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Infant Feeding Advice and Sustainable Alternatives in Low-Income South African Contexts

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ABSTRACT

The study aimed to determine the lived experiences of mothers and caregivers (M/Cs) from low-to no income families, who are coerced to feed their infants formulas prescribed by health professionals against thin soft-porridge, and to understand the old ways of preparing the soft porridge for babies. Two samples of M/Cs and elderly mothers (elders) were used from accidental sampling and purposive sampling for this aim, with data collection done by interviewing them. Thematic content analysis was used for analysing the interview transcripts. The M/Cs find it difficult to cope with high formula prices, and they find it causing them psychological challenges such as anxiety, depression, and financial stress. The elders decried the marginalization of indigenous knowledges (IKs) where child and baby feeding were also included. A hybrid model that blends modern ways and IKs are integrated for use in infant feeding, without imposing or restricting any one of the methods.

Keywords: Infant, Feeding Advice, Low-Income, South African

INTRODUCTION

Wealthy families can afford any baby foods while destitute ones may find it difficult to sustain purchases of some foods as required by modern infant feeding. This explains the nutritional divides between the poor and the rich, which should be bridged. Infant feeding practices in South Africa are shaped by a complex interplay of modern healthcare guidelines, socioeconomic constraints, and indigenous traditions. This paper is revisited after the first attempt (by 1st and 5th authors) was written in 2011 and the subsequent manuscript was never published, despite an editor of a journal showing interest to get it published in one of their issues. Memories of the lost paper haunted these authors, especially when they shared the idea and the lost paper. The other three authors also liked the idea and a revisit with more comprehensive coverage. The interest generating points were: mothers collecting child grants and immediately buying child's formula with supplement from *mashonisa* (loan shark) money; mothers asking for money, claiming the formula finished and they had no money left; crying children with mother standing on the street sides; children on the mothers' backs showing hunger and untidiness; children in tattered clothes but mothers wearing expensive labels; and so on. Our approaches entailed

volunteering to buy something for the baby, such as toy and/or food and in some cases have a meal with the mother.

While hospitals often advocate for exclusive breastfeeding or commercial formula, many families experience systemic barriers that render these recommendations impractical. The agreement by health experts that breastfeeding is the healthiest alternative for both the baby and its mother is not disputed. Hörnell and Lagström (2024) inform that health experts recommend that babies should feed only on breast milk for the first six months and then continue breastfeeding as a principal diet until they reach and even exceed 12 months to about 24 months of age. While breastfeeding is embraced, this manuscript argues that for some mothers this becomes unrealistic as some mothers lack breast milk (Srinivasan et al., 2025). This manuscript critiques the overreliance on purchased baby milk, highlights the value of indigenous knowledge systems, investigates living experiences of the mothers in that league, and proposes a sustainable model for infant nutrition that aligns with the realities of low-income households.

METHODOLOGY

Study Design

This study employed a mixed-methods approach that integrated quantitative price analyses, qualitative interviews, and policy reviews to critique infant feeding guidelines and propose sustainable alternatives.

Population and Sample

The main study population consists of mothers/caregivers (M/Cs) of infants. For the insights on infant formula purchase, this population is unlimited and consists of mothers of infants from low-income families, who receive advice from hospitals about baby formulas they should use and at times struggle to raise funds to buy the formulas. The other population for IKS consisted of elderly mothers who prepared infant foods before the emergence of hospital reliance, when births still took place in the homes by elderly mothers and clinic/hospital visits were rare. Retail stores were another set for collecting data on prices of baby formulas. There was also the Child Support Grant Policy from the South African Social Security Agency [SASSA] to provide information on the amount of money given for child support to non-working families (South Africa, 2025). Selection of the sample units from the mothers was accidental, occurring by pure chance but using the inclusion criteria of willingness to share the experiences and having experienced the hardship of lacking formula money for their baby/infant. Many refused to share, and the paper preparation was prolonged. Three elderly mothers were purposefully selected for having cared for grandchildren as their parents lacked responsibilities in supporting their children. These grandmothers played mother roles using the methods with which they were groomed.

Sample

For qualitative data collection, 14 respondents (all female) participated in the study, 11 being M/Cs of infants for lived experiences of the pressure of breastfeeding/formula and unaffordability, and four elderly mothers for IKS insights on infant feeding. The 11 M/Cs were interviewed during trips to the areas, where they were recruited after being observed to need help for the babies, in different and contrasting ways. Qualitative data collection occurred between January 2024 and March 2025 in three South African provinces (Eastern Cape, Free State, Gauteng, Limpopo), selected for their socioeconomic diversity and cultural relevance. Three mothers came from Eastern Cape, one from a township (ECT) and two from rural/villages (ECR; ECV). From the Free State it was one respondent (FS), a mother who hailed from Botshabelo township, but her interview took place in Bloemfontein. Gauteng had four respondents, two from townships (GT1; GT2) and two from informal settlement (GI1 & GI2). Limpopo had three respondents from villages/rural (L1, L2, L3). The three elderly mothers for IKS came from Soweto in Johannesburg (in Gauteng Province) (S), Madibeng district in the North-West Province (N) and the third one came from Mpumalanga Province (M).

Table 1. Respondents' profiles

Eastern Cape	Free State	Gauteng	Limpopo	Elderly Mothers
ECT	FS	GT1	L1	N
ECR		GT2	L2	S
ECV		GI1	L3	M
		GI2		

Data Collection

Field notes were used to collect data on the prices of formulas and from elderly mothers on IKS on methods of blending of techniques for feeding infants. The data collection mix consisted of price surveys, interviews,

policy/grants surveys, and record collection of IKS. Informal interviews with M/Cs asked questions regarding feeding practices, financial constraints, cultural beliefs, and psychological stressors. Informed consent was obtained from the respondents and those who did not want to be interviewed were left alone. Participants were also anonymized in a way never to trace their identities, as in Table 1. We report a limitation of coverage only of four provinces, and a limited number of respondents preventing generalization of results.

Price Surveys: Retail prices of several formula brands were recorded monthly from 20 low-cost retailers and pharmacies. Costs of diapers, winter clothing, and porridge ingredients (maize, sorghum) were tracked using standardized checklists.

Interviews: Participants were 11 M/Cs (ages 18–25) from rural areas and townships, and three elderly mothers who gave insights on IKS regarding old ways of feeding infants. The topics covered in the interviews included feeding practices, financial constraints, cultural beliefs, and psychological stressors. On IKS from elderly mothers, we documented traditional recipes, porridge preparation methods, and childcare rituals. Sessions were only transcribed in writing with no voice recordings as the opportunities for 'interviewing' were informal and accidental.

Policy and Grant Analysis: We also reviewed South Africa's Child Support Grant (CSG) policy documents (2020–2025) and hospital infant feeding guidelines.

Data Analysis

The quantitative research entailed using descriptive statistics to compare formula costs to R350 CSG and then projecting annual expenses based on average infant consumption rates (WHO, 2023). Thematic analysis was used for qualitative data analysis with themes emerging from the identified recurring patterns (e.g., "formula stigma," "intergenerational conflict"). There was then the triangulation taking place by cross-verifying findings between price data, interview narratives, and policy gaps.

FINDINGS

The M/Cs were all female, unemployed, unmarried, black South African, and did not reveal level of education or age except indicating to be between 18 and 25 years old. The first theme emerging from the study is:

Theme 1: Systemic barriers and corruption in accessing infant formula and support for infant feeding

The extracts showing how the M/Cs were enticed to start formula feeding were:

"*On first time of pregnancy visiting the local clinic we receive several tins of formulas, and we get a letter for support at the local clinic with further formulas after birth. After giving birth, the local clinic report 'no stock' on formula.*" – Respondent L2

"*We are warned not to feed babies any solid food, as we will not receive help if anything happens. Our local clinic does not stock formulas, the hospital does. We know the hospital nurses sell the stock instead of sending them to clinics at spaza* [high] *prices, for self-enrichment. Reporting this to officials, we receive threats because they raise funds for the political party.*" – Respondent ECV

"*When we visit SASSA for child grants, they tell us to buy baby formula with the R350 grant but their friends sell formula for R500. They promise to track us if we do not buy it and threaten to stop the grant. These are the administration officials who should help us get the milk for free as government releases it for us. No official helps us, they only force us to use formula to feed our babies.*" – Respondent FS

"*The clinic nurses gave us lessons on feeding babies, and formula was stressed. We know many tins of baby formula are released for us, but our local clinics do not receive them. In our area there is a spaza shop on medical and nutritional items that have government labels, and we are told to buy there as only then will we receive help at the clinic. So we avoid shops, and prices are a bit more as they say we save on transport.*" – Respondent GT2

These narratives underline systemic issues in accessing baby formula and child support services in South Africa. Respondent L2 explains to have received formula during initial pregnancy visits and then later experiencing shortages after birth. This leaves mothers unsupported (Horwood et al., 2022). Respondent ECV alleges corruption, claiming hospital nurses sell formulas intended for clinics at inflated prices. She reports threats when attempting to expose this exploitation, which allegedly funds political parties. Respondent FS expresses frustration with SASSA officials who advise using the R350 child grant to buy overpriced formula sold by their associates. Apparently, officials threaten to revoke grants if the mothers do not purchases formulas. Lastly, Respondent GT2 mentions that clinics prescribe formula feeding. However, they never have stock. This forces mothers to buy government-labeled formula from local shops at higher prices. Since they purchase formulas under coercion, it strains their finances further (Jin et al., 2025). Collectively, these accounts reveal a troubling pattern of exploitation and neglect in maternal and child welfare systems. The main theme emerging from the respondents' narratives is the above theme, with several subthemes identified as:

Subtheme 1.1. Inconsistent Availability of Infant Formula

"*I was given formula during my pregnancy, and I assumed it would be available after my baby was born. But every time I went to the clinic, they told me they were out of stock. It was incredibly stressful, not knowing how I would feed my child from one day to the next.*" – Respondent L2

"*After my baby was born, I returned to the clinic expecting formula as promised during pregnancy. Instead, I was told there was no stock available. I felt helpless and panicked. How could I provide for my child when the system failed me?*" – Respondent GT2

Subtheme 1.2. Corruption and Exploitation in Distribution

"*The exploitation of government resources, such as formula meant for vulnerable populations, highlights a systemic issue in distribution channels. Selling these essential items through informal networks like spaza shops at inflated prices is not only unethical but undermines the purpose of public welfare programs.*" – Respondent ECV

"*The informal sale of government-provided formula at exorbitant prices reflects a deeper problem of corruption within the system. Officials and intermediaries are prioritizing personal gain over community needs, perpetuating exploitation and eroding trust in public institutions.*" – Respondent GI1

Subtheme 1.3. Threats and Coercion

"*The coercion faced by mothers who are forced to buy formula from specific sources is alarming. Threats to withhold child grants if they refuse to comply are not only intimidating but also undermine the autonomy of these women to make choices about their children's well-being.*" – Respondent ECT

"*It's disheartening to see mothers being bullied into purchasing formula from particular vendors under the threat of losing vital child support. This kind of exploitation not only exploits their vulnerability but also silences them from questioning a system that should be designed to support them.*" – Respondent FS

Subtheme 1.4. Economic Exploitation

"*The inflated cost of formula places an unbearable financial burden on mothers who rely on child grants. These grants are already limited, and spending a significant portion on overpriced formula leaves little for other essential needs, forcing families into deeper economic hardship.*" – Respondent L1

"*Mothers are trapped in a cycle of economic exploitation where the high cost of formula consumes their meager resources. This not only undermines the purpose of child grants but also forces them to make impossible choices between feeding their children and meeting other basic necessities.*" – Respondent GT1

Subtheme 1.5. Promotion of Formula Feeding Over Breastfeeding

"*Despite policies advocating breastfeeding as the optimal choice, clinics continue to prioritize formula feeding during educational sessions. This practice not only contradicts public health guidelines but also undermines mothers' confidence in their ability to breastfeed successfully.*" – Respondent GI1

"*The emphasis on formula feeding in clinic settings sends a mixed message to mothers, making it harder for them to embrace breastfeeding as the natural and healthier option. Such promotion disregards the long-term benefits of breastfeeding and perpetuates reliance on costly alternatives.*" – Respondent L3

Subtheme 1.6. Lack of Accountability

"*When reports of corruption and mismanagement are met with threats instead of action, it reveals a system that prioritizes silencing whistleblowers over addressing the root problems. This lack of accountability perpetuates a culture of impunity and leaves vulnerable communities without recourse.*" – Respondent ECV

"*The failure to act on reports of corruption, coupled with the intimidation of those who speak out, highlights systemic oversight deficiencies. Instead of fostering transparency and solutions, the system seems designed to protect wrongdoers and discourage accountability.*" – Respondent GI2

The subthemes reveal significant challenges and systemic issues on infant formula availability and distribution. Ching et al. (2021) explains that inconsistent availability causes stress and uncertainty for mothers. Corruption and exploitation are explained that in the distribution channels, government-provided formula is sold at inflated prices through informal networks. This practice undermine public welfare programs. Mothers face threats and coercion, being forced to buy formula from specific sources under the threat of losing child grants, which erodes their autonomy. Economic exploitation occurs as the high cost of formula burdens families financially, forcing them to make difficult choices between feeding their children and other necessities. The promotion of formula feeding over breastfeeding contradicts health guidelines and undermines mothers' confidence in breastfeeding. Lastly, a lack of accountability allows corruption to persist, as reports are met with threats rather than action, perpetuating impunity and leaving communities without recourse.

The second theme that emerged is:

Theme 2: The Financial Burden of Commercial Infant Formula

The narratives giving rise to the theme are:

"Formula costs are overwhelming, and there's no way out. They say formulas are essential for our babies' health, but the prices keep soaring much higher than we can afford. If we try to budget using the child grant, it does not cover the formula expense. Other necessities for our children! The pressure to buy the most expensive brands, marketed as being 'closest to breastmilk,' makes us feel guilty if we choose cheaper options. It's heartbreaking to feel like you're failing your child because you can't afford what's advertised as the best." – Respondent ECT

"Formula prices dwarf our household spending. I tried breastfeeding, but due to piece job demands, I changed to formula. Marketing makes you believe that only premium brands are suitable for your baby, so you stretch to buy them. Clinics and hospitals don't provide free formulas anymore, and even when they do, it's limited and inconsistent. The financial strain is unbearable, especially when you know formula companies profit from exploiting our fears and hopes as mothers." – Respondent GT1

"*In my community, formula milk is luxury. Shops sell it at overblown prices, we have no choice but to buy it. though h government programs say they supply free formulas, but we rarely see it at clinics or hospitals. Instead, we're directed to spaza shops where prices are higher than normal retail stores. It is a trap. The money we spend on formula leaves us with nothing for food or other essentials.*" – Respondent GT2

"*We mothers go into debt just to afford formula milk for our babies. We are forced to borrow money and reduce on food for ourselves just to buy formula. Marketing plays on our emotions, it makes us believe if we don't buy the expensive brands, we're neglecting our children. Something so basic and essential comes with such a heavy financial burden.*" – Respondent L3

These narratives collectively indicate that the cost of infant formulas is a major burden for many families. This is echoed by Saavedra (2022), stating that this factual mainly as prices often exceed what the mothers can afford. Respondents continue to express their frustration that despite the basic nature of formulas for the babies' health, the financial strain is overwhelming. Marketing strategies that emphasize premium brands as being "closest to breastmilk" create guilt and pressure to purchase expensive options. Lacking consistent access to free or subsidized formulas through government programs or healthcare facilities worsens the issue. It compels families to depend on high-priced retail options. This causes difficult financial decisions. Dabrowski et al. (2025) explains that mothers go into debt or reduce household expenses on food and other necessities. This highlights the exploitative nature of the formula industry that profits from parental fears and hopes.

Subtheme 2.1. High Cost of Formula Relative to Household Income

"*Infant formula is a significant expense for many families, particularly those with limited financial resources. The cost can be so high that it forces families to make difficult choices between paying for formula and other essential needs like food or education, sometimes even leading to debt.*" – Respondent ECT

"*The expense of infant formula is overwhelming for low-income families. It consumes a substantial portion of their income, leaving them with little choice but to sacrifice other vital expenses or go into debt just to ensure their children are fed.*" – Respondent L2

Subtheme 2.2. Health-Related Costs Associated with Formula Feeding

"*Infant formula is a significant expense for many families, particularly those with limited financial resources. The cost can be so high that it forces families to make difficult choices between paying for formula and other essential needs like food or education, sometimes even leading to debt.*" – Respondent ECT

"*The expense of infant formula is overwhelming for low-income families. It consumes a substantial portion of their income, leaving them with little choice but to sacrifice other vital expenses or go into debt just to ensure their children are fed.*" – Respondent L2

Subtheme 2.3. Exploitation Through Inflated Prices

"*The commercial formula is often sold at significantly higher prices, especially in informal markets. This not only burdens families financially but also limits their ability to afford essential items, further exacerbating their economic struggles.*" – Respondent ECR

"*The inflated prices of commercial formula in informal markets are particularly concerning. Families who are already struggling to make ends meet are forced to pay more for a necessity, which can have severe financial implications and undermine their overall well-being.*" – Respondent L1

Subtheme 2.4. Pressure from Marketing and Social Expectations

"*The aggressive marketing strategies employed by formula companies can be quite persuasive, often creating a psychological pressure on parents to opt for premium brands. These brands are frequently perceived as being better for infant health, even if they are not affordable, leading to financial strain on families.*" – Respondent L3

"*Formula companies' marketing campaigns are incredibly influential, often instilling in parents a belief that premium brands are essential for their baby's health. This perception can lead to significant financial pressure, as parents feel compelled to purchase these products, even if they are beyond their budget, due to the perceived benefits for their child's well-being.*" – Respondent GT1

Subtheme 2.5. Impact on Government Assistance Programs

"*Families who depend on child grants or subsidies often find themselves in a difficult situation. The funds provided are frequently insufficient to cover the high costs of infant formula, leaving many families struggling to meet this essential need. Furthermore, issues of corruption and mismanagement within the distribution systems can exacerbate these challenges, making it even harder for families to access the formula they need.*" – Respondent ECV

"*The reliance on government subsidies for infant formula can be precarious. Not only are the allocated funds often inadequate to cover the rising costs of formula, but the distribution systems are sometimes plagued by corruption and inefficiencies. This combination of factors can severely limit access to formula for families who need it most, highlighting the need for more effective and transparent management of these assistance programs.*" – Respondent GT2

Subtheme 2.6. Opportunity Costs

"*The financial burden of purchasing infant formula can have significant opportunity costs for families. The money spent on formula could be redirected towards more sustainable investments, such as education or nutritious food for the entire family. This diversion of resources can impact long-term well-being, as families might have to forgo other essential services or opportunities that could benefit them in the future.*" – Respondent FS

"*The high cost of infant formula presents a difficult trade-off for many families. Instead of investing in formula, families could be using those resources to enhance their overall quality of life. For instance, they could allocate funds towards better nutrition for all*

family members, educational opportunities, or other social services that contribute to long-term health and well-being. This highlights the broader societal implications of the financial strain caused by formula costs." – Respondent GT1

These narratives expose the financial burden of infant formulas as significant challenges for many families. particularly those with limited financial resources. Saran et al. (2025) explain that the high expense lead families to make difficult decisions between purchasing formulas and other essential needs like food or education, sometimes leading to debt. This affects low-income families, as the expense consumes a substantial portion of their income. It leaves little disposable money for other vital expenses. Moreover, inflated prices in informal markets intensify financial struggles. On the other hand, aggressive marketing strategies by formula companies create psychological pressure to opt for premium brands, further straining family budgets. Families relying on government assistance often face insufficient funds and corruption issues, limiting access to formula. The financial burden also results in opportunity costs, as resources spent on formula could be invested in education, nutritious food, or other services that enhance long-term well-being. The cost of infant formulas has extreme financial and societal implications. According to Groß et al. (2025), this affects individual families and broader community health and economic stability.

The third theme that emerged is:

Theme 3: Critiques of Formula-Centric Advice

This is supported by the following subthemes and their narratives below:

Subtheme 3.1. Economic Unsustainability

"*The clinics prescribe formula feeding and disregard our financial muscle. They direct us to the most expensive brands, alleging they are best for our babies, but offer neither alternative nor support for those who don't afford. They push us into debt and is economically not sustainable.*" – Respondent ECR

Subtheme 3.2. Nutritional Gaps

"*On feeding our babies, the nurses stress the importance of formula but do not discuss its nutritional gaps. They do not tell how formula lacks the antibodies and immune benefits of breast milk. Only when our babies get sick regularly, we get to know. The formula-centric advice overlooks these nutritional gaps. They give us a false sense of security about our babies' health.*" – Respondent GI2

Subtheme 3.3. Logistical Challenges

"*Depending on formula comes with huge logistical challenges as water is scarce where we live, and it is a challenge to prepare formula. The clinics provide no guidance on managing these challenges. It is frustrating as they act like there are no issues. Moreover, the formula often expires quickly, but we can't waste it. Also, we also can't afford to buy more when it runs out. It's a vicious cycle. Formula feeding is practically impossible for us.*" – Respondent L1

Subtheme 3.4. Breastfeeding Challenges

"*I tried breastfeeding, but the healthcare providers' advice misled me. I had no support or resources to bypass normal breastfeeding challenges like latching issues or nipple soreness. They immediately suggested I use formula. This lack of support for breastfeeding forces mothers to stop. The system is designed to promote formula.*" – (Respondent L1

Critiques of formula-centric guidance in healthcare settings emphasize some issues. One issue is economic unsustainability when clinics recommend expensive formula brands without offering alternatives or support for those who cannot afford them. Gilly et al. (2025) informs that this leads to financial strain. There are also nutritional gaps in formula feeding that healthcare providers often overlook. The gaps include lack of antibodies and immune benefits found in breast milk. Baker et al. (2016) warns that this can lead to frequent illnesses in babies. There are also logistical challenges, mainly in areas where water is scarce. Preparing formula can be difficult. Managing expired supplies is another serous issue. Breastfeeding challenges are worsened due to lack of support from healthcare providers. These healthcare providers keep suggesting formula but they do not address

normal breastfeeding issues such as latching problems or nipple soreness. This discourages mothers from continuing to breastfeed.

Theme 4. Psychological Impacts of Feeding Pressures

> *"As a mother, I often feel judged for supplementing my baby's feeding with porridge. Healthcare providers and even peers make me feel like I'm doing something wrong. This judgment isolates me, leaving me with feelings of inadequacy and loneliness. On top of that, the tension between my family's traditional feeding practices and modern medical advice adds to my emotional distress. It's confusing to navigate these conflicting perspectives while trying to make the best feeding decisions for my child."* – Respondent ECR

> *"The pressure to exclusively breastfeed or afford formula is overwhelming. When I can't meet these expectations, guilt and anxiety consume me. Society's expectations make it worse, and financial stress adds another layer to this struggle. Sometimes, I feel like these challenges are so intense that I might need mental health support just to cope."* – Respondent F

The psychological impacts of feeding pressures have the profound emotional toll of navigating societal, familial, and healthcare expectations around infant feeding. Respondent ECR describes feeling judged and isolated for supplementing her baby's diet with porridge, which clashes with both traditional practices and modern medical advice, leading to confusion and emotional distress. This experience underscores how societal judgment can erode maternal confidence and contribute to feelings of inadequacy. Similarly, Respondent F reveals the overwhelming pressure to exclusively breastfeed or afford formula, which exacerbates guilt, anxiety, and financial stress. These challenges are compounded by societal expectations and the lack of adequate support systems, sometimes necessitating mental health intervention. Both narratives reflect broader findings that perceived feeding pressures—whether to breastfeed or adopt alternative practices—can lead to significant mental health struggles such as anxiety, depression, and feelings of failure due to the lack of autonomy and conflicting advice from healthcare providers and peers

Subtheme 4.1. Guilt and Anxiety Due to Financial Constraints

> "*The struggle to afford formula or maintain exclusive breastfeeding weighs heavily on mothers, filling them with guilt and anxiety about their ability to provide for their children's basic needs.*" – Respondent ECV

> "*Financial stress compounds the emotional burden on mothers, making it increasingly difficult for them to cope with the guilt and anxiety that comes with not being able to provide the best for their children.*" – Respondent L3

Subtheme 4.2. Social Stigma and Judgment

> "*Mothers who opt for traditional feeding methods, like porridge supplementation, often face criticism from healthcare providers and peers, which can be discouraging and undermine their confidence in their parenting choices.*" – Respondent ECT

> "*The stigma associated with using traditional feeding practices can leave mothers feeling inadequate and isolated. This judgment not only affects their self-esteem but also isolates them from support networks, exacerbating feelings of loneliness.*" – Respondent FS

Subtheme 4.3. Intergenerational Tension and Conflict

> "*The clash between modern medical advice and traditional feeding practices passed down through generations creates a sense of dissonance. This contradiction often leaves mothers uncertain about which approach to follow, highlighting the tension between old and new.*" – Respondent GI1

> "*When modern medical advice conflicts with family traditions, it can lead to tension and emotional distress for mothers. This intergenerational conflict not only complicates decision-making but also strains relationships within the family, causing confusion and stress in choosing the best feeding options for their children.*" – Respondent L1

Subtheme 4.4. Impact on Mental Health and Confidence

"*The psychological pressures that mothers face in feeding their children can have a profound impact on their mental health, eroding their confidence and creating self-doubt about their ability to provide adequate care.*" – Respondent ECR

"*The cumulative stress and challenges faced by mothers in feeding their children can necessitate mental health support. Without access to such resources, these mothers may struggle to cope with the emotional toll of these pressures, further compromising their well-being and parenting confidence.*" – Respondent GT2

The collective narratives explain that mothers experience major emotional challenges related to feeding their children. There are financial constraints regularly causing feelings of guilt and anxiety. Horwood et al. (2022) concur that it is difficult for many mothers in low-income families to afford formulas or maintain exclusive breastfeeding. This worsens their emotional burden. In addition, Grant et al. (2024) points as social stigma and judgment from healthcare providers and peers that can discourage mothers who opt for traditional feeding methods. This stigma leaves mothers feeling inadequate and isolated. Intergenerational tension arises when modern medical advice conflicts with traditional practices, causing uncertainty and emotional distress. Ultimately, these pressures can profoundly impact on mothers' mental health, eroding their confidence and creating self-doubt about their ability to provide adequate care. Without access to mental health support, these challenges can further compromise their well-being and parenting confidence.

Theme 5: Resilience Through Indigenous Knowledge Systems (IKS

Subtheme 5.1. Cultural Wisdom and Adaptive Strategies

"*My grandmother taught me to prepare porridge using sorghum and maize, emphasizing its nutritional value and accessibility during times of scarcity. In our village, exclusive breastfeeding was paired with porridge made from grains we grew ourselves. It was a way to ensure that no child went hungry, even when food was limited.*" – Elder N

"*We crushed beans and peanuts, thinly, mixed with liquid porridge, one that was so liquid it could not choke a baby. We practice these not for survival but to promote community bonds. Women assembled to exchange recipes and advice.*" – Elder S

Subtheme 5.2. Cost-Effectiveness and Sustainability

"*There was financial relief from homemade porridge to feed our infants. We had no money for expensive formulas. With sorghum and maize being gifts from the land, we prepared porridge at home and save money while feeding our children well.*" – Elder S

"*We could not be poor because we appreciated what we had and used natural resources, not the expensive non-nutritious formula from your shops. The simplicity of our practices allowed families to thrive even in tough economic times.*" – Elder M

Subtheme 5.3. Holistic Knowledge Systems

"*Our traditional knowledge* [education] *combined agriculture, health, and spirituality. We believed the grains we harvested carried blessings from our ancestors. So, feeding children with these grains was more than nutrition. We viewed it as a spiritual act.*" – Elder N

"*Intergenerational learning was so important, it never failed us. My mother taught me how to complement breastfeeding using herbs and grains. This knowledge kept our community strong.*" – Elder M

Subtheme 5.4. Challenges and Refinement

"*We need to improve traditional practices. Back in the days we thought porridge alone was enough, but now we know adding beans or vegetables make it healthier and tastier for the children.*" – Elder S

"*I adapted recipes over time. At some point I learned about protein-rich legumes. From then I mixed them into the porridge. I think it is important to evolve* [improve] *while holding onto what works well.*" – Elder N

Subtheme 5.5. Decolonization and Knowledge Transmission

> "*Colonization impacted breastfeeding traditions profoundly. We lost many of our customs when outsiders told us their ways were better. We are now repossessing what belongs to us. I teach you younger generations, I tell my daughters that breastfeeding is not just feeding your baby. It is forming a bond with your child, you are connecting with you baby. Most importantly, it is honouring your heritage.*" – Elder M

The theme highlights the enduring wisdom and adaptive strategies embedded in cultural practices that have sustained communities through challenges. Narratives jointly highlight the nutritional and communal value of traditional recipes, citing porridge made from sorghum and maize. These ensure food security and promote social bonds through shared knowledge (Iannuzzi et al., 2025). The subthemes also underscore the cost-effectiveness and sustainability of using locally sourced grains. Wolf and Tomasello (2025) view this as decreasing reliance on expensive formulas while promoting financial resilience. There is a holistic integration of agriculture, health, and spirituality in indigenous practices. Hudson (2021) likens this feeding of children with ancestral grains as both a nourishing and spiritual act passed down through generations. He welcomes the implied need for refinement of traditional methods by incorporating modern insights, such as adding protein-rich legumes to enhance nutritional value. They decry the impact of colonization on indigenous breastfeeding traditions and support the ongoing efforts to reclaim and transmit this heritage to younger generations. Wiliyanarti et al. (2025) highlight breastfeeding as a sacred act to honour both the child and ancestral wisdom. These subthemes illustrate how IKS promote resilience, sustainability, and cultural identity in the face of evolving challenges.

DISCUSSION OF FINDINGS/THEMES

Theme 1: Systemic barriers and corruption in accessing infant formula and support for infant feeding

This theme clarifies that systemic barriers and corruption significantly hinder access to infant formula and support for infant feeding, as evidenced by respondents' narratives. Seabela et al. (2023) concurs that barriers exist about child feeding. Unreliable availability of formulas creates stress for mothers, who report receiving formulas during pregnancy but facing stock shortages postpartum (Respondent L2). Corruption worsens the issue, with healthcare workers allegedly selling government-provided formulas at inflated prices through informal channels like *spaza* shops (Respondents ECV, GI1). Mothers are coerced and threatened by officials, including the potential loss of child grants, if they do not purchase prescribed formulas (Respondents ECV, FS). Economic abuse further compounds the problem, as inflated formula costs stretch the limited resources of grant recipients (Respondent FS). Clinics often promote formula feeding over breastfeeding during education sessions, contradicting policies advocating breastfeeding as optimal for infant health (Respondent GI1; Department of Health, 2023; Vitalis et al., 2022).

Theme 2: The Financial Burden of Commercial Infant Formula

The theme shows that the financial burden of infant formulas is a critical issue. It highlights the severe economic challenges that families experience. Respondents decry the high cost of formula relative to household income that drag them into debt or sacrifice essential needs like food and education (Respondent L3; Hejase & Hejase, 2025). Marketing strategies worsen this burden by promoting premium brands as superior, creating guilt and pressure among mothers who cannot afford them (Respondents ECT, GT1). Limited government-provided formula supplies cause purchase of formula at high prices in informal markets, straining their finances more (Respondents GT2, GT1). This financial exploitation is compounded by health-related costs due to increased illness risks in formula-fed infants compared to breastfed ones (Ching et al., 2025). In addition, child grants and subsidies are insufficient to cover these expenses, leaving families trapped in a cycle of economic hardship (Respondent GT2; Poco et al., 2025). The opportunity costs are significant, as money spent on formula could otherwise support broader family well-being and long-term investments. Pervane and Ulukol (2025) indicate that hospitals tend to recommend formula brands such as Alula Gold (R509.99 for 1.8kg), Nestle Nan Protect (R509.99 for 1.8kg), and Similac Gold Comfort (R364.99 for 820g). These are prices observed in the trusted shopping outlets and supermarkets such as Checkers (including Hyper) Dischem, Makro, Pick 'n Pay, and Woolworths. At the March to April 2025 prices, a single 1.8kg tin of milk formula costs up to 145% of the monthly R350 child support grant that the South African government offers. This is despite the 1.8kg formula lasting less than two weeks for a typical infant (Yang et al., 2024). For caregivers relying on this grant, formula expenses alone exceed their income, leaving insufficient funds for diapers, clothing, and winter essentials (e.g., blankets cost ~R150–R200 in low-cost shops).

Theme 3: Critiques of Formula-Centric Advice

The theme points out systemic issues surrounding formula feeding. It insinuates its economic and practical unsustainability. Clinics impose expensive formula brands without considering families' financial restraints, pushing them into debt (Respondent ECR). Doherty et al. (2022) decry that this economic load is deepened by the lack of transparency on formula's nutritional gaps. For example, formula does not offer antibodies and immune benefits of breastmilk, leading to a false sense of security until health issues emerge (Respondent GI2). Logistical challenges also exist. The limited access to clean water and the quick expiration of formula frustrate formula feeding, and no guidance provided by clinics to address these hurdles (Respondent L1). Moreover, challenges of breastfeeding are worsened by deficient support from healthcare providers, despite it being them promoting formula as an immediate solution. They do not address common breastfeeding difficulties such as latching or soreness (Respondent L1). Despite the economic, nutritional, and logistical drawbacks pointed out, the systemic failures reflect a broader trend of prioritizing formula feeding (Wood et al., 2025). The three main drawbacks of feeding children with formulas are lack of sustainability for most of the mothers in low-income families, as well as poor nutrition and challenges in logistics of the availability of these formulas in rural and informal settlements, among others, where most babies seem to be found.

- ***Economic Unsustainability*:** The critique of this aspect follows mathematical logic. The monthly grant of R350 translates to R4200 annual grant (since 350 times 12 = 4200). Mathematically, considering the average R450 for a 1.8kg formula, two such formula to cover almost one month (i.e. four weeks) becomes R900. Annually this is a massive R10 800 which dwarfs the annual R4200. The required annual cost of formula exceeds the earning by over 257%.
- ***Nutritional Gaps*:** Matera et al. (2025) inform that formula lacks antibodies and dynamic composition that are unique to breast milk. Therefore, feeding children with formulas increases the risk of babies' susceptibility to infections.
- ***Logistical Challenges*:** Rural areas such as those in Madibeng subdistrict in North-West Province, Krwakrwa village in the Eastern Cape, and others, struggle with water, refrigerator and others, may lack clean water, refrigerator and transport useful is formula preparation. Tulelo and Mulaudzi (2021) safe preparation requires clean water and refrigeration, and consistent supply. They identify resources that are scarce in rural areas and informal settlements such as water and refrigerators.
- ***Breastfeeding Challenges*:** Among the risks of breastfeeding, one relates to mother producing limited or no milk to feed the baby (Vandenplas, 2022). This makes breastfeeding inadequate or impossible and gives way for the formula option to feed the baby.

Theme 4. Psychological Impacts of Feeding Pressures

According to this theme, mothers piloting infant feeding advice face significant psychological challenges, including guilt, anxiety, social stigma, and intergenerational tension. Garrett et al. (2025) concur that it may even reach where these mothers require mental health support. The inability to afford formula or exclusively breastfeed leads to deep-seated guilt and anxiety, exacerbated by societal expectations and financial stress (Respondent F). Valadares et al. (2020) explain that social stigma further detaches mothers using traditional feeding practices, such as porridge supplementation. These mothers are judged by healthcare providers and peers. It could lead to feelings of inadequacy and loneliness (Respondent ECR). Furthermore, intergenerational conflicts occur when modern medical advice contradicts traditional practices passed down through generations. It causes tension between mothers and their family members. It then causes emotional distress and confusion in making feeding decisions (Respondent ECR). These psychological pressures affect mothers' mental health and undermine their confidence in caring for their children. In closing, Tulelo and Mulaudzi (2021) view guilt and anxiety, social stigma, and intergenerational tension tending to emerge as psychological challenges due to pressure to feed using formula.

Theme 5: Resilience Through Indigenous Knowledge Systems (IKS

The theme highlights the multifaceted role of traditional practices in encouraging community resilience. Elders N and S highlight the cultural understanding and adaptive strategies implanted in traditional food preparation methods. These include using sorghum and maize porridge to ensure nutritional security during scarcity, which also promotes community bonds through shared recipes and advice (Peveri, 2021). Elders S and M underscore the cost-effectiveness and sustainability of these practices, as they point out that homemade porridge offers financial relief. It circumvents expensive formulas to enable families to succeed economically. IKS integrates agriculture, health, and spirituality believing that grains carry ancestral blessings (Tegegne et al., 2025). This makes feeding children a spiritual act. However, elders indicate that these systems also evolve. They express the need to include modern nutritional insights to refine traditional practices. Finally, the effect of

colonization on breastfeeding traditions warrants the importance of decolonization and knowledge transmission. Elders could reclaim and teach younger generations about the cultural significance of breastfeeding and traditional practices to preserve the indigenous heritage.

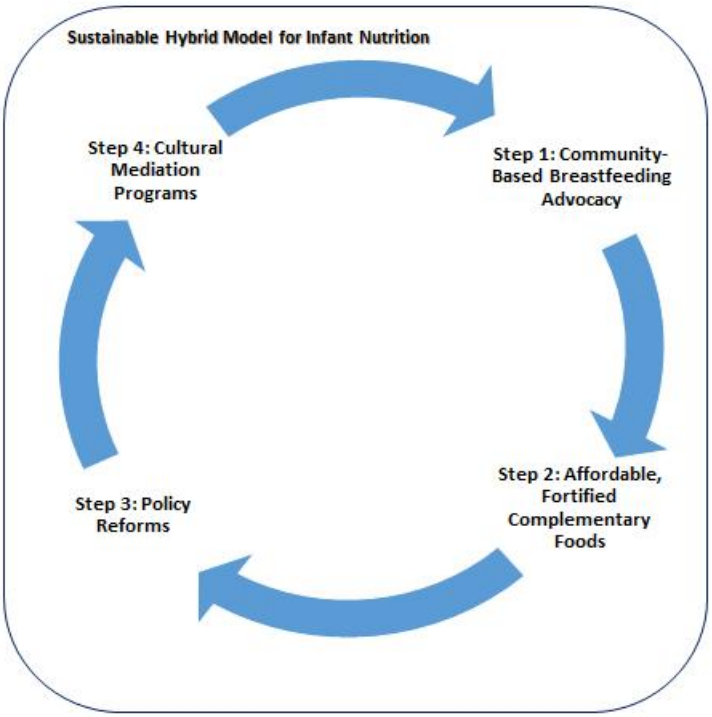
During insufficiency, IKS promises resilience to aid poor mothers to sustain feeding their babies. IKS are the complex, holistic body of knowledge, practices, and beliefs that the indigenous communities developed and sustained over generations through direct interaction with their environment (Hay, 2025; Moitra & Madan, 2025). IKS knowledge is intensely embedded in cultural, social, and ecological contexts (Pimprikar et al., 2023). It is passed down orally or through communal practices. It encompasses areas such as agriculture, medicine, environmental management, spirituality, governance, and traditional arts. Tulelo and Mulaudzi (2021) cite examples of traditional practices occurring in regions such as Vhembe District in the Limpopo Province of South Africa that emphasize exclusive breastfeeding and supplementary porridge made from locally available grains (e.g., sorghum or maize) While early porridge introduction contradicts World Health Organization (WHO, 2020; 2023) guidelines, these practices reflect adaptive strategies to offset food shortage, benefit from cultural wisdom and reduce costs formulas. Garutsa and Nekhwevha (2018) explain that mitigation of food insecurity occurs as porridge stays longer in the baby's body and extends limited milk supplies. The system leverages cultural wisdom as elders guide feeding rituals that strengthen communal bonds (Skukla, 2024). There is also cost reduction because homemade porridge is much cheaper than formula purchased from retailers. Motsumi and Nemakonde (2025), however, warn that these methods need to be refined to align with contemporary nutritional standards in which porridge is supplemented with protein-rich legumes or vegetables.

A SUSTAINABLE HYBRID MODEL FOR INFANT NUTRITION

Sustainable Hybrid Model for Infant Nutrition

- **Goal**

To improve infant feeding practices and nutritional outcomes through a culturally aligned, economically accessible, and policy-supported approach.



Step 1: Community-Based Breastfeeding Advocacy

Peer Counselor Program

- ***Recruitment & Training:*** This may be by identifying respected mothers and grandmothers as peer counselors, combining scientific lactation knowledge with indigenous caregiving norms such as storytelling and communal caregiving.
- ***Support Circles:*** An establishment of neighbourhood "mother circles" for group support and knowledge-sharing may be done.

Workplace Lactation Support

- ***Policy Development:*** An idea is to promote lactation breaks, breastfeeding rooms, and flexible work hours.
- ***Employer Engagement:*** A case to offer incentives to businesses that adopt breastfeeding-friendly policies.
- ***Integration with Labour Laws:*** A need to collaborate with labor departments to standardize protections for breastfeeding mothers.

Step 2: Affordable, Fortified Complementary Foods

Local, Fortified Foods

- ***Product Development:*** Porridge blends should be designed using local superfoods such as moringa and millet tailored to infants' nutritional needs.
- ***Clinical Distribution:*** Fortified foods should be distributed using healthcare centres, supported by demonstrations from nutritionists or peer counselors.

Agricultural Economic Partnerships

- ***Farmer Co-Ops*:** Cooperatives should be formed with smallholder farmers to grow subsidized ingredients.
- ***Capacity Building*:** Farmers should be trained in organic nutrient-rich crop production.
- ***Subsidization Scheme*:** Government or NGO-led initiatives should be implemented to ensure affordability.

Step 3: Policy Reforms

Child Support Enhancements

- ***Grant Increase:*** Child grants should be raised to a reasonably high amount per month, linked to inflation and formula prices.
- ***Cash-Plus Approach:*** Cash transfers should be paired with nutrition education and feeding support services.

Formula Pricing & Marketing Controls

- ***Regulation:*** Formula prices should be capped and penalize unethical marketing.
- ***Ethical Oversight:*** Formula promotions in public health spaces should be banned.
- ***Enforcement Mechanism:*** Independent monitoring bodies should be established in relation to health departments.

Step 4: Cultural Mediation Programs

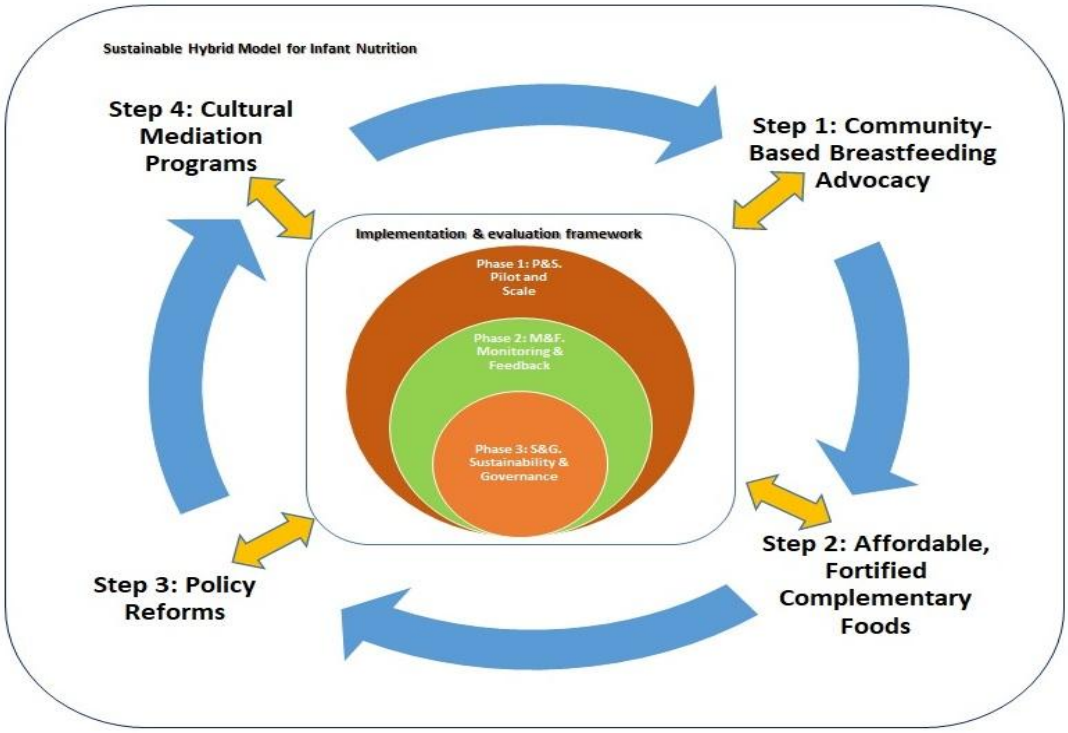
Healthcare-Traditional Leader Dialogue Forums

- ***Bi-Directional Learning:*** Sessions should be facilitated where healthcare workers learn indigenous beliefs.
- ***Consensus Building:*** Community-endorsed feeding practices should be developed by merging traditional and scientific knowledge.

Cultural Integration in Health Messaging

- ***Localization of Content:*** Health messages in indigenous languages should be created using traditional symbols and storytelling.
- ***Trusted Messengers:*** Elders should be engaged together with cultural custodians in public health campaigns.

IMPLEMENTATION & EVALUATION FRAMEWORK



Phase 1: P&S. Pilot and Scale

- Start with pilot programs in diverse regions to refine culturally responsive components.
- Scale successful elements nationally with localized adaptations.

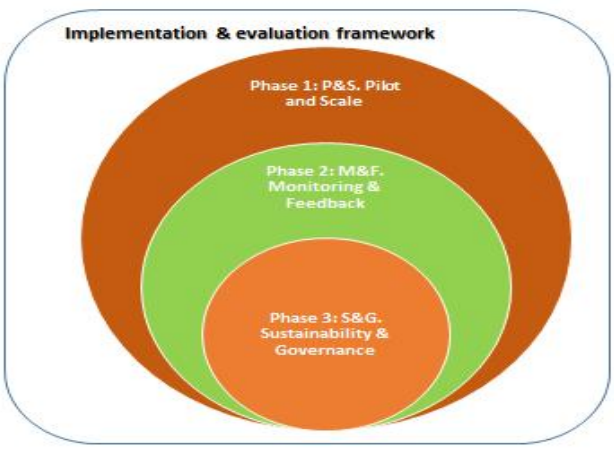
Phase 2: M&F. Monitoring & Feedback

- Include community feedback loops to adjust interventions continuously.
- Use mixed-method evaluations (quantitative outcomes + qualitative insights).

Phase 3: S&G. Sustainability & Governance

- Embed the model within existing health and social development systems.
- Foster public-private partnerships and community ownership to reduce donor dependence.

Therefore, the adopted Model: combination of goal(s) in steps and implementation in phases…….to introduce the model below



CONCLUSION

This study concludes that infant feeding challenges are multifaceted. They entail systemic, economic, nutritional, logistical, and psychological barriers that radically impact mothers' ability to provide optimal nutrition for their infants. Systemic barriers and corruption hinder access to infant formula and feeding support. Mothers experience stock shortages, economic exploitation, and coercion. The financial burden of infant formula causes severe economic strain on families, especially those reliant on government grants. Marketing strategies intensify guilt and pressure among mothers. Formula-centric infant feeding causes economic unsustainability, nutritional gaps, and logistical challenges. This applies more in disadvantaged communities where healthcare providers do not even support breastfeeding. Moreover, feeding pressures cause significant psychological distress among mothers, such as guilt, anxiety, stigma, and intergenerational tension. They dent maternal mental health and confidence. Addressing these barriers requires a holistic approach that integrates policy changes, healthcare reforms, community support systems, and education initiatives to ensure the health and well-being of infants and their families. Insisting on commercial formula as a standard disregards the socioeconomic realities of South Africa's most vulnerable families. Thus, mothers can nurture infants without sacrificing financial stability by imploring indigenous knowledge, advocating for policy changes, and creating low-cost nutritional alternatives. This model offers a critical shift from 'one-size-fits-all' healthcare advice and prioritizes dignity, cultural relevance, and sustainability.

Implications for Practice

The findings of this study have significant implications for healthcare providers, policymakers, and community leaders seeking to improve infant nutrition outcomes in South Africa. Moreover, it converts the developed model to a white box to allow full transparency and accessibility to their internal workings, enabling users to inspect, understand, and analyze the processes or logic behind their outputs (Şahin et al., 2025). That is, this section attempts to make the model actionable. It points at role players: *healthcare providers, policymakers,* and *community leaders*. It also proposes *areas of future research* to continue improving the infant feeding situation. The section therefore, sheds light on how the different role players could act to relieve mothers of the formula-centric infant feeding.

Healthcare Providers

The section covers cultural sensitivity in counselling, community engagement and support for breastfeeding.

- ***Culturally Sensitive Counseling:*** Healthcare providers need to receive training to offer culturally sensitive feeding advice that accepts both modern recommendations and traditional practices and recognizes the value of breastfeeding and supplementary porridge in resource-constrained settings.
- ***Community Engagement:*** Ther should be engagement with local elders to develop culturally suitable feeding guidelines that respect and embrace indigenous knowledge systems.
- ***Support for Breastfeeding:*** For inclusivity, workplace policies that support breastfeeding mothers should be implemented, such as lactation rooms and flexible work schedules to facilitate exclusive breastfeeding for those who choose it.

Policymakers

Aspects of importance for policymakers and are possible from their authority are *grant reform*, *price regulation* and *nutrition education*. They are discussed briefly.

- ***Grant Reform:*** The monthly Child Support Grant of R300 should be increased to align reasonably with the costs of formula and other essential baby supplies.
- ***Price Regulation:*** There should be price controls on infant formulas to prevent exploitation by manufacturers and retailers.
- ***Nutrition Education:*** There should be public health campaigns that promote affordable, nutritious complementary foods, such as fortified porridge, alongside breastfeeding.

Community Leaders

The issue of community leaders fits properly within the consultation of people in IKS for dealing with people. The section covers *community-based programs, nutrition workshops,* and *cultural preservation.*

- ***Community-Based Programs:*** Programs based in the communities should be established to provide support, peer counseling and lactation support for breastfeeding mothers.
- ***Nutrition Workshops:*** Workshops about preparing nutritious, affordable complementary foods that use local ingredients should be organized to educate mothers/caregivers.

- ***Cultural Preservation:*** The documentation and preservation of indigenous knowledge on infant care and nutrition, which integrates these practices into community health initiatives should be encouraged and nurtured.

FUTURE RESEARCH DIRECTIONS

Appropriate monitoring and evaluation to inform progress on intervention requires a long-term perspective, to determine sustainability and value for money. This section proposes longitudinal studies and economic impact analysis.

- ***Longitudinal Studies:*** This study proposes conducting longitudinal studies to assess the long-term health outcomes of infants who feed using hybrid models that combine breastfeeding with culturally appropriate complementary foods.
- ***Economic Impact Analysis:*** Other studies that should be conducted are comprehensive economic analyses to evaluate the cost-effectiveness of different feeding strategies for low-income families.

REFERENCES

Baker, P., Smith, J., Salmon, L., Friel, S., Kent, G., Iellamo, A., Dadhich, J. P., & Renfrew, M. J. (2016). Global trends and patterns of commercial milk-based formula sales: is an unprecedented infant and young child feeding transition underway? *Public Health Nutrition*, *19*(14), 2540-2550. https://doi.org/10.1111/mcn.13097

Ching, C., Zambrano, P., Nguyen, T. T., Tharaney, M., Zafimanjaka, M. G., & Mathisen, R. (2021). Old tricks, new opportunities: how companies violate the international code of Marketing of Breast-Milk Substitutes and Undermine Maternal and child health during the COVID-19 pandemic. *International Journal of Environmental Research and Public Health*, *18*(5), 2381. https://doi.org/10.3390/ijerph18052381

Dabrowski, V., Atas, N., Ramsey, T., & Howarth, N. (2025). 'Money anxiety': Understanding HE students' experiences of the cost-of-living crisis. *Social Policy & Administration*, *59*(2), 280-292. https://doi.org/10.1111/spol.13048

Department of Health. (2023). *Infant and young child feeding policy*. South African Government Printers.

Doherty, T., Pereira-Kotze, C. J., Luthuli, S., Haskins, L., Kingston, G., Dlamini-Nqeketo, S., Tshitaudzi, G., & Horwood, C. (2022). They push their products through me: health professionals' perspectives on and exposure to marketing of commercial milk formula in Cape Town and Johannesburg, South Africa–a qualitative study. *BMJ open*, *12*(4), e055872. http://doi.org/10.1136/bmjopen-2021-055872

Garrett, M. F., Cutrer-Párraga, E. A., Allen, G. K., Young, E. L., Urbina, K. J., & Hull, I. M. (2025). "It would ruin my life": Pacific islander male adolescents' perceptions of mental health help-seeking—An interpretative phenomenological analysis focus group study. *International Journal of Environmental Research and Public Health*, *22*(1), 62. https://doi.org/10.3390/ijerph22010062

Garutsa, T. C., & Nekhwevha, F. H. (2018). Indigenous knowledge, food production and food security in rural Khambashe in the Eastern Cape, South Africa. *South African Review of Sociology*, *49*(3-4), 16-31. https://doi.org/10.1080/21528586.2018.1564692

Gilly, M. C., Celsi, M. F., Dellande, S., Schau, H. J., Nelson, R., & Aradhye, C. M. (2025). Trying not to spend. *Journal of the Academy of Marketing Science*, 1-21. https://doi.org/10.1007/s11747-025-01091-8

Grant, A., McNamara, T., Cooper, J., Dvorak, S., Dolling, A., Ellis, R., McIntyre, C., Jones, S., & Brown, A. (2024). Analysing data with members of a stigmatised community: experiences, reflections and recommendations for best practice from the finding the formula community analysis group. *International Journal of Qualitative Methods*, *23*, 16094069241229983. https://doi.org/10.1177/16094069241229983

Groß, C., & Vriens, D. (2025). Buy! Buy! Buy!—How multilevel marketing companies pressure their participants to buy their products. *Journal of Public Policy & Marketing*, 07439156241301737. https://doi.org/10.1177/0743915624130173

Hay, E. (2025). Towards an indigenous and traditional "pedagogy of repair": an ecological approach to environmental education. *South African Journal of Philosophy*, 1-13. https://doi.org/10.1080/02580136.2025.2462431

Hejase, A. J., & Hejase, H. J. (2025). He who has the cash gets the cure. *Journal of Community Medicine and Public Health Reports*, *6*(01). 6(01): https://doi.org/10.38207/JCMPHR/2025/JAN06010203

Hörnell, A., & Lagström, H. (2024). Infant feeding - a scoping review for Nordic Nutrition Recommendations 2023. *Food & Nutrition Research*, *68*, 10.29219. https://doi.org/10.29219/fnr.v68.10456

Horwood, C., Luthuli, S., Pereira-Kotze, C., Haskins, L., Kingston, G., Dlamini-Nqeketo, S., Tshitaudzi, G., & Doherty, T. (2022). An exploration of pregnant women and mothers' attitudes, perceptions and experiences

of formula feeding and formula marketing, and the factors that influence decision-making about infant feeding in South Africa. *BMC Public Health*, *22*(1), 393. https://doi.org/10.1186/s12889-022-12784-y

Hudson, B. (2021). *Food and Human Evolution: How Ancestral Diets Shaped Our Minds and Bodies*. Algora Publishing.

Iannuzzi, V., Narboux-Nême, N., Lehoczki, A., Levi, G., & Giuliani, C. (2025). Stay social, stay young: a bioanthropological outlook on the processes linking sociality and ageing. *GeroScience*, *47*(1), 721-744. https://doi.org/10.1007/s11357-024-01416-5

Jin, X., Spence, P. R., & Lachlan, K. (2025). What and Where Do I Learn About the Baby Formula Shortage Crisis? Exploring Crisis Communication Patterns, Influencers, and Information Resources. *Communication Studies*, *76*(1), 1-25.

Matera, M. G., Capristo, C., de Novellis, V., & Cazzola, M. (2025). The ongoing challenge of prevention of pertussis in infants: what's new in 2024?. *Expert Review of Anti-infective Therapy*, 1-17 (just-accepted). https://doi.org/10.1080/14787210.2025.2476010

Moitra, P., & Madan, J. (2025). Stakeholder perspectives on integrating Ayurveda and Indian Indigenous Knowledge Systems into higher education: An exploratory study. *Social Sciences & Humanities Open*, *11*, 101453. https://doi.org/10.1016/j.ssaho.2025.101453

Motsumi, M. M., & Nemakonde, L. D. (2025). Coping with COVID-19 using traditional medicine: perspectives from Joe Morolong, Northern Cape. *Health SA Gesondheid (Online)*, *30*, 1-12. https://doi.org/10.4102/hsag.v30i0.27

Pervane, S. Ş., & Ulukol, B. (2025). Maternal recognition of formula food brand logos and its association with breastfeeding. *Breastfeeding Medicine*. Articcle in Press. https://doi.org/10.1089/bfm.2024.0266

Peveri, V. (2021). Flavouring the nation. *Rhetoric and Social Relations: Dialectics of Bonding and Contestation*, *8*, 253. doi.org/10.1515/9781789209785-014

Pimprikar, M., Cunningham, M., Ravan, S., & Lambert, S. (2023). Integrating indigenous knowledge and state-of-the-art Earth observation solutions for the Sendai framework implementation. *Disaster Prevention and Management: An International Journal*, *32*(1), 186-205. https://doi.org/10.1108/DPM-07-2022-0151

Poco, L. C., Andres, E. B., Balasubramanian, I., & Malhotra, C. (2025). Financial difficulties and well-being among caregivers of persons with severe dementia. Aging & Mental Health, 1-10. https://doi.org/10.1080/13607863.2025.2481978

Saavedra, J. M. (2022). The changing landscape of children's diet and nutrition: new threats, new opportunities. *Annals of Nutrition and Metabolism*, *78*(Suppl. 2), 40-50. https://doi.org/10.1159/000524328

Şahin, E., Arslan, N. N., & Özdemir, D. (2025). Unlocking the black box: an in-depth review on interpretability, explainability, and reliability in deep learning. *Neural Computing and Applications*, *37*(2), 859-965. https://doi.org/10.1007/s00521-024-10437-2

Saran, R., Kasar, J., Jha, M., Sahu, J. K., Babu, S. S., & Mutreja, A. (2025). Building blocks of life: improving nutrition and health outcomes through fortification and breastfeeding in the first 1000 days of a child's life. *Frontiers in Nutrition*, *12*, 1517247. https://doi.org/10.3389/fnut.2025.1517247

Seabela, E. S., Modjadji, P., & Mokwena, K. E. (2023). Facilitators and barriers associated with breastfeeding among mothers attending primary healthcare facilities in Mpumalanga, South Africa. *Frontiers in Nutrition*, *10*, 1062817. https://doi.org/10.3389/fnut.2023.1062817

Shukla, A. (2024). Examining the role of intergenerational relations in food systems: evidence from western India. *Progress in Development Studies*, *24*(3), 234-251. https://doi.org/10.1177/14649934231215116

Srinivasan, V., Panchanathan, S., & Jayapal, K. (2025). A Narrative Review of Global Trends and Determinants Influencing Complementary Feeding Practices. *The Journal of Medical Sciences*, *11*(1--4), 1-6.

Tegegne, H. R., Tesfay, T., Hailesilassie, M. B., & Gebreyohaness, S. T. (2025). Indigenous Knowledge and Practices of the Tigray People: How Do Teachers and Students Perceive Its Integration in Science and Mathematics Education?. *Science & Education*, 1-28.

Tulelo, P. M., & Mulaudzi, F. M. (2021). Indigenous neonatal feeding and bathing practices of caregivers in Vhembe District, Limpopo province. *Health SA Gesondheid*, *26*, 1632. https://doi.org/10.4102/hsag.v26i0.1632

Valadares, G., Drummond, A. V., Rangel, C. C., Santos, E., & Apter, G. (2020). Maternal mental health and peripartum depression. *Women's Mental Health: A Clinical and Evidence-Based Guide*, 349-375. https://doi.org/10.1007/978-3-030-29081-8_24

Vandenplas, Y. (2022). Breastfeeding and its risk factors. *Jornal de Pediatria*, *98*(3), 219-220.

Vitalis, D., Witten, C., & Pérez-Escamilla, R. (2022). Gearing up to improve exclusive breastfeeding practices in South Africa. *PLoS One*, *17*(3), e0265012. https://doi.org/10. 1371/journal.pone.0265012

Wiliyanarti, P. F., Choliq, I., Hasanah, U., & Lin, S. Y. (2025). Mother's experiences in caring for children with stunting in rural Indonesia. *Journal of Transcultural Nursing*, *36*(2), 161-167. https://doi.org/10.1177/10436596241274264

Wolf, W., & Tomasello, M. (2025). A shared intentionality account of uniquely human social bonding. *Perspectives on Psychological Science*, *20*(2), 264-275. https://doi.org/10.1177/17456916231201795

Wood, B., Garton, K., Milsom, P., Baker, P., Anastasiou, K., Clark, J., Swinburn, B., & Sacks, G. (2025). Using a systems thinking approach to map the global rise of ultra-processed foods in population diets. *Obesity Reviews*, *26*(4), e13877. https://doi.org/10.1111/obr.13877

World Health Organization (WHO, 2020). United Nations Children's Fund (UNICEF). Protecting, promoting and supporting breastfeeding: The baby-friendly hospital initiative for small, sick and preterm newborns. Geneva: WHO/UNICEF.

World Health Organization. (2023). Infant feeding guidelines: Exclusive breastfeeding and complementary feeding. Retrieved from https://www.who.int/publications/i/item/9789240017470 https://doi.org/10.1016/j.jped.2023.01.00

Yang, J., Tang, Q., & Zhou, P. (2024). Narrative review of methodological advances in human milk fortification: for better preterm infant growth. *Frontiers in Pediatrics*, *12*, 1466528.

