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Review

Perinatal loneliness: prevalence, impacts, drivers, interventions, solutions and future directions

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Loneliness has been associated with perinatal mental illness, which is shown to negatively affect infant mental health. This review outlines current understandings of prevalence and negative impacts, and summarises what is currently known about contributing factors, highlighting multidimensional experiences of loneliness in the perinatal period (pregnancy and two years following birth). The socioecological framework is used to explore evidence on individual, interpersonal, organisational, community and societal factors that contribute to perinatal loneliness. Parents who experience intersectional inequalities are most at risk, including parents who are on low incomes, young, LGBTQ+, from ethnically marginalised populations, or affected by poor health. Most interventions to reduce perinatal loneliness operate at the individual or interpersonal level. To fully address perinatal loneliness, it is also important to further explore organisational factors and adopt a spatial and social justice approach that addresses the community and societal drivers such as poverty, discrimination and unsupportive social policies.

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Introduction

While loneliness experienced in parenthood has been largely unexamined [1], there is an emerging literature focussing on loneliness in the perinatal period (pregnancy and two years following birth) [2–4]. New parenthood involves a period of transition, and while this can be a positive experience with opportunities for social connection, parents may also feel isolated navigating a new role and experience social restrictions due to caregiving [5]. Loneliness is the negative feeling resulting from a perceived gap between the personal relationships that you want and those you have. Experiences of loneliness in the perinatal period are multidimensional and include social, emotional and existential domains [4]. Social loneliness is experienced due to an absence of an engaging social network, whereas emotional loneliness relates to a lack of close personal relationships [6]. Existential loneliness stems from a sense of lacking meaning in life [6] and feeling fundamentally separate from others and the world [7], which can be experienced in the perinatal period due to identity changes relating to caregiving [4]. Addressing perinatal loneliness is important as the first 1001 days are critical for child development, and disruptions to the parent–infant relationship can have lasting negative consequences [8]. This review summarises evidence on the prevalence and impacts of loneliness in the perinatal period, and uses the socioecological framework outlining evidence about contributing factors and their influence on multidimensional aspects of the experience of loneliness. Potential interventions are then explored, with recommendations made for public health approaches and future directions for research.

Prevalence and impacts of perinatal loneliness

Whilst large-scale cross-sectional or cohort studies examining perinatal loneliness are lacking, there are strong indications that loneliness is both widespread and globally experienced in the perinatal period [1, 2, 4]. Loneliness in the general population ranges from 24% in low-income countries to 11% in high-income countries [9]. In contrast, a scoping review of 117 studies that examined loneliness in mothers of children under five found prevalence ranged from 32% to 42% [2]. Similar high rates of loneliness were found in a cohort study in pregnancy [10]. There is no prevalence data for fathers: given qualitative studies reporting their experiences of

loneliness [11, 12], this may reflect their lack of prioritisation in research.

There is evidence to indicate that perinatal loneliness may negatively affect the health and well-being of parents and their children [4, 5, 13]. An association between loneliness and postnatal depression is commonly found [14–16], and loneliness in pregnancy is predictive of postnatal depression [17]. Further, a meta-synthesis of qualitative studies found that loneliness is central to postnatal depression [18]. There are vast socioeconomic costs of poor maternal mental health: postnatal depression is estimated to cost UK society around £74,000 per case [19]. Loneliness has been linked to poorer physical health in other populations, but there have been no empirical studies examining the impacts of perinatal loneliness on physical health [5, 13]. However, perinatal loneliness has been linked to increased use of healthcare services [13]. Impacts of perinatal loneliness on well-being and developmental outcomes of children have also been demonstrated, with syntheses of evidence suggesting the possible intergenerational transmission of loneliness [20, 21], and links with infant physical health [22] and child and adolescent developmental outcomes [10, 23]. Little is known about the mechanisms linking perinatal loneliness with child outcomes [5], although biological processes resulting from increased maternal stress relating to depression and anxiety have been implicated [5].

Factors contributing to perinatal loneliness

Given that research indicates perinatal loneliness is both prevalent and has negative impacts, it is important to adopt an evidence-informed response by understanding contributing factors. A meta-synthesis of qualitative literature exploring mothers' experience of loneliness and perinatal depression found that loneliness in this population is exacerbated by multiple disadvantages [18]. As such, a socioecological framework, which incorporates evidence at multiple levels (individual, interpersonal, organisational, community and societal), is appropriate for shaping our presentation of contributing factors to perinatal loneliness [24]. For an overview of our model, see Figure 1.

Individual factors

Individual drivers of loneliness include sociodemographic background, personality traits, early life experiences and health status [25]. A lack of robust, large-scale longitudinal cohort data for perinatal loneliness means conclusions about individual risk factors are tentative. However, syntheses of qualitative studies and small-scale cohort studies highlight that parents' perceived or actual poor health, having multiple children, being younger (than 25), or parenting solo increase the risk of perinatal loneliness [2]. Cross-sectional studies in Japan found an association between an insecure attachment style in the parent and perinatal loneliness [26].

Interpersonal factors

Interpersonal relationships are widely associated with loneliness across the lifespan [27]. Cross-sectional studies have linked perinatal loneliness to a lack of social support [2, 11, 28, 29], and qualitative studies also cite a lack of social support as leading to loneliness [11,18,30–32]. Parents may experience emotional loneliness as they report feeling lonely due to perceived changes in relationships with partners, family or friends, which may be intensified by the stigma of expressing negative feelings about parenthood [4, 11, 18, 31–33]. Social loneliness may be common because parents report that caring for an infant reduces opportunities for social activities, and diminishes access to social networks (e.g. work colleagues or interest groups/clubs). Social support, particularly from partner, family and peers, is an important buffer for perinatal loneliness.

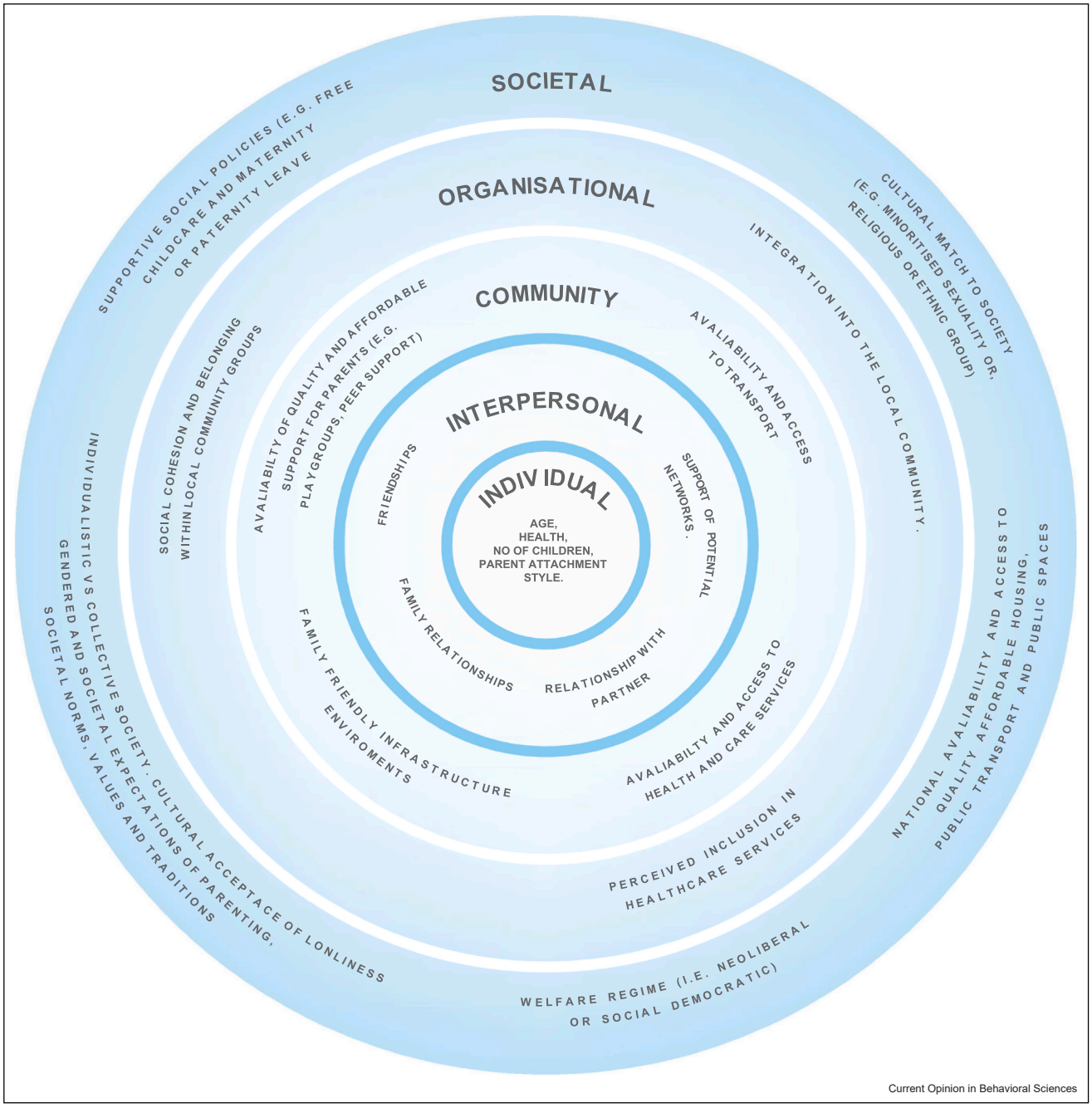
Organisational factors

Structured communities, which groups of individuals frequent or belong to, such as healthcare services, workplaces or community groups, such as playgroups, can foster social connections and integration, which in turn influence loneliness [24, 27]. Parents in qualitative studies often report feeling excluded from community spaces where spaces are not welcoming for children [4]. Patriarchal and heteronormative norms, reflected in workplaces and health and care services, shape mothers', fathers', and trans and nonbinary parents' experiences of loneliness [4, 11, 12]. Fathers, non-birthing parents and queer families may not feel comfortable or able to access healthcare and support services, which are limited by a heteronormative maternal-focussed model [4, 33, 34]. Many qualitative studies show that parents who are outside of the prevailing cultural norms tend to report loneliness, including parents who are young, solo, from marginalised religious and ethnic communities, refugees and migrants, and people who do not speak the dominant language [1, 2, 4, 12, 18, 32]. One possible reason for this is that these groups feel unwelcome in services or communities that were not designed for them, triggering social and existential loneliness through feeling excluded and/or fundamentally different. However, it is equally plausible that loneliness in these typically marginalised populations could be the result of discrimination; thus, societal influences may also be implicated.

Community factors

Despite limited research exploring community drivers for perinatal loneliness, there is a growing awareness that poor local infrastructure can create environments that produce loneliness through spatial and social contexts that make social connections difficult, recently termed *lonelygenic* environments [35]. Similar to older or disabled

Figure 1



Socioecological model of factors contributing to perinatal loneliness identified in the literature.

populations who experience mobility challenges, moving around with child-carrying apparatus (e.g. slings and prams) can be challenging, including navigating curbs, animal excrement, poorly maintained pavements and traffic [36, 37]. This is compounded for parents who have more than one child, who live in rural areas with poor access to transport, or who have limited income and are dependent on unreliable public transport [38]. Further, research suggests that opportunities for playgroups, antenatal classes and social activities vary geographically, and are often not free to access, meaning parents are excluded if they cannot afford this support [4, 12, 30].

Societal factors

Societal factors influencing perinatal loneliness include cultural values and beliefs about parenthood and

caregiving, social policies and investment in transport and infrastructure. Individualised post-industrial societies often leave parents managing childcare largely on their own. Mothers in particular often spend long periods of time physically alone with their infants, which can contribute to feelings of loneliness [39, 40]. Qualitative research in these societies highlights a mismatch between the support parents expect and what they receive [4]. In collectivist societies (e.g. China and some Asian and African countries), mothers may experience greater practical and emotional support. For example, qualitative studies with migrants from these contexts suggest that the absence of expected community and family support contributes to loneliness in their host countries [41, 42]. These findings indicate potential cross-cultural differences in perinatal loneliness, consistent with broader patterns observed in other population groups [43].

Parents may also experience loneliness when they feel unable to meet perceived societal expectations of 'good parenting' [4, 10–12, 18]. A meta-synthesis exploring perinatal loneliness and depression found that feelings of inadequacy were common, and that stigma and shame surrounding the expression of negative emotions often led parents to hide their struggles and avoid seeking help [18]. Furthermore, cultural constructions of a 'strong-male', prioritising the need to support mother and infant, may discourage fathers from seeking help with their experiences of loneliness [25, 6].

Whilst there has been little examination of the sociopolitical drivers of perinatal loneliness [4], there is a growing awareness that loneliness is driven by structural drivers such as poverty, lack of investment in health and social care services and inadequate welfare benefits [44]. Thus, there are likely to be socio-political influences on perinatal loneliness. For example, austerity-driven reductive social policies since 2010 in countries such as the UK have led to the retraction of health and social care services for parents, who are left without vital social support [45, 46].

Interventions

A review of promising interventions for perinatal loneliness and its proximate determinants (e.g. social support, social isolation) identified six distinct categories: synthetic social support; shared-identity social-support groups; creative health approaches; parent and child groups; multidisciplinary and holistic approaches; and awareness campaigns [3]. The review identified five mechanisms that may lead to reductions in perinatal loneliness: providing meaningful activities; connecting to similar others; normalising and validating experiences of loneliness; overcoming barriers to connectedness; and providing a positive social tie. Promising interventions included peer support, health visiting and creative health approaches (such as group or individual singing, craft, nature-based activities, and physical activities) [47–50]. There has been a growth of online interventions for parents, which are popular as they support parents to attend even if they lack transport or childcare [3]. However, conclusions made are tentative as many of the studies in the review were small-scale and/or qualitative evaluations: thus, there is a need for more rigorous evaluation [3]. Importantly, most interventions for perinatal loneliness focus on factors at the individual or interpersonal level, so further research is needed to examine organisational policies and practices that reduce loneliness, and to develop interventions to address community and societal factors.

Conclusion and future directions

Around one third of parents may experience loneliness during the perinatal period [2], which has negative implications for public health due to its link with poor maternal mental health [18] and children's well-being and developmental outcomes [13]. However, our understanding of the prevalence, causes and consequences of perinatal loneliness (particularly over time) is limited by a lack of robust evidence. Future research should address this gap by measuring the prevalence and impacts of perinatal loneliness across diverse populations using large-scale national cohort and longitudinal designs.

Current evidence, although tentative, suggests that the causes of perinatal loneliness can be understood within the socioecological framework (individual, interpersonal, community, organisational and societal levels). There is more evidence supporting the relationship between loneliness and interpersonal factors (e.g. social support), and some evidence about the contribution of individual factors (e.g. age and attachment style), but few studies have explored the other domains. This perhaps explains why most interventions for perinatal loneliness offer social support or try to build social networks [3]. However, we recommend that future research should further explore how other domains within the socioecological model contribute to perinatal loneliness. Understanding how different welfare regimes, cultural norms, workplaces, health and social care services, and access to green spaces, transport and infrastructure can contribute to or mitigate perinatal loneliness will enhance our ability to respond to this urgent public health issue.

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RND and RN jointly contributed to the conceptualisation, content and editing of the paper. RND prepared the first draft.

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Data Availability

No data were used for the research described in the article.

Declaration of Competing Interest

The authors have no conflicts of interest to declare.

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