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Understanding the influence of *Manasika Bhavas* on *Stanya Kshaya*: A Conceptual Study

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ABSTRACT

Breast milk stands as the foremost source of nutrition in every individual's early life. According to Ayurveda, *Stanya* is considered an *Upadhatu* of *Rasa* and is pivotal for the nourishment and development of infants. Ayurveda defines decreased breast milk or lactation insufficiency as *Stanya Kshaya*, primarily attributed to emotions like anger, grief, and excessive affection, alongside dietary influences. Psychological factors such as emotional stress, anxiety, and maternal health also significantly impact milk production, necessitating both psychological and medical interventions. Any disruption in *Agni* affects *Ahara Rasa*, leading to disturbances in *Rasa Dhatu*, thereby affecting *Stanya*. Psychological aspects play a crucial role in the proper formation of *Ahara Rasa*. The significance of Manasika Bhavas lies in their advocacy of *Soumanasya* as a primary treatment for *Ksheerajanana*. This paper explores the correlation between psychological well-being and lactation outcomes, drawing on both contemporary psychological research and traditional Ayurvedic principles. Psychological stress, anxiety, depression, and maternal bonding are examined as key factors affecting hormonal balance and neuroendocrine pathways involved in lactation. Understanding these influences is crucial for holistic approaches to maternal health and breastfeeding support. The integration of psychological interventions alongside conventional medical treatments could enhance maternal lactation success rates and overall maternal-infant health outcomes. Thus, managing *Stanya Kshaya* requires thorough consideration of both psychological factors and dietary practices.

Key words: *Ayurveda, Stanya, Stanyakshaya, Breast milk, Lactation insufficiency, psychological factors.*

INTRODUCTION

Breastfeeding was considered highly beneficial for infants even in the Vedic Period. Both WHO and UNICEF recommend exclusive breastfeeding for the first six months of life as it provides babies with the healthiest start. It is also recognized as the simplest, smartest, and most cost-effective way to ensure the health and survival of children worldwide.[1] It is deeply concerning that such a critical issue, directly impacting the health of both mother and child, is often neglected. *Stanya Kshaya*, or lactation insufficiency, is a significant problem with increasing prevalence. Rates range from 23-63% in Western countries to 45-53% in certain parts of India.[2]

Stanya is an *Upadhatu* of *Rasa Dhatu*, derived from the sweet essence of digested food through the mother's *Jatharagni*.[3,4,5] Ayurveda comprehensively addresses the qualities of *Stanya*, the lactating mother's attributes, and the numerous benefits of breastfeeding for both mother and child. *Soumnasya* (Happiness) has been considered as major factor for *Stanya Pravriti*,[6] *Stanyaksaya is* primarily caused by the mother's psychosomatic issues and her diet. Psychological factors such as *Krodha* (anger), *Shoka* (grief), *Bhaya* (fear), *Irshya* (jealousy), and decreased affection (*Avatsalyatwa*) are identified as contributors to *Stanyakshaya*, along with the mother's dietary and physiological conditions.[7]

Lactation appears deceptively simple and natural, yet it is profoundly intricate, influenced by a multitude of

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factors within the mother's internal and external environments. Internally, it encompasses her physical and mental health, past experiences, hormonal balance, and her personal intentions regarding breastfeeding. Equally significant are her perceptions of body image, beliefs about breastfeeding and child-rearing, and convictions related to these practices. Externally, factors such as support and encouragement from the spouse, job status and its demands, the dynamics of home and workplace structures, concerns about job security, and the support and child-rearing practices of family and friends all play pivotal roles.[8] Moreover, the knowledge, attitudes, and practices of hospital staff can significantly impact breastfeeding outcomes.

According to the Five-factor model (FFM) introduced by McCrae and Costa in 1987, personality can be categorized into five core dimensions: Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness to experience. Among these traits, Neuroticism, Extraversion, and Conscientiousness are particularly relevant to breastfeeding initiation and continuation.[9] Maternal psychological well-being significantly influences the breastfeeding patterns. Studies also indicate that conditions such as depression, anxiety, and stress can adversely affect physiological functions, including breastfeeding.

Thus, efforts are being made to integrate Ayurvedic perspectives on how psychological factors impact *Stanya Kshaya* (lactation insufficiency) and to explore their potential scientific implications.

Aims and Objectives

1. To provide a comprehensive understanding of *Stanya Kshaya* and the impact of psychological factors according to Ayurvedic principles.
2. Explore contemporary scientific research on the influence of psychological factors on lactation and milk production.

Materials and Methods

Ayurvedic texts were extensively searched to gather literature related to *Stanya* (lactation), *Stanya Kshaya*, and their association with *Manasika Bhavas* (psychological factors). Additionally, contemporary research and texts were consulted to support the relevance of descriptions found in Ayurvedic texts.

Methodology

This study employs a review-based descriptive approach to explore the concept of *Stanya Kshaya* and its correlation with *Manasika Bhavas*, as well as its Ayurvedic management.

Review

In Ayurveda, *Stanya* (breast milk) holds a prominent position, often referred to synonymously as '*Piyusha*'. It is regarded as *Jivana Amsha*, signifying its crucial role as the primary source of nutrition for infants.[10] This designation is attributed to its inherent *Satmyatva*, which denotes its compatibility with the infant's constitution. Its importance extends beyond physical nourishment, fostering a profound emotional bond between mother and child.

Stanya is considered the essence of *Rasadhatu*, which is derived from digested food circulating throughout the body.[11] It accumulates in the breasts and is rich in nutrients derived from the *Prasada Bhaga* of *Ahara Rasa* (nutrient plasma). This composition makes it the ideal source of nourishment for the child. Therefore, *Stanya Kshaya* (decreased breast milk production) is closely linked with *Rasadhatu Kshaya* (depletion of bodily tissues).

The food ingested by the mother travels through the *Sira* (channels) of the chest (esophagus), where it mixes with *Pitta* (digestive enzymes). It then reaches the *Jathara* (stomach) where it is metabolized by *Jatharagni* (digestive fire). Further metabolism by *Pitta* occurs, and the nutrients reach the *Siras* (channels) of the breasts, where milk is formed and eventually discharged.[12]

The ejection of milk is triggered by the thought, sight, or touch of the child, as well as the physical contact during suckling.[13] Uninterrupted affection for the child is crucial for ensuring the proper flow of milk.

After delivery, there is a rapid decrease in levels of human placental lactogen, estrogen, and

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progesterone. Progesterone, known for inhibiting prolactin, ceases its action in the absence of high levels, thereby allowing milk secretion to commence. This decline is most effective when accompanied by lactogenic hormones like prolactin, insulin, and cortisol, leading to full secretory activation typically occurring between 30 and 72 hours postpartum. Consequently, mothers often experience breast fullness by the second or third day after delivery.[14] While prolactin, oxytocin, glucocorticoids, and insulin are the primary hormones involved in lactogenesis and milk ejection, additional hormones such as leptin and opiates also play roles in stimulating these processes.[15]

Prolactin is the primary hormone responsible for milk production, its levels fluctuating in response to the intensity, duration, and frequency of nipple stimulation. It also follows a circadian rhythm, peaking at night and surging in response to the baby's suckling. Frequent breastfeeding promotes the development of prolactin receptor sites in the mammary gland, which significantly influences the quantity of milk produced.

The process of milk ejection, also known as let-down or release, begins with direct stimulation of sensory neurons in the areola by the baby's suckling. This initiates a neuroendocrine pathway to the posterior pituitary gland, triggering the release of oxytocin. Exteroceptive stimuli such as hearing the infant cry, emotional responses from the cerebral cortex, and visual cues of the baby can also initiate the let-down reflex. Oxytocin causes contraction of the myoepithelial cells surrounding the alveoli, facilitating the expression of milk into the collecting ducts of the breast. It acts to shorten the ducts without constricting them, thereby increasing intraductal mammary pressure to aid in milk flow.

Discussion

The causes of *Stanyanasha* (loss of breast milk) and *Stanya Kshaya* (decreased breast milk) are extensively documented by ancient Ayurvedic scholars. They attribute these conditions to various factors, prominently including *Langhana* (excessive fasting or dieting), *Rukshannapana* (consumption of dry or rough foods), *Karshana* (emaciation), *Atyanta Apatarpana* (excessive depletion), *Shodhana Atiyoga* (excessive detoxification), as well as psychological factors such as *Krodha* (anger), *Bhaya* (fear), *Shoka* (grief), *Kama* (desire), and *Avatsalyatwa* (excessive love or attachment).[16,17] As a consequence, imbalance in *Vata, Pitta*, and *Kapha doshas* occurs, leading to depletion of the *Rasa Dhatu*. This depletion subsequently affects the *Upadhatu*, particularly *Stanya* (breast milk).[18] Therefore, *Stanya Kshaya* is influenced by both psychological factors and the mother's dietary regimen

In Ayurveda, the *Stana* (breast) is revered as the *Moola* (root) of organs involved in the formation and nourishment of gametes (*Shukravaha Srotas*). This designation stems from the influence of gonadal hormones on breast tissues.[19] The growth and development of the breast are primarily under the influence of estrogen and progesterone, crucial hormones that regulate tissue development. Conversely, the process of milk formation and milk ejection is orchestrated by prolactin and oxytocin.

Lactogenesis (milk formation) and milk ejection begin approximately three to four days after delivery, triggered by the dilation of *Dhamani* (blood vessels) in the *Hridaya* (cardiac region). This delay may be attributed to elevated levels of progesterone and estrogen, which render breast tissue less responsive to prolactin initially. As these hormone levels naturally decrease after delivery, the inhibitory effect is lifted, allowing for milk synthesis to commence. The dilation of blood vessels in the cardiac region likely signifies the filling of milk in the lactating tubules of the mammary glands.

Psychological factors such as anger, grief, fear, and a lack of affection for the child are cited as significant causes of *Stanya Kshaya* (lactation insufficiency). Additionally, worries, excessive anxiety, stressful labor, maternal insecurities, and stress stemming from a lack of support or motivation from the spouse and family can hinder oxytocin secretion, thereby impeding milk ejection.[20] External pressures such as aggressive advertising of infant formula, misconceptions about

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lactational sufficiency due to inappropriate feeding practices, or inadequate understanding of lactation processes can further exacerbate these challenges.

Stress induces the release of cortisol, and elevated cortisol levels following a stressful labor can also negatively impact lactogenesis, further complicating the initiation and maintenance of breastfeeding.

Psychological Factors and Their Influence:

1. Stress and Anxiety:

- Impact on Hormones: High levels of stress trigger the release of cortisol, the body's primary stress hormone. Cortisol can inhibit the release of oxytocin and prolactin, hormones essential for milk production and let-down reflex.
- Disrupted Breastfeeding Patterns: Stress can lead to irregular breastfeeding schedules or difficulties in latching, affecting milk production due to inadequate stimulation of the breasts.

2. Depression and Emotional Distress:

- Hormonal Imbalance: Depression and emotional distress can disrupt the delicate balance of hormones involved in lactation. Serotonin and dopamine levels, crucial for mood regulation, can also affect prolactin production.
- Behavioral Changes: Mothers experiencing depression may exhibit decreased interest in breastfeeding, leading to reduced milk supply over time.

3. Psychosocial Factors:

- Support System: Lack of emotional support or strained relationships can contribute to stress and anxiety, further impacting milk production.
- Cultural and Societal Influences: Cultural beliefs or societal pressures regarding breastfeeding can also influence a mother's mental state, affecting her ability to breastfeed effectively.

Pathophysiology

The impact of stress on lactation is multifaceted. Stress can directly suppress lactation by inhibiting the release of prolactin and oxytocin, crucial hormones for milk production and ejection. Indirectly, stress can affect lactation by activating specific regions in the central nervous system (CNS), particularly through activation of the sympathetic nervous system.[21,22,23] Peripheral inhibition of milk ejection can occur through activation of the sympathoadrenomedullary system. This mechanism may involve vasoconstriction within the mammary glands, stimulation of mammary myoepithelial cells, or an increase in mammary ductal tone.

In response to stress, neurobiological systems mobilize to protect the body and facilitate adaptation. The sympathetic adrenomedullary system (SAM) releases epinephrine, triggering the fight-or-flight response.[24,25] Concurrently, the hypothalamic-pituitary-adrenocortical (HPA) axis, part of the central nervous system, releases cortisol in response to stress. Chronic or repeated exposure to stress imposes a cumulative burden on the body, known as its "allostatic load."

Maternal distress can also impact lactation by interfering with insulin sensitivity and secretion. Insulin plays a crucial role in regulating glucose metabolism, which is essential for supporting optimal lactation.

Ayurvedic Perspective:

1. Mind-Body Connection:

- Ayurveda views health as a balance between body, mind, and spirit. Imbalances in Dosha due to psychological factors can manifest as physical symptoms like *Stanya Kshaya.*
- Practices such as yoga, meditation, and Ayurvedic herbs (like *Shatavari*) are recommended to restore mental balance and support lactation.

2. Diet and Lifestyle:

- Ayurvedic recommendations emphasize a balanced diet (including lactogenic foods) and a nurturing environment for the mother to enhance milk production.
- Adequate rest, hydration, and emotional support are crucial aspects of postpartum care to prevent or address *Stanya Kshaya*.

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Integrative Approaches:

1. Holistic Care:

- Integrative approaches combine conventional medical care with complementary therapies to address both physiological and psychological aspects of *Stanya Kshaya.*
- Counselling, support groups, and mindfulness-based interventions can aid in managing stress and promoting breastfeeding success.

2. Individualized Care:

- Recognizing that each mother's experience is unique, personalized approaches to address psychological factors and promote lactation are essential.
- Healthcare providers play a crucial role in assessing and addressing mental health concerns during the postpartum period to support breastfeeding outcomes

CONCLUSION

Breastfeeding is recognized as the optimal feeding choice for infants. Understanding the psychological factors influencing *Stanya Kshaya* highlights the importance of holistic care and support for breastfeeding mothers. Addressing stress, anxiety, depression, and emotional well-being through integrated approaches can greatly impact milk production and maternal health outcomes. Therefore, it is crucial to develop effective strategies that garner the interest of policymakers and healthcare providers in identifying specific demographic and psychological traits in mothers that can enhance breastfeeding success. Implementing psychological screening during pregnancy and integrating mental health services into postpartum care are strongly recommended practices. Thus, holistic approach empowers healthcare providers to support mothers comprehensively, enabling them to navigate challenges and enjoy fulfilling breastfeeding experiences.

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