

# Field-testing of the revised, draft South African Paediatric Food-Based Dietary Guidelines amongst mothers/caregivers of children aged 0–12 months in the Breede Valley sub-district, Western Cape province, South Africa

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**Objectives:** To assess the appropriateness and understanding of the revised, draft South African Paediatric Food-Based Dietary Guidelines (SA-PFBDGs) amongst mothers/caregivers of children aged 0–12 months. Exposure to guidelines with similar messages, barriers and enablers to following of the guidelines were also assessed.

**Design:** Qualitative data were collected from 14 focus-group discussions (FGDs), conducted in isiXhosa ( $n = 5$ ), English ( $n = 4$ ) and Afrikaans ( $n = 5$ ), totalling 73 mother/caregiver participants.

**Setting:** Worcester, Breede Valley sub-district, Western Cape province.

**Subjects:** The study population included mothers/caregivers who were older than 18 years.

**Results:** The majority of participants had previous exposure to variations of messages similar to the revised, draft SA-PFBDGs. Health platforms and practitioners (community health centres, antenatal classes, nurses, doctors) and social networks and platforms (family, magazines, radio) were mentioned as primary sources of information. Barriers to following the messages included: inconsistent messages (mainly communicated by healthcare workers), contrasting beliefs and cultural/family practices, limited physical and financial access to resources, poor social support structures and the psycho-social and physical demands of raising a child.

**Conclusion:** The revised, draft SA-PFBDGs for the age range 0–12 months have been field-tested in English, Afrikaans and isiXhosa. The messages in some of the revised, draft SA-PFBDGs were not understood by the participants, indicating that a degree of rewording should be considered to facilitate understanding of the guidelines by the public. The National Department of Health should consider the findings of this study, and use these standardised messages to optimise infant and young child feeding.

**Keywords:** breastfeeding, complementary feeding, infants, young children, paediatric food-based dietary guidelines, South Africa, consumer testing

## Introduction

The consequences of childhood malnutrition can be short-term, resulting in mortality, morbidity and disability; or they can have long-term detrimental effects on cognitive ability, economic productivity, reproductive performance, metabolic and cardiovascular disease.<sup>1,2</sup>

A large contributing factor towards South Africa's poor childhood nutrition lies with the prevalence of suboptimal breastfeeding and complementary feeding practices for infants from birth to 12 months.<sup>3,4</sup> The 2016 South African Demographic and Health Survey (SADHS, 2016) revealed an encouraging increase in exclusive breastfeeding (EBF) under the age of six months, from 8% in 2012 to 32% in the latest report.<sup>5</sup> This figure is still off the World Health Assembly 2030 target, which stipulates an increase to a prevalence of at least 50%.<sup>6</sup> Complementary feeding was also assessed in the SADHS (2016) and it was reported that 18% of infants consumed breast milk plus complementary foods before they are six months old, 25% of infants under the age of six months are not breastfed at all and 45% of infants under six months were fed using a bottle with a nipple. Of concern is that it was found that only 16% of infants aged 6–12 months received a minimum acceptable diet for their age. The minimum acceptable diet contains at least four out of the following seven food groups, namely

porridge made from grains; vitamin A-rich fruits and vegetables; other fruits and vegetables; eggs; and meat, poultry, fish, shellfish or organ meats; as well as legumes and nuts. Furthermore, more than 13% of children aged between 6–8 months received sugary foods and 17% received salty foods on the day prior to the survey. The SADHS (2016) figures on the prevalence of stunting (20%) and underweight (10%) for children aged 8–23 months are of particular concern.<sup>5</sup>

Against this backdrop, it is clear that there is a persistent need to address infant and young child feeding (IYCF) practices and for action to curb childhood malnutrition. The revised, draft South African Paediatric Food-Based Dietary Guidelines (PFBDGs) were published in 2013.<sup>7</sup> Field-testing of developed guidelines is recommended by the Food and Agriculture Organisation (FAO) of the United Nations to ensure every country's guidelines are practical, comprehensible and appropriate to its cultural, social and economic context. Once tested, guidelines can be used as a tool for nutrition education to promote appropriate diets.<sup>8</sup>

This study formed part of a larger study that aimed to field-test the revised, draft SA-PFBDGs amongst mothers/caregivers of children aged 0–5 years in the Western Cape and Mpumalanga provinces of South Africa (SA).<sup>9</sup> The aim of the study reported

here was to determine the appropriateness and understanding of the revised draft SA-PFBDGs amongst mothers/caregiver of children aged 0–12 months in Worcester, Western Cape province, SA. This study specifically focused on the 0–6 months and 6–12 months guidelines.

## Methodology

### Study design

A qualitative, descriptive, cross-sectional study was conducted in Worcester in the Western Cape, SA. This sub-district was purposively selected as it is one of Stellenbosch University's rural service and community engagement areas. Furthermore, previous research in Worcester found sub-optimal breastfeeding and complementary feeding practices and stunting and overweight in children aged 0–23 months, together with caregiver overweight and obesity.<sup>10</sup>

A snowball sampling technique was followed for recruitment of participants by personally approaching them in the streets, at public facilities and various community gathering areas. Furthermore, non-governmental crèche owners were contacted to assist with invitations to the FGDs. The Xhosa fieldworkers assisted by using their knowledge of the area to recruit participants. The primary investigator (PI) of the study trained the team on standardisation regarding the facilitation of the FGDs.

The inclusion criteria for the study participants were: mothers/caregivers over the age of 18, who have or have taken care of children from 0–12 months of age; fluent and literate in either Afrikaans, isiXhosa or English; and were permanent residents of the study area (i.e. lived in the area for more than six months).

### Data collection

Focus-group discussions (FGDs) were convened to determine the comprehension, ability to follow and previous exposure to similar messages, as well as barriers and enablers to following the revised, draft SA-PFBDGs.

The Afrikaans and English FGDs were conducted by members of the research team who were fluent in both these languages. For the isiXhosa FGDs, the researchers were assisted by two experienced isiXhosa-speaking fieldworkers. The study population was stratified according to socio-economic status (SES), using different settlement types (i.e. formal or informal) as indicator. Thereafter participants were randomly assigned to homogeneous language focus groups of up to eight participants. FGDs of 60–90 minutes were conducted with each group in their first language, according to an FGD guide. All FGDs were audio-recorded, with permission from the participants. Each participant also completed a self-administered socio-demographic questionnaire.

### Data analysis

Each English FGD audio-recording was transcribed by one of the research-team members, and thereafter checked independently by another. The Afrikaans and isiXhosa FGD audio-recordings were translated into English and simultaneously transcribed. The FGD transcriptions were entered into the Atlas.ti software program (<https://atlasti.com/>). Data were analysed using the content analysis method by identifying themes and assigning codes to the data. The codes and themes were reviewed and interpreted in line with the research objectives.

Data collected from the socio-demographic questionnaires were recorded and analysed in Microsoft Excel 2013 (Microsoft Corp, Redmond, WA, USA) and expressed as descriptive statistics.

### Ethics considerations

The Health Research Ethics Committee of Stellenbosch University approved the research protocol (Reference number: N14/09/122).

All mothers/caregivers who were eligible for inclusion in the study were required to provide written informed consent. The authors and facilitators explained the nature of the study to the participants as well as the purpose of audio-recording the discussions. All informed consent forms were available in English, Afrikaans and isiXhosa.

Participants were informed that all information would be treated confidentially by using unique classification codes. During FGDs, participants were required to wear a number on their clothing for identification purposes. The names of the participants were therefore not documented. Separate consent was requested for the audio recording of the FGDs and participants were assured of the confidential manner in which these recordings would be handled. On completion of the project, all audio recordings and transcriptions will be stored for at least five years.

## Results

### Socio-demographic information

A total of 14 FGDs were conducted: five in Afrikaans, five in isiXhosa and four in English, resulting in a total of 73 participants. Six FGDs represented formal housing groups (higher SES), while eight represented informal housing (lower SES). The total number of FGDs was determined by data saturation. The socio-demographic information on the participants is presented in Table 1.

### Appropriateness and understanding of the revised, draft SA-PFBDGs

*Revised, draft SA-PFBDG 1: 'Give only breastmilk, and no other foods or liquids, to your baby for the first six months of life'*

A few of the participants fully understood this guideline and interpreted it correctly. As one participant stated:

Table 1: Participants' socio-demographic information

Factor	n (%)
Caregiver's age:	
19–25 years	16 (21.9%)
26–45 years	34 (46.6%)
Older than 46 years	20 (27.4%)
Missing data	3 (4.1%)
Education:	
None	1 (1.4%)
Grades 1–7	8 (11.0%)
Grades 8–11	22 (30.1%)
Grade 12	8 (11.0%)
Post-matric education	32 (43.8%)
Missing data	2 (2.7%)
Employment status:	
Employed	41 (56.2%)
Unemployed	29 (39.7%)
Missing data	3(4.1%)

'... it is important to give only breastmilk and no other foods or liquids because breastmilk have all the nutrients.' (FGD 4, Participant 4, informal, isiXhosa)

Some reasons mentioned for breastmilk being important are that it is 'the most natural', 'from God', 'best for the baby', 'contains all the nutrients', 'healthier', 'fresh', 'not like formula milk' and 'necessary for HIV-positive mothers to follow'. There was a general affirmation of the belief that breastmilk is healthier than formula milk, and that breastfeeding is best.

There were also participants who said that they felt that HIV-positive mothers were better guided in the following of this guideline. One participant stated,

'For instance, with HIV-positive mothers, they are more informed about why you should not give other foods and liquids, because of their status. It is explained better to them.' (FGD 3, Participant 1, informal, isiXhosa)

Participants across all FGDs said they understood this guideline, but interpreted it as giving breastmilk and water – often boiled water – to a child from birth to six months. The reasons cited by the participants were the belief that a baby cannot survive without water for six months, and that giving boiled water had several gastrointestinal health benefits, including avoiding constipation and gassiness, and:

'It's because he has a lot of heartburn – the boiled water takes the mucous and the heartburn away.' (FGD 3, Participant 4, informal, Afrikaans)

Comments from some participants indicated that this guideline is interpreted as meaning that only breastmilk should be given to the baby and that the use of formula milk is not permissible. Others interpreted it as being that any form of milk – including breastmilk, formula and cow's milk – should be given to the baby and nothing else. They also interpreted it as to avoid other things like food, tea or water taking up space in the baby's stomach and replacing the full amount of milk that should be given.

Some participants interpreted this guideline as meaning that no food must be given to the baby before six months, although a sizeable number of participants disagreed with this, saying a baby cannot survive on only breastmilk for six months, and that soft foods like porridge must be introduced before that age. One participant interpreted this guideline to include the fact that no traditional medicines should be given before six months either.

Barriers to EBF or partial breastfeeding included the use of formula milk; breastfeeding being perceived as painful, difficult and time-consuming; the issue of breastfeeding in public; and the difficulty of breastfeeding for a working mother, especially when the child is taken care of by the grandmother.

The participants also reported that the 0–6 months guideline regarding EBF was difficult to follow with teenage and young mothers because the latter lack patience:

'They want to feed the children quickly, and then go out. They don't do what it says there.' (FGD 3, Participant 3, informal, Afrikaans)

The participants revealed various enablers to following the EBF guideline, such as their beliefs that breastmilk is healthy and is the best thing for babies, as opposed to formula milk, and that it leads to a healthier child who is less susceptible to illnesses, and grows faster, with benefits to the development of his/her brains, teeth and bones. A further enabler that many participants affirmed was that this guideline is important and that they followed it themselves (specifically the breastfeeding until six months); and that a child can survive only on breastmilk for six months. Some reported expressing milk to combat the difficulty of being a working mother.

Good support for a new or breastfeeding mother was revealed as another important enabler. One participant explained that she had a midwife who guided her on how to breastfeed. Another participant said that she had a physiotherapist who did laser treatment on her cracked and bleeding nipples to help her continue breastfeeding. Other participants said encouragement helped, and that it also helps that breastfeeding is calming; helps a mother bond with her baby; and leads to weight loss. Financial constraints were also identified as enabling to breastfeeding, since breastmilk 'does not cost money'.

Some participants said that they felt that HIV-positive mothers were better guided in the following of this guideline, one explaining: 'For instance with HIV-positive mothers, they are more informed about why you should not give other foods and liquids, because of their status. It is explained better to them' (FGD 3, Participant 1, informal, isiXhosa).

*Revised, draft SA-PFBDG 2: 'At six months, start giving your baby small amounts of complementary foods, while continuing to breastfeed to two years and beyond'*

Many of the participants said that they did not think that breastfeeding until two years and beyond was necessary, and they did not know of people who followed this. But just as many of the participants reported that they did or had continued to breastfeed until two years and beyond, and found it a common practice in their surroundings, and they had been exposed to a similar guideline before:

'My child drank until four years.' (FGD 4, Participant 2, formal, Afrikaans)

Some of the participants did not understand the word 'complementary' and this was evident in all three languages. Even though participants were not sure what the word itself meant, in general the participants displayed a broad understanding of the term. It was described as a 'good composition', 'soft food', 'it goes with', 'fine foods' or 'it fits with the milk'. Examples of complementary foods given were: porridge, 'baby food', vegetables, fruit, yogurt and 'eating out of the pot'. There was also uncertainty about what 'small amounts' meant in practical terms. Some participants felt that the guidelines were not clear regarding examples, quantities and practical application.

Most of the participants identified appropriate complementary foods to be mainly fruits and vegetables and starchy foods in the form of baby porridges – foods of a soft consistency. There was very little mention of protein sources, although several of the participants reported that they would feed the child 'out of the pot', as the family would eat, once the child was able.

For the participants who believed it unnecessary to continue breastfeeding to two years and beyond, the main perceived barriers identified were that 'breastmilk will dry up'; 'breastfeeding is embarrassing'; 'breasts will go saggy'; and that 'one is not able to breastfeed and drink alcohol'. More concerns raised were that a mother may become HIV-positive while breastfeeding, even though she was negative before; that it is difficult for working mothers; that there is a lack of support; and that breastfeeding is painful when the babies' teeth erupt.

*Revised, draft SA-PFBDG 3: 'Gradually increase the amount of food, number of feeds and variety as your baby gets older'*

Most participants understood the importance of this guideline and were already following it. Many of the participants did not understand the word 'variety', and there was often discussion amongst the participants about what types of foods and consistencies were meant by 'variety', where again there was the general assumption that this indicated fruit and vegetables only. There was confusion about whether 'feeds' indicated milk feeds or complementary food meals. There was also uncertainty about the practical implications of 'gradually' as well as 'amount', and the majority of the mothers/caregivers reported taking their cue from their baby according to the child's hunger or crying.

Many of the participants reported that their families did not eat a variety of food due to financial constraints, and therefore they were unable to feed their babies a variety of food.

*Revised, draft SA-PFBDG 4: 'Feed slowly and patiently and encourage your baby to eat, but do not force him or her'*

Some of the participants had heard this guideline before, and the majority of them believed it to be important. Many of them already practised this guideline and reported personalised techniques to encourage their babies to eat:

'I tell my one stories, and then she laughs about something, and then I say to her again 'eat'. As she laughs, then I push it in, then she eats. And then she runs again. And that's how I do it with her – with a doll or something.' (FGD 3, Participant 6, informal, Afrikaans)

Most of the participants also clearly understood the practical application of 'slowly':

'Slowly means you wait until he's finished eating, don't just give quickly. Let him finish spoon by spoon.' (FGD 4, Participant 3, formal, Afrikaans)

The majority of the participants believed that force-feeding could lead to nausea, vomiting and aspiration, and that the baby will eat when he/she is hungry.

There was some resistance towards the responsive feeding guideline. The majority of the participants in the formal isiXhosa FGD found the guideline to be impractical and unrealistic, with one participant stating:

'Sometimes it's easy to feed the child, but other times it's not. When you as the mother have eaten, you are full. When I feed my child, I force her because I want her to be full as I am . . . . No, shame I don't have patience for that . . . . I really don't have time. You're late to work but

you want him to eat. You don't have time for vroom, vroom, vroom!' [Referring to the airplane-eating-game] (FGD 4, Participant 4, informal, isiXhosa)

**Revised, draft SA-PFBDG 5: 'From six months of age, give your baby meat, chicken, fish or egg every day, or as often as possible'**

This guideline was found to be the least understood guideline with the majority of mothers/caregivers misinterpreting it. Many thought it meant giving all of the listed proteins every day. Many believed these foods to be inappropriate to introduce to a baby at 6 months that it should only be introduced from 8–9 months of age, or even from 12 months only. Most participants did recognise the importance of protein-rich foods in a baby's diet, but did not view it as a daily requirement.

Financial constraints were identified as a common barrier for the implementation of this PFBDG, which influenced the optimal following of the guideline, especially protein sources:

'Yes, when you can afford it because the baby is born into our household, but we are not able to afford all these things. We want to give these things to our children but we cannot afford it. That is why I am saying, that I think it depends on if you can afford it and the availability of these types of food.' (FGD 5, Participant 1, informal, isiXhosa)

**Revised, draft SA-PFBDG 6: 'Give your baby dark-green leafy vegetables and orange-coloured vegetables and fruit every day'**

The majority of the participants could identify orange-coloured fruits and vegetables. The participants struggled more to list dark-green leafy vegetables, except for spinach. Many simply understood it as 'green vegetables' and therefore included baby marrow, cucumber and green beans, yet few participants mentioned broccoli. Other examples cited were cabbage and gem squash as well as vegetables that have leaves when growing, like sweet potato, potatoes and pumpkin.

Many of the participants in the informal groups said that they could not afford to give their babies these vegetables every day:

'That depends on a mother's pocket; how much can you afford. You see, because I must not think that I can do it so someone else can too. This lifestyle is expensive to tell you the truth. Regardless if you buy it fresh or not, it still remains very expensive. You can maybe do it for the first three or six months, but it's not something that you can always do.' (FGD 4, Participant 5, informal, isiXhosa)

Some participants did not understand why specifically orange-coloured and dark-green leafy vegetables were important, as opposed to other vegetables.

The majority of the participants reported that their families did not eat vegetables daily; they experienced difficulty getting their babies to eat vegetables; that it is impractical; and that cooking vegetables is too time-consuming. Some participants reported just giving their babies commercial jarred baby foods from six months, saying that these contain a blend of fruits and vegetables.

*Revised, draft SA-PFBDG 7: 'Start spoon-feeding your baby with thick foods, and gradually increase to the consistency of family food'*

There was misunderstanding across all the groups regarding the meaning of certain words, such as 'thick foods' and 'consistency', as well as the specifications of certain practical measures or quantities, such as what type or size of spoon was being referred to; what the consistency of 'thick' foods was; and how to quantify 'gradually'.

All the participants understood what family food was. There was, however, concern related to the practical measurement of 'gradually' and a view that increasing the consistency too quickly could pose a choking hazard.

Despite the confusion regarding terms and practical measurements, the majority of the participants were in a sense unknowingly following this guideline, and all understood why it was important, citing reasons such as the child needs to learn to chew; eat by him/herself; and gain more energy as he/she grows.

*Revised, draft SA-PFBDG 8: 'Hands should be washed with soap and clean water before preparing or eating food'*

This guideline was found to be the most widely disseminated to the public, with all the participants having been exposed to it; understanding it clearly; being aware of its importance; and trying to follow it.

Some participants in the informal groups did not have running water in their homes and had to share an outside tap. The participants commented that following this guideline would be challenging for them.

*Revised, draft SA-PFBDG 9: 'Avoid giving tea, coffee and sugary drinks and high-sugar, high-fat, salty snacks to your baby'*

The majority of the participants understood the importance of this guideline and attempted to follow it as far as possible. Not all of the participants could identify what high-sugar, high-fat and salty snacks were, but almost all could provide examples of sugary drinks.

Most of the participants said that they often give their children high-sugar, high-fat and salty snacks and sugary drinks, such as chips, chocolates, sweets, carbonated drinks and fruit juice; but they understood that it was not healthy and many of them said that they were 'guilty' of doing this.

Many of the participants gave their babies coffee, tea and sugary drinks, especially Rooibos and 'baby' teas:

'... he or she sees grandmother drinking tea or coffee and she would also want, shame.' (FGD 4, Participant 1, formal, isiXhosa)

Rooibos and 'baby' teas were seen as appropriate, since they are caffeine free. This belief was exacerbated by branded 'baby' tea products in shops. Many participants also believed that giving these teas was important:

'... it's important that your child drink tea, as an additional supplement.' (FGD 2, Participant 3, formal, English)

'I have heard that Rooibos tea is healthy for children.' (FGD 5, Participant 6, formal, Afrikaans)

Many of the participants reported that their family members did not follow this guideline and that it is therefore difficult for them to follow this guideline for their babies.

**Previous exposure to guidelines with similar messages**

The research findings indicated that the most common modes of previous exposure to guidelines with similar messages were local clinics, family members, hospitals, nurses, posters and pamphlets. Groups from formal settlements also reported exposure from paediatricians, books, magazines and television programmes.

The majority of the participants had been exposed to guidelines with messages similar to the revised draft PFBDGs, mostly on healthcare platforms, but it was mentioned that mixed messages and inconsistent information were communicated by healthcare workers.

Whilst reflecting on the PFBDGs some participants commented that they experienced mixed messages on IYCF disseminated by branded complementary food products, the media, internet support groups for mothers, and social media. In some instances participants did not possess the correct knowledge and information on IYCF cues, evident from reported beliefs that 'the breastmilk dries up' or that 'there is not enough breastmilk', and that 'some children do not want to breastfeed because they do not like it' or 'they get hungry'.

Contrasting cultural and family practices and beliefs were also evident. Many of the participants reported following their own intuition depending on their child and their individualised circumstances. From their exposure to messages similar to the revised draft SA-PFBDGs they were of the opinion that the messages are flexible and that they do not have to be followed strictly.

**Discussion**

This study set out to field-test the understanding and appropriateness of the revised, draft SA-PFBDGs in the 0–12 months age category. Against the backdrop of the current sub-optimal infant feeding practices in many South African communities, it is important that the general public receive standardised infant feeding messages that are field-tested for understanding.

The guidelines on exclusive and continued breastfeeding, as well as hand washing, were well known. These guidelines have been widely disseminated to the public and the participants reported previous exposure to guidelines with similar messages. The educational efforts by the Department of Health's public health facilities relating to exclusive and continued breastfeeding as well as hygiene have resulted in knowledge regarding breastmilk being the best choice; the importance of EBF; introduction of complementary food at six months; and hand washing. This finding is consistent with evidence from previous studies,<sup>11,12</sup> which found a greater awareness among the public concerning these aspects of IYCF. This indicates that the move towards exposing the public to these concepts, especially regarding the commitment of South Africa to protect promote and support breastfeeding, as per the Tshwane Declaration,<sup>13</sup> is making a difference as far as awareness is concerned.

For some guidelines, a lack of information on IYCF practices was evident from the findings. Participants were not well informed about the guidelines relating to the appropriate age to introduce complementary food; the continuation of breastfeeding; and appropriate and nutritious complementary foods, particularly the inclusion of protein-rich sources.

A lack of IYCF support can manifest in inappropriate breastfeeding practices, such as giving an infant food or water before six months, and incorrect latching techniques, which leads to a reduction in breastmilk production and incorrect beliefs about breastmilk and breastfeeding. In turn, this leads to inappropriate introduction of complementary foods.<sup>14</sup> The experiences and practices of lack of IYCF support are reported at a global level.<sup>14</sup>

Although not a specific objective of this study, many of the participants held the perception that the Prevention of Mother to Child Transmission (PMTCT) counselling on EBF for HIV-positive mothers had resulted in those mothers being more informed, perhaps more so than their HIV-negative counterparts. This strengthens the recommendation to persevere with IYCF education messages for advancement in public knowledge. It also points to the potential positive outcomes of a greater IYCF counselling support base. In line with our findings, health platforms were uniformly identified as the main source of information on IYCF,<sup>13</sup> indicating that these would be important areas on which to focus IYCF promotion and education. The contradictory messages from healthcare workers consistently contribute to the widespread misinformation about IYCF.<sup>14–16</sup> Du Plessis *et al.*<sup>3</sup> propose that this is due to the fact that healthcare workers themselves are exposed to inconsistent IYCF messages, and therefore are also confused about the issue. Further inconsistent and erroneous messages are publicised by branded complementary food products, the media, internet support groups for mothers and social media. Much can therefore still be done through scaled-up IYCF advocacy campaigns and continuous professional development efforts to eliminate misinformation on IYCF amongst healthcare professionals.

Communication between healthcare workers and mothers/caregivers should be strengthened.<sup>16,17</sup> There should be more emphasis on understanding the various barriers and enablers to the implementation of health and nutrition messages as well as deeper understanding of the psycho-social determinants of behaviour, in order to adapt health-promotion efforts accordingly.<sup>17</sup> To this end, a crucial element of effective health promotion and communication is comprehensive training of healthcare workers, in order to counsel mothers/caregivers optimally.<sup>18</sup>

Our findings regarding the current IYCF practices and beliefs of mothers/caregivers to give water before six months; introduce food before six months; stop breastfeeding after six months; feed mostly vegetables and starchy food as complementary food with a lack of protein-rich foods and variety; give the baby tea and coffee, and sugary foods and beverages, fatty and salty foods, are consistent with the South African literature.<sup>3,4</sup> A prominent influence on these practices included the impact of the beliefs of family and friends. Cultural and familial practices and beliefs sometimes led to silent rejection of healthcare workers' advice, even correct advice, particularly when that advice conflicted with cultural practices. It was found that, for this reason, participants rejected or dismissed certain of the PFBDGs. Other common cultural IYCF practices found were giving food and water before six months, particularly boiled

water, traditional medicines, 'meelbol' (scorched flour mixed with water, creating a milky-looking fluid devoid of nutrients) and cereal in the milk.<sup>3,4</sup>

The findings in this study regarding financial constraints correspond with evidence of poor household food security and low SES in many areas in South Africa.<sup>19,20</sup> This is exacerbated by the nutrition transition in South Africa,<sup>21,22</sup> and results in the lack of complementary food variety and inability to give protein sources daily or even regularly. The issue that vegetables were deemed to be expensive is a concern, since it is possible to grow one's own vegetables, or harvest them in the wild in some parts of South Africa. Promotion of vegetable gardens is an evidence-based nutrition-sensitive intervention to promote diet diversity and increased vegetable intake,<sup>2</sup> an aspect that should be included in the promotion of the PFBDGs.

The practice of offering sweet tea to young children prevails, especially in low SES groups. This is often a coping mechanism to fill a hungry baby's stomach. The harsh reality of soaring food prices is not helpful. Healthy foods have increasingly become more expensive.<sup>23,24</sup> Efforts to exempt more healthy food from tax and interventions for home-grown food production should be strengthened to act as safety nets for the poor.<sup>21,24,25</sup>

The National Department of Health should adopt the field-tested revised draft SA-PFBDGs. Thereafter, all healthcare workers who have any interaction with mothers/caregivers and young children should be made aware of the PFBDGs. There is a need for community-based breastfeeding support groups and IYCF support groups, facilitated by knowledgeable counsellors and healthcare workers. It will be important that the adopted PFBDGs be promoted continuously by the Department of Health via healthcare platforms and the media.

Limitations of the study relate to the difficulty in maintaining homogeneity in some FGDs in terms of settlement type. Therefore the assignation of formal versus informal was based on the majority results of the socio-demographic forms of each FGD. This did, however, often lead to rich discussion, although it is acknowledged that some nuances of discussion may have been lost in translation. A few FGDs were small (four participants), but data saturation was still achieved.

The authors acknowledge that qualitative results are context specific and all findings cannot be generalised to the South African population.

## Conclusion

IYCF messages should be standardised to improve the public's knowledge and awareness of this important topic. The field-tested revised, draft SA-PFBDGs could serve this purpose. The National Department of Health should adopt the field-tested, revised SA-PFBDGs. Based on the findings of this research, a degree of rewording of some of the revised draft SA-PFBDGs is suggested to enhance understanding.

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