

Perceptions on child feeding practices among mothers of children under five in Namibia: a qualitative study

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Background: In developing countries, sub-optimal child feeding is widespread and deprives children of critical nutrients to support rapid growth spurts in the early years, and this remains a challenge to their growth and development. The study aimed to explore the perceptions towards child feeding of mothers of children aged under five years in Namibia.

Methods: The study utilised a qualitative approach to obtain the perceptions of mothers of children under five years towards child feeding practices. Data were collected using focus-group discussions and in-depth face-to-face interviews with mothers/ caregivers of children under five residing in four urban and peri-urban areas of Namibia.

Results: The study revealed that mothers had varied perceptions concerning child feeding practices that were not consistent with the recommended infant and young child feeding (IYCF) practices. The mothers' perceptions of child feeding were influenced by their social networks and family support systems, social media, and traditional beliefs and practices. The perceived key enablers to appropriate IYCF included the provision of special rooms and nutritious diets to breastfeeding mothers, social media, and social network and family support systems. The perceived constraints to appropriate IYCF included, financial challenges, limited family support, single motherhood, negative traditional beliefs and practices, and inadequate access to information.

Conclusions: Improving child feeding practices necessitates strengthening support groups to encourage peer-to-peer learning, capacity building of mothers, health providers, and their support networks on IYCF, and provision of income-generating activities. The formulation of a nutrition-strategic framework with community-tailored and culturally sensitive interventions has the potential to streamline intervention implementation and contribute to positive nutrition outcomes.

Keywords child feeding, perceptions, qualitative, breastfeeding, complementary feeding, Namibia

Introduction

Optimal feeding and care for children aged under five years guarantee that children obtain the necessary nutrients for proper growth and development.¹ A nutritious and balanced diet is essential to meet the requirements for rapid growth during the first five years of life.² Poor quality, inadequate, and unhealthier diets have been shown to have significant immediate and long-term negative effects on children's health and well-being.³ Research has indicated that poor nutrition, especially in the first thousand days of life – the period from conception to 2 years – has devastating and irreversible effects on the child's cognitive and physical development.⁴ Increased risk of poor academic performance, low classroom concentration, morbidity and mortality, and susceptibility to chronic illnesses in adulthood have been authoritatively linked to suboptimal nutrition in the early years of life.⁴

The World Health Organization (WHO) produced guidelines to support, promote, and protect optimal infant and young child feeding (IYCF) to achieve positive health outcomes.⁵ These guidelines prescribe the need for children to be exclusively breastfed for the first six months of life and the provision of adequate, nutritious, and safe complementary foods together with continued breastfeeding from six months onwards.⁵ The timely introduction of solid, semi-solid, or soft foods with concomitant observance of minimum dietary diversity (MDD) and minimum

meal frequency (MMF) ensures that children obtain the necessary nutrients to support the rapid growth spurts in early years.⁶

Despite global campaigns and evidence on the importance of appropriate child feeding and care, only 35% of babies aged 0–6 months globally are exclusively breastfed.⁷ According to the United Nations Children's Fund (UNICEF) (2022), half of children worldwide were not fed the minimum number of meals per day while only 31% were fed foods from at least five out of the eight recommended food groups.⁸ In low- and middle-income countries (LMICs), a third of children live in severe food poverty.⁸ Moreover, 41% of children are not fed nutrient-rich fruits and vegetables, which increases risks of micronutrient deficiency, reduced immunity, and susceptibility to infections.⁸ The situation has been worsened by incessant wars, civil unrest, and an unfavourable global economy that has escalated food price inflation, making it hard for the most vulnerable to access nutritious and healthier diets.⁹

The most recent Namibia Demographic and Health Survey (NDHS) of 2013 indicated that only 49% of children were exclusively breastfed and two-fifths were breastfed for up to two years.¹⁰ A meagre 31% and 41% of children met the MDD and MMF requirements per day respectively.¹⁰ Poor child feeding practices are a risk factor for malnutrition and evidence further shows that 24%, 6%, and 13% of Namibian children

are stunted, wasted, and underweight respectively.¹⁰ The situation is not so different from what was reported in the NDHSs for the last two decades, where 28%, 9%, and 26% of children were stunted, wasted, and underweight respectively,¹¹ indicating that undernutrition in Namibia is a chronic public health challenge that requires urgent attention. Factors associated with child undernutrition have not been extensively explored in Namibia, yet this is vital for developing priority actions to address it.

Higher levels of education and gainful employment of mothers have been associated with reduced risk of undernutrition in children due to improved capacity, and access to quality health-care, food, and other social services.¹² Other researchers such as Walters et al.¹³ observed that children of mothers with a high wealth index were more likely to consume nutritious and healthier diets and attain better nutritional status. A recent scoping review reported a paucity of research on child feeding and care in Namibia, foregrounding the necessity of an in-depth qualitative study to understand the driving factors to the high prevalence of undernutrition.¹²

This study aimed to describe the perceptions of mothers/caregivers of children under five years towards child feeding practices using a qualitative approach. This information is important for understanding the interactions of various determinants related to childhood nutritional status. Furthermore, it can guide further research to identify enablers and barriers to child feeding practices to develop priority actions to address child undernutrition.

Methods

Study design

The study employed an exploratory, descriptive, and qualitative design, building on earlier work by Lokossou et al.¹⁴ The design offers a deeper understanding of mothers' perceptions of child feeding practices and their related behaviours.

Study setting

The study covered four urban and peri-urban areas, namely Katutura, Otjomuise, Groot Aub, and Ovitoto in and near Windhoek, the capital city of Namibia. These areas are representative of the Namibian ethnic contexts that have diversified cultures. The dominant ethnic groups in Katutura and Otjomuise include Oshiwambo, Herero, Damara and Kavango. Groot Aub and Ovitoto mainly comprise Damara and Herero ethnic groups respectively. The target areas also comprise mostly the informal settlements where 80% of the population resides.¹⁵ Most of the dwellers in the target areas are low-income earners with an average monthly household income of US \$99.¹⁶ Children in the target areas are reared in shacks with poor sanitary conditions that make them vulnerable to infections and undernutrition.

Study population and sampling

The study areas were heterogeneous, purposively selected to reflect Namibia's ethnic diversity and geographical variability. Katutura and Otjomuise are predominantly urban, representing a mix of all the ethnic groups, while Groot Aub and Ovitoto are peri-urban, primarily inhabited by the Nama-Damara and Herero ethnic groups, respectively. The population aged 15–55 years in each of the following areas was: Katutura 14 773 (F = 8 309), Otjomuise 27 813 (F = 15 137), Groot Aub, 8 268 (F = 3 494) and Ovitoto, 6 942 (F = 3 537).¹⁷

A health facility was purposively selected from each of the four areas where the participants (mothers/caregivers) of children under five years were identified using health facility registers. The identification of the participants was done by the health facility in charge using purposive snowball sampling. A sample size of 54 participants was used in the study. A total of 24 participants were involved in the in-depth face-to-face interviews and 30 in the focus-group discussions (FGDs).

Inclusion and exclusion criteria

The primary participants in this study were mothers or caregivers of children under five years old who had been residents of the study areas for the last year. The mothers/caregivers of children older than five years and those who had children younger than five years but had not resided in the target areas for at least a year were ineligible to participate in the study.

Data collection

Data were collected from mothers/caregivers of children under five years using FGDs and face-to-face in-depth interviews between September and December 2023. The use of these two data-collection methods (FGDs and in-depth interviews) allowed for extensive exploration and triangulation of factors that affect child feeding practices in households. Information on sociodemographic and child feeding practices was collected. All participants were able to communicate in each of the aforementioned local languages. They signed the consent form before participating in the study.

Focus-group discussions

These were conducted by trained interviewers comprising the principal researcher and two research assistants. The research assistants were fourth-year Human Nutrition students at the Namibia University of Science and Technology (NUST) who were conversant in English and the local languages (Herero, Oshiwambo, and Damara). One research assistant engaged and asked mothers/caregivers questions during the FGDs as per the focus-group guide while the other audio-recorded the discussion and took notes. The principal researcher listened in and provided overall guidance. The FGDs were conducted from the selected health facilities in areas that were safe, secure, and devoid of interference from non-participants. The participants were engaged in a discussion for one and a half hours.

In-depth interviews

These were conducted by two research assistants with the overall supervision of the principal researcher. One research assistant engaged and asked the participant questions following the semi-structured interview guide and the other tape-recorded the interviews. In addition, the second research assistant took notes of the discussions. The interviews were conducted for one hour.

Qualitative analysis

The audio recordings were transcribed verbatim by three research assistants. Each of the research assistants transcribed the audio recordings verbatim in the field handbooks. The research assistants typed the notes in Microsoft Word and saved them. For interviews conducted in the local languages, the research assistants translated them into English verbatim before typing them in Microsoft Word (Microsoft Corp, Redmond, WA, USA). The principal researcher cross-checked the transcripts against the audio records and field notes for

accuracy. The transcripts were uploaded into ATLAS.ti 8 (<https://atlasti.com/>) for data management and analysis. The principal researcher read the transcripts repeatedly, familiarising himself with the content, and thereafter developed the codes. The codes were developed using an inductive approach. The codes were merged into subthemes and themes. The other researchers (TS and AL) verified the coding process.

Ethical considerations

The study obtained ethical clearance from the Research Ethics Committee at the Faculty of Health, Natural Resources and Applied Sciences of NUST (FHAS: 08/2022) and approval to collect data was obtained from the Research Committee at the Ministry of Health and Social Services in Namibia (Ref: MGWW2022).

Results

The study results are presented in two parts. The first part describes the sociodemographic characteristics of the study participants. The second part describes the various themes and sub-themes obtained from the FGD and face-to-face in-depth interviews with mothers/caregivers on their perceptions towards child feeding practices.

Sociodemographic characteristics of the participants

Table 1 indicates the sociodemographic characteristics of the participants in the FGDs and in-depth interviews. The details of the discussions with participants are presented in Supplementary material. The results show that all the participants were females and were biological mothers of children under five years, except one, who was a grandmother. Most of the mothers were single (92.6%) and unemployed (77.8%) despite having a considerably good level of education (87%).

Summary of themes and sub-themes

The key findings of the study are summarised in Table 2 and the full participant transcripts are in the accompanying Supplementary material. There were three themes and several sub-themes generated from in-depth interviews and FGD data that explain mothers' perceptions and practices regarding the feeding of children under five years. The themes included (1) child feeding practices; (2) perceptions of information sources, support systems, and traditional practices; and (3) perceptions

of mothers' socioeconomic status and knowledge of child feeding practices. The details of each theme are discussed in the subsequent sections.

Theme 1: child feeding practices

Breastfeeding practices

Across all groups interviewed, participants perceived initiating breastfeeding immediately after childbirth to be the best option to feed their babies. Health workers were reported to be gatekeepers to breastfeeding and encouraged mothers to breastfeed immediately after birth and avoid giving formula milk to their babies. One mother stated:

I was told by the nurse to put my baby on the breast after I gave birth; that breastmilk was the best food for my baby. I was also told to wash my hands often before breastfeeding. I did not know that all these things were important for my baby's health. (P. 1)

On the other hand, some participants reported not receiving sufficient and timely information on child feeding and care during antenatal care (ANC). They expressed uncertainty about their ability to sustain breastfeeding and were not sure when to start giving babies other foods and when to stop breastfeeding. Most participants considered giving prelacteal feeds and family foods within 2–3 months of birth as a best practice. Mothers justified those practices as follows:

The information that we get when we already have babies is the information that we were supposed to be given during ANC to enable us to feed and care for our babies well. (P. 2)

Fewer participants considered exclusive breastfeeding for the first six months to be the ideal feeding practice. However, upon thorough probing, it became evident that those who acknowledged the benefits often practised mixed feeding instead.

I was told that it was good for my baby to start eating food at six months and I have been doing it but sometimes when I am eating my baby shows signs of wanting to eat on my food; I end up giving her little to taste which is not bad as by my understanding. (P. 12)

Complementary feeding practices

Participants had varying opinions on when to commence complementary feeding, and the appropriate foods to feed their babies. They described starting to give their babies complementary foods following different timelines: while some stated this was at six months, others mentioned seven months or one year. Common complementary foods mentioned included soft porridge (*Omanda*), fermented finger millet (*Oshikundu*), fermented milk (*Omahaere*), *Othoba* (cooking oil, milk, and sugar mixture), mashed potatoes, carrots, mashed pumpkin, and plain yoghurt. Whereas many mothers mentioned culture as dictating when to start complementary foods, others stated that they were influenced by their mothers, elder sisters, grandmothers, and peer-mothers. One mother said:

My aunt and elder sister taught me how to feed and care for my baby; I was told to give soft food at six months. (P. 11)

Continued breastfeeding practices

Regarding continued breastfeeding, mothers' opinions revealed that they were not sure of the ideal time to stop breastfeeding

Table 1: Demographic characteristics of respondents (n = 54)

| Characteristics | Category | n (%) |
|-------------------------------------|-------------------|-----------|
| Age of the mother/caregiver (years) | 15–19 | 3 (5.6) |
| | 20–30 | 30 (55.6) |
| | 31–40 | 17 (31.5) |
| | 41–50 | 3 (5.5) |
| | 51–60 | 1 (1.8) |
| Relationship to the child | Biological mother | 53 (98.2) |
| | Grandmother | 1 (1.8) |
| Marital status | Single | 50 (92.6) |
| | Married | 4 (7.4) |
| Level of education | Primary | 4 (7.4) |
| | Secondary | 47 (87.0) |
| | Tertiary | 3 (5.6) |
| Occupation | Unemployed | 42 (77.8) |
| | Casual labour | 2 (3.7) |
| | Formally employed | 10 (18.5) |

Table 2: Summary of themes, subthemes, and selected quotes

| Theme | Subthemes | Sample quotes |
|--|---|---|
| Child feeding practices | Breastfeeding practices | "I was told that it was good for my baby to start eating food at six months" (P. 12) |
| | Complementary feeding practices | "My aunt and elder sister taught me how to feed and care for my baby; I was told to give soft food at six months" (P. 11) |
| | Continued breastfeeding | "Our mothers have a lot of experience on child rearing, so we do what they tell us to do and if you deviate from their advice the children fall sick" (FGD 1) |
| Perception of information sources, support systems, and traditional practices | Social media and other information sources | "I belong to a WhatsApp group of mothers of various professionals where members provide information on various topics including child nutrition" (P. 2) |
| | Social network and support system | "My mother tells me everything about how to feed and take care of the child" (FGD 1) |
| | Positive traditional practices | "In my Herero culture, I was put in a special room with my baby where no one was allowed to enter except my mother" (FGD 1) |
| Perception of mothers' socioeconomic status and knowledge of child feeding practices | Employment, school, and childcare | "I breastfed my child for 2 months and introduced bottle feeding because I had to go back to school" (P. 3) |
| | Poor knowledge of breastfeeding and complementary feeding | "We were never given information on child feeding and care during ANC, I was only told by the nurse to put my baby on the breast after I gave birth" (P. 2) |
| | Financial constraints | "My partner did not even bother to support me when I gave birth. He paid no attention to how the child fed" (P. 3) |
| | Mother's age and marital status | "I had to stop breastfeeding early and introduce bottle feeding because I had to go back to work" (P. 5) |
| | Negative traditional practices | "When a child is born you give breastmilk; however, the mother has to prepare cow's milk and give it to the baby" (P. 22) |

their infants. There were varied opinions on cessation of breastfeeding; while the majority mentioned one year, other mothers opted for a year and a half and none of them provided the ideal timeline of two years and above. Again, the differences in opinions were based on the culture and influence of the mothers' social networks. Mothers stressed that they wanted to feed their children based on what their parents told them to do:

Our mothers have a lot of experience on child rearing, so we do what they tell us to do and if you deviate from their advice the children fall sick. (FGD 1)

Theme 2: perceptions of information sources, support systems, and traditional practices

Social media and other information sources

Social media such as WhatsApp, Facebook, Instagram, Google, and YouTube were perceived by mothers as important avenues for accessing and sharing information, and interacting with peer-mothers, professionals, and health and nutrition experts on issues concerning child rearing, health, feeding, and care. Mothers reported belonging to WhatsApp groups comprising mothers from various professions, which enabled them to obtain timely expert advice on child feeding and care. One mother stated the following:

I belong to a WhatsApp group of mothers of various professionals where members provide information on various topics including maternal and child health and nutrition. (P. 2)

Through these WhatsApp groups, blogs and YouTube mothers amalgamate the information obtained from elders and peer-mothers before making the final decision on a challenge at hand. Mothers reiterated the importance of obtaining information from more than one source as one way of avoiding errors that could be costly to the health of their children. A mother justified the statement as follows:

On WhatsApp group, you do not just take advice from one person but have to look at various views from a number of mothers then I relate that information to that of my elder sister before taking the final decision. (P. 2)

Participants talked highly of "Dr. Google" being one of their favourites, through which they consulted and obtained real-time answers about child health. They referred to Google as doctor because it is reliable and offers timely information on health matters whenever needed. Although this may be so, mothers cautioned others to be extra careful and visit only proven websites to avoid obtaining misleading information. They emphasised the need to consult more than one source to verify and be sure of the truthfulness of the information.

Some participants who lacked smartphones and Internet access described obtaining information on child feeding from health professionals, peers, elders, radio, and television; however, they noted a dearth of nutrition-related programmes on radio and television. Participants were concerned that much of the programming on television and radio was dedicated to politics and other social issues, leaving out health matters vital to their well-being. One mother commented:

I do not have a smartphone, so I get information on how to look after my baby from the radio and it's one programme once a week. (P. 24)

Moreover, participants described having not received adequate and timely information on child feeding and care while attending ANC and postnatal care. Participants reported that health workers provided information mainly general health matters during health promotion but mentioned less regarding the nutrition of the child and mother:

Yeah, we were never given enough information on child nutrition. I think this information that we get when we

have the babies already is the information that we are supposed to be given during ANC. (P. 2)

Some mothers were sceptical of the information on child feeding obtained from elders, as they viewed it as outdated and not fitting in with the challenges of modern times. Although many believed that elders, especially grandmothers and their own mothers, were very experienced in child rearing, they emphasised the importance of amalgamating their advice and guidance from other sources such as peer-mothers and nutrition experts. One mother stated that:

I know that my mother has experience on child feeding but sometimes I feel her ideas are old and do not fit this age. I consulted my peers and Internet for answers. (P. 14)

Social network and family support system

The influence of elders and other respectable members of the households and community on child feeding and care was considered significant. Elders such as old women, grandmothers, aunts, and elder sisters were reported to have a lot of experience and to be highly trusted in matters of child feeding and care, thus their perceptions were not challenged. These perceptions on the way children should be fed and cared for shaped the practices adopted in particular by first-time mothers. The respect for elders' views/opinions on child-rearing practices appears to be entrenched in the culture of these communities, as stated by the mothers:

My mother tells me everything about how to take care of the child and how to talk to the child and position the child on the breast. If my mother tells me something and I do not do it the child falls sick. (FGD 1)

In some communities, there were support centres that provided vulnerable pregnant and lactating mothers with training, counselling and support, baby foods, and material support such as nappies and toys. Mothers perceived these centres as important and helpful in providing psychological and moral support, especially as many mothers are single with minimum support from spouses. A mother stated the following:

We are lucky that we have a community centre that helps us with food, children's utilities like nappies and toys and provision of health education. (P. 15)

Positive traditional practices

Responses from FGDs and face-to-face interviews showed that mothers considered their various cultures to significantly influence their feeding and care for their babies and themselves. Some mothers, especially from the *Herero* culture, stated that they were offered special treatment in the form of good accommodation and nutritious diets after childbirth. Mothers were placed in special rooms where no one was allowed to enter except their biological mothers. In addition, special diets were prepared for the mothers of the newborns and such foods were mainly contributed by in-laws and other well-wishers from the community. This was meant to be an appreciation for the daughter-in-law for bearing them a child. This practice allowed the mothers to have enough rest, time to recuperate and replenish body reserves, allowing ample time for bonding between mother and baby, provision of adequate care, and time to breastfeed and consume adequate and quality nutritious food. One mother emphasised the following:

In my *Herero* culture, when I gave birth, I was put in a special room with my baby where no one was allowed to enter except my mother, and I was served special diets. I had enough time to rest, recuperate, and consumed food I liked, and this enabled me to have time for my baby, feed him well and see him grow. (FGD 1)

Moreover, mothers perceived it as taboo for them to engage in sexual intercourse with their spouses when breastfeeding. Sexual intercourse in this case is viewed as an improper act that can make breastmilk dirty and unfit for consumption by the baby. Mothers also stated that apart from the breastmilk becoming dirty, sexual intercourse directly affected babies, causing them bad omens and sickness. One mother said:

In my *Damara* culture, we are not allowed to engage in sexual intercourse while breastfeeding. This makes breastmilk dirty and can make the child sick. (FGD 2)

Theme 3: perceptions of mothers' socioeconomic status and knowledge of child feeding practices

Employment, school, and childcare

In all the groups, participants perceived the need to go back to work and school after childbirth as a major constraint to their ability to practise appropriate child feeding practices. Participants reported going back to work/school within two to three months after childbirth. A mother said that:

I breastfed my child for 2 months and introduced bottle feeding because I had to go back to school. (P. 3)

Mothers were forced to leave their children in the care of relatives or child carers, which compromised the quality of care and diets given to the children. Portioning of time and financial resources between children's needs, household, and personal requirements left meagre resources for proper caring of children. As stated by this mother:

For me I multi-task school and looking after my child. When I am at school the baby is fed formula milk and when am back from school the baby continues breastfeeding. (FGD 1)

Perceptions of knowledge of breastfeeding and complementary feeding

Responses from participants revealed that much as most reported giving birth at health facilities and initiating breastfeeding within the first hour after birth, none sustained exclusive breastfeeding up to six months. Whereas some participants reported health workers encouraging them to breastfeed after childbirth, others talked of health workers instructing them to breastfeed without prior nutrition education and support. One mother stated that:

We were never given information on child feeding and care during ANC, I was only told by the nurse to put my baby on the breast after I gave birth. Since it was my first baby, I had no clear knowledge on how to feed and care for him. That advice from the nurse helped and cooled me down. (P. 2)

Furthermore, responses from participants revealed that they had limited knowledge of the components of breastfeeding, such as initiation of breastfeeding within one hour after birth, frequency of breastfeeding, complementary feeding, continued

breastfeeding, and when to stop breastfeeding. This was expressed in the divergent views participants had on breastfeeding and complementary feeding, as mentioned by one mother:

The nurse told me to breastfeed the baby after I gave birth, and I didn't know exactly how to continue feeding my baby. I had to rely on the advice of my peers and mother. (P. 16)

Whereas some participants stated that children were started on family foods at six months of age, others did it early (at 2–3 months) or too late at 11 months. Responses showed that participants had no clear knowledge of the importance of starting complementary feeding at six months or the disadvantages of an early or delayed start. This is confirmed by the following statement from one of the mothers:

I have 4 boys and am currently pregnant with my fifth child. When I give birth, I breastfeed for only 3 months and give the child to my mother. (FGD 1)

Furthermore, participants expressed varied opinions on the food types that were fed to the children as complementary foods, which varied from culture to culture. As mentioned, common food mixes included soft porridge (*Omanda*) made from finger millet (*Mahangu*) flour, *Oshikundu*, and fermented milk (*Omahaere*). Participants also reported giving other foods such as mashed potatoes, carrots, pumpkin, butternut, and plain yoghurt, which they believed were soft and high in nutrients. A mother stated that:

In our culture (Oshivambo) we give *Oshikundu* to the child from 4 months of age. (P. 23)

Financial constraints

Across all groups, participants identified the lack of a stable income as a significant constraint to providing adequate nutrition to their children. As per the study analysis, approximately 78% of the participants reported being unemployed and experiencing challenges in meeting their financial needs. Most participants reported obtaining financial support mainly from their parents/relatives and a few from spouses. Participants highlighted that their spouses were not supportive and provided no financial assistance. The situation is aggravated by the high cost of food and other children's necessities such as healthcare and clothing. One mother said that:

When you do not have a stable income, it is hard to have peace of mind and feed your baby well. My partner did not even bother to support me when I gave birth. He paid no attention to how the child fed. (P. 3)

The participants expressed great concern about their partners being "ghost fathers" and leaving all the burden of childcare to them. They reported that their children could not access healthier and nutritious foods and lacked quality healthcare, and this was confirmed in the following statement:

My partner is not supportive; he is like a ghost father and is never there. It is even worse when parents are not employed. (FGD 2)

Mothers' age and marital status

During FGDs, participants perceived the high prevalence of teenage mothers and singlehood as among the key bottlenecks

to appropriate child feeding and care in the communities. Most of the teenage mothers reported dropping out of school due to unplanned pregnancies and upon delivery left the responsibilities of child rearing to their mothers or grandmothers. Our analysis also showed that 93% of the participants were single mothers, who reported challenges in meeting the needs of their children. Participants considered limited time and resources for childcare as a major constraint to proper child feeding and care, as they had to apportion time between work and childcare. A young mother said:

When I started breastfeeding, I had to stop it early and introduce bottle feeding because I had to go back to work. (P. 5)

Moreover, participants perceived psychological stress and hardships due to limited motivation and moral support from relatives and fathers of their children to be key bottlenecks to feeding their babies well. A young mother said:

I feared breastfeeding my baby because I was told by my peers that if I did so my breasts would lose their shape. (FGD 1)

Negative traditional practices

Traditional beliefs were perceived to influence how children were fed and cared for and this was expressed in the way participants viewed when to start and stop breastfeeding, what foods to give to the children, when and for how long. Responses from participants revealed different cultural approaches to encourage mixed feeding and participants reported providing their babies with traditional baby foods such as *Omanda*, *Oshikundu*, *Omahaere*, and cow's milk. Some cultures dictated that children should be breastfed for up to one year and no participant stated that the child should be breastfed for up to two years. This was justified in the following statement:

When a child is born you give breastmilk; however, the mother has to prepare cow's milk and give it to the baby. This helps the baby to get full, not cry and grow strong. (P. 22)

During FGDs, mothers described the kind of foods that are prohibited or encouraged to be eaten due to their perceived effects on breastmilk production and these appeared to vary based on different cultures. These foods were considered to either reduce breast milk production or increase it. Foods reported to inhibit breastmilk production included sweet potatoes, cabbage, and coffee, and those that stimulated breastmilk production included *Oshikundu* and hot porridge. For example, a mother from the *Herero* tribe stated that:

In my Herero culture, it is a taboo to eat sweet potatoes and cabbage when breastfeeding, they reduce breastmilk production. (FGD 1)

The participants' perceptions towards child feeding practices were diverse and indicated the significance of various factors in influencing the nutritional status of children.

Discussion

This study explored the perception of mothers regarding child feeding practices in urban and peri-urban areas of Namibia. The results revealed that mothers' perceptions of child feeding were diverse and were influenced by social media, social networks and family support systems, traditional beliefs and practices,

and work-related roles and responsibilities. The results are indicative of the interactions of several factors, especially at the household level, in determining the nutritional status of children.

The findings showed mothers had varied views on child feeding practices indicative of a general paucity of knowledge and skills regarding recommended IYCF practices. Whereas the WHO⁵ recommends infants be exclusively breastfed from birth to six months and introduced to complementary feeding at six months with continued breastfeeding for up to two years, the majority of the mothers in this study did not meet these standards. Our findings agree with the results of Bimpong et al.,¹⁸ who reported that mothers – especially in developing countries – lacked adequate knowledge and skills concerning child feeding and faced significant barriers to feeding their children as per the recommended IYCF practices. Researchers have also observed that the inadequate knowledge and skills regarding IYCF combined with the lack of an enabling environment for child feeding curtails children from receiving the MDD and MMF to support the rapid growth spurts in the early years.¹⁹

Studies conducted in LMICs have identified nutrition education and male involvement in child feeding as among the key interventions that can address the nutrition knowledge gap and alleviate barriers mothers face when rearing their children.²⁰ In Burkina Faso, Hien et al.²¹ reported that mothers' knowledge of breastfeeding and complementary feeding significantly increased after a 10-month nutrition education intervention that involved cooking demonstrations, counselling, and discussions. Elsewhere, a study conducted among African American families revealed that nutrition education interventions that were directed at fathers yielded a 20% increase in breastfeeding rates.²²

The advent of the Internet and social media has changed the communication landscape, enhanced information flow, sharing and bridged gaps in decision-making on child health and nutrition²³. Similarly, our study has indicated increased reliance on social media and the Internet among mothers, especially the millennials, to inform decisions and actions on child feeding and care. Through social media, mothers reported obtaining timely advice from health experts, and peers shared experiences and challenges in child feeding and care. In Thailand, Supthanasup et al.²³ revealed that social media platforms such as Facebook influence child feeding practices and act as avenues where mothers seek emotional support from peers and experts on child-rearing.

Social network and family support systems are critical in providing moral and psychological support to breastfeeding mothers to sustain and feed their children as per IYCF recommended practices.²² This is in line with our study, which identified social and family support as key factors influencing mothers' perceptions of child feeding. In Gambia, Mwangome et al.²⁰ observed that the presence or absence of mothers' support networks was a central determinant for the mothers to practise what they knew about child feeding, and those in a supportive environment were able to feed their children as per the recommended IYCF practices.

Study implications

This study has established varied perceptions among mothers and other caregivers towards child feeding practices. Furthermore, these perceptions were influenced by the mothers' social network, social media, and traditional beliefs and practices. Perceptions and influences have a strong bearing on the

overall health and nutritional well-being of children and provide the fulcrum for the design of interventions and social behavioural change communication (SBCC) messages to demystify negative traditional beliefs and practices regarding child feeding and care.

Mothers' family and social support is critical to the adoption of the recommended child feeding practices,²² yet in traditional African communities child feeding is perceived to be predominantly women's role. There is limited involvement of fathers in child feeding, which increases the work burden and resultant exhaustion of mothers rendering them unable to care for their children adequately. There is a need to conduct research on male involvement in child feeding and care to design appropriate programmes and SBCC messages to demystify negative practices and realise positive nutrition outcomes.

There are no known studies that have investigated the influence of social media on child feeding and care practices in Namibia. Our findings have revealed an increasing trend in the use of social media in Namibia, especially among millennial mothers, to obtain guidance and information on child feeding and care. Research in this area will contribute to the body of existing knowledge and spur the development of cost-effective strategies to address malnutrition in Namibia and related socio-economic settings.

To successfully address malnutrition in Namibia, there is a need to develop a strategic framework based on the current findings and earlier work conducted in line with this study. This will provide country-tailored interventions that are key to addressing actual barriers to the attainment of optimal child nutritional status.

Strengths and limitations

This study used a qualitative approach that involved undertaking FGDs and in-depth interviews with mothers and other caregivers. The interactive environment during the interviews allowed free expression of views and enabled the researchers to obtain the true perceptions mothers have towards child feeding. Second, the questionnaires for this study were designed based on earlier work conducted on policy analysis, a scoping review, and secondary data analysis of the NDHS, 2013. This allowed triangulation of results obtained from the three earlier studies as mentioned earlier.

The study was conducted within urban and peri-urban areas of Namibia, and this in one way might have left out important information from mothers and other caregivers residing in purely rural areas. Therefore, future studies should aim to include rural areas to improve the inclusivity of all the social spheres in Namibia.

Conclusion

The study results indicated that mothers/caregivers' perceptions towards child feeding were diverse and were influenced by various factors. The perceptions of mothers regarding child feeding were influenced by mothers' social networks and support systems including peers, elder mothers and family members, social media, and traditional beliefs and practices. There is a need to strengthen community support groups as a means of encouraging peer-to-peer learning, capacity building of older mothers on child feeding and care, training mothers/caregivers on income-generating activities, and investing in social behaviour change interventions, especially through

culturally appropriate nutritional messages via social media. Whereas some of the factors influencing child feeding and care practices such as social networks, family support, and traditional practices have been investigated in related socioeconomic settings, others such as social media are emerging research areas. The influence of social media on children's health and nutrition has not been well studied in Namibia yet it has the potential to provide low-cost interventions to address malnutrition through well-crafted behavioural change messages.

The development of a nutrition strategic framework with nutrition education and capacity-building interventions that are culturally sensitive and targeted at the family, health professionals, and community leaders will contribute to positive nutrition outcomes in Namibia and related socioeconomic settings.

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