

Nutritional experiences of postpartum mothers - A qualitative study

Shainy Sravanthi Bathula, Kanta Helena, Krishnaveni Avvaru

Department of Community Medicine, Government Medical College, Srikakulam, Andhra Pradesh, India

ABSTRACT

Context: The postpartum period is crucial for both mother and infant as additional maternal nutrition needs to support the needs of self and that of an infant in the form of adequate breastfeeding. The dietary choices of women during the postpartum period were heavily influenced by traditional cultural beliefs surrounding these periods. **Aims:** To explore the experiences regarding postpartum nutrition and various nutritional practices during this period. **Settings and Design:** The study was a community-based cross-sectional qualitative study performed in the urban field practicing area of Government Medical College during the months of October and November 2022 on postnatal mothers who have crossed not more than one month of completion of their postpartum period (first six weeks of delivery). **Methods and Material:** Two focus group discussions (FGDs) and 15 in-depth interviews (IDIs) were conducted with the postnatal mothers and their caregivers using a pre-prepared semi-structured discussion guide comprising open-ended questions. Each interview/discussion was recorded electronically after taking verbal consent. **Statistical Analysis Used:** The recorded responses were transcribed verbatim and translated into English. The data were analyzed thematically and were grouped into a few broad themes. **Results:** Most mothers followed strict dietary restrictions for the first 15 days of delivery. Fruits were avoided by many of the mothers. The mothers took iron-rich foods like jaggery and green leafy vegetables in excess. Protein-rich foods like meat, egg, fish, and dal were avoided by most of the mothers. The beliefs of the mothers and caregivers about various food items were that they may cause ill health to mother and baby, considered as hot and cold foods and also out of ignorance. **Conclusions:** Most of the practices were beneficial to the mother and a few of them were harmful like avoiding protein-rich foods, few vegetables, most fruits, and night meals. The harmful nutritional practices can be addressed by educating the mother and also the caregiver who prepares the puerperal diet.

Keywords: Caregivers, cultural beliefs, nutritional experiences, nutritional practices, postpartum mothers

Introduction

The postpartum period is crucial for both mother and infant as additional maternal nutrition will support the needs of self and that of an infant in the form of adequate breastfeeding. The nutrition of a postpartum woman will also affect the intellectual function of the newborn. Although a malnourished mother can breastfeed her infant, she does it at

cost of her own health. According to National Family Health Survey (NFHS)-5 (2019-2021), 21.2% of women of reproductive age in India are undernourished.^[1] Poor nutrition during breastfeeding makes it more challenging for mothers to replenish their nutrient stores and meet their additional dietary needs. Women's intake should be increased to cover the energy cost of lactation by about 10% if the woman is sedentary, but 20% or more if she is moderately or very active.^[2] Women who breastfeed require approximately 600 additional kcal/day beyond what is recommended for non-pregnant women and the recommended daily allowance for protein during lactation is an additional 17 g/day.^[3] Requirements of many micronutrients increase in lactation compared to pregnancy.

Address for correspondence: Dr. Kanta Helena,
Department of Community Medicine, Government Medical College,
Srikakulam, Andhra Pradesh, India.
E-mail: drhelenasundar@gmail.com

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Virtually all dietary restrictions should be avoided. The effect of cultural norms, beliefs, and restrictions on the nutritional status of women should not be underestimated.^[2] The dietary choices of women during the postpartum period may be heavily influenced by traditional cultural beliefs surrounding these periods. Not many studies were performed to analyze the nutritional practices of women in the postpartum period. So, this study has been undertaken to explore the various nutritional practices of mothers during the postpartum period.

Subjects and Methods

The study was a community-based cross-sectional qualitative study done in the urban field practicing area of Government Medical College, during the months of October and November 2022 among postnatal mothers who have crossed not more than one month of completion of their postpartum period (first 6 weeks of delivery). Approval from the Institutional Ethics Committee was taken.

Inclusion criteria

The postnatal mothers residing in the urban field practicing area during the first 6-10 weeks of delivery and willing to participate were included in the study.

Exclusion criteria

Mothers of infants who had stillbirth or IUD and infants who died less than one month after birth are excluded from the study.

Method of data collection

Written informed consent was obtained from each participant after which the sociodemographic data and obstetric history were collected. A pilot study was done and necessary modifications were made.

In-depth interviews (IDIs) and focus group discussions (FGDs) were conducted in the nearby anganwadi centres to know the mothers' and caregivers' experiences and various nutritional practices until data saturation was obtained. Two FGDs and 15 IDIs were conducted. The mothers who participated in FGDs were not included in IDIs. A pre-prepared semi-structured FGD guide comprising of open-ended questions was used to direct the discussion to understand the perspectives and beliefs of postpartum women on various nutritional practices. Each interview/discussion was recorded electronically after taking verbal consent.

Data analysis

The recorded responses were transcribed verbatim and translated to English. The data were analyzed thematically and were grouped into few broad themes. On analyzing the main themes, new sub-themes and codes have emerged.

Results

The results of fifteen IDIs and two FGDs with mothers and their caregivers were analyzed.

The age of the study participants ranged from 20 to 30 years. Most of the women were hindus (14), belonged to upper and lower-middle (5 each) socioeconomic status as per Modified Kuppaswamy's socioeconomic scale, educated to graduate level (7), and were housewives (12) by occupation.

About half of the mothers were multiparous, and ten had caesarean section type of delivery. Eleven were exclusively breastfeeding. Six mothers complained of backache during the postpartum period. Although all the mothers received vitamin and IFA supplements, only half of them consumed them during the postpartum period.

Only half of the mothers were visited by the health worker during the postpartum period. Ten mothers said that they received advice regarding immunization and seven received advices regarding both nutrition and immunization when the mother went to the health centre for immunization. Mother was the caregiver (especially in preparing a puerperal diet) in most (12) of the postnatal mothers, and in others, it was the mother-in-law and sister.

Nutritional practices and experiences of the mothers and their caregivers

Thematic analysis from the excerpts of participants involved in IDIs and FGDs identified four major themes, subthemes, and codes which are presented in Table 1.

Perceived factors for consuming fewer meals (less than two per day)

It was observed that the postnatal mothers followed strict dietary restrictions during the first 15 days and fewer dietary restrictions till three months of delivery.

Many of the mothers were taking only one meal in the afternoon and the night meal was replaced mostly by few slices of milk bread, two chapatis, or two idli. Milk bread was considered as a galactagogue, easily digestible, and will decrease the mother's weight. Idli or chapati was consumed with sugar instead of curry or chutney, as they believed that Bengal gram and coconut chutney may cause delayed healing or infection to stitches, diarrhea, and indigestion to the baby. All the mothers had biscuits with a cup of tea as snacks daily in the morning and evening.

Few mothers were not consuming milk at all in the first 6 weeks because of the fear of weight gain and also because it may cause cold and cough for the baby. All the mothers were taking adequate water, i.e., 2-3 lit per day.

Most of the mothers had rice with ganji every day in the morning as it was perceived to be a galactagogue. Curd rice and curd were considered as cold foods and perceived to cause cold and cough to mother and baby. The other fluids that were frequently taken by the mothers during this period include *verbatim* - *pippalla* water (water boiled with pippalla powder derived from the roots

Table 1: Thematic analysis of the perceptions of the mothers and caregivers

Themes	Sub-themes	Codes
Perceived factors for consuming fewer meals (<2 per day)	Causes related to baby Causes related to mother Lack of knowledge Dietary habit	Indigestion to baby Abdominal pain to the baby May cause vomiting to the baby during nights Having meals at night will cause the mother to sleep deeply and neglect the child Reduce the weight of the mother that has been gained during the antenatal period Don't know the reasons Following elders advice No habit of having meals at night times
Perceived barriers for non-consumption of fruits	Health concerns of the baby Health concerns of the mother Lack of knowledge	Indigestion to baby Cold and cough to baby Considered as cold foods and so should be avoided Cold and cough to mother which leads to C-section wound gaping Elders in the neighbourhood said so In dilemma whether can eat or not till 3 months
Perceived factors for having more green leafy vegetables	Digestion related factors Health concerns of the mother Breastfeeding Mother's appearance concerns Lack of knowledge	Easily digestible for mother Easily digestible for both mother and baby Will not cause constipation to mother Quick healing of stitches Increases hemoglobin Increases milk production Will not increase the weight of the mother Don't know the reasons, just following care giver's words
Perceived deterrents for intake of protein-rich foods (like meat, eggs, fish and dal)	Indigestion of the baby Health concerns of the baby Caesarean delivery Considered hot food Ignorance Religious factors	Baby cannot digest Will cause abdominal pain to the baby Baby will vomit the milk Eating big fish will cause indigestion to baby Will cause the gastrointestinal problem (<i>Verbatim Anaas- abdominal distension, stomach pain, and green coloured stools</i>) in baby Bald head, delay the fusion of anterior fontanelle, weakness of upper and lower limbs in baby especially with consumption of eggs Causes infection of stitches in C-section delivery Elders consider a non-vegetarian diet as hot food for mother and baby, so it should not be consumed till 3 months Don't know the reasons Two of the mothers were brahmins who don't eat a non-vegetarian diet

of 'piper retrofractum' or long pepper available in ayurvedic pharmacy), water boiled with fenugreek seeds, ajwain seeds, and cumin seeds as they were considered to be galactagogues and easily digestible Table 2.

Verbatim – *Kayam* is a sweet made of jaggery, garlic, black pepper, cinnamon, and poppy seeds. It was considered to give strength to mothers especially for mothers delivered through normal vaginal delivery and also in the removal of all the waste blood from inside the body of a postpartum mother. *Verbatim* – *Varra*, a sweet made of ajwain seeds, jaggery, garlic, and sesame seed oil, is consumed regularly as they believed that it would give strength to the mother's loin after delivery and also acts as a galactagogue.

Perceived barriers for non-consumption of fruits

Most mothers did not consume fruits at all during the postpartum period. Few mothers ate only selective fruits like apple, pomegranates, and papaya because these were believed to be galactagogues, healthy to mothers, increase hemoglobin, and do not cause cold and cough to baby like other fruits. Few of them did not give any reasons for non-consumption

of fruits. Pineapple was believed to cause indigestion in babies (*verbatim*- *Anaas-abdominal distension, stomach pain, and green-colored stools*).

Perceived factors for consuming more green leafy vegetables

Most of the mothers had good practices like excess consumption of green leafy vegetables except Quora as it was believed to cause cold and cough to baby. Ivy gourd, raw banana, and brinjal were avoided during the postpartum period because most of them opined that they may cause indigestion in baby and delayed wound healing in mothers who underwent C-section. The vegetables that were consumed in excess include ridge gourd as it was considered as galactagogue, enhances healing of stitches, and will not cause weight gain of the mother; beetroot and carrot—rich in vitamins, increases hemoglobin, good for eyes of the baby, and good to mother and baby; and drum stick—quick healing of stitches.

Perceived deterrents for intake of protein-rich foods

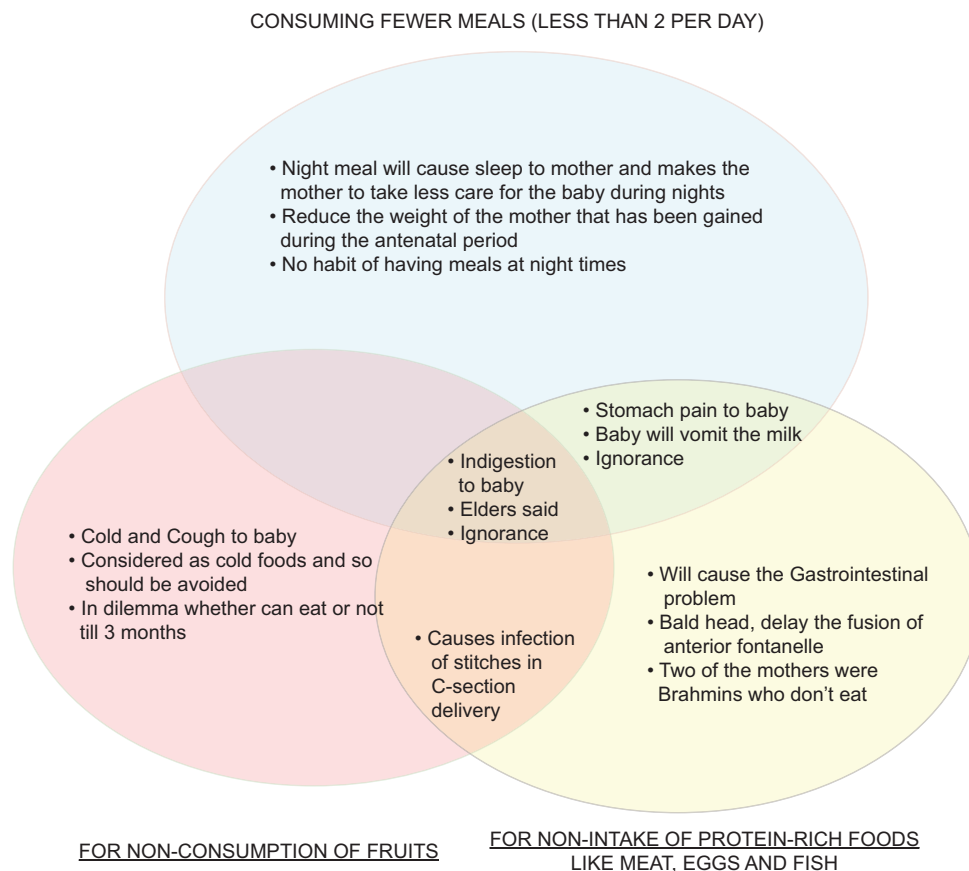
Most of the mothers believed that foods like meat, egg, fish, and dal should be avoided during the first month after

Table 2: Experiences of postnatal mothers to different food items

Foods consumed in excess	Reason
Curry made with Unripe papaya	Galactagogues
Sesame seed oil used in preparing food for postnatal mother	Good for baby and mother Strength to mother's bones Enhances healing of stitches Increases milk production No backache to mother
Garlic	Good for mother Gives strength to the mother Enhances easy digestion for the mother Advised by elders Galactagogue Considered a hot food so will avoid cold in baby
Sweet made with Ragi flour and jaggery (<i>verbatim- Topa</i>)	Controls postpartum bleeding It gives strength to mother Increases hemoglobin (blood) to mother
The powder form of cumin seeds, dry ginger, red gram, and turmeric root	Galactagogues Strength to mother's spine Removes all the waste blood from postpartum mother after delivery Light food to mother so, easy for digestion Healing of C-section stitches Baby will roll over quickly Turmeric powder acts as an antibiotic

delivery. Those mothers who were eating chicken consume it only after the first month and that too only the desi chicken (*verbatim- arakodi petta mamsam*) because of the perceptions that it gives more strength to mother, enhances healing of stitches, rich in protein, it was a galactagogue, and improves head control in the child. Few mothers believed that taking goat/sheep meat once or twice a week in the first one month gives strength to the baby and mother's bones, acts as a galactagogue, enhances healing of stitches, and rich in vitamins and proteins. Few mothers were following caregivers' advice without knowing the reason. Most of the mothers avoided taking eggs and only a very few had eggs daily on doctor's advice. Only small-sized fish (*verbatim-gulivindalu, kanagadathalu, and pitta parigalu*) were preferred believing that they were good for mother, increase breast milk production, and also hemoglobin of mother. Bengal gram and green gram were avoided for the belief that it causes delayed healing or might cause infection to stitches, and also diarrhea and indigestion to the baby. Only rasam made with red gram was given along with rice.

Few mothers were not allowed to eat daily meals along with the rest of the family members for the fear that an evil eye would fall which might have a health impact on both the mother and child Figure 1.

**Figure 1: Venn diagram showing the Perceptions of Mothers and Care-givers regarding various Foods**

The Venn diagram shows that ignorance and following the elderly care givers advice were the common reasons expressed by the postnatal mothers for taking fewer meals, non-consumption of fruits, and avoidance of protein-rich foods.

Discussion and Conclusion

The nutritional status of women during pregnancy and lactation is not only critical for their health, but for future generations.

Most of the women had one meal a day and not more than two snacks in between. The reasons cited for dietary restrictions include tradition within the family/ethnic group, followed by helping the mother's body to heal after childbirth, and restricted diet aided the mother's stomach to heal and involution.^[4,5]

Regarding water consumption, majority of our study participants consumed 2-3 lit of water. The reasons quoted for decreased consumption of water in a study done in rural Karnataka were elders' advice and the belief that drinking water would cause distension of abdomen and would predispose them to catch a cold.^[6] Some believed that decreased consumption of water will aid in stomach healing and involution and few caregivers opined that postpartum water consumption had to be greatly restricted as it could cause prolonged bleeding and abdominal distension in the mother and in case of caesarean section, it could cause the stitches to give way.^[5,7]

Fruit consumption was avoided during the postpartum period thinking that they may cause indigestion, cold, and cough to baby and few consider them as cold foods and so should be avoided.^[6,8-11]

Mothers consumed foods rich in iron, like green leafy vegetables and special sweets made with jaggery, groundnuts, and ragi flour. Similar results were reported by studies performed in rural parts of Karnataka.^[5,7,12,13] Foods that were believed to increase breast milk were high amounts of ghee, fenugreek, drumstick, green leafy vegetables, ghee mixed with ginger, mutton leg, and chicken and hoofs, red meat, chicken, cow milk, green leafy vegetables like snake gourd, sorrekai, raggi-mudhe, ground nut, non-vegetarian foods, ghee mixed with milk, and ginger.^[5,7,14,15]

Most of the mothers did not consume protein-rich foods like meat, eggs, and fish for the first 6 weeks.^[6,16,17] Even if they consumed, it was limited to not more than once a week as they consider it would cause indigestion to the baby, give away stitches in case of C-section delivery, and most of them do not know the reasons for avoidance of these foods. However, another study reported that good practices of postpartum mothers include consumption of meat and egg, and also meat obtained from a lamb's neck as it was thought to improve head control in the child.^[5] A qualitative study done in South Karnataka consider mutton leg, and chicken to increase breast milk and fish in the list of hot foods to be avoided.^[7]

Some nutritional practices were beneficial like consuming green leafy vegetables and sweets made with jaggery. Few were harmful nutritional practices like avoiding protein-rich foods, fruits, and night meals and they were related with cultural beliefs, ignorance, and inadequate knowledge of an elderly female care giver. The nutritional needs of the postpartum mothers can be addressed by providing health education and nutritional counselling to the mothers and their caregivers.

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Conflicts of interest

There are no conflicts of interest.

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