



## Local Wisdom-Based Parenting Concept in Stunting Prevention Policy among Coastal Bugis Communities

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### ABSTRACT

**Introduction:** Stunting remains a major public health issue in Indonesia, particularly in coastal areas such as Barru District, South Sulawesi, which has shown a significant increase in prevalence. Parenting practices play a central role in stunting prevention; however, existing policies often fail to accommodate the local values embedded within communities. Among coastal Bugis communities, local wisdom-based parenting practices such as *mattarana'* and *yabelale* are believed to contribute to the holistic development of children, yet they have rarely been studied in the context of health policy. This study aims to explore the concept of local wisdom-based parenting within Bugis coastal communities and to analyze its potential for integration into more contextual and participatory stunting prevention policies.

**Methods:** A mixed-methods sequential exploratory design was employed with explicit qualitative-quantitative integration. The qualitative phase generated culturally grounded constructs of parenting through in-depth interviews, focus group discussions, and participatory observations with parents, community leaders, health workers, and *posyandu* cadres. These findings directly informed the development of quantitative survey instruments. The subsequent quantitative phase involved a descriptive survey of 326 caregivers selected via stratified random sampling. Integration occurred at the design level (instrument development), the methods level (sequential linkage), and the interpretation level, where qualitative themes were used to contextualize quantitative results. Data were analyzed using thematic analysis and descriptive statistics. Ethical approval was obtained from the Health Research Ethics Committee of Maluku Husada School of Health Sciences (RK.196/KEPK/STIK/VII/2025).

**Results:** Qualitative findings revealed that *mattarana'* is understood as a form of intensive maternal caregiving, while *yabelale* represents a spiritual-emotional practice that strengthens mother-child attachment. Quantitative data indicated that 93.3% of respondents had adequate knowledge about stunting and 99.4% demonstrated positive attitudes toward healthy parenting. However, parenting practices did not fully reflect this knowledge. Furthermore, 62.9% of respondents agreed that local wisdom should be integrated into stunting prevention policies. Integrated analysis indicates that local values shape how biomedical knowledge is interpreted and enacted in daily caregiving.

**Conclusion:** Integrating the concept of *mattarana'* into stunting prevention policies may enhance the effectiveness of interventions through a more culturally grounded, socially responsive, and locally contextualized approach. This strategy supports WHO's whole-of-society principle and offers a more humanistic and sustainable framework for health development.

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## INTRODUCTION

Stunting in children under five is one form of growth failure that indicates chronic problems in nutritional intake, health, and parenting practices during the critical period of the First 1000 Days of Life (HPK) (1). This problem not only affects physical growth but also influences cognitive development, learning capacity, future economic productivity, and even increases the risk of non-communicable diseases in adulthood (2,3).

One of the key determinants in stunting prevention is parenting practices during the First 1000 Days of Life (HPK), the golden period that spans from pregnancy to the age of two years. Responsive parenting practices that include adequate nutrition, health care, early stimulation, and affection are crucial to the success of stunting prevention interventions (1). However, parenting practices cannot be separated from the local social and cultural context, which significantly shapes household perspectives and caregiving behaviors.

Nutritional problems in Indonesia, particularly among children under five and pregnant women, remain high, with significant prevalence of wasting and stunting (4). Stunting reflects social inequality and inhibited child growth due to unhealthy diets, increasing the risk of mortality, with 50% of infant deaths caused by malnutrition (5,6). The golden period (1000 HPK) from pregnancy to the age of 2 years is the main focus of stunting prevention (7). Stunting as chronic malnutrition affects both physical and cognitive growth in children, with contributions from economic, social, cultural factors, as well as poor parenting practices and lack of maternal knowledge about nutrition (6),(8–12). The development of a local wisdom-based parenting concept has become a strategic approach to address this issue.

In 2022, there were 148.1 million children under five experiencing stunting, reflecting a significant global nutrition problem. In Asia, there were 87 million, Africa 59 million, and Latin America and the Caribbean 6 million children affected (13). Based on the 2022 Indonesian Nutrition Status Survey (SSGI), the prevalence of stunting in Indonesia remained at 21.6%. Although it decreased compared to the previous year, it still reflects a high burden of chronic malnutrition. Stunting not only affects physical growth but also impairs brain development, learning ability, increases the risk of chronic diseases in the future, and reduces economic productivity in adulthood (14,15).

South Sulawesi reached 27.4%, increasing by 0.2% from the previous year. Barru District, a settlement area of the coastal Bugis community, is among the five districts/cities out of 24 in South Sulawesi experiencing a rise in stunting cases, with an 8% increase from 14.1% to 22.1%. This increase highlights the urgent need for serious attention in addressing nutrition problems (16). Mallusetasi Subdistrict is one of the subdistricts in Barru District with the highest stunting cases, totaling 176 cases.

The local wisdom of the Bugis community, such as customary values and traditional beliefs, supports child-rearing by enhancing understanding of care and nutrition. Integrating local values into health policies can improve community participation in stunting prevention. However, difficult socio-economic conditions hinder adequate child nutrition in coastal areas. Education on balanced nutrition and proper parenting is crucial, particularly through the involvement of community leaders (6),(17–19). Stunting prevention in coastal Bugis communities requires an approach that integrates local wisdom with health policies. Values such as *siri' na pacce* and *sipakatuo* play an important role in educating parents about nutrition and healthy parenting. Local wisdom-based parenting practices can be an effective strategy to increase community knowledge and awareness of the importance of child nutrition (20–22).

Considering the complexity of stunting issues and the limited effectiveness of programs that have not fully taken local cultural contexts into account, a more contextual and participatory approach is needed. Coastal Bugis communities have distinctive value systems and child-rearing practices, but these have not been extensively studied as potential social resources for stunting prevention. Therefore, it is important to formulate the following questions: what are the forms and values embedded in local wisdom-based parenting practices of coastal Bugis communities in the context of stunting prevention? And how can these concepts be effectively integrated into stunting prevention policies? This study aims to explore traditional parenting practices of coastal Bugis communities, identify cultural values relevant to stunting prevention efforts, and propose a model for integrating local wisdom into public health policies, thereby strengthening the effectiveness of stunting interventions that are sustainable and culturally grounded.

## METHOD

This study employed a mixed-methods approach using a sequential exploratory design, in which qualitative findings informed the subsequent quantitative phase. This design was selected to ensure that culturally grounded

constructs of parenting practices were systematically incorporated into the measurement and interpretation of quantitative data.

### **Qualitative Phase**

The qualitative phase aimed to explore local wisdom-based parenting practices within coastal Bugis communities. The sampling frame for this phase comprised key social actors involved in child caregiving and community health within Mallusetasi Subdistrict, Barru District, South Sulawesi. Informants included mothers and fathers of children under five, grandmothers as intergenerational caregivers, community and cultural leaders, *posyandu* cadres, and primary health care workers. Inclusion criteria for qualitative informants were: (1) self-identification as members of the coastal Bugis community; (2) residence in the study area for at least five years to ensure cultural embeddedness; and (3) direct involvement in childcare, community leadership, or maternal–child health services. Informants were selected purposively to capture variation in age, gender, caregiving roles, and social authority. Recruitment continued until thematic saturation was achieved, defined as the point at which no new substantive themes emerged. Data were collected through in-depth interviews, focus group discussions (FGDs), and participatory observations. The credibility of qualitative findings was ensured through source triangulation, method triangulation, member checking, and the maintenance of audit trails. Data were analyzed using thematic analysis involving open, axial, and selective coding.

### **Quantitative Phase**

The quantitative phase was designed to assess levels of knowledge, attitudes, and acceptance of local wisdom integration in parenting practices related to stunting prevention. The sampling frame consisted of all parents or primary caregivers of children aged 0–59 months registered at *posyandu* within Mallusetasi Subdistrict. This registry-based frame was chosen to maximize coverage of the target population most relevant to stunting prevention programs. Inclusion criteria for the quantitative survey were: (1) being a parent or primary caregiver of a child aged 0–59 months; (2) residence in the study area for at least one year; and (3) willingness to provide informed consent. Caregivers with severe cognitive impairment or those temporarily residing in the area were excluded. A stratified random sampling technique was applied based on village-level *posyandu* strata to ensure proportional representation across communities. The final sample consisted of 326 respondents, calculated using Slovin's formula. The survey instrument comprised three sections: knowledge of stunting, attitudes toward healthy parenting and stunting prevention, and a local wisdom integration scale derived from the qualitative findings. Content validity was assessed by expert review, and internal consistency reliability was evaluated using Cronbach's alpha.

### **Considerations of Representativeness and Potential Selection Bias**

Several potential sources of selection bias were considered. First, reliance on *posyandu* registries may underrepresent caregivers who do not routinely access community health services, potentially limiting representation of more marginalized households. Second, participation was voluntary, introducing the possibility of self-selection bias, whereby respondents with greater interest in health issues or local culture may have been more likely to participate. Third, the cross-sectional nature of the quantitative phase limits causal inference and temporal generalization. To mitigate these limitations, stratified random sampling was employed, and data collection was conducted across multiple villages to enhance variability and representativeness. Nevertheless, findings should be interpreted as contextually grounded, with external validity primarily applicable to similar coastal Bugis communities rather than generalized to all Indonesian settings. This contextual specificity is consistent with the study's aim to inform culturally responsive policy development rather than produce nationally representative estimates.

### **Ethical Considerations**

Ethical approval was obtained from the Health Research Ethics Committee of Sekolah Tinggi Ilmu Kesehatan Maluku Husada (approval number: RK.196/KEPK/STIK/VII/2025). Written informed consent was obtained from all participants prior to data collection.

## RESULTS

### Qualitative Phase

The informants in the qualitative phase included Bugis coastal cultural figures, the Head of Mallusetasi Subdistrict Office, village heads, health workers, youth leaders, mothers of infants/toddlers, and *posyandu* cadres. The key informant was a Bugis cultural expert, who also participated in the focus group discussions (FGDs). Based on the results of in-depth interviews and FGDs, the researcher identified the construction of knowledge within coastal Bugis communities regarding stunting and parenting concepts rooted in their local wisdom, particularly the concept of *Mattarana*'.

### Construction of Knowledge of the Bugis Community on Stunting

Parenting practices within coastal Bugis communities are rich in local wisdom, cultural symbolism, and spirituality deeply embedded in traditional values. One prominent aspect is the existence of taboos during pregnancy that continue to be believed and practiced across generations. The Bugis community holds the belief that the condition of a baby at birth is influenced by the behaviors of both parents (the pregnant mother and the father). The results section should present the key findings of the study.

**Table 1.** Construction of Knowledge of the Bugis Community on Stunting Incidence

Source of Information	Construction of Knowledge about Stunting
Key Informant	In Bugis community traditions, there are local beliefs linking children's health conditions, including stunting and congenital disabilities, to parental behavior during pregnancy. For example, it is believed that pregnant women and their husbands should not commit acts of violence or kill animals cruelly, as this may negatively affect the physical condition of the baby at birth. Children with thin and weak bodies are locally referred to as <i>sawengang</i> , which is perceived as resembling stunting though differing in physical characteristics. Beliefs about parental behavior influencing congenital anomalies, such as cleft lip, remain strong, reflecting a symbolic system of meaning that provides both moral guidance and protection for pregnant women. Although not fully grounded in biomedical science, these beliefs play an important role in shaping cautious behavior during pregnancy within the framework of Bugis local wisdom.
General Informant	Bugis traditions emphasize that a husband's responsibility during his wife's pregnancy goes beyond providing financial support; he must also ensure that food consumed is from halal sources and carries <i>mabbarakka</i> (blessings). Food with unclear origins is believed to negatively affect fetal growth, including the risk of undernourishment at birth. In addition, parental behaviors during pregnancy are believed to influence the baby's condition, such as taboos against killing animals carelessly or wrapping cloth around the neck, which are symbolically associated with complications during childbirth. These beliefs reflect the Bugis community's holistic understanding of the close interrelationship between parental ethics, spirituality, and child health beginning from the womb.

### Excerpt from in-depth interviews with informants:

*"...pregnant women as well as their husbands are forbidden to kill animals cruelly. Sometimes the impact will be on the baby at birth. For example, being born with a disability, and likewise if the child is stunted. Maybe it's because some taboos were violated. Nowadays we know it as stunting. Back then, there was no such term; what we knew was something similar to stunting called sawengang. But a sawengang child is still tall, only thin and weak. Whereas stunting means being short..." (AM, 52 years)*

*"...a simple example like this, Sir. For instance, if the wife is pregnant and the husband goes fishing, and let's say the fish he catches has a cleft, then the child will also be born with a cleft lip. There are many such beliefs, and they are still held. That's why we Bugis people must be careful when the wife is pregnant..." (AL, 39 years)*

Another informant linked parental behavior to the incidence of stunting in babies at birth, as illustrated in the following interview excerpt:

*“...As I said earlier, we Bugis consider it the husband’s responsibility to provide sustenance. The food given to a pregnant wife must be halal and mabbarakka (blessed). If the source is unclear, then we say it can become madoraka. If the food we give is not mabbarakka, then our child might be born stunted...undernourished. In Bugis, we call it Sawengang...” (DN, 62 years)*

*“...The Bugis people have always believed this. Our behavior as parents will have an impact on the child. Killing animals, going hunting, slaughtering animals, even wrapping a sarong or towel around the neck—people say that will make childbirth difficult because the baby will be strangled...” (DS, 41 years)*

During the focus group discussion (FGD), participants also confirmed that coastal Bugis communities have long believed that the condition of a baby at birth is influenced by parental behavior.

### ***Mattarana’***

The concept of *Mattarana’* is part of the Bugis cultural value system closely linked to parenting practices. Etymologically, *Mattarana’* comes from the root word *tarana’*, which means to guide, direct, or lead. In the context of parenting, *Mattarana’* is understood as the process of shaping a child’s character and behavior from infancy through moral, social, and spiritual guidance based on cultural values and local wisdom.

Local concepts such as *Mattarana’* emphasize full childcare without dividing attention. The following are excerpts from in-depth interviews about the *Mattarana’* concept:

*“...in Bugis culture, there is what is called Mattarana’. Mattarana’ means how parents take care of their child. For example, if the child is really asleep, only then can the mother do other activities. It means she prioritizes feeding and caring for the child first, making sure the child is well-fed and asleep before continuing with other tasks. Mattarana’ comes from the word tarana’, which means to nurture. It essentially means raising a child from infancy with full focus, without dividing attention with other work. And Mattarana’ does not necessarily have to be carried out only by the biological parents...” (AM, 52 years)*

*“...Mattarana’ has long been known as the Bugis way of child-rearing. The mother is obliged to practice Mattarana’. The father’s responsibility is to provide and support the family...” (DN, 62 years)*

*“...It is the mother’s responsibility to practice Mattarana’. No matter how busy, the mother must focus on nurturing the child...” (DS, 41 years)*

Furthermore, informants stated that local wisdom does not contradict religion but instead serves goodness. This shows that traditional values share normative convergence with religious teachings and universal ethics. In this sense, cultural preservation is not conservatism but an adaptive strategy to sustain identity and social harmony. Excerpt from an interview:

*“...I strongly support the preservation of local wisdom. Because local wisdom actually never deviates...it is for goodness, and it does not contradict religion...” (AM, 52 years)*

The researcher also found another form of local wisdom in traditional Bugis parenting practices, namely *Yabelale*, which reflects the transmission of values, norms, and adaptive strategies formed through collective intergenerational experience in raising and educating children. Excerpts from interviews include:

*“...ehh, what I know is that it is the Bugis custom to sing Yabelale. In Yabelale, there are prayers and hopes for the baby, and it continues until the baby is no longer rocked in the cradle. The lyrics of Yabelale contain prayers and messages for the child, whether a boy or a girl, with hopes conveyed through the song...” (AM, 52 years)*

“...Yabelale is a form of prayer and hope. It is a Bugis traditional song. In addition, we Bugis must ensure that the food we provide for our children comes from mabbarakka...blessed sources. If the source is unclear, it brings madoraka. That means we must give halal food to children so they can grow healthy and not become stunted...” (DN, 62 years)

Participants in the FGD also agreed with integrating *Mattarana*’ as a parenting model rooted in Bugis coastal local wisdom. The concept was even considered an innovation that could be implemented in mother–child classes at *Posyandu*. Participants agreed to develop a module to serve as a guideline. Excerpts include:

“...yes, *Mattarana*’ is the Bugis version of parenting. This *Yabelale* tradition can also be preserved again. I was taught that when breastfeeding, the mother must look into the child’s eyes. The purpose is to create an emotional bond between mother and child...” (TM, 49 years)

“...This concept could become a Puskesmas innovation. Later, it can be applied in mother–toddler classes, antenatal care classes, and even premarital education classes...” (TM, 49 years)  
Another participant added:

“...The advice of the elders is still relevant today. Many Bugis child-rearing traditions are fading. For example, *Yabelale*. I agree if we preserve it. We Bugis have always been reminded from the beginning. For example, before a man marries, he must circle the kitchen seven times. The meaning is responsibility as head of the household, to be able to provide for the wife and children...” (SA, 54 years)

“...*Yabelale* is sung when the baby is rocked in the cradle. That is when it is usually chanted...” (AL, 39 years)

**Table 2.** Empirical Findings on the Concept of *Mattarana*’

Informant	Concept of <i>Mattarana</i> ’
Key Informant	<ul style="list-style-type: none"> <li>▪ -In Bugis tradition, the concept of <i>Mattarana</i>’ is well known. This concept refers to a caregiving practice that places the child as the highest priority, especially from infancy, ensuring that the child’s needs are met before attending to other activities. A mother, for instance, will make sure her child has eaten and is sound asleep before resuming other tasks. However, the role of <i>Mattarana</i>’ is not always carried out solely by biological parents but can also be practiced by other caregivers who uphold the principle of full and attentive child-rearing.</li> <li>▪ In the practice of <i>Mattarana</i>’, the tradition of <i>Yabelale</i> is recognized as a Bugis custom in which lullabies are sung to infants. Within <i>Yabelale</i> are embedded parental prayers and hopes for the child’s future, sung from the time the baby is still in the cradle until no longer rocked. The meaning of the <i>Yabelale</i> lyrics carries profound messages as a form of spiritual and emotional caregiving passed down through generations.</li> </ul>
General Informant	<ul style="list-style-type: none"> <li>▪ <i>Mattarana</i>’ has long been recognized as a form of child-rearing in Bugis culture, where the primary role rests with the mother as the direct caregiver of the child, while the father bears the responsibility of providing for and supporting the family.</li> <li>▪ <i>Mattarana</i>’ represents a distinctive Bugis form of caregiving that emphasizes emotional closeness between mother and child. The <i>Yabelale</i> tradition, as part of this caregiving, is considered worthy of preservation because it carries noble values in nurturing children. As taught across generations, during breastfeeding mothers are encouraged to gaze into their child’s eyes in order to strengthen the emotional bond between them. This practice reflects the community’s awareness of the importance of attachment and affective communication in the child’s growth and development process.</li> </ul>

## Quantitative Phase

### Age

**Table 3.** Distribution of Respondents by Age

No	Age	Frequency	%
1	17-25 Years	48	14.7
2	26-35 Years	196	60.1
3	36-45 Years	76	23.3
4	46-55 Years	6	1.8

Source: Primary Data

Table 1 shows that the majority of respondents were within the age range of 26–35 years (60.1%), representing the productive age group that plays an active role in childcare for toddlers. The age group of 36–45 years accounted for 23.3% of respondents, while those aged 17–25 years comprised 14.7%. The smallest proportion was respondents aged 46–55 years (1.8%). This composition indicates that most respondents are in a life phase that is socioculturally relevant to parenting roles, thereby holding significant potential for applying local values in parenting practices and stunting prevention.

**Table 4.** Distribution of Respondents by Education Level

No	Education	Frequency	%
1	No Formal Education	10	3.1
2	Primary School	54	16.6
3	Junior High School	53	16.3
4	Senior High School	139	42.6
5	Higher Education	70	21.5

Source: Primary Data

Table 2 shows that the majority of respondents had attained a senior high school education (42.6%), followed by higher education (21.5%), and primary (16.6%) as well as junior high school (16.3%). Meanwhile, 3.1% of respondents had never received formal education. This composition reflects that most respondents had at least a secondary-level education or higher, which theoretically contributes to their capacity to understand health information, including parenting practices and stunting prevention. Education level also plays a crucial role in shaping attitudes toward the integration of local wisdom into contextual and culturally grounded parenting practices.

**Table 5.** Distribution of Respondents by Length of Stay in Coastal Areas

No	Length of Stay	Frequency	%
1	1–10 years	268	82.2
2	11–20 years	34	10.4
3	21–30 years	18	5.5
4	> 30 years	6	1.8

Source: Primary Data

Table 3 shows that most respondents, 268 individuals (82.2%), had lived in coastal areas for 1–10 years. Meanwhile, 10.4% of respondents had lived there for 11–20 years, and only a small proportion had resided for more than 20 years. This proportion reflects both high population mobility and the dominance of newer generations settling in coastal areas. Nevertheless, a decade-long involvement in the local community still provides significant opportunities for the internalization of local cultural values in parenting practices. The duration of residence thus serves as an important indicator in assessing the extent of respondents' integration with the norms, traditions, and local wisdom that develop within Bugis coastal communities.

**Table 6.** Distribution of Respondents by Length of Stay in Coastal Areas

No	Nutrition Information Source	Frequency	%
1	Posyandu	302	92.6
2	Health Workers	15	4.6
3	Social Media	9	2.8

Source: Primary Data

Table 4 shows that the majority of respondents obtained nutrition information through Posyandu, amounting to 302 individuals (92.6%). This underscores the strategic role of Posyandu as the frontline provider of nutrition information and education at the community level, particularly in the context of stunting prevention. Meanwhile, only 4.6% of respondents received information directly from health workers, and 2.8% from social media, indicating the relatively low penetration of digital media and individual consultations as primary sources of nutrition information in coastal communities. The dominance of Posyandu as the main source highlights the importance of strengthening cadre capacity and integrating local wisdom-based messages into their educational activities.

**Table 7.** Distribution of Respondents by Knowledge

No	Knowledge	Frequency	%
1	Adequate	304	93.3
2	Poor	22	6.7

Source: Primary Data

Table 5 shows that the majority of respondents, 304 individuals (93.3%), had adequate knowledge related to parenting and stunting prevention, while only 6.7% were categorized as having poor knowledge. This proportion indicates that most respondents have been sufficiently exposed to relevant information, both through formal interventions such as Posyandu and other sources. The high level of knowledge serves as an important asset in promoting healthier parenting behaviors, including the adoption and integration of local wisdom values into parenting practices to support stunting prevention efforts.

**Table 8.** Distribution of Respondents by Attitude

No	Attitude	Frequency	%
1	Positive	324	99.4
2	Negative	2	0.6

Source: Primary Data

Table 6 shows that almost all respondents, 324 individuals (99.4%), demonstrated positive attitudes toward parenting practices that support stunting prevention, while only 0.6% expressed negative attitudes. This very high proportion of positive attitudes indicates strong community acceptance of healthy parenting practices, including the potential integration of local cultural values. These findings also highlight a significant opportunity for strengthening community-based education programs, as positive attitudes are an essential prerequisite for sustainable behavioral change.

**Table 9.** Distribution of Respondents by Attitude

No	Integration of Local Wisdom	Frequency	%
1	Agree	205	62.9
2	Disagree	121	37.1

Source: Primary Data

Table 7 shows that 205 respondents (62.9%) agreed with the importance of integrating Bugis local wisdom into stunting prevention policies, while 121 respondents (37.1%) disagreed. These findings reflect majority community support for a contextual and culturally grounded policy approach. The high level of agreement suggests that the community perceives local wisdom not only as cultural heritage but also as a source of social capital that can be mobilized to strengthen the effectiveness of health interventions, particularly in stunting prevention. However, the

proportion who disagreed also points to challenges of perception or possible generational gaps in internalizing local values, which need to be considered in communication strategies and policy advocacy.

## DISCUSSION

### Knowledge and Attitudes Construction of Coastal Bugis Communities Toward Stunting

The findings of this study indicate that parenting practices within coastal Bugis communities are shaped by a complex interplay of cultural values, spirituality, and socially constructed meanings related to child health. Rather than demonstrating a direct causal effect, the results suggest a strong association between local wisdom-based caregiving frameworks and how stunting-related knowledge and practices are interpreted and enacted at the household level. This distinction is important given the exploratory and cross-sectional nature of the study design.

The coastal Bugis community shows a belief in symbolic associations between acts of violence and child growth disorders or congenital abnormalities. The concept of *sawengang* refers to a child who appears thin and weak, a condition locally associated with undernutrition, although distinct from the medical definition of stunting. The community also embeds spiritual dimensions in their perception of food, where blessing (*mabbarakka*) and the legitimacy of livelihood sources are considered to influence fetal conditions. This reflects how moral and economic dimensions are inseparable in the community's perception of child health. For a husband, responsibility is not limited to providing for the family but also ensuring that the provision is religiously and traditionally lawful.

This local knowledge can be analyzed through the framework of symbolic interactionism (Blumer, 1969), in which social meanings are formed and negotiated through symbolic interactions in daily life (23). Taboos such as prohibiting the killing of animals in a cruel manner, forbidding wrapping a sarong around the neck while the wife is pregnant, or beliefs that catching deformed fish may result in a baby being born with cleft lip, are examples of symbolizations interpreted as moral warnings. From a health anthropology perspective, this knowledge can be categorized as lay knowledge or local knowledge (Geertz, 1983), a body of knowledge embedded within the community that may not be rooted in modern science yet serves strong regulative functions (24)(25). According to Kleinman (1980), local meaning systems often constitute the primary framework for explaining and responding to illness, especially in societies that continue to uphold traditional values (26).

The findings further emphasize that the Bugis coastal community's knowledge system is holistic and integrative. Child health is not only understood as a result of medical interventions but also as a consequence of spiritual behavior and social ethics during pregnancy. Thus, these taboos serve as mechanisms of social control that protect pregnant women and fetuses. This aligns with the social constructivist perspective, which views reality as a product of collective construction based on values and social practices (27).

Quantitative results further support this interpretation. Although a high proportion of respondents demonstrated adequate knowledge (93.3%) and positive attitudes (99.4%) toward stunting prevention, these attributes were not consistently aligned with reported caregiving practices, indicating that knowledge alone does not automatically translate into behavioral change. The observed patterns point to associative relationships between knowledge, attitudes, cultural values, and caregiving behaviors, rather than causal pathways. This aligns with existing behavioral health literature emphasizing that parenting practices are influenced by multiple interacting social, economic, and cultural factors.

Furthermore, data also showed that most respondents (99.4%) held positive attitudes toward stunting prevention efforts, including acceptance of healthy parenting practices such as exclusive breastfeeding, providing nutritious complementary foods, and regular antenatal checkups. This positive attitude reflects community openness to health interventions that are educational and participatory. However, it is important to note that these attitudes did not emerge in a vacuum; rather, they are the outcome of a dialectic between local cultural values and modern health knowledge continuously disseminated. This reinforces the argument that the effectiveness of stunting interventions depends not only on the content of messages delivered but also on the extent to which those messages are aligned with the community's interpretive frameworks and lived values.

Thus, the quantitative results not only illustrate the statistical distribution of knowledge and attitudes but also highlight the significant opportunity to strengthen dialogue between local wisdom and evidence-based health approaches. Within coastal Bugis communities, the integration of local epistemology and scientific narratives can serve as a key strategy in building legitimacy and acceptance of stunting prevention programs in a broader and more sustainable manner.

Although data indicate that the majority of respondents possess adequate knowledge (93.3%) and positive attitudes (99.4%) toward stunting prevention, these findings do not automatically translate into behavioral change in actual parenting practices. This phenomenon highlights a gap between cognition and action, in which good knowledge and attitudes are not yet fully internalized into daily parenting behavior. For instance, some respondents acknowledged the importance of exclusive breastfeeding and balanced nutritious diets, yet their practices were still constrained by economic limitations, social pressures, or even local myths contradicting medical advice. This suggests that improving health literacy alone is insufficient without structural and cultural support that enables consistent application of healthy parenting practices.

Within the framework of Behavior Change Communication (BCC), knowledge and attitudes indeed represent the initial stages in the process of behavioral change; however, sustained implementation is strongly influenced by contextual factors such as social norms, family capacity, and cultural legitimacy of certain behaviors. According to Nutbeam (2000), health behavior change requires not only the enhancement of knowledge but also the strengthening of skills, motivation, and supportive social environments to enable individuals to act effectively in maintaining their own and their family's health (28). Therefore, intervention success is determined not only by how well communities know and positively respond to stunting issues but also by the ability of programs to transform social and cultural environments into supportive contexts for desired practices. At this point, intercultural approaches become critical—not merely educating, but also empowering communities by leveraging local values as authentic and effective drivers of change.

From a policy perspective, it is crucial to recognize that the success of stunting prevention programs largely depends on the extent to which interventions can accommodate local meanings that exist within communities. Neglecting local beliefs may create resistance, while integrating local wisdom may enhance program acceptance. In this regard, risk communication and health promotion need to be developed using intercultural approaches that are sensitive to local values. It is important to emphasize that although such beliefs are not grounded in biomedical scientific evidence, they hold epistemic value in shaping caution and preventive behaviors during pregnancy. Therefore, dialogue between modern health sciences and local knowledge systems must continuously be fostered within a transdisciplinary approach that is more humanistic and contextually grounded.

### **The Concept of Mattarana' as a Parenting Model in Bugis Society**

Local concepts such as Mattarana'—which refers to full child-rearing without dividing attention—represent a form of strengthening the mother's role as the central actor in shaping the child's emotional attachment. This value reflects a high moral responsibility and aligns with the concept of intensive mothering in family sociology studies (29). The concept of intensive mothering, introduced by Sharon Hays (1996), refers to an ideology of child-rearing that positions the mother as the primary figure with full responsibility for the child's well-being through a child-centered approach, emotionally absorbing, labor-intensive, costly, and guided by professional expertise. Within this framework, the ideal mother is expected to sacrifice her time, career, and personal needs to meet child-rearing standards determined by social norms and expert discourses.

The researcher identified one form of Bugis parenting practice called Yabelale, a lullaby that contains prayers and hopes, reflecting a holistic form of care work that integrates emotional and spiritual aspects into the caregiving process. This practice corresponds with the concept of emotional nurturing in medical anthropology literature, in which cultural and spiritual elements have significant influence on maternal and child well-being. In medical anthropology, emotional nurturing refers to social and cultural practices aimed at supporting individuals' emotional well-being, particularly in the context of family, community, and healthcare relationships. Emotional nurturing does not merely mean providing affection but also includes the transmission of values, psychological protection mechanisms, and identity formation through affective interactions that are culturally structured (30).

The Yabelale lullaby is not only therapeutic but also strengthens the emotional bond between mother and infant, as described in attachment theory by Bowlby (1969) (31). Bowlby's theory emphasizes that the emotional bond between an infant and the primary caregiver is a basic biological need essential for survival and psychosocial development. He stressed that physical and emotional closeness with the caregiver forms the foundation of a secure base, enabling the child to explore the environment with confidence and return for comfort when threatened. These attachment experiences then shape the internal working model, a mental representation of the self, others, and social

relationships, which influences interpersonal interactions throughout life. The caregiver's responsiveness and sensitivity to the child's emotional needs largely determine whether the attachment formed is secure or insecure.

Interestingly, the researcher also found that local wisdom is not perceived as contradictory to religion but rather as complementary to goodness. This demonstrates that traditional values have normative convergence with religious teachings and universal ethics. In this context, cultural preservation is not a form of conservatism but rather an adaptive strategy to sustain identity and social harmony (32).

### **Integration of the *Mattarana*' Concept in Stunting Prevention Policy**

The integration of the *Mattarana*' concept into stunting prevention policy opens new pathways for a local wisdom-based policy approach that is more contextual, sustainable, and meaningful for the community. *Mattarana*', understood as full, intensive, and exclusive childcare by mothers, reflects a profound form of caregiving consistent with the paradigm of intensive mothering in modern family sociology (Hays, 1996). In the context of stunting prevention, *Mattarana*' can serve as a social and cultural foundation that strengthens the mother's role as the primary agent in ensuring the optimal growth and development of children, encompassing nutrition, health, and emotional attachment.

This aligns with the guidelines of the Indonesian Ministry of Health, which emphasize that child-rearing based on stimulation, affection, and responsiveness (early stimulation and responsive caregiving) is a key component in stunting prevention, particularly during the First 1000 Days of Life. Responsive parenting not only focuses on nutrition and health fulfillment but also on emotional interaction and active parental involvement in holistic child development (33). Similarly, WHO underscores that good caregiving includes nutrition, protection, responsive caregiving, and early learning, where parents or caregivers provide adequate intake, respond empathetically to children's needs, and create a safe and stimulating environment (33). This approach is highly relevant given that many nutritional and health interventions often fail to take root in community social practices. By incorporating *Mattarana*' into the design of stunting prevention programs, the government can create interventions that are not only technocratic but also socially and culturally acceptable. For example, behavioral campaigns targeting the First 1000 Days of Life can be packaged through local narratives such as *Mattarana*', thereby not only conveying scientific messages about exclusive breastfeeding or nutritious complementary feeding but also resonating with local identity and community spirituality.

In addition, the practice of *Yabelale*—a Bugis lullaby imbued with prayers and hopes—can be incorporated into child development stimulation programs as a form of emotional nurturing, a caregiving practice that strengthens the affective bond between mother and child (Scheper-Hughes & Lock, 1987). This resonates with Bowlby's (1969) attachment theory, which emphasizes the importance of emotional closeness in forming a secure base for children, ultimately supporting holistic cognitive and social development. Such integration not only provides a more human-centered approach but also creates policy spaces that value local practices as part of health development strategies.

Quantitative findings show that the majority of respondents (62.9%) agreed with the integration of Bugis local wisdom into stunting prevention policies. This majority support highlights that local values such as *Mattarana*' and other symbolic parenting practices serve not only as cultural heritage but also as epistemic tools relevant in shaping health behavior. The high approval for cultural integration indicates community awareness of the importance of approaches aligned with their collective identity, particularly in addressing multidimensional problems like stunting. Furthermore, these findings suggest strong potential to enhance program effectiveness through culturally grounded communication strategies and interventions, rather than relying solely on technocratic and universalistic approaches.

These findings are consistent with the community-based health development approach advocated by WHO, namely the whole-of-society approach, which emphasizes community involvement and recognition of local knowledge systems as part of effective and sustainable interventions. Therefore, integrating local values into stunting policies is not merely a complementary strategy but a recognition of the community's social and cultural capacity to produce meanings and caregiving practices that directly impact child growth and development. In the context of coastal Bugis communities, caregiving practices rich in symbolism and spirituality can serve as powerful entry points for building legitimacy and acceptance of health programs at the community level.

At the national policy level, *Mattarana*' can be mainstreamed through the development of parental education modules at community health centers (*Puskesmas*), *posyandu* cadre training, and behavior change communication

(BCC) materials that incorporate local elements. Local governments may also adopt this approach through derivative regulations, such as regent/mayor decrees on strengthening family and community roles in child-rearing. Such support is essential to ensure that policies are not solely top-down but also responsive to the values lived by communities.

Furthermore, the integration of *Mattarana*' also supports the principle of intersectorality in stunting prevention. For instance, the Department of Culture can be involved in documenting and preserving *Yabelale* practices, while the Department of Health and the Department of Women's Empowerment can collaborate to develop family- and community-based programs that incorporate local values into parenting practices. This synergy reflects the whole-of-government and whole-of-society approaches promoted by WHO in community-based health development.

Recognition of the *Mattarana*' value within policy not only strengthens the effectiveness of stunting prevention programs but also serves as a strategy of knowledge decolonization shifting dominant narratives from external frameworks toward those originating from within the community itself. In this way, policies address nutritional issues not only biomedically but also by preserving meanings, identities, and social structures that form the foundation of child well-being within society. This approach enhances program legitimacy, broadens intervention reach, and builds family resilience in addressing long-term health development challenges.

## **CONCLUSION**

This study demonstrates that parenting practices among coastal Bugis communities are shaped by a rich system of cultural values, spirituality, and local symbolism, with the concept of *Mattarana*' at the core of caregiving. *Mattarana*' emphasizes a mother's full emotional and physical attention to the child. This practice is reinforced by cultural elements such as *Yabelale*, *Mabbarakka*, and symbolic taboos, which collectively form community awareness of the importance of holistic child growth and development. This local knowledge system carries strong regulative functions and cannot be separated from the community's ways of understanding and preventing stunting.

The quantitative findings support the qualitative results, showing that the majority of respondents had adequate knowledge (93.3%) and positive attitudes (99.4%) toward stunting prevention. However, a gap remains between knowledge and practice, indicating the need for intervention approaches that not only focus on education but also empower families within their socio-cultural contexts. In addition, 62.9% of respondents agreed with the integration of local wisdom values into stunting prevention policies, reflecting strong community support for contextual and culturally grounded policy.

Therefore, the integration of the *Mattarana*' concept into stunting prevention policies is not only culturally relevant but also strategically significant for enhancing the effectiveness of public health interventions. This approach aligns with the WHO's whole-of-society principle and creates space for transdisciplinary dialogue between modern health science and local knowledge systems. Mainstreaming local values into parenting modules, health education at *Posyandu*, and cadre training represents concrete steps to ground public health policy in a more humanistic, inclusive, and sustainable manner.

## **AUTHOR'S CONTRIBUTION STATEMENT**

All three authors actively contributed to every stage of this research. Andi Surahman Batara designed the study framework, coordinated the implementation of both qualitative and quantitative phases, and wrote the introduction, methods, and discussion sections. Linda Hardianti Saputri was responsible for data collection in the field, quantitative data processing, and preparation of the results section. Nurul Hikmah B contributed to thematic qualitative analysis, drafted the conclusion and policy implications, and conducted the final review of the manuscript's structure and references. All authors have reviewed and approved the final version of the manuscript for publication and declare no conflicts of interest.

## **CONFLICTS OF INTEREST**

The authors declare that there are no conflicts of interest in this study. All processes, including planning, implementation, analysis, and manuscript writing, were conducted independently without any external intervention. The authors have no commercial, institutional, or personal relationships that could influence the results or

interpretation of the data presented in this article. This statement is made to ensure integrity, objectivity, and transparency in scientific publication.

## DECLARATION OF GENERATIVE AI AND AI-ASSISTED TECHNOLOGIES IN THE WRITING PROCESS

Authors are required to transparently disclose any use of generative artificial intelligence (AI) tools or AI-assisted technologies—such as ChatGPT, Grammarly, or DeepL—during the manuscript preparation process. This policy aims to uphold academic integrity, promote responsible authorship practices, and ensure compliance with ethical publication standards. If AI tools have been employed to support language refinement, enhance clarity, or improve the overall readability and structure of the manuscript.

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