

EXPLORING MATERNAL EXPERIENCES AND PERSPECTIVES ON BREASTFEEDING AND COMPLEMENTARY FEEDING: A FOCUS GROUP STUDY IN A SOCIOECONOMICALLY DEPRIVED AREA

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Abstract

Background: Breastfeeding remains a boon for newborns and infants, as breast milk is the perfect source of nourishment, providing essential nutrients vital for their healthy growth. The NFHS-5 survey reported that 72.9% of children in Odisha were exclusively breastfed, only 20.4% of children aged 6–23 months received an adequate diet. This study aimed to explore the underlying reasons for breastfeeding practices and beliefs, with an objective to explore the experiences of mothers regarding breastfeeding and complementary feeding practices. **Materials and Methods:** A qualitative study was conducted through four focus-group discussions with eligible mothers in the urban field practice area of a medical college. Focus-group discussions were continued until data saturation was achieved. Thematic analysis was performed to identify key insights. **Result:** While most mothers have good knowledge on the importance and duration of breastfeeding, their knowledge on introduction of complementary feeding was poor. Many were uncertain about the appropriate continuation period for breastfeeding. Additionally, knowledge and practices related to complementary feeding were found to be inadequate. **Conclusion:** The focus-group discussions conducted with mothers provided valuable insights into their views and understanding of breastfeeding practices. Most of the mothers had adequate knowledge regarding the initiation of breastfeeding, colostrum feeding and the avoidance of pre-lacteal feeds. However, gaps in knowledge persist, particularly regarding prevalent myths and misconceptions surrounding breastfeeding and child feeding practices. Addressing these gaps can help develop targeted interventions to improve child nutrition outcomes.

INTRODUCTION

Breastfeeding and complementary feeding play a crucial role in ensuring optimal infant nutrition, growth, and development.^[1] The World Health Organization (WHO) recommends exclusive breastfeeding for the first six months of life, followed by the introduction of nutritionally adequate and safe complementary foods while continuing breastfeeding up to two years or beyond.^[2] Despite these well-established guidelines, adherence to optimal infant feeding practices remains a challenge, particularly in socioeconomically deprived communities where multiple structural and social factors influence maternal decisions.^[3]

Maternal experiences and perspectives on breastfeeding and complementary feeding are shaped by a complex interplay of cultural, economic, and social influences. Research has shown that mothers in low-income settings often face barriers such as inadequate healthcare support, lack of breastfeeding-friendly environments, misinformation, and societal pressures favoring formula feeding.^[4,5] Additionally, food insecurity and financial constraints may affect the availability of nutritious complementary foods, potentially leading to suboptimal feeding practices and negative health outcomes for infants.^[1] Understanding the lived experiences of mothers in these settings is crucial for developing targeted interventions that address both individual and systemic challenges.

Qualitative research methods, particularly focus group discussions, offer valuable insights into maternal perceptions and behaviours regarding infant feeding. Focus groups provide a platform for mothers to share their experiences, express concerns, and discuss coping strategies in a supportive environment.^[6] By capturing the voices of mothers from socioeconomically deprived areas, this study seeks to explore the key factors influencing breastfeeding and complementary feeding decisions and identify potential areas for policy and programmatic improvements.

According to NFHS-5, 72.9% children in Odisha and 60% children in Khordha district of Odisha are exclusively breastfed.^[7] Bhubaneswar, the capital city of Odisha consisting of 3 zones and 67 wards belongs to Khordha district.^[8] The estimated population of Bhubaneswar city in 2023 was 1,161,000.^[9] This study aimed to explore the experiences of mothers residing in urban slums of Bhubaneswar city regarding breastfeeding and complementary feeding practices. The findings will be instrumental in informing healthcare professionals, policymakers, and public health interventions to enhance breastfeeding support services and promote optimal complementary feeding practices, ultimately improving child health outcomes.

MATERIALS AND METHODS

This qualitative study was conducted over a period of six-months from October 2023 to March 2024, in the Anganwadi centres (AWCs) situated within the urban field practice area of UHTC affiliated to Kalinga Institute of Medical Sciences, Bhubaneswar. The sampling frame comprised of mothers with children aged six months to two years. Purposive sampling was employed to select participants, aiming for a diverse representation of experiences and perspectives. The primary instrument utilized for data collection was a set of probes tailored for Focus Group Discussions (FGDs), designed to delve into the practices and obstacles encountered in breastfeeding and complementary feeding. The questionnaire was a researcher-made, done after a thorough literature review. FGDs were conducted till the achievement of data saturation. The number of participants in FGD1, FGD2, FGD3 and FGD4 were 6, 12, 10 and 8 respectively. FGDs were conducted among the eligible participants after obtaining written informed consent.

Inclusion Criteria

1. Mothers with children aged 6 months to 2 years at the time of study participation.
2. Residing in the field practice area of UHTC for a minimum period of 2 years.
3. Currently or previously engaged in breastfeeding and/or complementary feeding practices.
4. Able to provide informed consent and willing to participate in a focus group discussion.

5. Fluent in the primary language (Odia) to ensure effective communication.

Exclusion Criteria

1. Mothers with serious health conditions (physical or mental) that may impair participation in the study.
2. Children with medical conditions requiring specialized feeding support, such as tube feeding or metabolic disorders.
3. Mothers who have never initiated breastfeeding or complementary feeding (e.g., exclusive formula feeding from birth).
4. Inability to attend focus group discussions due to time constraints, transportation issues, or other barriers.

Data analysis was conducted through a dual approach: firstly, employing a thematic approach to identify recurring patterns and themes within the dataset; and secondly, utilizing frequency analysis to ascertain the prevalence of emergent themes across the responses obtained from the participants. This multifaceted analytical strategy facilitated a comprehensive exploration of the nuances surrounding breastfeeding and complementary feeding practices, offering insights into both individual experiences and broader trends within the study population. The quantitative data analysis was primarily descriptive, assessing percentages and means. The qualitative data was analysed by thematic approach, establishing emergent themes based on the frequency. [Figure 1]

Ethical Consideration

This study was approved by the Institutional Ethics Committee bearing number KIIT/KIMS/IEC/1140/2023.

RESULTS

Quantitative component: In this study conducted among 36 mothers, the mean maternal age was 28 ± 3.07 years, ranging from 19 to 39 years. 52.8% mothers had female children, 44.4% had education up to middle school (6th to 8th grade), and 58.3% were housewives [Table 1]

Qualitative component: The transcript was prepared from the open ended responses recorded. After familiarization with the text, data was coded. Initially, 90 codes were generated. After merging similar codes and deleting the duplicates, we had a total of 65 codes. These codes were organized into four themes. They are shown in [Figure 2]. The broad themes identified were: 1) knowledge about breastfeeding; 2) breastfeeding practice followed by the participants; 3) knowledge about complementary and supplementary feeding; and 4) reasons for breastfeeding cessation.

The most common responses cited in the FGD are represented in [Table 2]. The themes of the FGDs and some of the probes and answers and its frequencies are given in the table. [Figure 3] shows us the

knowledge of mother's regarding their breastfeeding practices and complementary feeding.

In the FGDs, mothers provided a range of responses regarding their understanding and practices related to pre-lacteal feeding, colostrum, exclusive breastfeeding, and complementary feeding. These responses offer valuable insights into both the knowledge and misconceptions surrounding infant feeding practices.

When discussing pre-lacteal feeds, a recurring theme was the medical practice of giving formula milk to infants, especially following a Cesarean section. One mother commented, "It should not be given but the hospital gives formula feed to the child after C-section." This response highlights a potential conflict between hospital practices and recommended breastfeeding guidelines, reflecting lack of adherence to exclusive breastfeeding practices in certain clinical settings.

Several mothers recognized the importance of colostrum, the first milk produced after birth, describing it as essential for the infant's health. One mother described breast milk as being akin to "Amrut Saman," a term meaning "nectar-like," emphasizing its protective properties against illness and its role in boosting the child's immunity. This sentiment reflects a deep cultural belief in the healing and protective powers of breast milk. Such responses indicate that mothers value breast milk highly, acknowledging its nutritional and immunological benefits, which is consistent with public health messages encouraging breastfeeding initiation soon after birth.

When questioned about exclusive breastfeeding, the majority of mothers expressed a strong preference for breastfeeding as the sole form of nutrition for infants during the first six months. One mother stated, "It is good to give only breast milk till 6 months of age, we should not give anything else." This reflects a well-established understanding of exclusive breastfeeding during the first six months of life, which is essential for optimal growth and development. This response suggests that many mothers are aware of the importance of exclusive breastfeeding, yet the continued practice of formula feeding in some settings may indicate barriers to full adherence.

When asked about complementary feeding, the mothers' responses highlighted a variety of approaches and some variability in their understanding of when and how complementary foods should be introduced. One mother remarked, "We give outside food after the rice ceremony, when the child is 6 months of age," which is a common cultural practice in many parts of the world. The rice ceremony typically marks the introduction of solid foods to the infant's diet, often occurring around six months of age.

Several mothers listed specific foods they commonly introduce at this stage, such as boiled vegetables (e.g., carrot, papaya), rice, roti (flatbread), chatua (a flour-based food), ghee (clarified butter), and dal (lentils). These foods reflect a blend of traditional and

locally available ingredients that mothers believe are suitable for infants. One mother emphasized the importance of the food's consistency, stating, "The consistency should be in a way that the child can swallow," indicating an understanding of the need for age-appropriate textures during the early stages of complementary feeding.

However, some responses also highlighted a lack of clear guidelines or consistency in practices. For example, one mother mentioned, "Whenever the child is hungry," which suggests that feeding frequency is based on hunger cues, but there may be limited understanding of the optimal timing and variety of complementary foods.

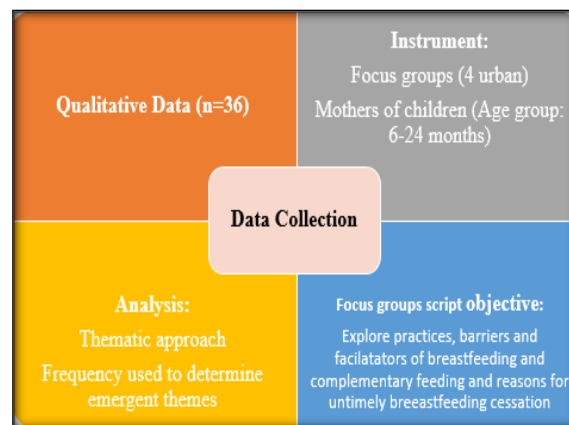


Figure 1: Figure depicting the data collection and analysis process

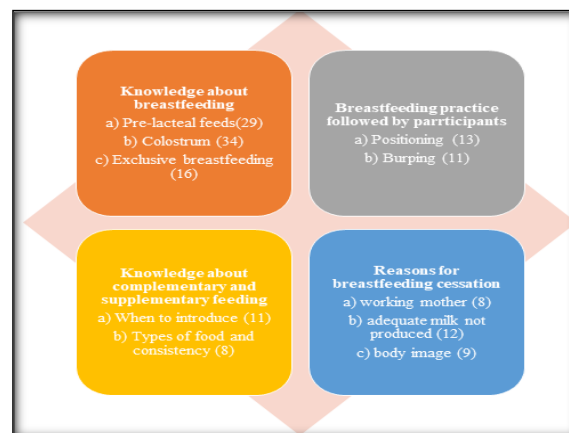


Figure 2: Themes of the qualitative study along with major sub-themes

Regarding breastfeeding techniques, several mothers shared their beliefs on the correct way to breastfeed. One mother expressed concern about the positioning of the baby, stating, "The nose of the child shouldn't touch the breast, otherwise the child may not be able to breathe, we should sit and give." This reflects a common concern about the infant's ability to breathe during breastfeeding, which may result from improper positioning. Another mother commented, "We should not feed the child in a lying position because it will lead to ear infections and pus will come from the ear." This statement showed that she

is well informed that certain positions during breastfeeding can increase the risk of ear infections. Additionally, some mothers discussed the practice of burping the baby after breastfeeding, with one mother noting, “Initially, used to burp, now stopped because the child has grown.” This suggests a shift in practices as the child grows and becomes less prone to issues like gas or discomfort after feeding.

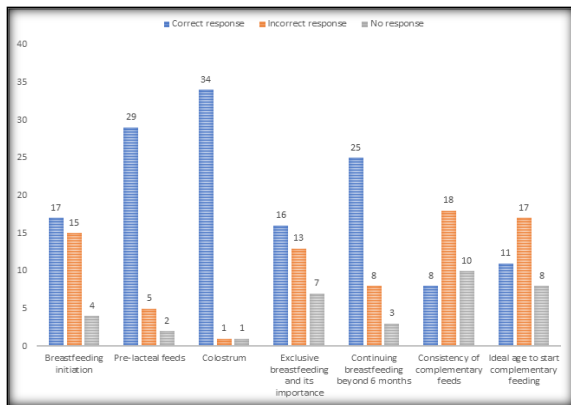


Figure 3: Knowledge among mothers regarding breastfeeding and complementary feeding (n=36)

The focus group also explored reasons for cessation of breastfeeding. A few mothers cited insufficient milk production as a reason for stopping breastfeeding, with one mother stating, “Adequate milk is not produced.” This points to a possible issue

with milk supply that may influence the decision to discontinue breastfeeding, although it is important to note that in many cases, perceived low milk supply can be addressed with support and education on lactation management.

Other reasons for cessation included planning for a subsequent child (“Mother planning for next child”), the challenges faced by working mothers (“Working mother”), and concerns related to body image (“Mother may not give because of body image”). These reasons highlight the social, economic, and personal factors that can influence breastfeeding practices. Working mothers, in particular, may face barriers such as the lack of maternity leave or the inability to express milk at work, which can lead to early cessation.

The responses from mothers in the focus groups reveal a generally strong understanding of the importance of breastfeeding, especially during the first six months, and a mix of knowledge and cultural practices around complementary feeding. However, there are also notable gaps in knowledge, particularly regarding the timing and types of complementary foods, as well as the techniques for breastfeeding. Addressing these gaps through targeted education and support could improve breastfeeding and complementary feeding practices, ultimately leading to better health outcomes for both mothers and children.

Table 1: Demographic information of the mother (n=36).

Instrument		Focus groups (Mothers)
Mean age (SD) in years		28 (± 3.07)
Average number of children per mother (range)		2 (1-4)
Sex of the youngest child (n & %)	Male Female	17 (47.2) 19 (52.8)
Education of mother (n & %)	Professional degree Graduate Diploma High school Middle school Primary school Illiterate	0 (0) 0 (0) 2 (5.6) 3 (8.3) 16 (44.4) 12 (33.3) 3 (8.3)
Occupation of mother (n & %)	Housewife Additional work (domestic service, street vendor, factory worker, laborer)	21 (58.3) 15 (41.7)

Table 2: Mothers’ response during FGD (n=36)

Sl no.	Probe	Response of mothers	n (%)
THEME 1: Knowledge about breastfeeding			
1	When should we initiate breastfeeding?	As soon as possible •after I was cleaned, they gave the child for breastfeeding •between 1 and 24 hours after birth •within half an hour	17 (47.2) 3 (8.3) 2 (5.6) 14 (38.9)
2	What is your view on pre lacteal feeds?	Should not be given •Colostrum should be given soon after birth •hospital gives formula feed to child after C-section	29 (80.6) 3 (8.3) 4 (11.1)
3	What are the reasons for delay in initiating breastfeeding?	Mothers who underwent surgeries cannot give milk immediately •My child born at 9.30 am in the morning, underwent C-section and I gave breastmilk after 6 hours •I had given after 3 hours	6 (16.7) 1 (2.8)

		<ul style="list-style-type: none"> •I underwent C-section, I had given breastmilk to my child after few hours of gaining consciousness •The mother who underwent C-section, after stitching when mother will get stable, then only mother can give breastmilk to the child, for this there is delay •child needs to be cleaned, all those takes around 1 hour after which child is brought to the mother •There is delay in the OT 	<p>1 (2.8)</p> <p>3 (8.3)</p> <p>2 (5.6)</p> <p>1 (2.8)</p> <p>3 (8.3)</p>
4	What is colostrum? Should we give it to child or discard it?	The first milk should be given <ul style="list-style-type: none"> •Mother's milk is like 'Amrut Saman', it protects the child from illness, increases immunity 	<p>34 (94.4)</p> <p>1 (2.8)</p>
5	Exclusive breastfeeding and its importance?	<ul style="list-style-type: none"> •Only mother's milk should be given till 6 months •it is good to give only breastmilk till 6 months of age, we should not give anything else before that •breastmilk must be given till child wants to feed •till 6 months breastfeeding to be done, after that outside food can be given 	<p>16 (44.4)</p> <p>1 (2.8)</p> <p>8 (22.2)</p> <p>11 (30.6)</p>
THEME 2: Breastfeeding practices followed by participants			
1	What should be the frequency of feeding a child?	Whenever child cries <ul style="list-style-type: none"> •when the child is hungry •after urination and defecation, child becomes hungry, then breastmilk is given •as and when required •every 30 minutes but we should not breastfeed immediately after taking bath 	<p>24 (66.7)</p> <p>2 (5.6)</p> <p>1 (2.8)</p> <p>7 (19.4)</p> <p>2 (5.6)</p>
2	What should be the frequency of night feeds?	<ul style="list-style-type: none"> •three to four times •four to five times •two times •whole night, because the child doesn't eat any other food •if the child has fallen asleep then no need to wake the child up for feeding, because sleep is more important •When the child wakes up and cry, I give breastmilk to the child •I wake up to give breastmilk at night, but we should give milk in sitting position not lying position 	<p>4 (11.1)</p> <p>3 (8.3)</p> <p>9 (25)</p> <p>1 (2.8)</p> <p>6 (16.7)</p> <p>12 (33.3)</p> <p>1 (2.8)</p>
3	Do you practice burping after each feed?	Yes, till 1 year <ul style="list-style-type: none"> •I don't practice •I don't practice it now, when the child was small after each feed I used to practice burping 	<p>6 (16.7)</p> <p>13 (36.1)</p> <p>4 (11.1)</p>
4	Feeding practice when the child is ill?	Difficult to feed, only breastmilk is given	9 (25)
5	Should we continue breastfeeding beyond 6 months? If yes, till when?	Yes, till the child wants to feed	23 (63.9)
THEME 3: Knowledge about complementary and supplementary feeding			
1	What should be the ideal age to start outside food other than breastmilk?	<ul style="list-style-type: none"> •after 6 months of age We give outside food after rice ceremony, when the child is 6 months of age, we give rice ceremony, after that I started giving food •after 6 months of age, boiled home cooked foods should be given 	<p>11 (30.6)</p> <p>1 (2.8)</p> <p>6 (16.7)</p>
2	Should we give breastmilk along with outside food? If yes, why?	<ul style="list-style-type: none"> •Yes •for child's health •yes, till child wants to feed on breastmilk 	<p>30 (83.3)</p> <p>1 (2.8)</p> <p>3 (8.3)</p>
3	Types of food you prefer to give to your child?	Boiled rice, dal, vegetables, suji <ul style="list-style-type: none"> •rice, dal, carrot boiled, cerelac, lactogen •boiled carrot, papaya, rice dal, child refuses to eat non-veg food items •home cooked foods like everybody eats using oil, onions, everything, green leafy vegetables fry, millet kheer made using Amul milk, mishri and millet •cerelac, boiled vegetables and rice •boiled vegetables like carrot, papaya, roti grinded, chatua, ghee and dal 	<p>12 (33.3)</p> <p>2 (5.6)</p> <p>1 (2.8)</p> <p>3 (8.3)</p> <p>2 (5.6)</p> <p>2 (5.6)</p>
4	What type of artificial food are you giving?	<ul style="list-style-type: none"> •giving Lactogen from 7 months, rice is cooked in pressure cooker and child takes that melted rice 	1 (2.8)

		<ul style="list-style-type: none"> •give outside food, make rice and dal powder mix with water and give •cerelac 	3 (8.3) 5 (13.9)
5	What should be the consistency of food?	Watery <ul style="list-style-type: none"> •should not be too watery •consistency should be in a way that the child can swallow •semi solid food to be given •depends on child's age, older the child becomes more solid food he will eat 	18 (50) 9 (25) 3 (8.3) 5 (13.9) 1 (2.8)
6	Frequency and amount of food to be given?	<ul style="list-style-type: none"> •3 times in the day, and takes feeds at night if not sleeping •every 2 hours •whenever child is hungry •whatever amount the child can eat at a time •4-5 times •Breakfast, lunch and dinner 	11 (30.6) 8 (22.2) 12 (33.3) 2 (5.6) 2 (5.6) 1 (2.8)
THEME 4: Reasons for breastfeeding cessation			
1	Why do you think mothers stop breastfeeding? What can be the possible reasons for quitting breastfeeding?	<ul style="list-style-type: none"> •if mother is having any disease, then breastmilk should not be given •child stopped taking breastmilk therefore stopped giving •mothers may not produce adequate breastmilk •mothers don't like to breastfeed their child because it will make the women look ugly •If someone is working outside, giving breastmilk is difficult •if mother is planning for next child, she needs to save milk for next child •the fact is mother will become sick if she continues breastfeeding for long 	4 (11.1) 3 (8.3) 8 (22.2) 5 (13.9) 12 (33.3) 1 (2.8) 3 (8.3)

DISCUSSION

In the current study, around 47.2% mothers had a right knowledge about the timing when to initiate breastfeeding. In a study done by Karim F et. al.in Bangladesh, it was noted that 67% mothers out of 249 mothers initiated breastfeeding within one hour.^[10] The differences in the findings may be because both the studies were done in different countries, In the present study, 80.6% mothers were against giving any kind of pre-lacteal feeding. In a study done by Wondmeneh TG amongst 370 mothers, it was observed that pre-lacteal feeding was practiced by 36% of mothers.^[11] In this study, as high as 94.4% mothers had the correct knowledge about the importance of giving colostrum to the newborn child, but in a study done by Tejaswini S et. al., out of 150 mothers (75 each from urban and rural), 92% from urban and 89.3% from rural mothers practiced colostrum feeding.^[12]

In this study 44.4% mothers had knowledge of exclusive breastfeeding. In a study done by Rajak et al., out of 400 mothers, only 53% of mothers resorted to exclusive breastfeeding, even though 68% of mothers were aware of its significance.^[13] In our study, 69.4% mothers were advocating for continuing breastfeeding beyond 6 months but in the study conducted by Rajak et al., only 9% of mothers were aware of the duration of prolonged breastfeeding, while 57% were ignorant of the same.^[13]

In the current study, it was seen that 50% of the mothers have a poor knowledge of the ideal age to start weaning or when to give complementary food. Also it was seen that they have a poor knowledge on

what should be the right consistency of the complementary food. In a similar study finding by Venugopal. S et. al, out of 500 mothers, only 23% of mothers started complementary feeding at 6 months of age and 21.6% of mothers used commercial foods.^[14]

The limitation of the study is that it was conducted in a particular area, that is the urban slum which is the field practice area of our institute. So, the results obtained from this area cannot be generalized to the entire population.

CONCLUSION

Many mothers expressed a clear understanding of the importance of breastfeeding in supporting their child's health and development. They emphasized key benefits, including the role of breast milk in enhancing their child's immunity, providing essential nutrients, and fostering a stronger emotional bond between mother and child. These positive views align with the objectives of public health campaigns, suggesting that these efforts have been effective in promoting the foundational benefits of breastfeeding. However, despite the widespread acknowledgment of breastfeeding's health benefits, the discussions also uncovered significant gaps in mothers' knowledge, particularly regarding complementary feeding. While the majority of mothers understood the importance of breastfeeding in the first few months of life, there was less clarity around the appropriate introduction of solid foods and the nutritional needs of infants as they transition beyond exclusive breastfeeding. Many mothers struggled with understanding when and how

to introduce complementary foods, what types of foods were best, and how to balance breastfeeding with the incorporation of solids to ensure optimal growth and development.

This lack of knowledge about complementary feeding presents an opportunity for further education and support. It highlights the importance of continuing to provide comprehensive and accessible information to mothers not only on breastfeeding but also on how to successfully transition to complementary feeding. Proper guidance on this aspect is crucial for improving the long-term health outcomes for both mothers and children, and addressing this gap in knowledge could lead to healthier feeding practices and reduce the risk of malnutrition or other health issues.

In summary, while there is a strong foundational understanding of the benefits of breastfeeding, the findings underscore the need for more targeted education on complementary feeding practices. Enhancing knowledge in this area can further support mothers in providing optimal nutrition for their children, ensuring healthier developmental trajectories and better overall outcomes for both mother and child.

The limitation of the study is that the sample size was relatively small and may not be fully representative of the broader population of mothers. As such, the findings may not capture the full diversity of experiences, knowledge, and challenges faced by all mothers in different socio-economic or cultural contexts. Further research with a larger, more diverse sample could help validate and expand on these insights.

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