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ORIGINALPAPER

Stories of Challenge in South Africa: changes in the enabling environment for nutrition among young children (1994–2021)

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Abstract
Despite important nutrition-related policy and programmatic improvements in South Africa, rates of stunting among young children remain unacceptably high, while rates of overweight and obesity in this same population group are simultaneously on the rise. This study sought to examine the changes in the enabling environment for nutrition aimed at young children in South Africa by drawing on a literature review, policy mapping, and stakeholder interviews, for the time period from the end of apartheid in 1994 to 2021. The study focuses on changes and drivers of change at national level but also in three provinces: Western Cape, North West, and KwaZulu-Natal. The study ultimately seeks to better understand the changes and challenges with regards to policy and commitment to nutrition, coordination structures at various levels, and how these led to or did not lead to implementation and impact in these provinces. The study ends with reflections on what these findings mean for food and nutrition security in South Africa going forward, as well as what they might mean for other countries with similar contexts.

Keywords Malnutrition · Policy · South Africa · Enabling Environment · Food and Nutrition Security · Children

1 Introduction

Over the past decade or so, nutrition has gained extraordinary attention on the world stage. In 2012, as part of an international effort to end malnutrition, the World Health Assembly (WHA) outlined ten nutrition targets to be achieved by 2025. Nutrition was subsequently explicitly included in the Sustainable Development Goals (SDGs) for 2030, and a plethora of research, funding, initiatives, and events has taken place since to raise awareness about the issue (Development Initiatives, 2020; McGuire, 2015). However, despite many countries having developed nutrition-related policies or interventions, no country is on track to meet the WHA targets, stunting rates among young children (defined in this paper as those under five years old) remain high (particularly in Africa and Asia), and many countries are starting to experience multiple malnutrition burdens, i.e. both high rates of undernutrition along with rising prevalence of overweight and obesity (Development Initiatives, 2020).

While what is needed to reduce malnutrition is clear – nutrition-specific and nutrition-sensitive interventions,[1] implemented at scale, and sustained over time – less is known about the "enabling environments" that are foundational for building political momentum and converting this momentum into results on the ground (Gillespie et al., 2013; Ruel & Alderman, 2013). Given the disappointing global progress on malnutrition goals, in addition to the fallout of the Covid-19 pandemic, it is important to examine how enabling environments can be improved in contexts where malnutrition continues to exist.

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[1] Nutrition-specific interventions address the immediate causes of undernutrition, such as inadequate dietary intake or disease, whereas nutrition-sensitive interventions address the underlying causes of malnutrition, such as household food insecurity, inadequate care practices, lack of health services, and unhealthy household conditions (Ruel & Alderman, 2013).

Table 1 Changes in young child nutrition outcomes (1998 – 2016) (%)

Indicator	NFCS 1999 1–9 yrs	SADHS 2003 < 5 yrs	NFCS-FB 2005 1–9 yrs	SANHANES 2012 < 5yrs	SADHS 2016 < 5 yrs
Wasting	3.7	5.2	4.5	2.9	2.5
Underweight	10.3	11.5	9.3	5.8	6
Stunting	25.5 (1-3yrs)	27.4	23.4 (1-3yrs)	26.5 (1-3yrs)	27 (< 5yrs)
Overweight	12.4	Not reported	10.6	16.5 (girls) 11.5 (boys)	13.3
Obesity	6.6	Not reported	4.8	7.1 (girls) 4.7 (boys)	Not reported

Source: May et al. (2020)

In order to improve nutrition outcomes among young children, South Africa has implemented a wide range of nutrition-specific and nutrition-sensitive policies and programmes since the early 1990s. Despite progress on reducing wasting and undernutrition, South Africa's stunting rate has remained stubbornly high and rates of overweight and obesity have increased over the past two decades. Stunting among children under five stands at ~ 27% (30% of boys, 25% of girls) (NDoH et al., 2017), a rate that is "exceptionally high" for a country with one of the biggest economies in sub-Saharan Africa, and falls far short of successes achieved in several other low- and middle-income nations (May et al., 2020; Micha et al., 2020) (Table 1).[2]

The position of South Africa's double burden of malnutrition also reflects poor performance relative to global trends and other middle-income countries (May et al., 2020). The South Africa Demographic and Health Survey (SADHS) in 2016 found that 13% of under-five children were overweight or obese (NDoH et al., 2017). Furthermore, for children between 5 and 19 years of age, overweight and obesity have steadily increased since the early 2000s and were projected to be around 35% for girls and 26% for boys in 2019 (Development Initiatives, 2022). Overnutrition increased with age with a strong gender bias emerging in late teens (aged 15–19), where 8.6% of young men and 26.8% of young women were overweight or obese. Prevalence of overweight and obesity among all women increased over time, from 56% in 1998 to 68% in 2016, with the highest rates of overweight and obesity (81–82%) in women aged 45 – 60 years (NDoH et al., 2017). Obesity and stunting are linked in South Africa and found in the same households – at least one obese adult is found in 45 percent of households with a stunted child (FAO et al., 2022). The risk of becoming overweight or obese has been connected to previous nutritional status, with stunted children having twice the likelihood of being overweight as children of average height (Steyn et al., 2005).

An effective response to this situation would have substantial social and economic returns (Ruel & Alderman, 2013). Yet, little is known about why the numerous policies and programmes developed to improve nutrition in South Africa have not resulted in expected impacts on the ground. Using a mixed qualitative approach, the paper focuses on the question of why, despite nearly three decades of nutrition-related policy development and programme implementation, there has been insufficient progress on improving nutrition outcomes among young children in South Africa, particularly in terms of stunting and overweight and obesity. It does this by examining changes in the enabling environment for nutrition, focusing on issues of political commitment, agenda-setting, and policy coherence with attention to broader political-economic dynamics. The focus is primarily at national-level with in-depth analysis of the three provinces of KwaZulu-Natal, Western Cape, and North West to enable specific issues to emerge.

The study is part of the Stories of Challenge in Nutrition research initiative (2019–2021), which was led by the International Food Policy Research Institute (IFPRI) and carried out with country partners. The initiative sought to investigate drivers of political attention to and action on the multiple burdens in nutrition, in order to foster learning across contexts and inform policy and programme development (Gillespie et al., 2021).[3]

The paper proceeds as follows. Section 2 discusses the framework on an enabling environment for nutrition, which was used to guide the design of the study. Section 3 describes the study setting and the methods used for this research. Section 4 examines the findings of the study,

[2] However, because the South Africa Demographic and Health Survey sample size is limited, confidence intervals are broad when data is disaggregated to lower levels, particularly in regions with small populations, such as the Northern Cape.

[3] The studies carried out as part of this latest initiative are being published as part of a topical collection in Food Security (found here: https://link.springer.com/journal/12571/topicalCollection/AC_92bea2864714a58198b28b3ed8864049). These papers build on a 'first wave' of similar studies carried out between 2015 and 2017 that were published in a Special Issue of *Global Food Security* in 2017 (Gillespie et al., 2017).

Table 2 Enabling environment framework for nutrition

Issues and challenges for creating and sustaining momentum	Issues and challenges for converting momentum into results
Framing, generation, and communication of knowledge and evidence	
• Framing and narratives • Evidence of outcomes and benefits • What works and how well do nutrition interventions work relative to others? • Advocacy to increase priority (civil society) • Evidence of coverage, scale, quality	• Implementation research (what works, why, and how?) • Programme evaluation (impact pathways) • Generation of demand for evidence of effectiveness
Political economy of stakeholders, ideas, and interests	
• Incentivising and delivering horizontal coherence (multisectoral coordination) • Development of accountability to citizens • Enabling and incentivising positive contributions from the private sector	• Delivery of vertical coherence • The role of civil society and the private sector in delivery
Capacity (individual, organisational, systemic) and financial resources	
• Leadership and championing • Systemic and strategic capacity • Making the case for additional resource mobilisation	• Delivery and operational capacity • New forms of resource mobilisation • Prioritisation and sequencing of nutrition action • Implementation and scale-up

Source: Gillespie et al. (2013)

with a focus on the enabling environment domains of knowledge and evidence, politics and governance, and capacity and financial resources. Section 5 discusses what these findings mean for addressing nutrition challenges in South Africa and how broader lessons learned from this study are relevant for other contexts. The last section concludes.

2 An enabling environment for nutrition

Conceptualisation of the study, along with data collection and analysis is informed by Gillespie et al.'s (2013) framework of an "enabling environment" for nutrition, defined as "the political and policy processes that build and sustain momentum for the effective implementation of actions that reduce undernutrition" (Gillespie et al., 2013, p. 553) (Table 2). While evidence on causes of malnutrition as well as the appropriate nutrition-specific and nutrition-sensitive interventions to address them is well-established, the politics around nutrition issues and the way in which policies are developed and translated into actual implementation on the ground has been less straightforward and has become an important area of research.

The framework draws on existing evidence to identify three domains that are important for creating and sustaining momentum on nutrition and for translating this momentum into impact. These domains informed the design of interview guides as well as the codebooks used for analysis of interviews, in order to assess the enabling environment for nutrition in South Africa.[4]

[4] Interview guides and codebooks used for analysis are available upon request.

3 Methodology

3.1 Study setting

The study focused on examining changes in the enabling environment for nutrition by focusing on national level policy dynamics, as well as examining these at provincial level through a more in-depth focus on three provinces: Western Cape, North West and KwaZulu-Natal (Fig. 1).

These provinces were selected based on a diversity of nutrition outcomes, risk factors, policy emphasis and governance arrangements. North West and the Western Cape were chosen because of high levels of young child malnutrition, child poverty and hunger rates along with differing governance arrangements, with KwaZulu-Natal being added at the request of the National Department of Health because of a perception that the provincial government had handled nutrition in an innovative inter-sectoral manner (Fig. 2).

Child hunger rates are highest in the North West and KwaZulu-Natal provinces, affecting 19 percent and 18 percent of children, respectively, according to an analysis of child hunger rates within provinces (May et al., 2020). Poverty rates across provinces differ significantly. The child poverty rate in KwaZulu-Natal is 71 percent whilst the lowest child poverty rates are in Gauteng and the Western Cape, with 40% and 23%, respectively (May et al., 2020). Child poverty is still most prevalent in the former homelands' rural areas, such as KwaZulu-Natal and North West, where 81 percent of children live in poverty. According to 2016 figures, the Western Cape experienced relatively high rates of hunger (12% of households), despite being a relatively wealthy province in comparison to the others. This may be

Fig. 1 Map of South Africa's provinces. Source: Map of South Africa - Bing images: 5fc8153f06666510cee7b99e85407487.jpg (583×625)(pin-img.com)

a result of the high rates of poverty in urban slum regions and the low levels of agricultural activities among provincial households. This was despite having some of the highest consumption levels across all food groups with fruit consumption being the highest in the Western Cape, where 46% of households reported consumption, and spending on vegetables was 50% higher than the national average (Omotayo et al., 2019).

3.2 Data collection and analysis

Research for this study was carried out between May 2019 and February 2021. The study covered the time period from 1994 to 2021; 1994 was chosen as the starting point as this was the year of South Africa's first democratic election after the end of apartheid, initiating significant changes in policy in the country. Data collection relied on a mixed qualitative approach, as follows:

1. *Tracking change in young child nutrition outcomes*. To track young child nutrition outcomes over time at national and provincial level, we relied primarily on the recent Child Gauge report (May et al., 2020), which examines data from different national surveys since 1998.
2. *Review of existing literature:* A literature review (a review of reviews) was carried out to identify existing research on how policies to address malnutrition and related comorbidities have been ratified and/or enacted in the post-apartheid period (see Hagen-Zanker & Mallett, 2013). The review focused on peer-reviewed published research on undernutrition (particularly stunting) and overweight/obesity in South Africa from 1994 onwards, at national and at provincial level (see Appendix A for the search strategy and study evaluation criteria).[5] Ultimately, information was reviewed from 117 reviews.
3. *Policy mapping*: A rapid policy mapping exercise was carried out to develop a comprehensive overview of nutrition-relevant policy in South Africa from 1994 to 2021, as well as ongoing policy in Western Cape, North West, and KwaZulu-Natal provinces. This search was

[5] The intention is to publish this literature review separately; we draw on it here specifically to provide data for the analysis of the three domains of the enabling environment.

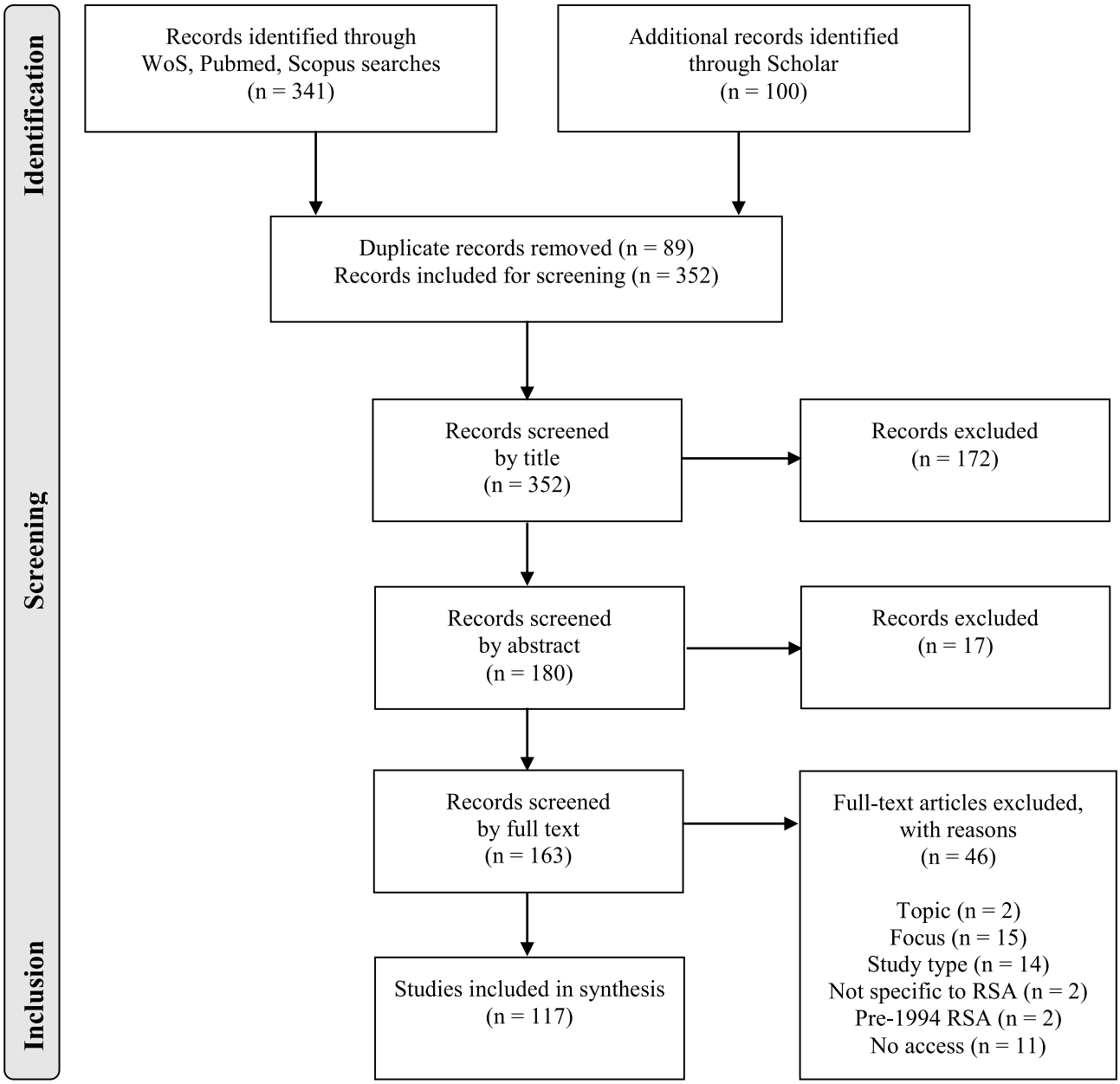

Fig. 2 Study selection diagram

intended to complement information on policy retrieved through the literature review, which produced fewer results for the subnational level. The mapping was carried out by searching identified institutional websites, such as, e.g., the government of South Africa. Strategic goals identified through the targeted search for nutrition-relevant policies in each of the three provinces were mapped against strategic goals in key national policy and against Sustainable Development Goals. Further insights on policy at both national and subnational level were sought through semi-structured interviews and stakeholder consultations.

4. *Semi-structured interviews and stakeholder consultations*: Two rounds of interviews were held. As part of the first round, fourteen key informants were selected representing civil society, academia, research and the private sector. Apart from the first two, all interviews were conducted virtually as a direct result of Covid-19 restrictions. These interviews focused on the challenges of translating nutrition-relevant policies into impact on nutrition outcomes, in South Africa broadly but also in specific provinces. Interviews allowed for a detailed evolution of policy to emerge and brought out stakeholder perceptions on key challenges to young child nutrition in

Table 3 Summary of interviews

Type of interviewee	No. of interviews	
	National-level	Provincial-level
Key informant interviews *(Nov 2019 – Oct 2020)*		
Academia	*6*	
Civil society	*5*	
Private sector	*2*	
United Nations	*1*	
Semi-structured interviews *(Nov 2020 – March 2021)*		
Government departments	*7*	*9*
Academia		*2*
Civil society	*1*	
Total	**22**	**11**

South Africa from the time of the democratic transition to a more recent broader systemic approach focused on food systems, food environments and social-ecological systems (Table 3). A (virtual) consultation workshop was subsequently held on 14 October 2020, midway through the study, to review findings and inform the remainder of the study. The second round of nineteen interviews went into further depth and hence this time included government representatives. These interviews focused on implementation of policy, drawing in senior officials overseeing various policies at national level and officials charged with overseeing the translation and implementation of these policies at provincial level (Table 3). A second (virtual) consultation/validation was held with key stakeholders on 17 March 2021 to review findings and finalise recommendations (SoChall, 2021).

Interviews were audio recorded and transcribed verbatim. Transcripts were reviewed and an initial coding was undertaken using themes framing the enabling environment, namely knowledge and evidence, political commitment, role of change leaders or champions, coherence, capacity to act, opportunities and barriers to change and sustainability . These were expanded to cover the "evolution of policy 1994-2021; critique of the enabling environment" and "new agendas" in nutrition".

The enabling environment framework was also used to triangulate data from the different data collection activities. Findings were distinguished by framework domain (knowledge and evidence; political economy of stakeholders, ideas, and interest; capacity and financial resources) and according to "creating and sustaining momentum" and "converting momentum into results", and written up and synthesized in narrative form.

The Health Research Ethics Committee of Stellenbosch University approved the research (Ref nr: N19/10/130). Participation in interviews and workshops were voluntary. Informed consent forms (ICF) were completed before all interviews. Workshop participation provided informed consent via the online platforms. Permission to record all interviews and workshop proceedings were requested from all participants.

4 Results

Findings from the data collection activities are discussed in accordance with the enabling environment framework domains on knowledge and evidence, politics and governance, and capacity and financial resources. Throughout, the voices of the respondents have been elevated to provide unique perspectives of the challenges facing nutrition and how best to address these.

4.1 The enabling environment for nutrition in South Africa

4.1.1 Framing, generating, and communicating knowledge and evidence

Framing the policy agenda In terms of the policy response in post-apartheid South Africa, national strategies and programmes across sectors have declared food security a priority for all citizens (Hendriks, 2014). The South African government and partners have thus taken various steps to address the nutrition challenge with a clear trajectory for nutrition- and health-sensitive policy since 1994, which appears to be growing in momentum (WHO, 2020). A key finding from the literature and policy reviews, and later substantiated by key informant interviews, is the positive example that South Africa provides for the African continent in developing a policy response to malnutrition.

Despite impressive policy development, however, a review of the literature revealed that these efforts have not translated into the intended improvements in nutrition, an issue reiterated by many key informants. The breadth of these policies is depicted in the World Health Organisation, Global database on the Implementation of Nutrition Action (GINA) (who.int).

The failure to reach the intended improvements in malnutrition suggests that these policies and programmes have been poorly implemented, or that inequality and poverty have diminished the impact (Jonah et al., 2018). The literature review found that in some cases, the policy documents lacked detail, particularly in adequately contextualising and diagnosing the underlying issues and appropriate

responses. To place these policies in context, the literature review highlighted poverty as a key underlying driver of malnutrition, which is in turn driven by the high unemployment and low levels of income for many who are employed, particularly women.

The need for more and better nutrition data on which to base policy and programmes became a core tenet of nutrition programming in South Africa since 1994. In the early 2000s, a dearth of data on food and nutrition security existed (see Hendriks, 2005). Subsequently a number of national surveys and case studies were undertaken that shed light on the nutritional status of South Africans (Rose & Charlton, 2002; Bourne et al., 2007; Labadarios et al., 2011; Iversen et al., 2011). However, as Labadarios et al. (2011) highlight, the findings from these datasets differ and so a food security-specific national survey was initiated. In 2012, the SANHANES-1 (first South African National Health and Nutrition Examination Survey) aimed to rectify this gap and provided a comprehensive snapshot of food and nutrition security in South Africa (Pereira, 2014). Following these national surveys, various recommendations from survey reports were implemented, notably the Vitamin A supplementation programme and the Food Fortification programme (Ac3). These reports provided important evidence to inform policy formulation by a broader range of stakeholders.

Framing new agendas: food environments and foodscapes Research respondents from across sectors indicated that the nutrition challenge needed to be framed in the future beyond the emphasis on undernutrition, to an overt recognition of obesogenic food environments. Evidence from key respondents highlighted the concept of food environments as determinants of overweight, obesity and non-communicable diseases (NCDs) due to the prevalence of highly processed, high energy, low nutrient foods (NGO2), and as a key issue that was not well articulated within policy (Ac1). The literature review held that these problems were related to the intersection of poverty and food system transitions leading to changes in the types of food available and accessible to people in the local food environment.

Raising this as an issue facing both the urban and rural context, respondents agreed that addressing these challenges is not a matter of individual food choices, as these are driven by broader obesogenic food environments, including availability and physical access, affordability, promotion, advertising and information as well as food quality and safety issues. These perspectives raised by research respondents have important policy implications. Regulating food environments in such a way that consumers find it easier to make more healthy food choices draws attention to the policy domain governed by cities and municipalities (Ac1). Local government regulation does not consider the health and nutritional impacts of food traded, and often restricts street trade offering healthy foods, while spazas (convenience store) selling unhealthier options are under-regulated (NGO2).

Consistent with these observations, the literature review highlighted that household income and food expenditure did not correlate with a healthy diet, with malnutrition issues being observed across income groups and being shaped by underlying and structural dimensions of foodscapes and nutrition insecurity (An, 2013; Arthur et al., 2015; Bonti-Ankomah, 2001; Labadarios et al., 2011; Temple & Steyn, 2011). Foodscapes reflect the spatiality of food systems and include the physical structures, such as availability of supermarkets and grocery shops, as well as social and economic factors that influence how residents in an area access different foods and make dietary choices or decisions (Miewald & McCann, 2014). Dietary practices and food choices are directly dependent on the external environment (An, 2013; Hawkes et al., 2013; Reddy & Moletsane, 2009). The rapid spread of formal supermarkets and fast-food chains influences consumer behaviour and food consumption patterns. This expansion, while offering consumers a wider range of products, also entails major organisational changes in the whole food supply chain and wider food system. It is a major driver of the rise of obesity, particularly in young children, underlining the role of structural factors in shaping a food environment that promotes a high energy, low-quality diet (An, 2013; Igumbor et al., 2012; Mabhaudhi et al., 2018b; Mpandeli et al., 2018; Reddy & Moletsane, 2009; Schram et al., 2013; Temple & Steyn, 2011).

Framing nutrition as a "multi-sectoral" issue: in discourse, not practice The framing of nutrition has had an impact on the institutional arrangements constructed to drive policy priorities. Seen largely as a health issue, nutrition has been positioned within the Department of Health (DoH) since 1994, which was tasked to oversee largely nutrition-specific interventions. The Department was mandated to lead the government's response to nutrition with priority interventions (during the late 1990s and early 2000s) mostly being nutrition specific (including Vitamin A supplementation; Food fortification, infant and young child feeding (IYCF) guidelines). The Nutrition Roadmap of 2013 to 2017, attempted to broaden the scope of interventions and supported the notion of multisectoral work (May et al., 2020). The Comprehensive Package of Key Nutritional Interventions highlighted in the Roadmap, however, remained mostly nutrition-specific.

Respondents recognised that the Department of Agriculture has led the broader food security agenda since 1994 at national level (Gov9). This is most evident in the Integrated Food Security Strategy (IFSS) (Department of Agriculture, 2002). The IFSS was expected to provide the overarching framework and guidance for multisectoral collaboration

towards addressing food security issues (Gov9). One of the key criticisms of the IFSS, however, was that it had an emphasis on the production side of food security to the detriment of other aspects, in particular nutrition (Drimie & Ruysenaar, 2010). In developing the subsequent National Policy on Food and Nutrition Security, the departments convening the process acknowledged this weakness in the IFSS, given by its leaning towards agricultural issues other than the broader issues for food and nutrition security (Gov9).

Positioning nutrition as a multi-sectoral issue has faced challenges in the government's fixed planning structure. Respondents reported that there have been attempts to engage nutrition-sensitive work within the primary health care approach, to shift the framing of nutrition to a more inclusive space. The challenge has been, however, that planning in government happens in silos and performance therefore happens in silos. The architecture of government structures was thus identified as a major constraint despite the multi-sectoral framing of food and nutrition security. In particular, existing mechanisms for reporting periodic performance (e.g. Annual Performance Plans (APPs) and lines of accountability (UN1), and the lack of streamlined targets and indicators to ensure coherence between design, budgeting, implementation, monitoring and evaluation (Gov1), were cited as factors hindering effectiveness.

Arguments about the need for a coordination mechanism to align nutrition-related programmes were raised in critiques of the IFSS (see Drimie & Ruysenaar, 2010), and the subsequent National Food Security and Nutrition Plan (NFSNP) was critiqued for its lack of a legislative framework and implementation strategy necessary to achieve its goals (Hendriks & Olivier, 2015).

In terms of framing nutrition to influence governance arrangements, there has been progress with inter-sectoral technical committees working within government, but a major gap exists at the political level. The NFSNP envisages the establishment of the National Food and Nutrition Security Council, intended as a "game changer" designed to "provide leadership and oversight for all efforts of government and society to enhance food security and good nutrition" (DSD & DAFF, 2017: 6). To date, this Council has not been established. The failure to establish the Council as a multi-stakeholder forum has made it difficult for government to respond effectively to the impacts of the Covid-19 pandemic resulting in litigation and community-based organisations intervening in order to provide food relief to those affected by the pandemic (May et al., 2020).

What works? Monitoring and evaluation Nutrition-sensitive programming within the NFSNP relates directly to monitoring and evaluation (M&E). A senior academic argued that "if you look at the M&E part [in the NFSNP], the person who is heading up that M&E…is the custodian of the whole food security M&E system…[they] fall under the chief director for smallholder agriculture, which food security falls under. We cannot get them to understand what indicators are needed" (Ac2). A related issue was a lack of alignment between departmental monitoring systems: "Everyone has their own information management system and all these are sitting independent to each other" (Gov3).

Echoing insights from interviews, findings from the literature highlight that disaggregated data is particularly important given how nutrition outcomes continue to differ markedly between age groups, between boys and girls, between ethnic groups and between geographical areas (Dalal et al., 2011; Rossouw et al., 2012; Seonandan & McKerrow, 2016; Vorster et al., 1999). There are strong age-dependent trends from early childhood to late adolescence that are especially evident (Rossouw et al., 2012).

Based on national and subnational evidence (Gilbert & Gilbert, 2004; Labadarios et al., 2005; Hendriks, 2014; Hendriks & Olivier, 2015; Pereira & Drimie, 2016; Boatemaa et al., 2018; Boatemaa et al., 2019; Mabhaudhi et al., 2018a; Godsmark et al., 2019), many reviews point to a need to implement interventions for addressing malnutrition that are equity driven and specific to the targeted populations, as well as differentiated so that they are relevant to settings in rural, urban and peri-urban environments. This is due to some key differential drivers and entry points. Major limitations in the comparability of data from both national and subnational surveys limit the benefits that can be derived from better coordinated M&E methodologies and systems. Stratified information concerning population groups at national and provincial levels is needed to capture how determinants of nutrition and health outcomes affect population groups across and within settings, in consideration of the contextual elements which constitute foodscapes in particular settings.

Until the 2020 National Income Dynamics Study-Coronavirus Rapid Mobile Survey (NIDS-CRAM), there has been a data disconnect in that surveys rarely include health and food and nutrition security and agricultural indicators. This makes it difficult to link underlying causes from non-health factors to nutrition outcomes.

4.1.2 Politics and governance

Political commitment Post-apartheid nutrition policies have changed markedly in emphasis, indicating how successfully the agenda has aligned to a Constitutional democracy influenced by human rights (Constitution of the Republic of South Africa, 1996). A senior academic who had worked in the food and nutrition space since the 1990s explained the stark difference in emphasis across time, with nutrition policy during apartheid being "about feeding the masses and feeding them as cheaply and efficiently as you could while

advancing white farming capacity. And then you see the shift after that to a far more human approach" (Ac2). The post-apartheid government achieved a great deal in developing a suite of policies focused on nutrition ranging from "nutrition and school feeding", "dietary guidelines", "nutrition education…if you look at what a state could do, South Africa hits almost all the boxes. NCD policy, this policy, that. It really is extraordinary" (Ac2).

At the level of broad policy frameworks, commitment to addressing food and nutrition insecurity seems clear in writing. However, the stated commitment in policy documents has not translated into action. Referring to high-level political commitment, a senior government official explained that "one of our biggest problems is that there's no political will…when there's the will and commitment, you'll see actions" (Gov2). Arguably, securing political support for nutrition would provide impetus for real change. In other words, it was not policy and programmes that were perceived to be the problem, but rather the political will to prioritise their implementation.

Using the right to food enforced by the legal system was identified as a key strategy by an interviewee working within public litigation. The respondent argued that a functional process would see: "…the courts to then compel the state to legislate". This would entail a "declaratory order coming from the courts and going back through parliament" which would prompt the drafting of legislation to govern the food space (NGO4). Legal processes were needed to mitigate "rampant capital interests that are running loose in our food value chain, with no legislation, with no accountability", and call for stakeholders to spell out their involvement with relation to the right to food in the country and clarify their lines of accountability (NGO4).

Commitment to delivering horizontal coherence The issue of legal processes raises the importance of pressure for commitment emanating from outside of the state, particularly from civil society organisations. The HIV agenda was raised as an example: "it wasn't government officials or medical experts or HIV experts or so on, it was NGOs. For example TAC [Treatment Action Campaign], which made a noise and did advocacy, whatever, and created that demand and made politicians to hear them through unconventional ways, like *toyi-toyiing* [dance used in political protests] and so on" (Gov2).

Every survey since 1994 has proposed a national coordinating body for nutrition. Notably, the last national survey in 2012, SANHANES-1, recommended that a special task force was needed to look at short-, medium- and long-term food and nutrition security interventions for populations in different localities (Shisana et al., 2013). In 2014, the NFNSP formulated this recommendation as its key strategic objective number 1: 'A Food and Nutrition Security Council would be established [and] chaired by the president with premiers of provinces chairing provincial food and nutrition security councils and mayors chairing district food and nutrition security councils' (DSD & DAFF, 2017; Masilela, 2020). The immediate task of the Council would be to advocate for the integration of policies, legislation, and programmes, to achieve coherence. Further detail about this Council, and its underpinning institutional arrangements, are absent in official documentation.

The National Food and Nutrition Security Coordinating Committee has been established and is chaired by the Department of Performance Monitoring and Evaluation (DPME) to steer the implementation of the six strategic objectives of the NFSNP (Gov3). In terms of function, the Committee meets to discuss sectoral progress against the strategic objectives and shares information about implementation. A senior official in a participating department reflected on the DPME's success in galvanising and shaping coordination, noting that: "Maybe at a lower level we have to strengthen some aspects to make sure that we have these sector departments truly planning and working together to deliver the same objectives and outcomes. But at national [level] that [coordination] is a problem of the past" (Gov3).

There may, however, be a misplaced confidence in these structures to generate change. A major challenge is the alignment of sectors, in particular agriculture and health, to converge on a nutrition outcome when such policies lack nutrition indicators and budgets. As reflected by a participating official: "even at national level we are not engaging as much as we should, because as agriculture we still have a number of interventions and programmes that we are planning without necessarily having a consultation per se with the Department of Health" (Gov9).

Beyond consultation, the official raised the issue of the authority of the structure to ensure that departments worked together, highlighting the sectoral mandates and structures: "There is nothing that forces the department to ensure that whatever programme that it implements is in line with the nutrition sensitivity guidelines or something like that" (Gov9). The Food and Nutrition Security Council was often raised by respondents as a way of providing stronger political commitment to nutrition through high-level political leadership, and representatives from across society to provide strategic guidance and oversight, including for convergence and advocating for funding. Without some legislation forcing departments to adhere to a common framework for nutrition sensitivity, emerging programmes may continue to emerge without any proper consideration of nutrition.

Subnational governance and vertical coherence A high level of local specificity in the causes, experiences and consequences of food insecurity is evident from the reviewed research at provincial level. From an operational perspective,

the 'how' of interventions – their process – matters at least as much as their 'what' – their content (Misselhorn & Hendriks, 2017). This concerns the process of finding alignment between resources from provincial line departments. Some findings from the literature review suggest that provincial governments were overambitious in terms of the quantity of initiatives undertaken for short-term political gains, while losing track of the quality of provision which impacts on outcomes in the longer term (Monyeki et al., 2015).

Nutrition policies with high potential for addressing multiple forms of malnutrition simultaneously faced implementation challenges on the ground (Monyeki et al., 2015; Seonandan & McKerrow, 2016). A key issue was a minimal structure for coordination, co-creation, and cooperation in most provinces (Boatemaa et al., 2018). This was reflected in insights gained through interviews. A key informant who participated in the national coordinating structure questioned whether this structure informed "integrated action at lower spheres of government" (Gov9). This meant that ultimately "the frontline workers are functioning in accordance to their sectoral functions and the coordination is not happening at that level. And there's nothing that binds departments to ensure that it happens" (Gov9). This was a striking reflection emerging from North West province (Gov5). Consequently, the compounding impact of Covid-19 revealed that little changed in the North West in response to the pandemic and its effects on malnutrition.

In contrast, there was evidence of effective structures emerging at lower administrative levels in KwaZulu-Natal and Western Cape. Pre-Covid-19, the Operation *Sukuma Sakhe* Implementation Plan in KwaZulu-Natal was noted as an example of an effective intergovernmental approach. In KwaZulu-Natal, the importance given to nutrition was 'evident in the existence of effective coordination mechanisms for food/nutrition interventions from the level of the premier down to the ward level' (Khulisa Management Services, 2013). This had, however, dissipated over time (Gov3). In the Western Cape, a strong network of officials, activists, academics, researchers and other stakeholders has emerged since 2010, unfolding at different levels including at province, city and within local government (Haysom, 2020). These groupings built an understanding of nutrition and mobilised political support culminating in a "web of actors" being mobilised during Covid-19 that were able to move rapidly to mitigate the impact of the pandemic on local communities (Adelle et al., 2021). This partly involved building alliances, as actors had learnt to know (and trust) each other over the preceding decade (Gov6).

4.1.3 Capacity and financial resources

Nutrition capacity The previous sections have shown that leadership at national level, including government, civil society, and nutrition professionals, has raised awareness of multi-sectorality of nutrition and improved coordination. The effective translation of policy into implementation requires the appointment of committed and well-qualified officials to lead sector programmes. Addressing the complexity of malnutrition cannot be achieved without the "bureaucratic space" for innovation and learning such that programmes can be adapted.

There are arguably an inadequate number of posts available within government considering the extent of the nutrition challenge (Goeiman et al., 2019). This was confirmed by a senior provincial nutrition manager's observation that attention should be paid to capacity of the workforce in terms of their numbers and of their ability to act on a technical and practical level (Gov 6).

Although several postgraduate degrees exist in South Africa focused on nutrition and dietetics, this has largely fed into the private sector as opposed to the need within the state. A senior academic involved in establishing postgraduate courses commented that "…most of them are going into private practice and so they're not filtering into the system" (Ac2).

Gillespie et al. (2013) makes it clear, however, that human and organisational capacity goes beyond nutrition know-how. It should include a set of soft-power skills to operate effectively across boundaries and disciplines. This was articulated by a retired senior government programme manager, now consultant, in noting that: "within the nutrition community certainly there is a will to do it [shift malnutrition] and to make it better. I don't think that we have got enough people to do it and I don't think we have got enough of the skill sets at the right level" (Con1). Such a skill set has been described to include, apart from "leadership for alliance building and networking", also "communication of the case for collaboration, leveraging of resources, and being able to convey evidence clearly to those in power" (Gillespie et al., 2013).

Leadership in nutrition is key for driving the changes at different levels in government and more broadly in society. In particular, leadership within lead organisations for national level programmes with the ability to influence political decision-makers is essential. Although some influential leaders have emerged, this has not been widespread. In the view of a senior academic, "the right level of leadership has not been in place to drive nutrition into a core priority of government" (Ac2).

Building political acumen amongst nutrition professionals Some respondents, including those at a senior level in government, argued that nutrition professionals needed a greater sense of the "politics of nutrition" and the importance of working with political levers "to make people have some political acumen, to see things, have an insight of

politics…It really makes a huge difference if we bring politics into, not politics for Parties and whatever, but to see how politics drives the health agenda or the nutrition agenda" (Gov2). Apart from exposing early career professionals to local level dynamics, training at universities should include understanding the importance of agency, influence and how to enable change.

Delivery and operational capacity for implementation Looking ahead, there is a need for increasing the number of trained nutrition professionals. A lack of personnel, especially at implementation levels, was identified in all three provinces as a key issue, exacerbating technical capacity gaps and high frontline workloads. The issue of inadequate capacity pertains to both nutrition-specific and nutrition-sensitive programming at lower administrative levels. An academic respondent who had worked in the food and nutrition space for over two decades reflected on this in terms of the Department of Agriculture, where: "22% of posts in agricultural development are not filled. If a fifth of your workforce is not in place in your organogram, certain things are going to slip" (Ac2).

As a result, existing personnel struggle to make an impact. In a study conducted at implementation level in the Breede Valley, Western Cape Province, Du Plessis et al. (2018) investigated the domain of capacity and resources and found accounts of government officials being overwhelmed with high workloads and a lack of resources. Different stakeholders were reluctant to take ownership of issues not aligned with their budgets, targets and objectives. Technical and funding challenges meant policies were only implemented in a few areas or nodes, reflecting a lack of budget to facilitate further coherence across sectors and between administrative levels.

There is, however, an opportunity to increase nutrition's reach and impact by ensuring that the scope of the dietetics and nutrition profession is well understood and respected, but also to share the responsibility of realising optimum nutrition for all in South Africa, with a broader base of professionals and civil society (Goeiman et al., 2019). A senior provincial nutrition manager from the Western Cape expressed a "whole of society" approach as follows: "The opportunity is there to make it clear what the roles and functions of your nutrition professional is and how it relates to the rest of the workforce that is also part of the nutrition workforce… the fact that we have the vision that we need to work as whole of government, whole of society brings forth great opportunity for nutrition to point out the role that nutrition can play in the other sectors" (Gov6).

It is noteworthy that the current undergraduate training programme for dietitians in the country was reviewed and will be revised in future to better serve the needs of the country. The purpose of the new programme is to train a dietitian nutritionist who is in possession of graduate-level scientific knowledge, skills and attitudes necessary to practice independently, cost-effectively and responsibly in any of the areas of therapeutic nutrition, community and public health nutrition and food service management, in line with national and international trends and requirements (Spies & Wentzel-Viljoen, 2023).

Nutritionists employed in the public sector could, as a priority, be enrolled in existing programmes such as the African Nutrition Leadership Programme (ANLP) (Ac3). The ANLP has a growing track record of impact across the continent anecdotally reflected through testimonies of alumni.[6] Although strong leaders exist across national, provincial and local levels, the concentration of these is not adequate to address the malnutrition challenge at present.

An integrated approach for nutrition actions is desirable and the role of community health workers can be invaluable. This sentiment was echoed by a nutrition consultant with experience in senior programme management in government. They implied, however, that community health workers are expected to be champions for many causes: "If you look at, for example, the role that community health workers are and could and should be playing in terms of preventive nutrition, it's huge. That's a resource. There is your health promotion practitioners, then you have your clinic staff and everybody there at their different levels with different responsibilities" (Con1).

New forms of resource mobilisation There is evidence that the National Treasury has recognised the importance of nutrition and allocated increasing budgets to specific programmes over time, partly reflected in the Treasury study (Carter et al., 2015). The NFSNP, however, remains unfunded. A senior official involved in developing the policy recalls: "we…wrote to the Presidency…after we had costed the plan and it had come to about R86 billion[7] over a five-year period, which is on average just under R20 billion [annually]…The big question was, what's going to be the source of funding for the R86 billion?" (Gov1). This large amount raised concerns amongst "the political leadership about going out there publicly and making this public commitment to this plan" (Gov1) when there was uncertainty about the source of funding.

To date, the plan has not received its own dedicated budget, with the Treasury arguing that existing funds allocated to participating departments should be used to achieve the targets. These include programmes currently funded within the budget and coordinated through

[6] see https://africanutritionleadership.org/the-leader

[7] This is approximately 5.8 billion United States Dollars (USD). In 2021 the average exchange rate was 1 USD equivalent to 14.79 South African Rand.

the DoH, including multiple macronutrient supplementation programmes, child healthcare problem identification, deworming amongst others, and two programmes currently funded in the budget of the Department for Basic Education (DBE) and related to school nutrition. These are the National School Nutrition Programme and the School Food – Gardens Programme. The NSNP budget is protected by the Treasury: "Yes, they are protected because, first of all, it is a nutritional grant…And therefore it has been ring-fenced for all these years" (Gov7).

5 Discussion

The Stories of Challenge South Africa study used a mixed (qualitative) methods approach to examine the "enabling environment" for nutrition in South Africa since 1994 to understand what underpins the lack of positive changes in critical nutrition outcomes. This revealed a paradox, in that significant strides have been made since the advent of democracy in terms of establishing a comprehensive framework of policy and programming, yet this has been insufficient to address young child malnutrition. Improvements in the overall policy frameworks and expressions of commitment have not translated sufficiently into changes in key young child malnutrition indicators, particularly stunting and overweight. We discuss these findings in accordance with the enabling environment dimensions: knowledge and evidence, politics and governance, and capacity and financial resources.

5.1 Framing, generation, and communication of knowledge and evidence

The framing of nutrition in government has changed over time to promote a broader, multi-sectoral approach to nutrition (beyond health), although the reality of sectoral mandates and structures overrides the language of "multi-sectoralism". Our findings stress the need to frame the issue as multisectoral, not only in discourse but also in institutional arrangements, so that coordinated responses can be translated into practice. Other limitations persist such as a failure to characterise the issue within obesogenic food environments. The broad policy domain reflects this framing. Another major challenge remains: the framing of malnutrition's relationship with persistent poverty and increasing inequality.

Regularly collected quality data is critical for informing policy decisions and communication to policy makers. Since 1994, various national surveys have been implemented to better understand continuing disparities. However, a data disconnect persists in that surveys rarely include health and food and nutrition security and agricultural indicators, making it difficult to link underlying causes from non-health factors to nutrition outcomes. While the collection of accurate nutrition data is critical, so is the management, analysis, and dissemination of these data among relevant sectors and stakeholders. Information systems are needed that strengthen accountability and drive and inform action at all levels. Thus, improved systems are required to inform understanding about the relationship between poverty, inequality and food and nutrition security, including agriculture-nutrition linkages and potential "double duty" actions. These systems are also required to enable accountability. This has a bearing for other countries trying to build an effective enabling environment.

5.2 Politics and governance

As Gillespie et al. (2013) have argued, nutrition-specific and nutrition-sensitive actions need to be underpinned by policy and institutional environments that are enabling in nature. As revealed in the literature review, a range of policies exist that have a direct bearing on the food system. While each has a specific focus, it is not clear how they fit into an overall policy framework. The promotion of nutrition will only succeed with greater alignment in this multi-policy, multi-institutional and system-wide frame.

Findings revealed that political commitment at the highest level is considered a major issue. This is exacerbated by insufficient pressure from civil society groups. The broader implication of this is that the development of a coherent policy architecture that reflects the most pressing nutrition issues is insufficient to enable change. The lack of impact of policy and therefore commitment on changes in malnutrition was particularly revealed by the Covid-19 pandemic, which foregrounded the failures of the food system to provide sufficient, healthy, nutritious food.

With regards to governance and policy coherence, forms of multi-stakeholder arrangements, particularly the NFSNP interdepartmental coordinating committee, have been established to coordinate nutrition-relevant programmes, at least at national level. Lessons learnt from the enabling environment at subnational level underline that effective governance structures require concerted efforts to build relationships and trust within and beyond the organisational structures that exist in theory.

There is thus evidence from our results that different levels of governance have been effective. Nonetheless, challenges remain with these examples; despite the intersectoral coordinating committee, nutrition interventions at national and provincial level have remained overwhelmingly nutrition-specific, largely because the issue is positioned as the mandate of the Department of Health, with the food security agenda led by the Department of Agriculture.

5.3 Capacity and financial resources

Within the new generation of nutrition professionals, stronger strategic and operational capacities are needed to complement technical skill sets. In particular, there is a need to strengthen the capacity of individuals in non-health sectors, to empower and motivate them to apply a nutrition lens in their work, and to contribute to nutrition-relevant change through their programming and investments. As argued by Du Plessis et al. (2018), investment in the "people" element warrants stronger emphasis within the three linked dimensions of an enabling environment, suggesting that a definition of the enabling environment at implementation level could expand on the international definition, as follows: "political, policy and *people-centred* processes that build and sustain momentum for the effective implementation of actions that reduce malnutrition" (2018).

Linked to this, value-based collaborations such as trust and relationships between government departments and other stakeholders consistently lead to successful partnerships (Garrett et al., 2014). This argument, derived from a range of country examples, is echoed in South Africa with a positive example emerging in the Western Cape. Without building and sharpening the skills to understand, facilitate and guide multisectoral processes, a crucial element in capacity for addressing malnutrition will be amiss. With a broader bearing beyond South Africa, these competencies must go way beyond just knowing the biological and social dimensions of malnutrition, and include, for example, service-learning and demonstrating leadership (Shrimpton et al., 2016).

Existing government policies acknowledge the need to draw in the wide range of actors needed to recalibrate the food system as a whole. Nutrition champions at all levels are required to catalyse social and political change and make development policy in general more nutrition-sensitive. The next generation of nutrition leaders need to be developed and existing initiatives strengthened, including academies and curricula that aim to build leadership capacity (Shrimpton et al., 2016).

Many respondents perceived funding as a major challenge. Some sectors such as education reported increases in nutrition-relevant funding, but others such as the NFSNP argued that limited progress has been made in generating adequate finance. Some examples at subnational level reflect efforts to better align existing resources to have greater impact at community level and include non-state actors through partnerships (Gorgens, 2021; WCG, 2017). Overall, however, fiscal austerity challenges undermined adequate state responses. Clearly, political commitment to support the adequate allocation of resources remains a priority in many different contexts.

5.4 Limitations

A limitation of this study was the low number of respondents in the third province (North West) partly due to a weak interest in the research on behalf of officials. However, this was offset by drawing on three key informants outside of government who have knowledge of governance arrangements and impact in the province. Another limitation was not fully assessing local government regulation and interviewing local government officials, as food and nutrition security and other dietary issues at local level are dominant determinants of why young children in South Africa are malnourished. By extension, policy and interventions are also required at local level.

6 Conclusion

This study described the changes in the enabling environment for young child malnutrition in South Africa since 1994 at national level and in three provinces: North West, Western Cape, and KwaZulu-Natal. We aimed to better understand the drivers and pathways of nutrition-relevant change in South Africa, the challenges that influence political commitment, policy and programme coherence, and the implementation of nutrition-relevant actions in the country.

As part of the broader Stories of Change in Nutrition studies, the findings have relevance for a growing body of country studies. Indeed, whilst some of the observed challenges are specific to the country context, others offer important insights on the complexities of food systems more generally and point to potential entry points related to double duty interventions, which can address undernutrition and overweight and obesity simultaneously in countries that are similarly experiencing multiple burdens of malnutrition.

The South Africa study reflects the inherent challenges of implementation due to a weak enabling environment despite the existence of a relatively coherent and comprehensive policy framework. Given the inherent multi-sectoral nature of nutrition, the study shows the challenge of ensuring coherence across sectors with some promising experiments emerging in KwaZulu-Natal and the Western Cape. However, challenges remain with regards to political leadership on nutrition and elevating nutrition sufficiently on the political agenda, setting up a national coordination structure to lead on nutrition (the National Food and Nutrition Security Council), contextualising interventions according to disaggregated data that provide information on how nutrition outcomes differ by population group, age, and gender in particular, as well as with regards to capacity building and training of nutrition professionals, and support to community health workers.

Looking ahead, the relative immaturity of the policy sector in dealing with issues such as obesity and overweight, and associated influences in the wider food environment, adds a further challenge to South Africa. Identifying and securing the necessary resources and capacity to drive these changes consolidates this call for a social compact to address young child malnutrition in all its forms.

Appendix: Literature review parameters and search strategy

Parameters considered important for the review were specified using the PICO framework that considers the problem, process, context, outcome and, study type, which has been adapted for qualitative studies (Hagen-Zanker & Mallett, 2013; Tricco et al., 2018). The PICO acronym stands for "P – Patient, problem or population", "I – Intervention", "C – Comparison, control or comparator" and "O – Outcomes". The search strategy used search strings consisting of key terms relevant to food, diet and nutrition, multiple forms of malnutrition, including macro- and micro-nutrient imbalances, underweight, stunting, wasting, overweight, obesity, nutrition-related infectious and non-communicable diseases (NCDs), outcome measures, policy and legislation, political commitment, political economy and enabling environment, and setting. The search was carried out in four databases: Scopus, PubMed, Web of Science, and Google Scholar. Due to the timeframe (twenty-six-year period between 1994 and 2020) and time constraints of the study, the literature search was limited to peer-reviewed *reviews*, published in English only. Reviews were classified based on cross-checking of author and journal review classifications against the SALSA analytical framework – Search, Appraisal, Synthesis & Analysis (Grant & Booth, 2009). Based on the classification, the following review types were included: systematic review, systematic review and meta-analysis, systematic overview, overview, scoping review, literature review, narrative review, critical review, mixed methods review, and review of the evidence. Additional reviews relevant to the objective of the review, i.e., review of policies and legislation, policy development, policy implementation, as well as review of progress (e.g. MDGs/SDGs), review of syndemic relationships, review of methodologies/monitoring mechanisms, were also included. A final 117 reviews were included. (Fig. 1). Relevant data from these reviews was extrapolated into a standard extraction matrix according to the PICO criteria, and an inductive/grounded theory approach was used to organize information into themes and sub-themes, after which these were developed into narrative summaries. Drawing on the Cochrane Collaboration Qualitative Methods Group (CCQMG) (2011) rationale for critical appraisal and the DfID (2014) approach to assess quality of evidence, the team built an integrated critical appraisal tool consistent with the Cochrane rationale for qualitative evidence (CCQMG 2011), which was adapted to our review of mixed methods reviews. All of the retrieved reviews were included in the final synthesis.

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Declarations

Conflict of interest The authors report no conflicts of interest.

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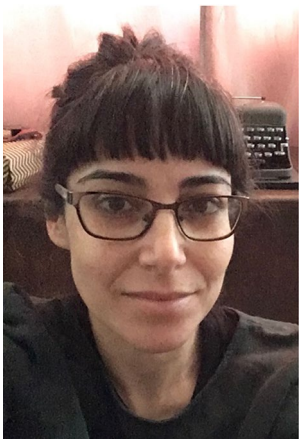

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