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Review Article

Development of a conceptual framework that identifies factors and challenges impacting perinatal fathers

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Abstract

Background: A father's ability to cope with fatherhood in the perinatal period has received limited attention in the literature. Recent studies have shown that both mothers and fathers are challenged by the demands of parenthood.

Aims: The challenges experienced by fathers during the perinatal period are explored and specific risk factors are identified. The aim of this paper was to develop a framework embedding the identified risk factors into a theoretical model that could be applied in predicting paternal emotional well-being.

Methods: This literature review consulted English peer-reviewed papers as far back as 1990. Databases, including PubMed, CINAHL, SCOPUS, PsycINFO, EBSCO, and ProQuest Dissertations and Theses were examined.

Results: The results of the literature review depicted a number of factors that could be aggregated into four clusters, including vulnerability factors, precipitating factors, coping style, and socio-cultural factors.

Limitation: The literature review was limited as it only examined English based peer-reviewed articles.

Conclusion: The suggested model is based on various theoretical concepts and empirical findings. The application of this model could assist clinicians in the

identification of at-risk perinatal fathers and target interventions to specific challenges experienced by perinatal fathers.

Keywords: Clinical psychology, Psychology

1. Introduction

1.1. Background

It is well established that parents are exposed to major life changes during the perinatal period (Bradley and Slade, 2011). Fathers also encounter life challenges demanding complex adjustment and adaptation to the new baby. Several studies have investigated the difficulties and challenges faced by mothers (Brunton et al., 2015), which resulted in the development of a conceptual framework. The Milgrom et al. (1999) framework improved our understanding of mothers' perinatal adjustment. In contrast, only limited research has examined perinatal challenges for fathers, but to-date paternal perinatal challenges have not been explored in a comprehensive way. This literature review will identify the available theoretical and empirical literature on fathers' perinatal challenges, and develop a comprehensive conceptual framework.

Fatherhood transition affects a father's physical and emotional well-being (Schulz, 2016). Fletcher et al. (2011) pointed out that fathers reported many concerns during the perinatal period. The major concern for the father was their ability to cope with the perinatal challenges and balancing life and work (Fletcher et al., 2011). Perinatal fathers have been shown to be at greater risk of experiencing heart attacks and reporting lower health status than other men (Bartlett, 2013). Given the impacts of fatherhood on the physical and emotional well-being of fathers, it warrants a more detailed examination of the risk factors.

Before exploring the factors impacting the emotional well-being of fathers, it's important to define what is understood by emotional well-being. The World Health Organization (1985) considers well-being as a state of physical, mental, and social aspects. This review will specifically focus on the mental aspect of emotional well-being and use lower emotional well-being as an umbrella term, encompassing depression, anxiety, and stress.

1.2. The identified gap

The examined perinatal literature suggests that mothers' challenges are different from that of fathers'. The Milgrom et al. (1999) model embedded mothers' factors and challenges in a conceptual framework and differentiated between "vulnerability factors," "precipitating factors," and "socio-cultural factors" impacting the emotional

well-being of mothers during the perinatal period. This model suggests that these three factors play an important role in the emotional well-being of a mother, with both precipitating and vulnerability factors contributing to poorer emotional well-being than mothers with only precipitating factors (Milgrom et al., 1999). In contrast, the impact of these factors is less clear in fathers during the perinatal period. The review of the literature will review factors already identified for mothers and explore additional factors as they may apply to perinatal fathers. It is anticipated that this review will assist in the formulation of a comprehensive model with the contextual focus on a father's ability to manage perinatal challenges.

Like mothers, fathers also need to manage new demands and challenges. This paper will apply the Milgrom et al. model in identifying fathers' new demands and challenges, and examine fathers' preparedness to manage challenges of perinatal period;

- a) What are the conceptual challenges impacting on fatherhood? This paper will review existing maternal perinatal conceptual framework as it may apply to fathers. That is providing an evaluation of the identified challenges experienced by mothers like vulnerability, precipitating, and perinatal socio-cultural factors in the context of fatherhood.
- b) How can paternal challenges be embedded in a conceptual framework? This review will adapt the maternal model to fit challenges experienced by fathers.
- c) Do paternal challenges differ between the antenatal and postnatal periods? Differential challenges by fathers will be examined for the antenatal and postnatal periods.

2. Materials and methods

Acknowledging that fathers' and mothers' experiences show some similarity, examination of the factors identified by the Milgrom et al. (1999) model was considered a starting point. This review considered the method advised by (Fink, 2013) to conduct a literature review. It examined theoretical and empirical literature back to 1990 and consulted PubMed, CINAHL, SCOPUS, PsycINFO, EBSCO, and ProQuest Dissertations and Theses.

The key search terms used to find relevant literature were "maternal perinatal depression," "maternal perinatal anxiety," "paternal perinatal anxiety," "paternal perinatal depression," "maternal perinatal conceptual framework," and "paternal perinatal conceptual framework." This review will relate to all of these terms in aggregate as emotional well-being.

Initially, the search identified 1020 articles. After removing the duplicates, the number of articles reduced to 777. The process of screening excluded 687 articles because they did not relate to fathers or men, were not addressing antenatal or

postnatal periods, and did not address the low emotional well-being factors of perinatal fathers. The remained 45 articles were considered relevant to this current review. Literature reviews and qualitative studies were not excluded (See Fig. 1).

2.1. Challenges and factors embedded in maternal perinatal conceptual framework

The vulnerability factors in the Milgrom et al. (1999) conceptual framework are factors experienced by mothers before pregnancy and are considered to increase mothers' susceptibility to postnatal depression. Vulnerability factors include historical experiences and personality factors. In contrast, the precipitating factors relate to current stressful events, issues, and challenges that arise during the perinatal period and may affect the emotional well-being of mothers. The Milgrom et al.'s conceptual framework differentiates precipitating factors for each stage of the perinatal period. Mothers in the antenatal period (before childbirth) experience different challenges to mothers in the postnatal period (after childbirth and up to one year after this event). Apart from the actual challenges, the literature also considers the perception of challenges by considering one's personal appraisal of the precipitating factors and the ability of coping during the perinatal period as key influences on the emotional well-being of mothers. Lastly, since the perinatal period happens in a social-cultural context, it's important to consider social and cultural factors and their impact on mothers' experiences. The identified factors in the Milgrom et al. (1999) conceptual framework are represented in Table 1.

3. Results

3.1. Identified contextual factors as they relate to the emotional well-being of fathers

The Milgrom et al. (1999) model identified four main factor types affecting the emotional well-being of mothers; vulnerability, precipitating, socio-cultural, and coping factors.

3.1.1. Vulnerability factors

The paternal vulnerability factors are likely similar to the maternal vulnerability factors, as they relate to personality traits, demographic characteristics and historical life experiences that may influence emotional well-being in both parents. When considering the Milgrom et al. (1999) model for fathers, the identified vulnerability factors included personality and cognitive style, childhood and family experiences, history of depression, marital relationship, and negative life events (see Table 2). These factors and their contribution to paternal emotional well-being will be examined below.

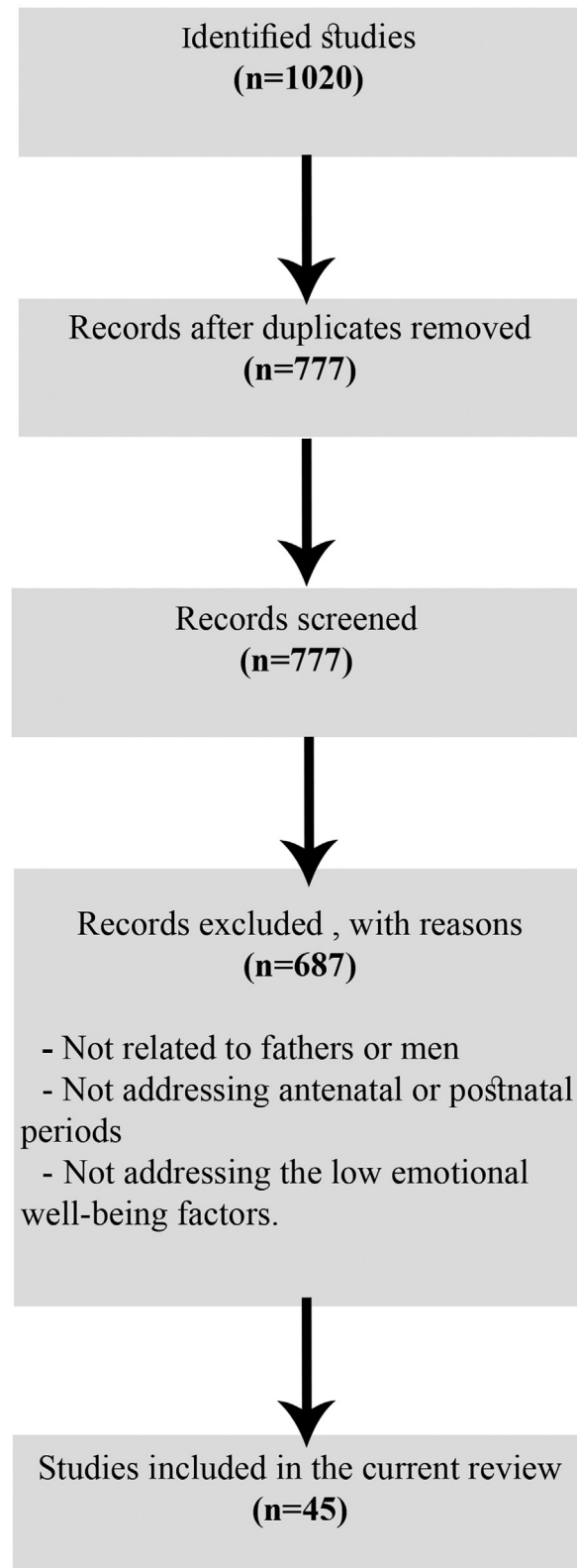


Fig. 1. Review flow diagram.

Table 1. Milgrom's conceptual framework factors of maternal postnatal depression.

Vulnerability factors	Socio-cultural factors	Precipitating factors	Appraisal
- Personality and cognitive style	- Lack of support	- Unemployment	- Lack of social support
- Childhood and family experiences	- Incongruence between real life of perinatal period and expectations	- Labour complications	- Maladaptive coping style
- History of perinatal depression	- Unrealistic image about motherhood or motherhood myth	- Mother's illness	
- History of premenstrual syndrome		- Infant demands	
- Poor marital relationship		- Financial stressors	
- Previous Negative life events			

Data from [Milgrom et al. \(1999\)](#).

The literature also identified additional factors such as socioeconomic status ([Wang and Chen, 2006](#)), relationship status ([Bronte-Tinkew et al., 2007](#)), and parental knowledge ([Boyce et al., 2007](#)) when examining factors impacting the emotional well-being of fathers during the perinatal period. Such factors have shown to increase the vulnerability of fathers and may lead to lower emotional well-being.

3.1.1.1. Personality factors

3.1.1.1.1. Neuroticism

Personality traits like the 'big five model of personality' have been examined for the impact on fatherhood adjustment. This model consists of five personality dimensions, including openness, conscientiousness, agreeableness, extraversion, and neuroticism ([Goldberg, 1993](#)). Literature investigating paternal adjustment identified neuroticism as a personality trait affecting a father's adjustment negatively during the perinatal period ([Dudley et al., 2001](#)). Neuroticism is defined as the tendency of frequent feelings of negative emotions as well as perceiving external stimuli as threatening. [Matsumoto \(2009\)](#) sees neuroticism as "a tendency to react with stress to minor frustrations at the high end and emotional stability and positive emotions at the low end." The literature identified that neuroticism increases fathers' vulnerability leading to lower emotional well-being during the perinatal period. For instance, [Dudley et al. \(2001\)](#) found neuroticism as a predictor of poor emotional well-being in fathers when comparing the level of neuroticism between a group of depressed fathers and a group of non-depressed fathers during the perinatal period. Their findings showed that depressed fathers had higher scores of neuroticism

Table 2. Summary of most relevant studies included in the current review.

Authors and country of study	Sample size	Design	Research type	Identified factors
Bielawska-Batorowicz and Kossakowska-Petrycka (2006) Poland	80 fathers.	Measured 3-month postnatally	Cross-sectional study	Mother's depression ($r = .76$, $p < .001$). Divergence between prenatal hopes and postnatal daily life experiences ($r = -0.68$, $p < .001$) and marital relationship satisfaction ($r = -0.65$, $p < .001$).
Boyce et al. (2007) Australia	312 first-time fathers	Assessed 20 weeks after the pregnant and reassessed at 3, 6 and 12 months postnatally	Longitudinal study	Neuroticism ($F(2,344) = 60.51$, $p < 0.000$) with ($\beta = 0.45$). Poor marital relationship ($F(2, 279) = 48.0$, $p < 0.001$, $R^2 = 0.25$). Social support dissatisfaction ($F(10,217) = 13.23$, $p < 0.001$, $R^2 = 0.38$).
Bronte-Tinkew et al. (2007) USA	2139 fathers	Measured 12-month postpartum time point.	Cross-sectional study	Race (High prevalence in Hispanic participants 7.7%). Marital status (separated/divorced 6.5% vs. cohabited 0.6%). Employment status (unemployed 14.3% vs employed 8.3%).
Buist et al. (2003). Melbourne, Australia	294 first-time fathers	Assessed at 26 weeks antenatally and at 36 weeks gestation; and 1 and 4 months postpartum.	Longitudinal study	Lower relationship satisfaction ($\chi^2 = 4.0$, $p < .05$). Fathers who scored high on gender role stress, also scored high on EPDS.
Dudley et al. (2001) Sydney, Australia	92 fathers	Postnatal period	Cross-sectional study	Marital status or cohabitation relationship, the views of the mother's personality style, the mother's unresolved issues, mother's perinatal depression and ability of coping, and the mother's perception of the marital relationship. The results reported $R^2 = .59$, $p < .001$ on the EPDS and $R^2 = .62$, $p < .001$ on the BDI. Positive correlation between fathers and mothers' postnatal depression was found ($r = .34$, $p < .001$ on the revised BDI and $r = .23$, $p < .05$ on the GHQ).
Gao et al. (2009) Mainland China	130 fathers	Measured at 6 to 8 weeks postpartum	Cross-sectional study	Lower perceived social support ($r = -.58$, $p < .01$). Higher perceived stress ($r = .58$, $p < .01$). Maternal depression ($r = .37$, $p < .001$).
Johnson and Baker (2004) Midlands and north east of England	284 fathers, but 68 of them were bereaved fathers.	Assessed at the 2nd trimester of pregnancy, at childbirth or miscarriage, and 1 year postpartum or miscarriage.	Longitudinal study	Avoidant-orientated coping (R^2 change = 0.24, $F(11, 212) = 7.41$, $p < 0.001$)

(continued on next page)

Table 2. (Continued)

Authors and country of study	Sample size	Design	Research type	Identified factors
Paulson and Sharnail (2010)	43 studies involving 28004 participants	Antenatal and postnatal	Meta-analysis	Partner's depression: positive correlation and moderate in size ($r = 0.308$; 95% CI, 0.2280.384).
Wang and Chen (2006) Taiwan	83 postnatal Fathers.	Assessed at 6 weeks postpartum.	Cross-sectional study	Low self-esteem ($r = .43$, $p < .01$)
Wee et al. (2011)	30 relevant articles (from 1996 and 2009)	Antenatal and postnatal	Systematic review	Poor relationship satisfaction
Zelkowitz et al. (1997) Canada	50 fathers who had postnatal depression and 50 fathers whose partners were not postnatally depressed.	Assessed around 6 weeks postnatally	Cross-sectional study	Stress from work (42% of the index group as compared to 14% from the control group, $p < .01$). Economic pressures (20% of the index group as compared to 6% of the control group, $p < .05$). Social and family support (40% (index) versus 60% (control); 44% (index) versus 66% (control); 38% (index) versus 62% (control) respectively, all at $p < .05$).

compared with non-depressed fathers. The literature also linked low emotional well-being, such as depression in the general population and in parents to neuroticism (Klein et al., 2011; Medicine et al., 2009). In summary, the neuroticism trait has been shown to increase the vulnerability of fathers for lower emotional well-being, especially during the perinatal period where fathers need to adjust to changes and experience increased stress.

3.1.1.1.2. Self-esteem

The literature identified self-esteem as a precursor influencing emotional well-being. Self-esteem refers to the attitude, opinion, and evaluation that a person holds about his behaviour, history, body, and mental process (Matsumoto, 2009). Low self-esteem is defined as a state rather than a trait and is defined as a person holding a negative perception or attitude about himself/herself. Self-esteem may be influenced by the historical experiences of negative emotions and/or cognitions and impact on emotional well-being. Several studies identified low self-esteem as a vulnerability factor in fathers, negatively affecting their emotional well-being during the perinatal period (Church et al., 2005; Wang and Chen, 2006). Since self-esteem is about personal judgment of worthiness, in the perinatal context, Wang and Chen (2006) purport that in the perinatal context self-esteem relates to personal judgment of worthiness. That is, fathers with low self-esteem may perceive their role as a father as being undefined and fathers may feel excluded from the birthing event. These

findings suggest that self-esteem is an important precursor for the emotional well-being of fathers and need to be included into the model.

3.1.1.2. *Historical life experience*

3.1.1.2.1. Adverse childhood experiences

Historical life experiences such as adverse childhood events have shown to increase the vulnerability of fathers (Teixeira et al., 2009). In this paper, the adverse childhood events refer to verbal, physical, or sexual abuse, maltreatment by a parent, substance abuse, or mental illness of a parent in a household experienced during his childhood and/or adolescence years. In addition to these direct factors, a father's vulnerability may also be impacted by negative experiences from acrimonious parental separation or divorce. The literature indicated that in the general population, these adverse childhood experiences increase the vulnerability of people and likely affect a person's emotional well-being into adulthood (Chapman et al., 2004; McEwen, 2000; Opacka-Juffry and Mohiyeddini, 2012). This vulnerability, as a result of adverse life experiences, has also been shown to influence the emotional well-being of fathers (Teixeira et al., 2009). Skjothaug et al. (2015) investigated the role of adverse childhood experiences and their impact on the emotional well-being of fathers during the antenatal period. They compared a group of fathers with adverse childhood experiences with a group of fathers without these adverse life experiences. The findings indicated that fathers with adverse childhood experiences were more likely to experience depression and anxiety during the antenatal period (Skjothaug et al., 2015). Flykt et al. (2009) confirmed these findings and explained that adverse childhood experiences and traumatic memories negatively impact fathers' perceptions as caregivers. They argued that conflicting experiences with their own fathers may interfere with their own perception and experience of being a father. These findings support the importance of historic life experiences as a vulnerability factor for fathers.

3.1.1.2.2. History of depression

Previous experience of depression is considered an important factor in the emotional well-being of fathers during the perinatal period. Goodman (2004) research findings suggest that a history of depression is a strong predictor for future emotional decline, especially when fathers are challenged by extra stresses. These findings have been supported by subsequent studies, where a personal history of depression increases the vulnerability of a father resulting in lower emotional well-being, such as anxiety and depression in the perinatal period (Edward et al., 2015; Gao et al., 2009; Molgora et al., 2016; Paulson and Sharnail, 2010). Cox et al. (2014) assert that a history of depression impacts the emotional well-being of fathers. The literature has shown overwhelming evidence that fathers with a history of depression show greater

vulnerability and are more prone to experience lower emotional well-being when faced with the challenges of becoming a father.

3.1.1.3. Demographic

3.1.1.3.1. Financial stress and unemployment

Financial stress and unemployment are additional factors that were found to influence paternal perinatal well-being. Wang and Chen (2006) found that low-income fathers were identified at greater risk to experience lower emotional well-being. Financial stresses negatively impacted the emotional well-being of fathers. The impact of financial stress is most acute when families are challenged with extra costs at the end of antenatal period and the beginning of the postnatal period (Bradley and Slade, 2011; Seguin et al., 1999). Financial stress might be further compounded by the need for mothers to take maternal leave, further reducing family income, when household expenses increase due to the baby care expenses (Schulz, 2016). Financial stress is often associated with fathers being faced with either under-employment or unemployment. Dudley et al. (2001) showed that unemployment was correlated with more severe low emotional well-being among fathers. Bradley and Slade (2011) suggested that unemployment places extra stress on a family's financial situation affecting the emotional well-being of fathers. Apart from unemployment being associated with financial stress, research has also informed that many unemployed people are emotionally impacted by the fact of being unemployed. That is, the state of being unemployed has a direct impact on a person's emotional well-being independent of the financial stresses (McIntyre et al., 2014). In perinatal context, the father may feel helpless and may see himself as not being useful to their family due to his unemployment status, which is further exacerbated by the associated financial stress. These findings indicate that employment status and financial stress are independent contributors towards the emotional well-being of fathers.

3.1.1.3.2. Relationship status

Relationship status has been shown to be an important factor for the adjustment of fathers during the perinatal period. Fathers have been shown to draw support and share responsibility when they have a positive relationship with the mother (Galambos and Krahn, 2008). In contrast, Bronte-Tinkew et al. (2007) found that separated or divorced fathers were more likely to suffer from low emotional well-being compared to cohabiting fathers. This finding is consistent with the study by Galambos and Krahn (2008) claiming that fathers in a committed romantic relationship with the mother may act as a protective factor for emotional well-being in the perinatal period.

Empirical findings show that custody arrangements also influence the emotional well-being of fathers. Marsiglio et al. (2000) comparing custodial fathers to non-custodial

fathers suggested that both groups experienced lower emotional well-being. They explained these findings by suggesting that non-custodial fathers are emotionally affected by the lack of paternal involvement with the infant whilst custodial fathers may feel overwhelmed by the responsibilities of taking care of the child, together with household chores and work demands.

These findings allow the conclusion that fathers' relationship status and for separated fathers, the custodial arrangements both have an impact on their emotional well-being.

3.1.2. Perinatal socio-cultural factors

The Milgrom et al. (1999) model identified socio-cultural factors like a lack of community support, perceived incongruence between expected and real life during the maternal perinatal period, and cultural expectations. These identified maternal socio-cultural factors have also been shown to have an impact on fathers. A review of the literature found that fathers are affected by a lack of social support (Gao et al., 2009), and challenging social expectations (Davey et al., 2006). Buist et al. (2003) identified incongruent gender role identification as an additional factor for poor paternal emotional well-being.

3.1.2.1. Social support

Social support is defined as providing physical or emotional assistance and support to a stressed person experiencing low emotional well-being by establishing rapport, developing a sense of belonging, and being socially valued as a member of the community (Matsumoto, 2009). Several studies showed that lack of paternal social support contributed to the poor emotional well-being of fathers (Gao et al., 2009; Lancaster et al., 2010). Gao et al. (2009) suggest that lower perceived social support affects the emotional well-being of fathers more than actual received social support. Thus, fathers' social support is based on their beliefs and perceptions rather than on real received and tangible support.

Although lack of perceived social support was identified as a risk factor for low emotional well-being, the predominant source of emotional support for fathers is not yet clear. Research identified that one predominant source of emotional support for fathers is from their partner. That is, fathers are more likely to rely on their partner's support during the perinatal period (Henderson and Brouse, 1991; Zelkowitz et al., 1997). In contrast, Fletcher et al. (2008) reported that fathers need emotional support from the broader family and friends other than their partner alone. A number of studies have shown that both sources of support are important as fathers' low perceived social support from friends, family, and health professionals negatively impacted emotional well-being (Forsyth et al., 2011; Wee et al., 2011). In

conclusion, social support is considered an important factor that influences the emotional well-being of fathers. A lack of perceived social support has been shown to have a negative influence on the emotional well-being of a father.

3.1.2.2. *Societal expectations*

The traditional role of fathering changed as Western society expects more paternal responsibilities in child rearing. Western society expects fathers to be more involved and practically engaged in parenting and performing household duties. Despite these expectations, fathers in the main are the predominant bread-winner for the family and are required to adjust to their new roles of fathering as expected by their partners and society. Adjustments to these new roles may be difficult to achieve for some fathers and conflicting roles may influence the emotional well-being of a father. This notion has been supported by two qualitative studies that explored the role of fathers' conflicts and experiences during the perinatal period (Barclay and Lupton, 1999; Davey et al., 2006). Barclay and Lupton (1999) showed that there is a broad consensus about the importance of fathers being engaged with their child. The level of engagement is determined by the expectation in society, the demands of the child, and the expectations by the partner. Most fathers interviewed in this study informed that the engagement expectations of society and their partners are difficult to achieve as these expectations may exceed their capacities. Davey et al. (2006) examining fathers' attitude towards parenting found that fathers believed that they should be tolerant during this difficult period and hide their difficulties of coping with fatherhood. Barclay and Lupton (1999) expanded on identifying the reasons for fathers deliberately hiding coping difficulties. They identified fear of stigma as a main possible reason for fathers hiding their coping problems. In other words, the partner and society's high expectations from fathers and their inability to meet these expectations makes fathers feel shamed, preferring to hide their perceived parental difficulties. These findings suggest that societal expectations about parenthood can be challenging for fathers leading to additional emotional stress.

3.1.2.3. *Gender role identification*

Gender role behaviour relates to traditional fathering attitude, lack of emotional expression, and anger behaviours (Buist et al., 2003). Incongruent gender role identification in fathers is one cultural factor that contributed to the development of paternal perinatal low emotional well-being (Buist et al., 2003). Low emotional well-being in fathers is thought to be influenced by the fathers inadequate emotional processing of changes and traditional male gender norms (Mussap, 2008). Traditional fathering attitude includes fathers not being directly involved in child care and considering their responsibility to only provide material support. In contemporary Western society, the greater involvement by fathers during the perinatal period

has led to a shift in the stereotypical male gender role. This shift has also influenced mothers' expectations of the role played by fathers, including fathers looking after the child and helping the mother with the household daily chores. In contrast, fathers adopting a traditional attitude of fathering may feel challenged by societal pressure and mother's expectation affecting their emotional well-being. As preparation for fatherhood is embedded in culture, gender role identity is an important factor when considering the emotional well-being of a father. Aligned with gender role identity are societal expectations of child rearing.

3.1.3. Precipitating factors

The Milgrom et al. (1999) conceptual framework for maternal postnatal depression identified stressful events, including labour complications, unplanned pregnancy, physical illness, and baby demands as precipitating factors. Some of these factors are not dissimilar for the father. Additional unique factors influencing fathers' well-being are father-mother conflict, negative perceptions, depressed partner, father-child conflict, and parental knowledge.

3.1.3.1. Unplanned pregnancy

Studies found that unplanned pregnancy defined as an unintended pregnancy has been shown to have an impact on the emotional well-being of fathers (Gao et al., 2009; Habib, 2012; Tuszyńska-Bogucka and Nawra, 2014). The impact of an unplanned pregnancy on emotional well-being has been explained by being unprepared for fatherhood and/or being insecure financially (Gao et al., 2009). These findings suggest that fathers unprepared for managing these extra demands of pregnancy are likely to be negatively affected in their emotional well-being.

3.1.3.2. Childbirth concerns

Childbirth concerns and worries do not only have an impact on mother's functioning but also affect the emotional well-being of fathers. Childbirth concerns refer to parents' worries about the delivery and the physical well-being of both mother and baby. In contemporary Western society, fathers have become more engaged in the pregnancy and the actual childbirth (Carlson, 2006; Redshaw and Henderson, 2013). That is, fathers are taking part in antenatal classes and learn more about the childbirth process. This knowledge enhanced their ability to play an active role in supporting the mother during the actual childbirth (May and Fletcher, 2013). Nevertheless, two studies found an association between caesarean delivery and postpartum negative affect in fathers. Fathers who had their baby in a caesarean delivery were more likely to perceive the childbirth as a negative event than fathers who had their baby in a vaginal delivery (Greenhalgh et al., 2000; Pedersen et al., 1981). Although there is anecdotal evidence that fathers feel more confident in

managing the antenatal period and childbirth, delivery complications such as, caesarean may be a risk factor for lower emotional well-being of fathers.

3.1.3.3. *Father's antenatal and postnatal adjustments*

The father-child relation in the postnatal period has been well researched (Barclay and Lupton, 1999; Kim and Swain, 2007; Wang and Chen, 2006), while the father-child relationship during the antenatal period, such as adjustment to pregnancy and bonding with the unborn child were mostly neglected in the literature.

Fenwick et al. (2012) found that adjustment to the pregnancy was associated with an increased level of anxiety in fathers. They explained that men engage in emotional work in the antenatal period to accept the child and pregnancy. The findings suggest that fathers are likely to experience negative emotions such as discomfort and ambivalence when receiving the pregnancy news but most fathers adjust to becoming a father in the third semester of pregnancy. However, Fenwick et al. (2012) found that these negative emotions reappear as the birth event approaches, suggesting that negative feelings about the pregnancy may act as a precursor for fathers to develop poor emotional well-being.

During the postnatal period, a lack of engagement with the infant contribute to lower emotional well-being in fathers (Bronte-Tinkew et al., 2007). The lack of engagement is described as a lack of emotional connection, physical accessibility, providing material support, and taking practical care of the child (Cowan et al., 2009). Fathers experiencing difficulties in engaging with their child are more likely to experience poorer emotional well-being.

This literature suggests that fathers with difficulties accepting and bonding with their child during the antenatal and postnatal period may experience lower emotional well-being.

3.1.3.4. *Father-mother relationship*

The father-mother relationship and the relational commitments are often tested during the perinatal period. The pressure and responsibilities of transitioning to parenthood often lead to changes in the intimate relationship of parents. Several studies found that lack of emotional or/and physical intimacy in the parental relationship during the perinatal period impacts on the emotional well-being of the father. A decline in sexual activity (Knauth, 2000) and a lack of emotional support from the partner (Coffman et al., 1994) has been identified as sources of stress. In contrast, several studies showed that positive interactions between the parental relationships improves satisfaction and emotional well-being of fathers during the perinatal period (Rosand et al., 2012; Wee et al., 2011). Research into physical and/or emotional

intimate relationships in fathers showed that a positive relationship with the mother acts as a protective factor for paternal emotional well-being (Eggebeen and Knoester, 2001).

Research explored thus far has shown that fathers are affected emotionally when they perceive their partner negatively. Dudley et al. (2001) found that paternal perinatal depression was associated with the perception of the partner's ability to cope with stress, her emotional state, and her view about their conjugal relationship. Additional identified risk factors for paternal well-being were negative perceptions about the partner, including negative perception about marriage (Zelkowitz et al., 1997), partner's lack of interest in sexual relationship, fathers perceiving themselves being controlled by the partner (Buist et al., 2003), and a perception of the vast decline in sexual activity in fathers (Boyce et al., 2007). In summary, fathers who experience conflict with their partner and changes in the intimate relationship are likely to experience lower emotional well-being during the perinatal period.

3.1.3.5. Depressed partner

The emotional status of mothers has a significant influence on the emotional well-being of fathers. Several studies have linked maternal perinatal depression to paternal perinatal depression (Bielawska-Batorowicz and Kossakowska-Petrycka, 2006). The emotional well-being of mothers was considered as a main contributor for developing paternal depression; the prevalence of paternal perinatal depression can reach as high as 50% when the partner is depressed (Ramchandani et al., 2005). Apart from the emotional well-being of the mother, studies have also shown that the emotional well-being of fathers is affected by mothers' historic unresolved personal issues including traumatic experiences during childhood and adolescence. Dudley et al. (2001) found that mothers with a history of child abuse showed greater emotional instability, which contributed to lower emotional well-being in fathers. This finding indicates that the emotional well-being of fathers is not only related to the father's individual vulnerability but also influenced by relational issues and factors impacting on mothers' well-being.

3.1.3.6. Father's negative perceptions about the child

Fathers' negative perceptions about the infant are associated with paternal lower emotional well-being. The negative perception refers to a negative evaluation of the infant's behaviour or temperament such as crying, spitting, and vomiting (Zelkowitz et al., 1997). Zelkowitz et al. (1997) found that negative perceptions about the infant contribute to the father's poor emotional well-being. However,

this relationship between the father's perception of the infant and the father's emotional well-being warrants further studies.

3.1.3.7. *Parenthood knowledge*

Parental knowledge is seen as a protective factor towards the emotional well-being of fathers. [Boyce et al. \(2007\)](#) found that fathers who actively sought information about fatherhood were less likely to be affected in developing poor emotional well-being, compared to fathers that did not seek information and remained ignorant about pregnancy, childbirth, and taking care of the infant. In another study, [Greenhalgh et al. \(2000\)](#) identified two types of fathers; fathers who avoid information about the pregnancy and birth and fathers who seek information and act on the available information. The finding shows that fathers using monitoring strategies were less likely depressed compared to fathers using blunting strategies ([Greenhalgh et al., 2000](#)).

Previous parenting experience also acted as a protective factor, with second-time fathers being less emotionally impacted compared to first-time fathers ([Figueiredo and Conde, 2011](#)). [Fletcher et al. \(2008\)](#) interviewed fathers on practical issues of being a father. They identified two main concerns that worried fathers, namely living in a messy house and not knowing how to respond to a crying child. These findings demonstrate that fathers who are unprepared for changes in their lifestyle following the arrival of a newborn are challenged by the baby's needs, experiencing stress, and feeling overwhelmed, which affects their emotional well-being. [Ferketich and Mercer \(1995\)](#) commented that second-time fathers may have a more realistic expectation of fatherhood and seemed more familiar with changes in lifestyles and parental responsibilities. These findings permit the conclusion that un-prepared fathers are likely find it more difficult to adjust to their new role as a father.

3.1.4. *Coping*

The literature identifies several coping strategies used by fathers during the perinatal period. [Levy-Shiff \(1999\)](#) found that perinatal fathers are likely to use emotion-focused or problem-focused styles in dealing with fatherhood. The emotion-focused style consists of acting based on the prevailing emotions ([Brannon and Feist, 2009](#)), while the problem-focused style consists of exploring practical strategies to combat stressors ([Carroll, 2013](#)). In contrast, [Johnson and Baker \(2004\)](#) identified the use of either avoidant-oriented or approach-oriented styles in perinatal fathers. The approach-oriented style focuses on trying to solve the problem, whilst the avoided-oriented style attempts to ignore the problem and minimises the associated negative emotions ([Roth and Cohen, 1986](#)). They found that fathers were likely to adopt the approach-oriented style during the antenatal period, and apply the avoidance-oriented style in the postnatal period ([Johnson and Baker, 2004](#)). Consistent with [Johnson and Baker \(2004\)](#), [Etheridge and Slade \(2017\)](#) identified problem

solving and avoidance coping styles, where fathers applied mostly problem-solving strategies in the antenatal period and avoidance styles during the birthing and post-natal periods. [Greenhalgh et al. \(2000\)](#) identified coping styles by differentiating two distinct information seeking strategies. That is, fathers with a blunted style avoid seeking information and knowledge, whilst fathers with monitoring style deliberately seek out new information and knowledge. This is also reflected in fathers attending antenatal class or reading about becoming a father. The blunting-monitoring coping style is limited as it only considers a father's desire to gain parenting knowledge, rather than exploring coping styles that relate to situational stresses.

Different coping styles can be considered as either adaptive or mal-adaptive to a given situation in the perinatal period. The literature identified the emotion-focused ([Levy-Shiff, 1999](#)), avoidance-oriented ([Etheridge and Slade, 2017](#); [Johnson and Baker, 2004](#)), and blunting ([Greenhalgh et al., 2000](#)) as mal-adaptive styles. That is, fathers who adopted an emotion-focused style reported less effective parenting behaviour and higher stress when compared with fathers using a problem-focused style ([Levy-Shiff, 1999](#)). In a longitudinal study, the avoided-oriented style negatively affected fathers' well-being ([Johnson and Baker, 2004](#)). [Etheridge and Slade \(2017\)](#) found in their qualitative study, that fathers applying the avoidance coping styles had negative consequences on some fathers. The blunting style in [Greenhalgh et al. \(2000\)](#) coping styles was also negatively influencing the emotional well-being of fathers. In summary, the use of emotion-focused, avoidance-oriented, and blunting coping styles in the perinatal context negatively affect the emotional well-being of fathers. These findings suggest that fathers adopted coping styles during the perinatal periods have a marked influence on their emotional well-being. Particularly, avoidance attitudes and emotional focus limit a father's ability to effectively manage situational problems during the perinatal period. Therefore, coping style is considered an important factor in the contextual model and an assessment of coping style is warranted in the identification of the emotional well-being of fathers.

4. Discussion

4.1. The paternal perinatal framework

The provided literature review strongly suggested that there are similarities and differences between the challenges confronting fathers and mothers during the perinatal period. The [Milgrom's et al.'s model \(1999\)](#) can serve as a template to develop a contextual model that fits the special factors identified in fathers. Overarching factors like vulnerability, socio-cultural, and precipitating and coping factors form the basis of a paternal contextual model to strategically examine these paternal risk factors and help early detection of emotional issues and permit early professional intervention. Fathers experience similar vulnerability factors as mothers but there are marked

differences between fathers and mothers in the precipitating factors and socio-cultural factors.

The literature suggests that fathers' experiences differ between antenatal and postnatal periods, especially in terms of the father-child relationship dynamic. During the antenatal period, the child is not born yet and the father is expected to go through the process of adjustment to pregnancy and learning to plan for the child. In contrast, in the postnatal period, where the child is born, the father adjustment relates to the physical and emotional bond with the child.

Coping styles have been shown to play an important role in the perinatal emotional well-being of fathers. Transition to parenthood requires a cognitive evaluation of both internal and external resources to cope with the parental role (Tomaka et al., 1997). Thus, the ability to cope determines the emotional response of the father. The application of mal-adaptive coping styles contributes toward poor emotional well-being. The examined literature showed that fathers are likely to use either problem-focused style or emotion-focused style during the perinatal period. However, Tomaka et al. (1997) found that fathers may use a combination of these two coping styles to cope with the perinatal issues.

Precipitating factors, coping, and perinatal well-being occur in a cultural context demanding considerations of the specific perinatal socio-cultural factors like societal expectations, perceived social support (including partner support), and gender role identity. These socio-cultural factors may help in either decreasing or increasing the negative emotional well-being of fathers.

Fig. 2 depicts a conceptual framework that includes the four overall categories (vulnerability, precipitating, socio-cultural, and coping) that were identified in the

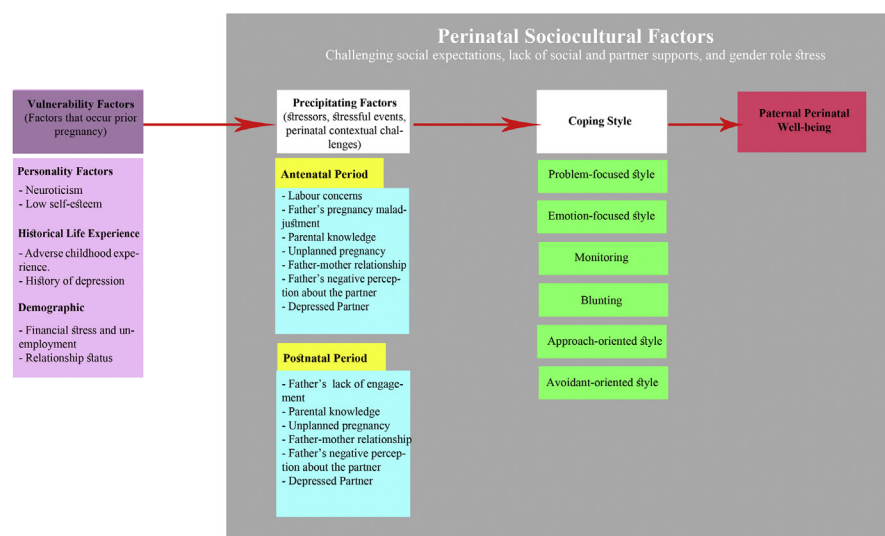


Fig. 2. Conceptual framework of paternal perinatal well-being.

literature as precursors to identify fathers at risk of experiencing poor emotional well-being during the perinatal period.

5. Conclusions

The literature supports the notion that four overarching factors affect the emotional well-being of fathers during the perinatal period. This review identified a number of factors related to the paternal emotional well-being. These identified factors were embedded in a conceptual framework to provide a better understanding of the adjustment of fathers and to flag paternal emotional well-being issues. Adopting Milgrom's framework as a template, the factors are aligned with the four overarching factors including vulnerability factors, precipitating factors, coping style, and socio-cultural factors. The review has identified several factors that impact fathers at different stages in the perinatal period. Different factors apply for the antenatal and postnatal periods.

This conceptual framework contributes to the paternal perinatal literature, suggesting that the emotional well-being of fathers during the perinatal period relies on the coping style of fathers and other vulnerability, precipitating, and socio-cultural factors. It's important to acknowledge that the interplay between these factors is likely to influence the emotional well-being. This review will help to inform health practitioners about the complexity of paternal perinatal well-being and guide clinicians in ways to better target their interventions. That is clinicians can identify the factors that negatively impact on their client's emotional well-being and specifically target their treatment to address these factors. Additionally, this review differentiates between the different perinatal stages and identified factors that become more relevant in the postnatal period compared to the antenatal period. The limitation is that this study did not target literature in languages other than English. Finally, the development of this conceptual framework will encourage researchers to conduct more focused research and provide empirical validation of this model. That is researchers may want to develop specific measures that assist in the identification of factors that relate to fatherhood challenges and subsequently impact on fathers' well-being.

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