians and employers should consider how to facilitate this transition.

References:

Amstad, F.t., Meier, L.L., Fasel, U., Elfering, A. & Semmer, N.K. (2011). A meta-analysis of Work-Family conflict and various outcomes with a special emphasis on cross-domain versus matching-domain relations. *Journal of Occupational Health Psychology*, 16, 151.
doi:10.1037/a0022170

- Darvill, R., Skirton, H.& Farrand, P. (2010). Psychological factors that impact on women's experiences of first-time motherhood: A qualitative study of the transition. *Midwifery*, 26, 357.
doi:10.1016/j.midw.2008.07.006
- Elgar, K., & Chester, A. (2007). The mental health implications of maternal employment: Working versus at-home mothering identities. *Australian e-Journal for the Advancement of Mental Health*, 6, 1-9.
- Thomas, C., Benzeval, M., & Stansfeld, S. A. (2005). Employment transitions and mental health: An analysis from the British household panel survey. *Journal of Epidemiology and Community Health*, 59, 243-249.

Appendix H: Feedback to participants

Thank you for your participation in the research project 'Is returning to work following maternity leave a period of particular psychological vulnerability for women'. At the end of the study you requested feedback once the study was completed. I am writing to inform you that this research has now been completed and a summary is outlined below. Once again, I really appreciate your participation in this study.

Regards,

Alexa Duff

Trainee Clinical Psychologist

Title: Returning to work after maternity leave: An exploration of factors influencing women's psychological distress during this period.

Background information: Becoming a mother is a period of adjustment (Nystrom & Orhling, 2004) which many mothers struggle with (Darvill, Skirton & Farrand, 2010). During this period of personal adjustment, many mothers return to work. Work seems to contribute to mother's wellbeing generally (Elgar & Chester, 2007). Little is known about whether it also has positive influences when returning to work after maternity leave. This deserves further attention as period of work transition have been found to be particularly stressful (Thomas, Benzeval & Stansfeld, 2005). The interplay between the demands of work and family and the impact on wellbeing has received considerable attention (Amstad, Meier, Fasel, Elfering & Semmer, 2011). However, the specific variables influencing this relationship need further research and no research has focused on this relationship when returning to work after maternity leave

What we aimed to do: The aim of the study was to explore psychological distress when returning to work after maternity leave. We aimed to discover how work-family conflict, work-family balance, social support and income were related to psychological distress during this period were explored.

How this was done: 195 women completed the same online questionnaire as you. The responses were statistically analysed.

What we found: Psychological distress was not found to be elevated in mothers returning to work after maternity leave. While mothers in this study had high levels of conflict between family and work, they also had high balance between work and family and good social support. Social support was of particular importance in allowing women to manage conflict and balance and impacted on psychological distress.

Conclusions and implications: This was the first study to test the relationships between psychological distress, work-family-conflict and work-family-balance in mothers returning to work after maternity leave. Returning to work after maternity leave does not seem to cause psychological distress, although the participants in this study had certain characteristics such as high income, which may have protected them from stressors. Social support, work-family-conflict and work-family balance all contributed to the psychological distress of women returning to work after maternity leave, and social support may be particularly important. However, more research is needed to fully understand this transitional period. The study concluded that it is important for clinicians and employers to consider how to facilitate the transition.

References:

Amstad, F.t., Meier, L.L., Fasel, U., Elfering, A. & Semmer, N.K. (2011). A meta-analysis of Work-Family conflict and various outcomes with a special emphasis on cross-domain versus matching-domain relations. *Journal of Occupational Health Psychology*, 16, 151. doi:10.1037/a0022170

Darvill, R., Skirton, H.& Farrand, P. (2010). Psychological factors that impact on women's experiences of first-time motherhood: A qualitative study of the transition. *Midwifery*, 26, 357. doi:10.1016/j.midw.2008.07.006

Elgar, K., & Chester, A. (2007). The mental health implications of maternal employment: Working versus at-home mothering identities. *Australian e-Journal for the Advancement of Mental Health*, 6, 1-9.

Thomas, C., Benzeval, M., & Stansfeld, S. A. (2005). Employment transitions and mental health: An analysis from the British household panel survey. *Journal of Epidemiology and Community Health*, 59, 243-249.

Appendix I: Information for submission to Journal of occupational health psychology

The Journal of Occupational Health Psychology® publishes theory, research, and public policy articles in occupational health psychology, an interdisciplinary field representing a broad range of backgrounds, interests, and specializations. Occupational health psychology concerns the application of psychology to improving the quality of work life and to protecting and promoting the safety, health, and well-being of workers.

The Journal has a threefold focus, including organization of work, individual psychological attributes, and work-non work interface in relation to employee health, safety, or well-being.

The Journal seeks scholarly articles, from both researchers and practitioners, concerning psychological factors in relationship to all aspects of occupational safety, health, and wellbeing.

Included in this broad domain of interest are articles in which work-related and nonwork-related psychological factors play a role in the etiology of occupational safety, health, and wellbeing articles examining the dynamics of occupational safety, health, and wellbeing articles concerned with the use of psychological approaches to improve occupational safety, health, and wellbeing

Special attention is given to articles with a prevention and a promotion emphasis.

Authors should consider the financial costs and economic benefits of prevention and promotion programs they evaluate.

Manuscripts dealing with issues of contemporary relevance to the workplace, especially with regard to unique challenges of occupational safety, health, and well-being experienced by minority, cultural, or occupationally underrepresented groups, or topics at the interface of work and non-work, are encouraged.

Each article should represent an addition to knowledge and understanding of occupational health psychology.

Evaluation criteria

Manuscripts submitted for publication consideration in the Journal of Occupational Health Psychology are evaluated according to the following general criteria:

- Mastery of the relevant literature
- Theoretical/conceptual framework
- Measures of key constructs
- Research design
- Data analysis
- Interpretations and conclusions
- Writing style (clarity)
- Appropriateness of topic for JOHP
- Theoretical contribution to occupational health psychology
- Practical implications for occupational health psychology

Length of Submission

Standard manuscripts may not exceed 40 double-spaced pages (excluding figures, tables, references, and appendices). Research Note (also known as Kevin's Corner) manuscripts may not exceed 20 double-spaced pages (excluding figures, tables, references, and appendices).

Additional materials, if needed, can be placed in a supplemental materials file.

Submission letters should include a statement regarding any possible conflict of interest in conducting or reporting of the research and a statement of compliance with APA ethical standards. Authors can (but are not required to) suggest up to five reviewers who are especially qualified to review their work and who would not have a conflict of interest in serving as a reviewer.

Masked Review Policy

The journal accepts submissions in masked review format only.

Each copy of a manuscript should include a separate title page with author names and affiliations, and these should not appear anywhere else on the manuscript. Furthermore, author identification notes should be typed on the title page. Authors should make every effort to see that the manuscript itself contains no clues to their identities.

Manuscripts not in masked format will not be reviewed.

Please ensure that the final version for production includes a byline and full author note for typesetting.

Manuscript Preparation

Prepare manuscripts according to the Publication Manual of the American Psychological Association (6th edition). Manuscripts may be copyedited for bias-free language (see Chapter 3 of the Publication Manual).

Review APA's Checklist for Manuscript Submission before submitting your article.

Double-space all copy. Other formatting instructions, as well as instructions on preparing tables, figures, references, metrics, and abstracts, appear in the Manual. Additional guidance on APA Style is available on the APA Style website.

Abstract and Keywords

All manuscripts must include an abstract containing a maximum of 250 words typed on a separate page. After the abstract, please supply up to five keywords or brief phrases.

References

List references in alphabetical order using APA Style. Each listed reference should be cited in text, and each text citation should be listed in the References section.

Appendix J: Skewness and kurtosis calculations

		WIF	FIW	WFC	WFE	PSS	DepX2	Anxx2	Stressx2
N	Valid	177	177	177	175	187	194	194	194
	Missing	19	19	19	21	9	2	2	2
Mean		26.9040	24.4181	51.3220	22.7829	71.2353	6.6289	3.6804	12.7938
Std. Error of Mean		.50471	.51171	.90423	.34066	.71243	.52192	.33301	.59127
Median		28.0000	24.0000	52.0000	24.0000	73.0000	4.0000	2.0000	12.0000
Mode		29.00	27.00	50.00	24.00	84.00	2.00	.00	10.00
Std. Deviation		6.71471	6.80786	12.02994	4.50654	9.74228	7.26953	4.63831	8.23544
Variance		45.087	46.347	144.720	20.309	94.912	52.846	21.514	67.823
Skewness		-.128	.099	-.080	-.861	-.657	1.668	2.903	.856
Std. Error of Skewness		.183	.183	.183	.184	.178	.175	.175	.175
Kurtosis		-.326	-.154	.054	.691	-.342	3.661	15.469	.770
Std. Error of Kurtosis		.363	.363	.363	.365	.354	.347	.347	.347
Range		35.00	35.00	68.00	24.00	42.00	42.00	38.00	42.00
Minimum		10.00	10.00	22.00	6.00	42.00	.00	.00	.00
Maximum		45.00	45.00	90.00	30.00	84.00	42.00	38.00	42.00
Percentiles	25	22.0000	20.0000	44.0000	20.0000	65.0000	2.0000	.0000	6.0000
	50	28.0000	24.0000	52.0000	24.0000	73.0000	4.0000	2.0000	12.0000
	75	31.0000	29.0000	60.0000	26.0000	80.0000	10.0000	6.0000	18.0000