

A qualitative study of breastfeeding culture among the Kaili tribe in Sigi Regency, Central Sulawesi

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Abstract. Socio-cultural support is fundamental to successful breastfeeding. This study aims to explore the breastfeeding culture of the Kaili tribe. Informants were chosen using purposive sampling. The qualitative data was analyzed using the triangulation technique, which combined observations, in-depth interviews, and focus group discussions. The data were then analyzed using NVivo 12. The findings indicate that Kaili breastfeeding mothers remain practicing the *nipasoa* culture after giving birth and use both breasts when nursing their babies, which should begin from the right breast to the left. This Kaili tribe culture can support the success of exclusive breastfeeding. However, this cultural practice is still being studied empirically, and more scientific research is needed to determine the impact.

1 Introduction

Breastfeeding offers numerous benefits for the health, nutritional adequacy, and psychological well-being of both infants and mothers. It is recommended to initiate breastfeeding within the first hour of birth, practice exclusively breastfeeding for six months, and continue breastfeeding up to two years or beyond, supplemented with safe and appropriate complementary foods [1]. Exclusive breastfeeding during the first six months is suggested since breast milk is sterile and provides all the nutrients required for optimal growth and health in newborns [2,3]. Exclusive breastfeeding is essential for a newborn's life and health since it supplies the infant with the necessary and irreplaceable nourishment for proper growth and development. Additionally, exclusive breastfeeding serves as a child's first vaccination, protecting them from diseases such as diarrhoeal, respiratory infections, and other life-threatening illnesses [2, 4, 5].

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Globally, the percentage of exclusively breastfed infants under six months of age reached 48% in 2023, approaching the World Health Assembly's 2025 target of 50%. However, in Indonesia, data from the 2021 Indonesian Nutrition Status Survey (SSGI) revealed that only 52.5% of infants under six months were exclusively breastfed, indicating a significant decrease from 64.5% in 2018. The early initiation of breastfeeding rate also decreased from 58.2% in 2018 to 48.6% in 2021 [6].

The success of exclusive breastfeeding is influenced by several factors: the mother's educational level, sex of the child, average monthly family income, ANC visit, husband's support, and the duration of skin-to-skin contact [7, 8]. Breastfeeding is also influenced by individual choices, rational decision-making, and customary habits within the social milieu in which the mother resides. Social learning of breastfeeding knowledge and attitudes occurs within the family because family members interact with the mother often and constantly. Breastfeeding knowledge is rooted in culture and is traditionally transmitted from mother to daughter through practices and shared concepts [9]. Mothers lacking socio-cultural background in breastfeeding may be disinclined to provide breast milk. Socio-cultural support plays a vital role in ensuring that infants are breastfed. Research into breastfeeding culture is essential to ascertain the influence of local customs on breastfeeding practices [6].

The breastfeeding culture is an integral aspect of various ethnic groups in Indonesia, including the Kaili tribe. The Kaili tribe, one of the predominant ethnic groups in Central Sulawesi, inhabits several regions, including Sigi Regency. However, studies about the breastfeeding culture of the Kaili tribe remain limited. Hence, this research aims to explore the breastfeeding culture of the Kaili tribe.

2 Materials and methods

This qualitative study employed various data collection methods, including observation, in-depth interviews, and focus group discussions (FGD). The study was conducted from February to March 2024 in Sigi Regency, Central Sulawesi. Observations were carried out with five breastfeeding mothers. Six FGD groups were conducted involving village heads, village midwives, cadres, traditional birth attendants, customary leaders, and community/religious figures, with each group consisting of six informants. Additionally, in-depth interviews were conducted with ten breastfeeding mothers. Informants were selected using purposive sampling. The in-depth interviews lasted 30 to 45 minutes, while the FGDs lasted approximately for 45 to 60 minutes. Observations, FGDs, and in-depth interviews were conducted to acquire information on breastfeeding culture among the Kaili tribe, including the timing and duration, materials and procedures, benefits and beliefs breastfeeding, and the practice of *nipasoa*.

The qualitative data was processed based on the results of data triangulation from observations, in-depth interviews, and FGDs. Data were recorded in audio and video formats (with permission) to allow facilitators to focus on the informants' responses, and then transcribed verbatim. All transcripts were coded and thematically categorized using NVivo 12. This research has received ethical clearance for social humanities from the National Research and Innovation Agency with No: 084/KE.01/SK/02/2024.

3 Results and discussion

Based on Figure 1, the youngest informant is 18 years old, while the oldest is 70 years old. Age plays a role in the practice of *nipasoa*, influencing its meaning for the informants. The range of educational backgrounds among the informants also reflects varying levels of

understanding and knowledge of *nipasoa*. However, individuals with middle to high-level education continue to preserve this cultural practice. The primary informants in this study are generally civil servants, suggesting that the continuation of this tradition is driven by belief rather than work-related constraints.

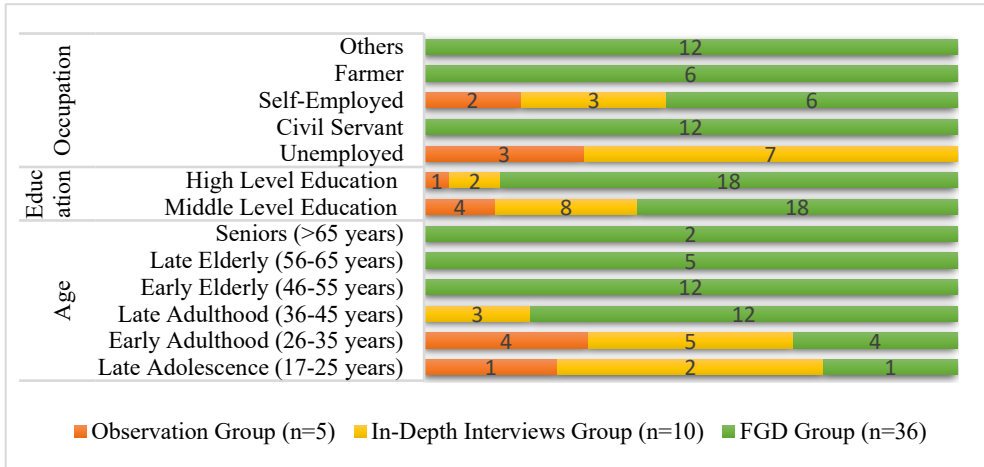


Fig. 1. Characteristics of informant

The results of applying the word frequency query feature in NVivo 12 to the interview transcripts of all informants revealed that the term ‘*nipasoa*’ is the most frequently occurring word (Fig.2). *Nipasoa* refers to a traditional steaming bath practiced by breastfeeding mothers of the Kaili tribe.

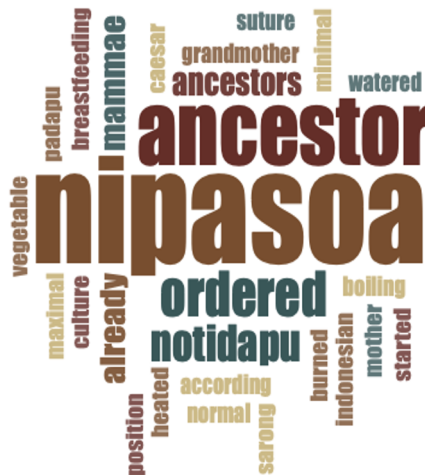


Fig. 2. The term most frequently emerging from the data

3.1 Time and duration of breastfeeding and *nipasoa*

The Kaili tribe’s mothers are encouraged to breastfeed shortly after childbirth and undergo *nipasoa* for 7 to 10 days following delivery. Below are some statements from the informants:

“...after delivery, the baby is immediately placed on the mother's chest to be breastfed...the Kaili tribe's are encouraged to breastfeed their babies for six months... and 'nipasoa' is practiced during the postpartum period...” (FGD with Traditional Birth Attendants).

“...to this day, after giving birth, Kaili tribe mothers still engage in 'nipasoa.' According to our elders, 'nipasoa' is carried out for a week. There is no specified duration for each 'nipasoa' session” (FGD with Village Midwives).

“...we are required to perform 'nipasoa' for at least one week and at most ten days...” (Breastfeeding Mother, 28 years old).

3.2 Materials and procedures of nipasoa

The materials for *nipasoa* include heated stone, herbs (such as pandan and citrus leaves), boiling water, and sarong (Fig.3). Below are some statements from the informants:

“...the custom of the Kaili tribe, stones are burned...the breastfeeding mother covers her body with a sarong...” (FGD with Traditional Birth Attendants).

“...the water is boiled and the stone is heated for 'nipasoa' ...” (FGD with Cadres).

“...using heated stones.... with pandan leaves and citrus leaves.... the mother uses a sarong as a cover...” (Breastfeeding Mother, 28 years old).



(a) Stone heated

(b) Pandan and citrus leaves

(c) Boiling water

(d) Sarong

Fig. 3. Materials of *nipasoa* practice

The procedure for *nipasoa* was described through the results of the observation (Fig.4) and the following statements:

“...stones are burned until reddened and then placed into the excavated soil...” (FGD with Cadres).

“...the breastfeeding mother uses a sarong to stand on a stone that has been burned, then the stone is watered slowly...” (FGD with Community/Religious Figures).

“...using heated stones until they turn red. A pit is then dug to place these stones along with pandan leaves and citrus leaves. Meanwhile, the mother uses a sarong as a cover and then stands above the stones sprinkled with water...” (Breastfeeding Mother, 28 years old).



Fig. 4. Procedures of *nipasoa practice*

3.3 Benefits and beliefs of *nipasoa*

According to their belief, the benefits of *nipasoa* for breastfeeding mothers were described through the following statements:

“...to restore and provide strength to the mother, ‘nipasoa wae’ is performed” (FGD with Customary Leaders).

“...‘nipasoa’ can enhance blood circulation, reduce joint stiffness, and increase breast milk production...” (Breastfeeding Mother, 26 years old)

“...the body feels good and refreshed. The blood flow becomes smooth... and the breast milk is fairly well-stimulated” (Breastfeeding Mother, 28 years old).

“...when ‘nipasoa’ is practiced for a week after giving birth, the breast milk becomes smooth...” (Breastfeeding Mother, 31 years old)

Some tribes in Indonesia also carry out this culture, including ba'ukup in Maluku [10]; tomboro therapy in the Muna tribe of Kendari City, Southeast Sulawesi [11]; oukup in the Karo tribe, Berastagi [12]; bakera in Minahasa [13]; and betimun in the Saibatin sub-tribe, Lampung [14]. This steaming bath is nearly identical to a sauna, although the surrounding air remains humid. The principal technique of steaming baths involves the evaporation of heated water, which contains aromatherapy from herbs, primarily lemongrass and orange leaves. These herbs' components, especially essential oils and alkaloids, serve as aromatherapy, promoting physical relaxation and rejuvenating the body [10-14]. This evaporation process produces heat, which improves blood circulation, allowing the body to warm up and cleanse toxins [14]. The steaming bath helps eliminate “dirty blood”, which commonly appears as dark red spots or blood clots, while the toxins themselves are released through sweat. This process strengthens the postpartum mother's body, rather than weakening it. Within 3 to 4 days after childbirth, the mother can resume daily activities independently. Additionally, it improves blood circulation, lowers blood pressure, relaxes muscles, and reduces stress [13].

Many cultures consider women who have recently given birth to be in a cold state, while during pregnancy, a mother is considered to be in a hot state [14]. For example, in the Karo tribe, women who have recently given birth are required to sleep with their babies near the waiting kitchen for approximately 10 days. The room temperature is maintained by burning hardwood to warm both the mother and her babies [12].

Furthermore, the steaming bath helps the mother to feel calm and relaxed, positively affecting breast milk production and improving metabolism. Family support and adequate rest will provide positive emotions and stimulate the increased production of the hormone oxytocin, facilitating smooth breastfeeding [12]. Relaxation can influence lactation by affecting hormones that regulate milk production and secretion, such as oxytocin and prolactin, through a complex interaction with stress hormones. [15].

Moreover, all informants stated that for breastfeeding practices, Kaili tribe mothers should use both breasts, starting with the right breast and then the left. This is based on their beliefs that breast milk from the right side of the mammary gland (breast) is considered as food, while from the left side is considered as drinking water for their infants. This belief is reflected in the following statements.

“...among the Kaili people, breastfeeding must be done with both breasts... starting with the right and then moving to the left. This is because the right is considered the food and the left is the drink” (FGD with Traditional Birth Attendants).

“...when breastfeeding, I always start with the right breast. Once it feels empty, I switch to the left breast... as the elders have instructed” (Breastfeeding Mother, 41 years old).

4 Conclusion

Breastfeeding mothers of the Kaili tribe continue to practice their nursing culture, which includes ‘*nipasoa*’ and initiating breastfeeding from the right breast to the left. This Kaili breastfeeding culture may contribute to the success of exclusive breastfeeding. However, this cultural practice remains an area of empirical study and requires further scientific investigation to evaluate the effects of *nipasoa* on psychological, physiological, and milk production outcomes.

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