

# Community perspectives on maternal and child health during nutrition and economic transition in sub-Saharan Africa

Daniella Watson<sup>1,\*</sup> , Sarah H Kehoe<sup>2</sup>, Agnes Erzse<sup>3</sup>, Adélaïde Compaoré<sup>4</sup>, Cornelius Debpuur<sup>5</sup>, Engelbert A Nonterah<sup>5</sup> o, Hermann Sorgho<sup>4</sup>, Shane A Norris<sup>1,6</sup>, Karen J Hofman<sup>3</sup>, Wendy Lawrence<sup>2,7</sup>, Marie-Louise Newell<sup>1,8</sup>, Keith M Godfrey<sup>2,7</sup>, Kate A Ward<sup>2,8</sup> and Mary Barker<sup>2,7,8</sup>, for the INPreP group

<sup>1</sup>Global Health Research Institute, School of Human Development and Health, Faculty of Medicine, University of Southampton, Southampton SO16 5YA, UK: <sup>2</sup>MRC Lifecourse Epidemiology Unit, University of Southampton, Southampton, UK: 3SAMRC Centre for Health Economics and Decision Science, PRICELESS, University of Witwatersrand School of Public Health, Faculty of Health Sciences, Johannesburg, South Africa: <sup>4</sup>Clinical Research Unit of Nanoro, Institut de Recherche en Sciences de la Santé, Nanoro, Burkina Faso: <sup>5</sup>Navrongo Health Research Centre, Ghana Health Service, Navrongo, Ghana: 6SAMRC Developmental Pathways for Health Research Unit, School of Clinical Medicine, University of the Witwatersrand, Johannesburg, South Africa: 7NIHR Southampton Biomedical Research Centre, University Hospitals Southampton NHS Foundation Trust, Southampton, UK: 8School of Public Health, Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, South Africa

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## **Abstract**

Objective: To explore community perceptions on maternal and child nutrition issues in Sub-Saharan Africa.

Design: Thirty focus groups with men and women from three communities facilitated by local researchers.

Setting: One urban (Soweto, South Africa) and two rural settings (Navrongo, Ghana and Nanoro, Burkina Faso) at different stages of economic transition. Participants: Two hundred thirty-seven men and women aged 18-55 years, mostly subsistence farmers in Navrongo and Nanoro and low income in Soweto. Results: Differences in community concerns about maternal and child health and nutrition reflected the transitional stage of the country. Community priorities revolved around poor nutrition and hunger caused by poverty, lack of economic opportunity and traditional gender roles. Men and women felt they had limited control over food and other resources. Women wanted men to take more responsibility for domestic chores, including food provision, while men wanted more involvement in their families but felt unable to provide for them. Solutions suggested focusing on ways of increasing control over economic production, family life and domestic food supplies. Rural communities sought agricultural support, while the urban community wanted regulation of the food environment. Conclusions: To be acceptable and effective, interventions to improve maternal and child nutrition need to take account of communities' perceptions of their needs and address wider determinants of nutritional status and differences in access to food reflecting the stage of the country's economic transition. Findings suggest that education and knowledge are necessary but not sufficient to support improvements in women's and children's nutritional status.

Keywords Maternal child health Nutrition Qualitative research Community engagement Sub-Saharan Africa

Sub-Saharan Africa has persistently high rates of fetal growth retardation, pre-term birth, low birth weight, underweight and child stunting but also rapidly increasing rates of overweight and obesity<sup>(1-3)</sup>. The region is faced with a 'double burden' of malnutrition, where undernutrition in infancy and early childhood is followed by enduring micronutrient deficiencies and overnutrition in later childhood<sup>(4)</sup>. The 2019 Lancet series on Double Burden of Malnutrition suggested that this is due to changes in the global food system making less nutritious food cheaper and more

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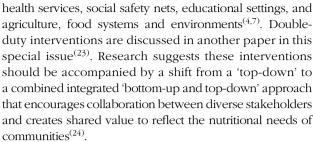


accessible than nutritious food<sup>(5)</sup>. The risk of the double burden of malnutrition is now impacting people with low incomes and in rural areas, not just wealthier urban households. The Lancet series suggested that lifecourse interventions are needed to address malnutrition by optimising diet quality and implementing double-duty interventions by simultaneously tackling both under- and overnutrition<sup>(6)</sup>. The 'first 1000 days' concept emphasises the importance of nutritional investment from conception to the child's second birthday to improve long-term population health<sup>(7,8)</sup>.

This double burden, combined with food insecurity, is a feature of transitioning societies across Africa. Over half of sub-Saharan Africans live in extreme poverty, subsisting on less than US\$1.90 per day, limiting their ability to purchase food<sup>(9)</sup>. Availability and access to higher quality food are further limited by lack of transport infrastructure (10), and increasingly unpredictable climate has resulted in low harvest yields further reducing food availability<sup>(11–14)</sup>.

Over the past 20 years, there has been rapid economic transition in Africa, including a shift from a subsistence to a more modern, industrialised economy, with accompanying urbanisation<sup>(15)</sup>. Economic transition has not only reduced levels of wasting and stunting but has also reduced physical activity. At the same time, industrialisation and urbanisation have resulted in a change away from traditional food systems and methods of food production. Traditional African diets, which include higher proportions of fruit and vegetables, have been found to be healthier than those in some high-income countries, but this is only the case if food access is secure<sup>(16)</sup>. More often, the move towards modern food systems supports increased availability and reduced costs of high fat, sugar and salt foods, lowering dietary quality<sup>(19)</sup>. The recent nutrition transition in Africa has seen communities moving from reliance on traditional foods towards more modern or mixed (traditional and modern) diets<sup>(17)</sup>, involving increased consumption of processed foods<sup>(5)</sup>, higher energy intakes and prevalence of overweight and obesity(3). Nutritional transition is therefore accompanied by an epidemiological transition in that there is a parallel shift away from a burden of infectious disease towards chronic conditions<sup>(5,18)</sup>. Africa's economic growth and societal changes also bring opportunities to address these health challenges<sup>(19)</sup>. Further, the transitioning roles of women reduces obligations to marry, increases opportunities for employment and 'personal liberation...being perceived as a free woman'(20), which may offer women the chance to have more control over their family's health and nutrition status. Women's economic and political empowerment has long been linked to better health and well-being of their families (21), issues which are discussed in another paper in this special issue<sup>(22)</sup>.

Implementing supportive double-duty nutritional interventions to simultaneously tackle both under- and overnutrition requires engagement of the target population along with policymakers across multiple sectors and the frontline operators. Such actions will need to be delivered through



This study is focused on maternal and child nutrition in three settings at varying stages of economic transition. Although quantitative data can tell us how transitions lead to a double burden of malnutrition, they do not explain why or how national transitions affect individuals and local communities. Qualitative research can do this by providing an approach through which to engage with, explore and document people's experiences and concerns. In the context of inequalities, qualitative research is valuable as a multicultural, gendered process, which can bridge local communities' lived experience to history, politics and decolonisation<sup>(25)</sup>. The focus of previous qualitative studies on nutrition in sub-Saharan Africa included communities' belief on and practices with foods. Two qualitative synthesises of data from participatory interviews and focus groups on maternal and child health in sub-Saharan Africa reported that many communities spoke of foods that were 'forbidden' for pregnant women as they were believed to increase the risk of birth complications and death<sup>(26)</sup>. Strong beliefs in the healing power of foods were also identified, although there was little agreement on which foods had which powers<sup>(27)</sup>. Previous qualitative studies have described beliefs and practices concerning food and nutrition in sub-Saharan Africa, but have not explored communities' understandings of causes of and solutions to poor maternal and child nutrition. Objectives of the study reported here were therefore to explore communities' perceptions of factors affecting maternal and child nutrition in three transitioning sub-Saharan African sites and to collect ideas for context-specific solutions to maternal and child nutrition problems<sup>(22,23,28)</sup>.

# Method

# Study setting and population

The focus groups were conducted in three countries in sub-Saharan Africa (Burkina Faso, Ghana and South Africa), each at a different stage of economic transition. The double burden of malnutrition is occurring in all countries, but each country's status is dependent on its stage of transition. Burkina Faso is classified as a low-income economy<sup>(29)</sup>; nationally, child undernutrition is more prevalent than in the rest of West Africa<sup>(30)</sup>, but overweight and obesity among women have increased from 7.7% in 1980 to 28.8%, respectively, in 2016<sup>(30)</sup>. Ghana is classified as a lower-middleincome economy<sup>(29)</sup>, where 27% of children under five are





stunted<sup>(31)</sup> and 41% of women nationally are overweight and obese<sup>(32)</sup>. South Africa is classified as an upper-middleincome economy<sup>(29)</sup>, with 27% of children under 5 years stunted and underweight, 13% overweight and two-thirds of women overweight or obese<sup>(33)</sup>.

The study included rural communities in Nanoro, Burkina Faso and Navrongo, Ghana, and an urban community in Soweto, South Africa. The communities in Nanoro are from the Mossi ethnic group (34). Two ethno-linguistic groups Kassena and Nankani are found in Navrongo<sup>(35)</sup>. In both rural communities, the main source of income is subsistence farming which is dependent on climate and rainfall. Soweto is a township with informal settlements in South Africa. It is a large but underdeveloped community separated spatially from the economic hub of Johannesburg, but where thousands of poor families live (36).

## Data collection

Focus groups were conducted as part of the NIHR INPreP (Improved Nutrition Preconception, Pregnancy, Post-Delivery) study, which aims to review and engage policy about maternal and child nutrition in three different sub-Saharan African countries, to establish the barriers to and the opportunities for developing and instituting costeffective and context-specific interventions to improve maternal and child health (37). This qualitative sub-study provided opportunities for communities to describe their experience and express their concerns in relation to maternal and child health and nutrition specifically and to make suggestions for interventions to address the issues identified in the discussions. Focus groups were chosen as a method of gaining a variety of views and experiences from men and women of different ages and to capture group dynamics<sup>(38)</sup>. Focus group guides were designed to stimulate discussion on the general health and nutrition of women and children and also to guide conversations towards identifying solutions. These guides covered topics including priority health and nutrition issues, current healthcare services and nutrition support, foods eaten by mothers and infants and possible interventions to address community needs. The standard focus group guide, developed by the team, was adapted for each site and for men and women. (See Appendix A for women's focus group discussion guide. The men's guide is similar.) Participants were recruited using site-specific sampling strategies, which are described in the three other INPreP papers in this special issue(22,23,28). All focus groups took place between January and March 2019, which is the dry season in Nanoro and Navrongo, and the rainy season in Soweto. The focus groups were conducted by experienced qualitative researchers in local languages (Moore in Nanoro; Kasem and Nankani in Navrongo; Xhosa, Zulu and English in Soweto). Consent was taken from all participants; those who were literate signed the consent form, and for those who were not, the form was read out to them and they indicated consent with a thumbprint. Focus groups were audio-recorded, and brief demographic details were recorded for each participant.

## Data analysis

South African and Ghanaian research teams transcribed the audio recordings from local languages into English. The Burkina Faso research team transcribed the local language recordings into French and then translated into English for comparison between sites. Each team inductively coded transcripts based on topics in the focus group guides using NVivo software version 12. Using a constant comparative approach, each team produced a codebook for the data from their site. To produce the cross-cultural analysis of the data reported in this paper, site codebooks and NVivo reports were subject to thematic analysis which produced a set of common, overarching themes underpinning data from all three sites. (Codebook available from authors on request.) Thematic analysis was chosen because it provides detailed and rich accounts of complex data in a flexible manner, yet has rigorous methods to enhance objectivity(39). We used COREQ guidance to structure our reporting<sup>(40)</sup>. (Quotes containing local currency were converted to US\$ on April 20, 2020.)

## Results

Thirty focus groups were conducted, eleven in Nanoro, ten in Navrongo and nine in Soweto, involving 237 participants whose characteristics are presented in Table 1.

We identified two major themes underlying participants' experiences on and concerns with maternal and child nutrition in their settings: (i) stage of the country's transition (epidemiological, nutritional and economic) and (ii) proposed solutions (household, community and structural). Data under each theme are presented below as a series of sub-themes, supported by quotes from each site, gender and age group. Theme one is represented in Fig. 1 that explains what the communities perceived to be influencing maternal and child nutrition. Participants described problems of under and overweight in mothers and children in their sites, the extent of which appeared to depend on the stage of economic, epidemiological and nutritional transition of their countries. Participants in all three sites described economic constraints that influenced the way they were either able to produce or purchase food. For farming communities, climate change was seen to be having profound impacts on the way they could feed themselves. Communities suggested solutions to these problems which are described in Table 2.

## **Transitions**

Discussions with participants suggested that different stages of epidemiological, nutritional and economic transition in





Table 1 Characteristics of focus group discussion participants by country

	Nanoro, Burkina Faso		Navrongo, Ghana		Soweto, South Africa		All countries	
	n	%	n	%	n	%	n	%
Number of focus groups	11		10		9		30	
Number of participants	86	36	85	36	66	28	237	100%
Number of women	63	73	53	62	45	68	161	68%
Number of men	23	27	32	38	21	32	76	32%
Age groups in year (n)	Women:		Women		Women			
	18-25 (24)		18–25 (17)		18–25 (13)			
	26–34 (15)		26–39 (18)		26–40 (18)			
	35–55 (24)		40+ (18)		$40 + (14)^{'}$			
	Men		Men		Men			
	18+ (23)		18+ (32)		18+ (21)			

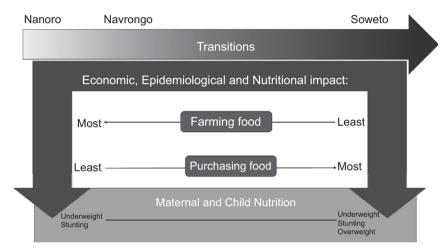


Fig. 1 What did communities perceive to have influenced maternal and child nutrition in three sites in sub-Saharan Africa? Thematic map

Table 2 Proposed solutions by community members across all three sites, operating at three ecological levels: household, community and

Proposed community solutions							
Household	Community	Structural					
Opportunities for women to earn income Food preparation demonstrations Men's involvement in family life	Participatory problem-solving groups Agricultural support (fertilisers, pesticides and vegetable gardens) Nutrition support from community health workers	Food and price regulation Social grants Irrigation projects					

each of the study settings influenced the communities' disease status, access to nutritious food and economic constraints, ultimately impacting upon maternal and child nutrition and health. Findings from the discussions are presented to reflect these ongoing transitions and the differing economic conditions between countries.

# Epidemiological transition

Participants spoke of different disease states, which appeared to be influenced by the stage of epidemiological transition of their site. People in Nanoro and Navrongo spoke of infectious diseases affecting community health, whereas in Soweto, the coexistence of infectious and non-communicable diseases was discussed.

In Nanoro, the least transitioned setting, the focus of health concerns was infectious diseases; particularly, malaria were prevalent and believed to be caused by environmental factors.

'Here in Nazoanga, children suffer from malaria and malnutrition' FGD03\_Men\_18-55yr\_Nanoro, Burkina Faso

'It is mosquitoes, dirty waters, the dust and the wind.' FGD01\_Women\_18-25 yr\_Nanoro, Burkina Faso



Similarly, communities in Navrongo reported infectious disease as an issue; however, community members reflected on how their understanding of disease has evolved over time so that they now take effective preventive actions. In this way, the community felt they had become more active agents in managing their own health.

'In the past, after fetching water... some women soak clothes in water for days without washing them, and mosquitoes can easily breed in them for them to get malaria .... Now the women wash their clothes and put everything in order, they cover their items with nets, ....so the things of the past have changed.' FGD03\_Women\_26-39 yrs\_Navrongo, Ghana

Discussions in Soweto, the most urbanised of the settings, revealed the coexistence of communicable and noncommunicable disease in the community, including mental health problems.

'A lot of people where I live are sick, some have HIV and then most of the youth and elderly have diabetes, and some have cancer.' FGD02\_Women\_26-40 yrs\_Soweto, South Africa

'Depression, it's there, it does exist among women but people don't understand what it is exactly.' FGD01\_Women\_26-40 yrs\_Soweto, South Africa

#### Nutritional transition

Regardless of whether their main concerns were about communicable or non-communicable diseases, participants in all sites made the connection between disease and nutrition. They recognised that eating well improves health for adults and children and prevents both types of disease.

'Good nutrition is the one that gives you good health.' FGD01\_Women\_18-25 yrs\_Nanoro Burkina Faso

'Good nutrition gives blood and also protects you from diseases...The white people have a saying that, "an empty sack cannot stand upright". When you wake up from bed, and the stomach is empty, you are weak, you cannot stand up to work. So it opens the mind, it also gives blood, it also makes you strong. It is in the body fighting against diseases.' FGD03\_Women\_26-39 yrs\_Navrongo, Ghana

'In order for them to be healthy you need to give them healthy food, give them veggies, get him accustomed to eating veggies, eating fruits, we need to pull them away from eating junk because at the end of the day ... it makes kids obese, it makes kids not think properly' FGD01\_Women\_26-40 yrs\_ Soweto, South Africa

Participants spoke of the ways that food availability and access to food had changed in recent times. They described how farmers in settings with more traditional food systems including Nanoro and Navrongo were struggling to grow

enough nutritious food to feed their families. They believed this to be, at least in part, caused by changing weather patterns. By contrast, the urban community in Soweto reported increasing reliance on processed takeaway foods instead of home-cooked meals and diminishing cultivable land for agricultural production. This is both a feature of transition to a more modern food system which had moved away from agricultural production and increasing urbanisation in South Africa.

In Nanoro, participants described how seasonal fluctuations affected food security and how they had to travel long distances and required transport to buy nutritious foods.

'The season was good but last year it hadn't rained enough and we had bad harvest.... One year is not enough to solve one bad year's harvest.' FGD03\_Men\_18-55 yr\_Nanoro, Burkina Faso

'Here we do not have vegetables. We must go and buy some in Wamzaala (6 km) to sell. Times before we went by bike to Nanoro (21 km) to buy the vegetables.' FGD02\_Women\_35-55 Nanoro, Burkina Faso

In Navrongo, it was reported that water insecurity led to insufficient fresh produce and the community had to eat dried vegetables. They associated this with poor nutrition and health.

'There is no water for us to water our gardens. We harvest the fresh vegetables and dry them. These dried vegetables, they don't have nutrients for the body' FGD06\_Women\_40-50 yrs\_Navrongo, Ghana

Additionally, communities in Navrongo reported that health workers advise pregnant women to eat healthy food but these foods were not available; they did not grow in this area and were too expensive to buy.

'Whenever we go to the hospital, they tell us to eat these foods because they are good. Because we don't have them is why we eat our local foods like the kapuno, TZ, and the vegetables and rice.' FGD03\_ Women\_26-39 yrs\_Navrongo, Ghana

More of the conversation with participants from Navrongo and Nanoro was focused on issues with generating sufficient food for their families rather than on the provision of good quality, diverse diets. This was less the case in Soweto, where much of the concern was with the poor quality of the food available locally in the shops and sold by street vendors. It was perceived to be more convenient and cheaper to purchase and consume widely available junk food than to prepare fresh food; this was a recent phenomenon.

'Food these days is wrong, wrong, wrong; you know back then, there used to be kota (bunny chow) we'd get it from school but it was scarce, but now at every corner there are those chips for R5 (US\$0.27)...' FGD08\_Women\_40+yrs\_Soweto, South Africa





#### Economic constraints

All communities described problems of poverty and lack of employment opportunity that limited access to nutritious foods for mothers and children and so affected their health. Different causes of poverty were discussed, including poor agricultural yield and lack of employment, which lead to having little food and no money to live on.

Participants described poverty as the main constraint to quality nutrition and health. They said poverty dictated their lives, and that they had developed coping mechanisms in order to survive.

'Poverty is the first disease.' FGD03\_Men\_18-55 yrs\_ Nanoro, Burkina Faso

Men in Navrongo described how they attempted to escape poverty by migrating to the cities and leaving their families behind.

'When the dry season comes about most of us especially we the young people, we run to Kumasi and stay looking for your daily bread alone, while the woman and the child are at home not having food to eat.' FGD09\_men\_35-50 yrs\_Navrongo, Ghana

Similarly, in Soweto, people described poverty leading to involvement in crime and substance abuse as a means to escape from a hopeless situation.

'It's poverty. There are many who are unemployed and that leads to involvement in crime, and drugs such as Nyaope' FGD09\_men\_18+yrs\_Soweto, South Africa

In Soweto, drinking was an issue for both genders. Alcohol was an instrument to help respondents' troubles with additional consequences for the health and well-being of their children.

'They do that because of their problems, there's no woman that wants to be an alcoholic when they have kids' FGD01\_Women\_26-40 yrs\_Soweto, South Africa

Unemployment and underemployment were prevalent contributing factors to poverty in all settings. For those who did work, livelihoods depended on whether the setting was rural or urban and the stage of transition from a more traditional to modern food system. In the rural communities, farming was described as becoming less productive; seasonal fluctuations believed to be caused by climate change were reducing the quantity and quality of foods available to mothers and children in those communities.

In Navrongo, the main source of income is subsistence farming and communities expressed challenges of yielding nutritious crops.

"... there is no money for us to farm, and also the farming is not progressing well. The land is not nutrient dense because of this, the micronutrient in the produce would not be sufficient' FGD08 men 24–34 yrs\_Navrongo, Ghana

In Soweto, women reported that they put themselves at risk in order to provide for their children.

'... I can't find a job, I go taking my CV but they don't call me back, so what do I do, I come with that mentality that because of I'm a woman, I can use my body to make money. I go to town and prostitute myself so I can buy food for my kids.' FGD01\_Women\_26-40 yrs\_Soweto, South Africa

In Nanoro, women who had employment spoke of having to work long hours in markets whilst pregnant or with their child.

'We have to wake up early in the morning to go buy articles we are selling, if you are pregnant with a young child how are you going to manage?" FGD02\_Women\_35-55 yrs\_Nanoro, Burkina Faso

## Solutions

Community members, despite feeling disempowered, had suggestions for improving maternal and child nutrition and wanted to be part of the solutions. Their solutions are presented below as they apply to the household, the community and societal structures.

To address their frustration that they had so little control over theirs and their children's diets, women asked for financial support to establish businesses to generate their own income. They felt that having their own income would increase the opportunities for them and their children to have healthier lives.

'The last rainy season, some of us got supported with 20 000 cfa (US\$33.19) to improve their business... some women wanted to implement activities to generate income.' FGD02\_Women\_35-55 yrs\_Nanoro, Burkina Faso

'We want jobs. If you have a job and you have food with money. You and your children are healthy even without your husband. Because you have your profession, you wouldn't mind him. You have peace of mind.' FGD05\_Women\_ 40-50 yrs\_Navrongo, Ghana

'Helping mothers to get an income. Especially mothers because they are the ones that go all out to ensure that children are fed.' FGD02\_Women\_26-40 yrs\_ Soweto, South Africa

Participants in all sites suggested solutions based on community empowerment, including investment in gardening and local agriculture, support from health workers with food preparation, and establishing community member support groups.

'What we can add is we want health care workers who will sensitise people to good nutritional practices, hygiene, cleanliness. To give advice to people,





give them solutions.' FGD03\_Men\_18\_55yrs\_Nanoro, Burkina Faso

'We have a large valley here so that let's say four or five us go and do gardens there and plant - whether it is cassava, plantain or orange trees. In three to four years' time, when we go there we will get food for a pregnant woman to eat to be strong' FGD07\_ men\_18+yrs\_Navrongo, Ghana

'So helping... support groups, we need to talk to each other, because we're basically fighting on our own as women...' FGD04\_Women\_18-25 yrs\_ Soweto\_South Africa

Participants asked that governments provide contextspecific solutions to increase the availability of healthier foods. The people in Nanoro wanted a reduction in food prices, communities in Navrongo sought the construction of dams, and people in Soweto wanted healthy food packages and social grants, increased availability of healthy food and regulation over the availability of unhealthy foods.

'They (the government) won't give us the food for free. They are going to reduce the price and we are going to give our contribution. ... Instead of paying 20 000 cfa (US\$33·19) for one bag maybe two bags can be 20000cfa.' FGD02\_Women\_35-55 yrs\_Nanoro, Burkina Faso

'If the government can create a dam here ... they will get fresh vegetables. Because the rains are seasonal, we dig boreholes, in order to help us farm. Now we are there waiting for the next year's rains to farm...' FGD10\_men\_18+yrs\_Navrongo, Ghana

'I would start a feeding scheme ... getting their social grants; they [mothers] need to come back with a little package of at least healthy food... a health pack for the child' FGD09\_men\_18+yrs\_Soweto, South Africa

# Discussion

This cross-cultural study explored perceptions of maternal and child nutrition in communities living in countries at different stages of economic and nutrition transition. Participants living in these communities indicated common problems such as poverty and lack of employment opportunity, and these made it challenging to provide sufficient food to prevent families from being hungry. Though they mentioned their poor diet quality, community members were less concerned about this than about simply feeding their families enough. Sites in rural Ghana and Burkina Faso were still at early phases of nutrition transition and relied heavily on traditional, plant-based diets<sup>(41)</sup>. Community member suggestions aligned with those of the 2019 Lancet series on the 'double burden of malnutrition' that advised double-duty actions to tackle all forms of malnutrition, these to include scaling up agriculture programmes and improving food environments<sup>(5,6)</sup>. Solutions suggested by the communities also included a number of 'nutrition-sensitive' approaches rather than just 'nutrition-specific' interventions (42,43). Nutritionsensitive approaches included access to good farming land, employment support and women's empowerment groups. Nutrition-sensitive interventions have been shown to be successful in reducing maternal underweight and infant wasting(42,43). Such interventions would need to be delivered in a way that reflected the local context.

These interventions may be more effective if focused on women in poorly nourished communities (20,44-48). Women in our focus groups felt overburdened with domestic chores and said that their men were largely absent from family life<sup>(22)</sup>. The men wanted to be included in raising their children but felt unable to fulfil their role as providers. Interventions that involve men have been shown to increase partner support for women during pregnancy<sup>(49)</sup>. Participants of both genders suggested that forms of collective action might be key to improving maternal and child nutrition. Involving women in problem-solving participatory groups in other contexts has been shown to create dramatic improvements in maternal and child health outcomes which offer cost-effective solutions in low-resource settings<sup>(50)</sup>. The Alive and Thrive initiative provides evidence that a multi-faceted nutrition-sensitive approach, including community mobilisation can improve maternal and infant outcomes<sup>(51)</sup>.

Our findings align with the 2018 Lancet commission on the 'global syndemic' of obesity, undernutrition and climate change<sup>(14)</sup>; participants in the focus groups spoke of changing climates and seasonal fluctuations impacting their agricultural outputs and consequently the quality and quantity of food available for them to eat or sell. Solutions to improve malnutrition in Africa's transitioning countries clearly need to take account of the effects of climate change on agriculture and the consequent effect on migration<sup>(13)</sup>.

# Strengths and limitations

This is a substantial focus group study, involving a large number of participants of a range of ages, from diverse settings. Highly trained local qualitative researchers carried out the research and analysed the data using standardised rigorous methods, but from their contextual perspectives. The data were further analysed by four international research teams, which promoted wider interpretation. As the audio recordings were translated into English, the original meaning of data may be lost in translations. This study was limited by speaking only to men and women from local families. It would have been useful to additionally capture perspectives from community leaders and health workers.





#### Conclusion

Nutrition-sensitive rather than nutrition-specific interventions were mainly suggested by sub-Saharan African communities to improve maternal and child nutrition. Food security is a major concern for the communities who called for support to put food production more under their control, and more opportunities for paid employment. This suggests that co-creation of any intervention response would be not just desirable but essential. Without addressing this basic need for enough food, it is a challenge to shift attention to improving food quality and dietary diversity and so offset the burgeoning obesity epidemic taking hold across Africa. Discussions also make clear the multi-sectoral nature of possible interventions to improve maternal and child nutrition, and the probability that solutions to this health problem lies well beyond the health sector. Sustainable policy interventions to improve maternal and child nutrition need to consider the complex issues involved in food security across transitioning countries, many of which are not obviously or immediately related to the provision of food.

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# Supplementary material

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