Qualitative Exploration of Health Professionals’ Perceptions of Addressing Malnutrition Within the First 1,000 Days

Marian Joyce Nyarko, MBA, PhD1; Wilma ten Ham-Baloyi, PhD1; Dalena (R. M.) van Rooyen, PhD2

ABSTRACT
Objective: Explore health professionals’ perceptions toward how to address malnutrition within the first 1,000 days of life in underresourced communities.
Design: A qualitative explorative-descriptive study using 8 face-to-face focus group discussions.
Setting: Health facilities serving underresourced communities within Nelson Mandela Bay, Eastern Cape Province, South Africa.
Participants: Fifty-six health professionals (n = 13 doctors, n = 28 nurses, n = 6 dietitians, and n = 9 social workers) aged between 20 and 60 years, with 1–16 years (5 years average) of working experience. The majority (n = 53; 94.6%) were women.
Phenomenon of interest: Health professionals’ perceptions of effective methods or strategies to address malnutrition are referred to as undernutrition.
Analysis: Content analysis.
Results: Health professionals perceived socioeconomic conditions; caregiver lack of nutrition knowledge; and behavioral, cultural, and generational infant feeding practices as contributing factors to malnutrition. Participants recommended efforts to strengthen the availability, accessibility, and utilization of contraception, especially for teenagers, increase support to caretakers of children from families, health facilities, and communities, and a multisector and multidisciplinary approach to improve social determinants of health in underresourced communities.
Conclusions and Implications: To address malnutrition within the first 1,000 days of life, data supports that health professionals in underresourced communities require a multisector, multidisciplinary approach. This approach entails educational interventions, peer mentoring and community empowerment through support to and involvement of caregivers of children.
Key Words: infant nutrition, health care professional, malnutrition, underresourced communities (J Nutr Educ Behav. 2024;000:1−10.)
Accepted March 12, 2024.

INTRODUCTION
Malnutrition, although possible at any stage of life, holds particularly significant consequences when it occurs during pregnancy or the first 2 years of life—also dubbed as the first 1,000 days of life—as during this period, rapid growth and development necessitate specific nutritional needs.1−6 Such early-life malnutrition can have enduring and profound effects on the child, including increased developmental delays, neurological issues, stunted growth, mortality, and morbidity rates.7−9

To combat malnutrition and reduce the high burden of diseases associated with malnutrition, the World Health Organization (WHO) adopted a resolution in 2012 focusing on maternal, infant, and young child nutrition. Six global targets that must be achieved by 2025 were identified, thereby contributing to the overall well-being and long-term health outcomes of individuals during the critical first 1,000 days.7 These targets include achievement of (1) a 40% reduction in stunting among children aged < 5 years, (2) a 50% reduction of anemia in women of reproductive age, (3) a 30% reduction in low birth weight, (4) ensuring there is no rise in childhood overweight, (5) ensuring an increased rate of 50% exclusive

1Department of Nursing Science, Nelson Mandela University, Gqeberha, South Africa
2Faculty of Health Sciences, Nelson Mandela University, Gqeberha, South Africa
Conflict of Interest Disclosure: The authors have not stated any conflicts of interest.
Address for correspondence: Wilma ten Ham-Baloyi, PhD, Department of Nursing Science, Nelson Mandela University, University Way, Port Elizabeth, Eastern Cape 6031, South Africa; E-mail: wilma.tenham-baloyi@mandela.ac.za
© 2024 The Authors. Published by Elsevier Inc. on behalf of Society for Nutrition Education and Behavior. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/)
https://doi.org/10.1016/j.jneb.2024.03.010

Journal of Nutrition Education and Behavior • Volume 000, Number 000, 2024 1
breastfeeding in the first 6 months, and (6) ensuring a reduction and maintaining of childhood wasting to < 5%.

Despite these approaches, some of these targets remain unmet, specifically for children in Africa. As of 2020, out of the 194 countries, 88 (45.4%) are not meeting any of the global nutrition targets, whereas only 8 (4.1%) are meeting at least 4 targets. South Africa, together with 34 other countries, is meeting only 2 of the global nutrition targets.

In South Africa, malnutrition, specifically (severe) undernutrition as referred to in this study, remains a significant concern, having been identified as the third leading cause of death among children aged < 5 years in 2017–2018, with 13.7% of the population in the Eastern Cape province (the study setting) being affected by food insecurity. In addition, the province has reported increasing severe acute malnutrition mortality rates ranging from 4.7%–12.9% for children aged < 5 years, resulting in 72 deaths from April, 2020 through March, 2021 and 127 deaths from April, 2021 through March, 2022, which is among the highest in South Africa.

Multiple contributing factors have been identified in relation to malnutrition and associated mortality during the critical first 1,000 days. Many communities in South Africa, particularly in Nelson Mandela Bay, Eastern Cape, are characterized by high poverty and unemployment rates, contributing to malnutrition, food insecurity, limited dietary diversity, inadequate maternal and child nutrition, poor sanitation and hygiene, and lack of access to health services. The coronavirus disease 2019 pandemic and subsequent food price inflation further exacerbated high levels of unemployment and food insecurity globally and in South Africa, potentially leading to an increased number of preventable deaths because of severe malnutrition in underresourced communities such as those in the Nelson Mandela Bay area.

In parts of Africa, including South Africa, strategies have been employed to improve malnutrition among children aged < 5 years, including fortifying home-prepared complementary foods, exclusive breastfeeding, immunization, as well as active community-based surveillance and nutritional counseling by community health care workers, malnutrition remains high.

Therefore, this study aimed to investigate the perceptions of health professionals in underresourced communities in Nelson Mandela Bay regarding how to address malnutrition during the critical first 1,000 days.

METHODS

Study Design And Setting

A qualitative exploratory-descriptive study was conducted because of its appropriateness in describing the perceptions of health professionals in underresourced communities within Nelson Mandela Bay on addressing malnutrition during the critical first 1,000 days. Given the limited existing knowledge on this topic, such an approach allowed for a comprehensive exploration and description of the phenomenon.

The study was conducted in maternal and child health sections of public health facilities (10 primary care clinics and the pediatric unit of 1 referral hospital) in which most of the children with severe malnutrition from underresourced communities were admitted in 1 of the Eastern Cape’s most populated health districts: Nelson Mandela Bay, South Africa. The health district in which the study was performed had a 52.1% poverty rate, an unemployment rate of between 36.9% and 47.1%, and 3.5% of school-age children were not attending school, indicating lower socioeconomic and educational levels.

Participants And Recruitment

Health professionals (doctors, nurses, dietitians, and social workers) working with caregivers and children in public health facilities in underresourced communities for at least 6 months were purposively selected. Participants were selected on the basis of their expertise in working with caregivers of children diagnosed with malnutrition, as they were deemed most suitable to provide comprehensive responses to the research questions.

Ethical clearance was obtained from the University’s Human Research Ethics Committee through full review (H18-HEA-NUR-001) and written permission from the Provincial Department of Health’s committee through expedited review (EC_201803_016). Copies of the district’s written permission to conduct the study and information about the study were sent to subdistrict managers, who in turn sent them via emails to the health facility managers. The health facility managers were telephonically contacted by the first author to organize a 30-minute face-to-face information session with the health professionals. The session, conducted by the first author during a morning tea break, aimed to recruit participants into the study without disrupting patient care. The information session furnished details regarding the study’s purpose, data collection methods, duration, and participant rights. Appropriate dates, times, and venues were arranged for eligible health professionals willing to participate, verified by the first author. Individual written informed consent, encompassing demographic data—such as profession, gender (man, woman, nonbinary, other: specify, prefer not to say), age, and years of working experience—was obtained from each participant on the day of data collection before commencing the interviews. No incentives for participation in this study were provided. No participants withdrew from the study.

Procedures

A semistructured interview guide was developed by the first author—a woman, registered nurse with a Master’s in Public Health and Business Administration, trained in performing qualitative research, with no preestablished relationship to any of the participants. The interview guide was
based on Dever’s Epidemiological Model for Health Policy Analysis,19 which examines the interplay of 4 components affecting health, namely: health care system organization, lifestyle or self-created risks, the environment, and human biology as well as key informants. This model guided the formulation of the main interview questions and probing. The interview guide included the following 4 questions: (1) What are your perceptions with regard to malnutrition within the first 1,000 days of life in underresourced communities? (2) How does the care received by the pregnant woman from the clinic affect the child in the first 1,000 days of life? (3) What role do you think living in underresourced communities plays in the child becoming malnourished within the first 1,000 days of life? (4) What, in your view, is needed to address malnutrition within the first 1,000 days of life in underresourced communities? Probing and paraphrasing were used as interview strategies to obtain in-depth data. The interview schedule was piloted in the first focus group discussion. After verification by the second and third authors, both experienced in qualitative research, no modifications needed to be made, so the data of the pilot test was included in the main study.

A total of 8 face-to-face focus group discussions were conducted in English, each lasting between 45–60 minutes. No follow-up interviews were required. The first author facilitated the focus group discussions, while an independent observer—a professional nurse with expertise in child health—took field notes before, during, and after each session. To allow for an interdisciplinary approach, groups were mixed in terms of professions. Participants in the focus group discussions ranged from 5 to 15, guided by Babbie,20 and the availability for participants to meet despite their busy work schedules while avoiding disruptions in patient care. Therefore, focus group discussions were conducted in the clinics (n = 7) or hospitals (n = 1) in which participants attended or worked during lunch breaks.

With the permission of the participants, each focus group discussion was audio recorded. Recording stopped only after the last participant left the room in order not to miss important information during focus groups and debriefing discussions following each focus group. Data collection continued until data saturation was achieved, which occurred after the seventh focus group discussion, as verified by the second and third authors. However, an additional focus group discussion was held to confirm that data saturation had been reached.

Data Analysis

The audio recordings of the focus group discussions were transcribed verbatim within a week of the conduct of each focus group discussion by a professional transcriptionist who had signed a confidentiality statement. Transcriptions were added to the field notes and manually analyzed by the first author and an independent coder, using the Neuendorf21 approach for content analysis, which suggests organizing and preparing data for analysis, reading through all data, and coding the data deductively, representing categories, formed into themes. The final codebook was derived by verifying both sets of coded data. Any disagreements were resolved through consensus discussions between the first author and independent coder and for the final set of themes between all 3 authors.

Trustworthiness

The interviews adhered to Lincoln and Guba’s criteria for trustworthiness, including credibility through member checks as well as triangulation of recorded data and field notes. Bracketing was implemented because of the first author’s expertise in malnutrition as a result of her nursing background. In addition, piloting of the interview schedule, transferability via a thick description of context and methods, dependability with an independent coder, and confirmability through an audit trail and literature control were done (as cited by Nowell et al22).

RESULTS

Participant Profile

Fifty-six health professionals participated in 8 focus group discussions. Most participants were nurses and midwives (50%, n = 28) and women (94.6%, n = 53). Health professionals were aged 20–60 years, with 1–16 years (average of 5 years) of working experience in child health care.

Themes

Two main themes were identified—the first relating to factors contributing to malnutrition (4 subthemes) and the second to recommendations for malnutrition management (3 subthemes) (Table).

Theme 1: Perceived factors contributing to malnutrition in children. Four factors were identified by health professionals that contributed to malnutrition in children: socioeconomic conditions, lack of nutrition knowledge, behavior practices, and cultural and generational infant feeding practices.

Socioeconomic conditions. The socioeconomic conditions compounding malnutrition in children in underresourced communities were identified by health professionals as poverty, unemployment, and overcrowding, as outlined in the following quotes:

If you go and do a visit, (…) you see in this small house there are many children. Say 3-4 children living in this 1 or 2 rooms. You see the condition of this house and you see these people are really hungry [looking concerned].” [P2 in FGD 2, page 8]

When we are giving the porridge at the facility, we'll find out the mommy will say "No, this porridge is not going to be eaten by the child only. All of them are going to share.” [P2 in FGD 2, page 8]

I also think a contributing factor to this malnutrition is (…) poverty and unemployment. (…) It's the economic status. Due to poverty, there is not always enough money to buy the specific stuff to see to their needs. [P4 in FGD 4, page 1]
Table. Main and Subthemes Related to Addressing Malnutrition Within First 1,000 Days of Life in Underresourced Communities, as Perceived by Health Professionals

<table>
<thead>
<tr>
<th>Theme</th>
<th>Subtheme</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Perceived factors compounding malnutrition in children</td>
<td>1.1. Socioeconomic conditions (poverty, unemployment and overcrowding, teenage pregnancy)</td>
</tr>
<tr>
<td></td>
<td>1.2. Lack of nutrition knowledge</td>
</tr>
<tr>
<td></td>
<td>1.3. Caregiver behavioral practices (substance abuse, nonadherence to HIV management)</td>
</tr>
<tr>
<td></td>
<td>1.4. Cultural and generational infant feeding practices</td>
</tr>
<tr>
<td>2. Recommendations by health professionals to address malnutrition in children</td>
<td>2.1. The importance of contraceptive use</td>
</tr>
<tr>
<td></td>
<td>2.2. Support from family, health facilities and communities</td>
</tr>
<tr>
<td></td>
<td>2.3. Multisector, multidisciplinary approach to improve socioeconomic conditions in underresourced communities</td>
</tr>
</tbody>
</table>

That poverty results in overcrowding. In overcrowded areas, there’s a lot of illnesses there [other participants nod in agreement]. Infectious diseases and that also results in malnutrition or undernourishment itself. [P6 in FGD 8]

Participants agreed that malnutrition is a result of poverty and unemployment, causing overcrowding as many generations/people live in 1 household, having to share limited resources and, in turn, creating illnesses contributing to malnutrition or undernourishment.

Teenage pregnancy was another socioeconomic factor perceived to be contributing to malnutrition in children, as outlined in the following quotes:

Another thing is the teenage pregnancy that causes the malnutrition because some of the children are too young and then some of their parents, they chase them away and then they go to the street and live on the street [looking sad]. [P5 in FGD 7, page 4]

You get like the young, adolescents that fall pregnant. They fall pregnant mainly for the financial income (...) not understanding that a child cannot get fed by R300 [monthly social grant of $16]. (...) and leave the children with the grandparents or a family member who is already burdened by unemployment or not having enough food in the house. [P2 in FGD 5, page 2]

Participants perceived that teenage pregnancy contributed to malnutrition because of a lack of funds and not being able to care for and feed their children. Mothers were not employed and were coping with homelessness while relying on small social grants.

Lack of nutrition knowledge. Lack of nutrition knowledge and the application thereof was another compounding factor for malnutrition of children, as perceived by health professionals and as outlined in the following quotes:

Basically, what I found is most of the mothers have lack of knowledge of what nutrition should be eaten. You’ll find a mother that’s giving only potatoes or only rice (...) not knowing the child’s first foods made from 6 months you can start giving like vegetables, butternuts, livers, chicken, you know... the normal proteins. So, the lack of knowledge. [P3 in FGD 5, page 2]

Also, the knowledge of the mama. The knowledge of the importance of having a well-balanced diet during the course of pregnancy and even the early childhood [other participants nod in agreement]. [P4 in FGD 4, page 2]

Well, they would say they don’t have enough money, uh, and they find alternatives. They feed the children (...) concoctions that just worsen the malnutrition. [P5 in FGD 8, page 3]

Caregiver behavioral practices. Behavioral practices of caregivers, particularly abuse of substances, were also mentioned as contributing to malnutrition in children, as outlined by the following health professionals:

Malnutrition is due to the poverty and a great deal of it is also due to the parents abusing to substances ...The child is not being taken care of [looking sad]. [P7 in FGD 5, page 1]

The substance abuses. Especially for females; pre-pregnancy state, pregnancy state and after birth state. [P1 in FGD 4, page 2]

Because the pregnant women, they are smoking or drinking alcohol. ...If the mom isn’t eating well—maybe because she’s drinking or smoking a lot—then the child again is really gonna be at a
disadvantage, which increases the risk of low birth weight or fetal alcohol syndrome, which affects their growth as well. [P1 in FGD 2, page 3]

Participants agreed that the abuse of substances (alcohol, smoking) by caregivers (women who are pregnant, fathers, family members) caused malnutrition in the child because of a combination of not caring for the child and the woman who is pregnant not eating, as well as an increased risks of low birth weight and/or fetal alcohol syndrome.

Nonadherence to HIV management by mothers of HIV-infected children was mentioned as another behavioral factor, increasing the child’s risk for HIV infection and, subsequently, malnutrition because of the increased demand for energy to cope with their infections.

Well, if she [the mother]’s not taking her [anti-retroviral] treatment, obviously that could affect the child for the rest of his life if the child becomes positive [looking sad]. [P2 in FGD 7, page 7]

Indirectly it can be the cause because even the mommies, they’re known [anti-retroviral treatment] defaulters. I had a postnatal mommy, uh... 6 days old baby. ... I ask her “Why didn’t you come to the clinic?” [looking concerned] It’s because she didn’t want to face the fact that she has to answer now... “Why are you not on your treatment?” So now she jeopardizes the whole pregnancy because she doesn’t want to face the nurses at the clinic who say that I’m not on my treatment. [P3 in FGD 7, page 3]

Another health professional mentioned that nonadherence to HIV management is often caused by the mother/carer not feeling well or not being able to eat as a side effect of the medication, which also poses a risk to the fetus: “HIV mommies. Sometimes they are pregnant (... they default ARV treatment (...) and they will say ‘Oh sister [nurse], that will make me not eat or I feel sick’” [P3 in FGD 3, page 16].

Cultural and generational infant feeding practices. Cultural and generational feeding practices were mentioned as another contributing factor to malnutrition in children. The use of certain foods practiced in certain South African cultures or families, such as skroëi meel or umkroqo (made by heating white flour until golden and mixing it with water), was mentioned:

But people say: No, she’s eating skroëi pap, you know. You just take the flour and you burn it. My grandmother gave it to me like that so I’m giving it and I’m fine, so why must I worry about all these things that they are telling me. [P2 in FGD 5, page 10]

So, they have these perceptions, you know, these uh... these cultural... these perceptions in their minds that these things they believe in. They were taught by their parents and they, by their parents, and they believe that this is right... it’s true that there is such a thing as sout melk [salty milk]. [P1 in FGD 6, page 3]

In summary, according to health professionals, socioeconomic conditions, lack of nutrition knowledge, caregiver behavioral practices and cultural and generational infant feeding practices were perceived factors compounding malnutrition in children in underresourced communities.

Theme 2: Recommendations by health professionals to address malnutrition in children. Health professionals identified 3 recommendations to address malnutrition in children. These were the need for efforts to strengthen contraception, to increase support to caretakers of children, and a multisector, multidisciplinary approach to improve social determinants of health.

The importance of contraceptive use. Participants felt that contraceptives must be used. To optimize contraceptive use, they should be readily available and easily accessible. In addition, women must be encouraged to use innovative services that offer family planning methods, especially for teenagers. Negative views held by the community would also need to be addressed, outlined as follows:

... I would recommend they use family planning. There must be more availability. (...) especially with the teenagers, we must start targeting them [others nod in agreement]. (...) So maybe with family planning must be more active, especially on school grounds. There should be a nurse providing them with family planning to prevent them being late for injection dates or for the oral contraceptives for instance. [P4 in FGD 2, page 3]

Family planning. I feel, you know if somehow, we would be able to emphasize family planning, especially to the young ones. [P3 in FGD 3, page 9]

Yes ... we need to incentivize or make it, encourage people to go for contraception, contraception, contraception. But we know that even in the communities, that some people have negative views about women who are using contraception. [P7 in FGD 8, page 10]

Other participants mentioned that contraception would also decrease overcrowding and transmissible diseases, which are risk factors for malnutrition among children:

If you look at this household... they will all have scabies. They will all have this, that, they will all have TB. Because of this overcrowding. What’s sad about that is, is we have family planning... it is free. You can get it anytime. So, there’s no reason for the overcrowding. [P1 in FGD 6, page 9]

You find that there’s overcrowding as well. In such overcrowded areas, you are at risk of getting a lot of infectious diseases. (...) I think it honestly starts with contraception and proper, uhm, adequate family planning. [P5 in FGD 8, pages 8–9]

Support from family, health facilities, and communities. The second recommendation to prevent and combat malnutrition in children was the provision of support from families,
health facilities, and communities. Support in terms of peer education and mentoring was mentioned by participants:

First of all, the most powerful tool for education is peer education. The people in the community have little information. So, they just need information sources like she was saying, visual, TVs and audio. People don’t read information; they listen to it. Nobody is interested in reading. So mostly it’s the source of information. [P8 in FGD 5, page 8]

... if we can take the youngsters or the people from this community, and let them be the mentors for themselves, it will definitely make an impact because [it’s a case of] ‘I know the type of life you were living, I know the type of person that you were and now seeing the transformation with you... that means it’s possible with me’ [looks hopeful]. [P6 in FGD 5, page 13]

Also, maybe having a mother that’s baby was severely malnourished and the baby is now well and growing well and then that mother can be an example to other mothers to say that it’s not a losing battle. [P4 in FGD 2, page 13]

The involvement of families as a means of support was also mentioned:

...these young mothers will listen to their own mothers because they feel they know best. And they are the nearest, the primary support system that they have. ... So, like he said, we’re inviting the grandmother or the mother to come with her. And also inviting the fathers to come with, if there is the father. [P4 in FGD 3, page 13]

We do get fathers that always come. (...) even today when they bring the baby, they will come together. You saw him last month. Or the father will bring the baby. [P5 in FDG 3, page 13]

Community support, including initiatives such as vegetable gardens, paid community members assisting mothers with children or support groups for caregivers involving community members in clinical committees, could also support and empower communities to prevent and combat malnutrition, as expressed by 1 participant:

Even here at the clinic, we used to have a nice garden. (...) And then they must learn to plant their own garden, so they don’t have to buy everything [vegetables]. [P5 in FGD 3, page 11]

I think we should think about having people from the community, employed by the Department of Health, work within for the community and visiting people at home to help them care for kids. [P4 in FGD 8, page 11]

We must involve the clinic committees. They are the ones working between the clinics and the community (...) we need to have support group for them [caregivers]. We really must establish that support group for them [caregivers]. [P2 in FGD 2, page 13]

Multisector, multidisciplinary approach to improve socioeconomic conditions in underresourced communities. The third and final recommendation was for a multisector, multidisciplinary approach to improve socioeconomic conditions in underresourced communities. Participants agreed that addressing malnutrition in children requires a multisector, multidisciplinary approach, as outlined by these quotes: “...malnourishment is something that we need to fight with all the government departments” [P2 in FGD 1, page 11] and:

I think we can only be able to fight malnutrition by working together as all departments, umm providing eh eh all the mothers with what they need in order to ensure that their children are fed. [P4 in FGD 1, page 12]

Organizations that were mentioned as appropriate to address malnutrition in children included the Department of Education and relevant nongovernment organizations (NGOs).

Malnutrition is a lifetime thing. It should start from today into the next generation. Which means we work with you, link you with the relevant resources. We go back with the Department of Education, and also assist with this social life, going home, and then transform the future within your household. Not in others.[points index finger] your household. [P6 in FGD 5, pages 13-14]

Maybe just some more involvement from NGOs. I’m not saying providing food or nutrition for the children but just to add on in that first 1,000 days... to provide people in that timeframe with some extra food or food parcels. [P2 in FGD 5, page 13]

The patients come in the morning, for some NGO giving out soup here in the community, but it’s an ongoing effect. [P4 in FGD 4, page 16]

However, the empowerment of communities to enhance the sustainability of community-based interventions was also mentioned as a necessary intervention to strengthen the multisector, multidisciplinary approach to improving socioeconomic conditions in underresourced communities, thereby addressing malnutrition in children in these communities. The following comments, for example, received general assent in 1 of the groups:

For me, it goes hand in hand with empowering communities, because that is of utmost importance...because people need to undo what ... they are taught along the line, that you need to go and stand with your hand and beg. [P7 in FGD 1, page 12]

It is of no use to start a support group or a gardening project if nobody will follow up to see if it’s working. Because our communities have learnt that if there is no money in whatever I do, I’ll do it hoping that there will be money and then if there’s no money coming, I’ll just sit at home and not continue it. Even if it’s gonna benefit me. [P4 in FGD 1, page 12]

In summary, recommendations by health professionals to address malnutrition in children were
related to contraceptive use, support, and a multisector, multidisciplinary approach in underresourced communities.

DISCUSSION

This study aimed to explore health professionals’ perceptions of how to address malnutrition within the first 1,000 days in underresourced communities in Nelson Mandela Bay. Two main themes were identified—perceived factors compounding malnutrition in children and recommendations by health professionals to address malnutrition in children.

Health professionals working in public health facilities in underresourced communities identified various factors compounding malnutrition in children. These factors include socioeconomic conditions, lack of nutrition knowledge, caregivers’ behavioral practices, and cultural and generational infant feeding practices. The link between poverty and malnutrition is well-established. In underresourced communities, including the study setting, the main underlying causes of malnutrition in children are identified as poverty, unemployment, and overcrowding, which are interlinked. For example, in our study setting, health professionals perceived unemployment as a common factor leading to poverty, resulting not only in food insecurity but also overcrowding because of housing affordability issues. Overcrowding because of poor housing conditions, in turn, contributed to infectious diseases, further exacerbating malnutrition, as confirmed in cross-sectional studies conducted on housing and child health, particularly nutrition in similar low-to-middle-income settings, including those in Mozambique, 33 sub-Saharan countries and 73 lower- and middle-outcome countries globally. Children in homes with improved drinking water, sanitation, adequate living space, and durable construction have lower risks of major causes of death: malaria, diarrhea, growth failure, and anemia. Better housing may offer protection against significant childhood infectious diseases and poor growth outcomes, potentially enhancing children’s health and survival throughout sub-Saharan Africa, including South Africa.

In our study, teenage pregnancy was perceived as another socioeconomic factor contributing to malnutrition in children. Studies conducted in Ghana and Ethiopia have established a direct link between teenage pregnancy and an increased risk of malnutrition, including stunting, wasting, and underweight. This link can be attributed to biological factors, wherein the nutritional needs of pregnant teenagers may compete with those of developing fetuses. Behavioral factors also play a role, as teenage mothers may be less mature in responding to the needs of their infants. Social factors, such as lower educational and socioeconomic status and limited resources, further contribute to the increased risk of malnutrition. These social factors may explain the increased malnutrition within the first 1,000 days of life in the study setting as participating health professionals expressed observed similar circumstances in which teenagers who are pregnant, at times, became homeless with limited resources beyond a small social grant. These teenagers lacked the responsibility to adequately care for their infants, resulting in the involvement of grandparents (who are themselves unemployed) assuming caregiving responsibilities with limited resources. This situation further underscores the potential impact of teenage pregnancy on the nutritional well-being of children in underresourced communities.

Caregivers’ lack of nutrition knowledge was identified as another contributing factor to malnutrition in children, which was often associated with the use of cultural or generational infant feeding practices lacking nutritional value. Similar findings have been reported in comparable settings. In South Africa, currently, nutritional education is disseminated by the nurse and midwife as part of antenatal care in the primary health care setting. However, gaps are mainly in the availability of certain nutrition education resources and teaching strategies, as well as provider capacity building.

Capacitating health professionals to deliver educational interventions such as nutrition messages or intensive nutrition education and counseling during antenatal care, which have been proven effective in similar contexts, are necessary to improve awareness of harmful cultural/generational infant feeding practices and to promote appropriate feeding practices among caregivers. In addition, health professionals identified caregiver behavioral practices, such as substance abuse and nonadherence to HIV management, as factors compounding malnutrition in children. Studies conducted in similar settings have shown that maternal tobacco use is associated with children being thin, while alcohol use increases the likelihood of children being underweight because of its impact on diet quality, maternal appetite, and child development. Furthermore, the lack of adherence to HIV management increases the risk of HIV infection in children, which is an underlying cause of malnutrition. The combination of lack of adequate nutritional knowledge and poor practices coupled with nonadherence to HIV management could explain the high incidence of malnutrition in the first 1,000 days in the study setting. Greater awareness and health education on these behavioral risk factors for malnutrition in children are needed. Special emphasis should be placed on providing health education related to substance use and HIV management compliance during pregnancy and beyond, particularly during antenatal visits.

Health professionals in the study context provided recommendations to address malnutrition in children, including the use of contraceptives. The implementation of contraceptive use can help tackle identified contributing factors that compound malnutrition in children, such as teenage pregnancy and overcrowding. Contraceptives enable pregnancy spacing—a gap of at least 18–24 months between pregnancies to allow the woman’s body to recover fully and to optimize the health outcomes for both the mother and the subsequent child—and prevention of unwanted pregnancies, facilitating improved maternal health and lactation.
support. This empowers women to better care for existing children and invest in their well-being while reducing maternal mortality and allowing families to allocate resources for better nutrition, resulting in reduced malnutrition among children under 5 years of age. Similar recommendations have been made in a cross-sectional study and a participatory qualitative research study conducted in similar contexts in 29 African countries and South Africa, respectively. Despite relatively high contraceptive use in South Africa, this metric conceals challenges related to the quality of contraceptive service delivery, equitable access, and women’s proficiency in correctly and consistently using their preferred contraceptive methods.

Therefore, implementing contraception, especially among teenagers or adolescents, requires innovative and tailored methods. It also necessitates a change in community attitudes toward contraception, as our study identified. Overcoming societal barriers and misconceptions related to contraception is essential to ensure its effective utilization, particularly among teenagers.

To effectively address malnutrition in children, support from various sources—such as families, health facilities, and communities—is crucial, as expressed by our study participants. Strategies such as peer education, mentoring, involvement of family members, community vegetable gardens, and the employment of paid community members to assist caregivers with their children have been identified as necessary. These strategies have also been recognized in other studies, as peers and trusted family and community members can provide valuable nutritional education and guidance to caregivers.

However, some of these initiatives, such as the community vegetable gardens, were no longer in place because of theft, which could have contributed to some of the increased malnutrition within these communities. Furthermore, community and health care initiatives, particularly antenatal and postnatal programs related to child nutrition, should actively involve and integrate family and community members as important stakeholders. This was particularly important for the study context as teenage pregnancy, substance abuse among pregnant women and mothers as well as ARV treatment among pregnant women with HIV were some of the factors indicated by participants contributing to child malnutrition.

To effectively address malnutrition in children within underresourced communities, a comprehensive multisector and multidisciplinary approach is required, as recommended by our study participants. This approach involves collaborations with various stakeholders, including the Department of Education and NGOs, as recommended in other studies.

Regular nutrition-related mentoring and support for and from health professionals to caregivers of children with malnutrition is also crucial in promoting the effective implementation of interventions. This support is particularly important to increase professional efficacy and potentially decrease incidents of blaming the caregivers of children diagnosed with malnutrition because of ignorance, as the latter was identified by study participants.

In addition to the above, community empowerment emerged as an important factor mentioned by study participants. By empowering members of communities, they can take ownership of the interventions and collaborate effectively with various sectors and professionals, combating malnutrition in the first 1,000 days of life, as confirmed elsewhere.

The study had some limitations. Only 1 health district with a limited sample was included in the study, affecting the generalization of the study findings. In addition, although a mixed group of health professionals were included, groups were predominantly represented by 1 profession (e.g., nurses or physicians). Overall, there were a limited number of dietitians who participated, which may have influenced the findings. Therefore, results do not allow for transferability. Furthermore, the use of the purposive sampling technique and the involvement of the first author in the data collection processes may have introduced bias.

**IMPLICATIONS FOR RESEARCH AND PRACTICE**

This qualitative study provides valuable insights into the factors as perceived by health professionals compounding malnutrition in children in the first 1,000 days and offers recommendations to address malnutrition in underresourced communities. The findings of this study can inform health professionals and policymakers in developing tailored strategies, in collaboration with community stakeholders, to effectively address malnutrition in children. Addressing malnutrition in this setting requires health professionals to adopt a multisector, multidisciplinary approach. To facilitate such an approach, a policy guideline is needed to enhance collaboration among different departments and sectors, ensuring coordinated activities. In addition, educational interventions aimed at raising awareness of harmful cultural/generational infant feeding practices, addressing behavioral practices, and promoting the use of contraception, as well as community empowerment through support and involvement, should be considered within this comprehensive multisector, multidisciplinary approach. Empowering communities in underresourced areas can be achieved through initiatives such as nutritional peer mentoring and education and by involving community stakeholders in the development and implementation of tailored strategies, including community vegetable gardens, to address malnutrition in children within their specific context. In addition, by including community members in interventions and initiatives, valuable support networks can be established, strengthening the caregivers’ knowledge and practices related to child nutrition. However, the sustainability of such interventions and initiatives is crucial through, for example, well-trained and supervised community volunteers and raising awareness about the importance of initiatives to combat malnutrition in children.

Further research is crucial for the implementation and evaluation of identified interventions within a multisectoral, interdisciplinary
framework aimed at addressing childhood malnutrition in under-resourced environments.

REFERENCES


35. Intulfu FD, Abdulhi H, Nyarko R, Tette E, Asante M. Malnutrition in HIV infected children on antiretroviral drugs


**ORCID**

Wilma ten Ham-Baloyi: [http://orcid.org/0000-0002-2253-6354](http://orcid.org/0000-0002-2253-6354)