

Depression, Early Birthing, Breast Milk Needs Government Support: A Narrative Review

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ABSTRACT

Artificial Intelligence (AI) has been revolutionizing many sectors, and healthcare is no exception. One of the most promising applications of AI is in medical diagnosis, where it offers the potential to enhance accuracy, speed, and accessibility of identifying diseases and medical conditions. As AI technologies continue to evolve, they are reshaping how healthcare professionals diagnose and treat patients, ultimately aiming to improve patient outcomes and reduce healthcare costs.

KEYWORDS

Breast Milk, Immigrant women, Environment, Diseases, Sustainable diets, Postnatal depression, Very early births depression.

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Background

Australia is but one country with an immigrant population. Australia has a falling population [1], and migration continues and will continue [2]. The mother's body can produce milk, and this process contains many factors, including immunological factors. However, are we influenced by our physical, social, biological, and political surroundings? [3]. The political is implicated in newborn babies and young children [4]. Overly commercial foods may induce Cancer in humans, as the incidence of diseases in the environment is increasing; thus, sustainable foods, such as breast milk, are required [5]. Others agree and identify that "commercial foods have replaced human breast milk, such that commercialized milk formula has increased in recent times, where women and families are encouraged to use increasingly, as anxiety, heavy marketing and limited protection and support for breastfeeding in healthcare systems, work settings and home care" [4]. Thus, "overly commercial foods are altered to be non-nutritious" [6].

Methodology

Primarily, to facilitate the development of articles in Google Scholar, the research question guiding this inquiry is: How is breastmilk a perfect food for infants? How will this be translated into ways to help women? However, the study of breast milk research is in its infancy. We now investigate women's views.

Women needs

Researchers De Matos Reis et al. [7] have studied the impact of maternal Nutrition on fetal and infant neurodevelopment. This focus included specific nutrients and their critical roles in perinatal and pediatric Health. These include "eicosapentaenoic acid (EPA), docosahexaenoic acid (DHA), folic acid, iron, and iodine in shaping children's neurological functions." [7]. Others have identified several functions of lipid research; however, the current understanding is limited [8]. Others have identified protein and lactose concentrations in breast milk and have found that mothers who avoid cigarette smoking have a positive influence [9].

Others identify hormonal growth [10]. As mammary gland development: “embryogenesis; mammogenesis; lactogenesis, or secretory differentiation (stage I lactogenesis) and secretory activation (stage II lactogenesis); lactation (or stage III lactogenesis), or full milk secretion; and involution.” [10].

Furthermore, studies are suitable for the baby’s immature digestive system [11]. Thus, immunoglobulins are Y-shaped proteins produced by B-cells to combat bacteria and viruses [12]. Therefore, “The composition of breast milk adapts to the baby’s changing needs, evolving from colostrum to transitional milk and then to mature milk.” “Colostrum, the first milk secreted after birth during the first five days, is rich in protein and immunological factors (e.g., lactoferrin, IgA immunoglobulin)” [11]. As Lawrence [10] sets out, “hormones play a central role in mammary gland development and lactation (estrogen and progesterone, prolactin, insulin, hydrocortisone, human placental lactogen, human growth hormone, Oxytocin).” Thus, breastfeeding has numerous well-known benefits for both babies and their mothers.

However, migrant sociocultural clustering by language can isolate a community, leading to issues surrounding the individual needs of immigrant women breastfeeding. Breastfeeding postnatally is limited in many European countries. Breastfeeding mothers suggest that targeted information at local group levels [13] is beneficial, as women desire information on infant behaviour and how breastfeeding works [14]. Other studies suggest alternative health treatments. A review study suggests that alternative health treatments from Chinese medicine are becoming mainstream [15]. In the study by Donlan et al. [16], Chinese women were to disregard hormonal pathways. Thus, Dennis et al. [17] and Joseph et al. [18] note that prior knowledge suggests immigrants may or may not overcome their prior understandings. Others suggest inconsistent breastfeeding practices across ethnic groups [19]. Therefore, exclusive breastfeeding in the first six months, as recommended by the World Health Organisation [20], “occurs in Southern Asia at 60% and East and South” Southern Africa at 57% and increasing breastfeeding is successful with self-help peer support and health professional input” [21].

Others highlight social, cultural, financial, and institutional factors that are critical to designing appropriate healthcare Strategies [22]. Another suggests that peer support and problem-solving approaches demonstrate promising evidence, as they target workplace loneliness and emotional exhaustion, promote work engagement, and support adaptive coping behaviours in healthcare [23].

Nutrients

Nutrients are more important than weight as a measure [9]. The rate of women having very premature babies is greater than 10% globally. Women may have postpartum depression [24]. Another cause is that those with early Birthing, with very premature babies, have similar rates of postpartum depression. Thus, “marketing has a large industry that affects breastfeeding by women” [25].

Other studies suggest that maternal smoking, lower education, and employment status may mitigate the longer-term benefits of breastfeeding [9,26]. A study reviews the development of women’s breasts from pre-birth to late adult stages as mothers [27]. Others argue that “very preterm infants depend on the quality and quantity of growth-regulated factors in early nutrition and gut microbiota, which differ between male and female babies” [28]. We turn to studies of breastmilk.

Breastmilk Studies

However, numerous studies have found that breast milk offers greater benefits for babies and women. An Irish study suggests that “human breast milk has been studied to unravel its unique composition, with infant formula manufacturers aiming to mimic breast milk composition for infants who are formula-fed” [27]. Others state “human milk is a complex biological fluid that can be divided into different layers as water phase and lipid phase with its component water and lipid fractions” [29]. A study identifies protection factors [30]. Thus, “Human Milks affect the growth and cell biology of GBS bacteria as it is a Gram-positive bacterial pathogen that causes invasive infections in both children and adults.” [30]. Therefore, “During pregnancy, GBS is a significant cause of infection of the fetal membranes (chorioamnionitis), which can lead to intra-amniotic infection, preterm birth, stillbirth, and neonatal sepsis” [30]. Reports also suggest higher protection in breast milk [31]; thus, breast milk develops a healthier gut microbiome.

Others suggest breast milk contains vitamin D and changes over time [32]. Others have studied lipids that reduce disease [8,33]. The nutrient content of breast milk may increase in the early months, particularly through the maternal diet [34]. Others suggest that gestational diabetes alters the infant’s immune system [35]. However, the preterm infant benefits from high levels of bioactive factors, as preterm babies are increasing.

Immunological actions occur in disease, and changes take place [36]. Research by Keller et al. [37] suggests that “very premature babies may require specific proteins, several micronutrients, and FAs, which are independent of maternal diet, and that premature birth may modify Human Milk composition.” Thus, breast milk contains a higher concentration of beneficial bacteria [31]. Others suggest “prebiotics bind to sialic acid in breastmilk” [38]. Another suggests “the essential roles of oxytocin, sialic acid, and docosahexaenoic acid in infant brain development and cognitive functions are beneficial” [11]. The available review of breast milk by Research includes “micronutrients (28), macronutrients (75), and bioactive compounds (75)” [39]. Moreover, “recognizing the significance of breastfeeding in reducing breast cancer risk has profound public health implications, necessitating comprehensive support, education, and policies to encourage and facilitate breastfeeding” [40].

For example, Obeagu & Obeagu [40] state it is “prolactin, a hormone produced during breastfeeding, that stimulates milk

production and concurrently suppresses ovulation". "This suppression of ovulation leads to reduced exposure to estrogen, a hormone known to promote the growth of certain types of breast cancer cells"[40]. "Lower levels of estrogen during breastfeeding may contribute to a decreased risk of breast cancer by limiting the proliferation of breast cells, thereby reducing the potential for malignant transformation." Equally, the "hormone oxytocin, released during breastfeeding, plays a role in milk ejection and has been associated with potential antitumor effects." Thus, "Oxytocin may influence cell growth and differentiation in breast tissue, potentially contributing to the protective effect against breast cancer" [40]. We explore how training can benefit women.

Hospital and Training Needs

There is evidence that postpartum depression may influence whether to breastfeed or not, depending on the training needs. There is evidence that counselling can be a tool. As McFadden et al. [41] state, all forms of "extra organised support analyzed together showed an increase in the length of time women continued to breastfeed, either with or without introducing any other types of liquids or foods." Thus, meaning that fewer women stopped breastfeeding (moderate quality evidence) before four to six weeks and before six months." Both trained volunteers and doctors and nurses had a positive impact on breastfeeding."

Cultural understanding has, as Li et al. [42] state, that for the "management of perinatal depression, participants preferred to deal with the problem within the family before seeking external help, due to potential stigma as well as Chinese traditional culture." They were "receptive to obtaining pertinent health information from anonymous social media apps, preferring these to personal text messages" [42]. Another study [43] of "young adults found that emotional regulation, particularly about shame and guilt proneness, should be targeted in interventions for trauma-related disorders." Future Research should further explore the role of these emotions [43].

A study of complementary feeding reveals differences between ethnic groups, highlighting the need for education to support increased breastfeeding rates [44].

A Canadian study of the results from published evidence to provide an "evidence base for policy improvement recommendations to improve the social, cultural, and political components of breast/chest feeding typically overlooked in current standards" [45]. Others suggest that "positive outcomes in breastfeed initiation, duration, and exclusivity, public health policies should focus on programs that enhance parental education and support maternal self-efficacy to impact breastfeed practices positively" [46].

Long ago, researchers examined "health policy documents that considered breastfeeding and revealed that it has been conceptualized almost exclusively as a nutritional issue, incorporated into initiatives connected with dietary guidelines developed to prevent diet-related diseases" [47]. Research is finding

pathways that suggest we all work from our theories; thus, the need is for "policy holders, such as strategic framing, to make decisions as evidence-based and aligned with health equity and ecological perspectives" [48]. A study argues that research terminology has overlooked lactating women in studies [49]. However, the WHO has suggested that more and greater targeted investment is needed, as between 2010 and 2019, less was invested in maternal and child, newborn Health, and stillbirth. In Australia, the Manufacturers and Importers (MAIF) Agreement is a Voluntary and Self-regulated Code [50].

Conclusion

This study aimed to determine whether researchers can use breast milk research to improve breastfeeding rates through education. We have identified some of the positive studies. Breastmilk is produced naturally by the body, unlike human foods. Government Policies need to understand that manufactured kinds of milk are not as dynamic as breast milk, that women who have depression and those who are giving Birth early need help to counsel such mothers in their cultural views.

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