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The COVID-19 pandemic reveals an unprecedented rise in hunger: The South African Government was ill-prepared to meet the challenge

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ABSTRACT

Recent research has shown increasing household food and nutrition insecurity in South Africa, indicating weaknesses in the national food system due to historical and current socioeconomic inequalities. The lack of inclusive governance and collaboration among actors and institutions to develop long-term strategies increase the problem. Such weaknesses intensify the government's ill-preparedness to provide food relief during disasters. We drew upon two rounds of the longitudinal University of Johannesburg and the Human Sciences Research Council's COVID-19 Democracy Survey to illustrate how ill-preparedness has resulted in increased hunger. The rollout of food relief was slow because the state ignored established non-governmental food relief structures. Delayed tender processes and corruption have worsened local distribution and access to food relief, increasing households' hunger. Individuals reported higher experiences of hunger above pre-COVID-19 figures of 11% attaining highs of 42% in 2020. We argue that COVID-19 has emphasised the South African food system's inequalities, particularly the state's inability to ensure integration, inclusiveness and rapidly provide emergency food relief. We focused on individual and households' experiences of hunger and economic circumstances. Challenges were evident where access to food was provided in-kind or through financial aid. The pandemic food relief interventions and the lack of food price controls were serious challenges. The state and stakeholders must prevent high transitory food insecurity levels from resulting in chronic food insecurity. The state's practices and challenges during lockdown must be examined to ensure this situation does not reoccur. Some essential foods require subsidisation and price regulation to ensure long-term access for the poor. To ensure zero hunger and increased food security, these elements of the NDP must be re-examined. Research is

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required on vulnerabilities in the system, ways to overcome these and the understanding of factors contributing to system-wide resilience, including at individual and household levels.

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Introduction

The COVID-19 pandemic and subsequent lockdown measures have been felt globally, but in low- and middle-income countries worldwide, we are seeing rising unemployment due to job-shedding and reduced wages, reduced food availability due to decreased production and restrictions on imports and exports of food following lockdown regulations. These factors have reduced access to food and increased experiences of hunger. The situation has worsened because inadequate food relief measures have not ensured food accessibility and stability in the face of the pandemic [53,61]. The state and local and international humanitarian aid organisations usually provide such relief measures. South Africa experienced these fallouts too, with increased inaccessibility to food and resultant increases in hunger among the poor, the country has suffered far beyond the experiences typically recorded by official pre-pandemic surveys.

South Africa prides itself as food secure at the national level [47]. Yet, there is strong evidence of food and nutrition insecurity, hunger, and food inaccessibility at household and intrahousehold levels, where many of the poor are deemed to be chronically food insecure [1,39]. Disparities at the household level emphasise long-standing socioeconomic inequalities, often linked to different population groups, socioeconomic class, poverty, cycles of unemployment, gender and geographical residence [4]. Impoverished households' food access, utilisation, and stability are of concern, despite national availability [37,39,47]. While inadequate access to food and experiences of hunger rose between 2008 and 2010 by almost 2 million individuals, due to the Global Economic Recession (GER) of 2008–2009 [47,55], dropping slightly by 2011, South Africa still retains a high level of household food insecurity. The proportion of food-insecure households (21%) and individuals (25%) remained relatively static between 2011 and 2017 [47], suggesting that little has been done to improve the situation. The proportion of households and individuals going hungry also remained relatively static during this period but had dropped back to 2007 levels by 2019, with 10% of households and 11% of individuals reporting experiences of hunger due to insufficient food in the household [49].

The 2011 National Development Plan (NDP) identifies food security and agriculture as high priorities (NPC 2012). Yet, the South African food system is in a precarious situation with signs of consistent hunger and increased malnutrition due to the impacts of climate change, periodic droughts, deterioration in food quality, increased urbanisation, and shifting dietary patterns [5]. Similarly, food price hikes and limited household purchasing power in the face of sustained poverty and increasing unemployment place extra burdens on resilience across the food system [27]. The NDP does not seem to have operationalised its intentions into meaningful impacts, profoundly affecting food security during the COVID-19 pandemic. While hunger and food insecurity are not the same, the experience of hunger is seen as an indicator of severe food insecurity.

Statistics South Africa (StatsSA), the national agency responsible for generating various social and economic statistics in South Africa that are used for monitoring the Sustainable Development Goals (SDGs), indicated that 6.8 million residents, or approximately 11% of the population and 10% of households, typically went to bed hungry in 2019 [49]. There is a significant drop from the 2002 figure of 13.5 million hungry individuals but only a slight drop from the 2010 figure of 8 million and slightly higher than the 2007 figure of just over 6 million. The decline in reported hunger between 2002 and 2007 is mainly due to the diversity and extension of social protection interventions by the state, suggesting the state is a crucial player in the food system regarding household food security for the poor [1]. Yet, the 2011 figure remained essentially unchanged until the onset of the COVID-19 pandemic, suggesting that the government is not taking its role in the food system seriously enough. The positive contribution of social grants has reached a plateau. The government also has a regulatory role in reducing inequalities in the food system. According to van Wyk and Dlamini ([55]:1), continually rising food prices have been recurrent during this century but the state has not taken sufficient regulatory steps to intervene, besides occasional investigations into the collusion in food 'price fixing'. According to van Wyk and Dlamini [55], the government has learned little from the shock of the GER, and little has been done to reduce food insecurity and contributing inequalities. The government appears content to keep levels relatively static rather than completely eradicate hunger.

Food systems 'comprise all the elements (natural resources, people, inputs, processes, infrastructure, institutions, produce, etc.) and activities related to the production, processing, distribution, preparation and consumption of food, as well as the outputs of these activities, including socioeconomic and environmental outcomes' ([26]: 29). Food systems are thus complex, and multiple interdependent subsystems at various levels - global, national and local - add to this complexity. Food systems are characterised by separate activities resulting in collective outcomes and through dynamic interactions among subsys-

tems. A disruption in one subsystem can have cascading impacts that may disrupt the holistic functioning of the entire food system [13].

Meuwissen, Feindt and Spiegel et al. ([32]:3) define food system resilience as the ability of a food system to maintain its societal functions through the system's robustness, capacity to adapt and transform in response to internal and external stress. Thus, food system resilience extends across the entire value chain [28]. This includes the multiple roles of national governments who also need to address the issue of system inequality. Improving food system resilience requires a deep understanding of food system vulnerabilities, i.e. the various ways that food systems can fail at the global, national and community level. Such knowledge will assist policymakers in prioritising and addressing evident vulnerabilities. Schipanski, MacDonald, Rosenzweig et al. [44] and Béné, Headey, Haddad and von Grebmer [6] assert that an understanding of the factors that contribute to resilience can improve food security and transform the governance of the food system to prevent food system failures. In South Africa, there is an urgent need for much deeper research to understand the multiple food system vulnerabilities and the factors that contribute to resilience, but little has been done to achieve this [39].

Tendall, Joerin, Kopainsky et al. ([51]:18) view resilience as an essential means to promote sustainability – since it implies the capacity of a given system to 'continue providing a function over time despite disturbances'. Resilience can therefore be part of a pathway to sustainability. According to the Food and Agricultural Organisation (FAO) and National Research Institute for Agriculture, Food and Environment (INRAE), sustainable food systems ensure food and nutrition security for future generations while preserving the environment [19]. The transition towards such sustainability needs a multi-stakeholder approach to reconstructing food systems – through promoting sustainable consumption and production practices, engaging consumers, and facilitating market access. These activities are in line with Sustainable Development Goal 12 (SDG 12) on 'Responsible consumption and production' that provides targets for ensuring sustainable consumption and production patterns. In this respect, SDG 12 is crucial to achieving SDG 2 'Zero Hunger' and contributing to SDG 3 'Good Health and Well-being'. In 2015 South Africa and other United Nations member states adopted the SDGs as a global call to end poverty, preserve the planet and guarantee that all people experience peace, stability and prosperity by 2030. However, the SDGs are simply goals and are not legally binding on national states and parties. It is thus difficult to bring duty bearers to account and ensure they meet these goals. Pereira and Drimie [39] note South Africa is confronted by numerous challenges, as food system actors seldom work cohesively and have their own, often conflicting, agendas. Considering this situation, StatsSA ([47]:8) reports that the pace to reduce food insecurity and achieve zero hunger by 2030 is slow.

General socioeconomic inequalities in South Africa are replicated within its food system, dominated by a concentrated number of local and multinational companies across the value chain components from 'farm to fork'. In a detailed review of the inequities within the South African food system, Pereira and Drimie [39] emphasise how power-differentials among the various stakeholders at multiple levels disrupt the ability to formulate a cohesive discourse and 'prevents effective collaboration to address food security challenges' (*ibid.* 19). They argue that studies on food security from 1999 to 2014 present 'a national food system that cannot meet the needs of the population' (*ibid.* 21). Furthermore, while the government has an integral role in the system, with multiple task teams focusing on food security, it seems to have begun acting independently and autocratically in formulating strategy and policy. In 2017 an interdepartmental committee, led by the Department of Planning, Monitoring and Evaluation (DPME), but excluding private and civil society representatives, developed a National Food and Nutrition Security Plan. Although this plan covers the period from 2017 to 2022, it has yet to be comprehensively drafted or shared publicly for comment [45]. Previous plans and strategies were multi-stakeholder inclusive. Stakeholder inclusiveness is particularly crucial in shocks where the government is responsible for mitigation and relief and for intervening in food price fluctuations and ensuring a healthy food basket is accessible to all [55]. To achieve mitigation and relief as well as the long-term reduction of hunger, the state needs to collaborate with other stakeholders. Van Wyk and Dlamini [55] argue that a 1% increase in food prices can reduce household wellbeing by at least 21% and that government needs to intervene. Aliber ([1]:397) shows that poor households spend a greater share of their income on food. Thus, although they buy less nutritious food, they spend a greater share of their income on this food [4]. According to StatsSA [50], by January 2021 the cost of a basic food basket rose 9.8% compared to January 2020.

Drawing on evidence from two rounds of the University of Johannesburg's (UJ) Centre for Social Change and the Human Sciences Research Council's (HSRC) Developmental, Capable and Ethical State (DCES) division's collaborative longitudinal online survey (UJ/HSRC survey), we argue that the South African food system is weak regarding the state's ability to reduce food insecurity and the state is ill-prepared to intervene with food relief measures during hard shocks such as COVID-19. Ill-preparedness has decreased individual access to food and increased personal experiences of hunger within households to new heights. This situation has been further marred by challenges to food accessibility, choice, the composition of food parcels, slow and inefficient delivery, and corruption during a global and national disaster. South Africa has been blighted by state corruption and fiscal negligence at all levels of government [2,3]. These remain apparent in disaster mitigation components of the food system, increasing social inequalities and experiences of hunger during the pandemic. High prices have played a role in reducing access to food, rising as much as 17% for a basic but nutritious food basket in the metropolises of Johannesburg, Durban and Cape Town and the hinterland towns of Springbok and Pietermaritzburg during 2020 [40]. High prices of even the most basic foodstuffs have affected food security, but the state has remained unwilling to interfere in what it perceives as market-driven forces.

We will first look at South Africa's pre-pandemic food security, nutrition and hunger status within the international and local context and the effect of rising levels of unemployment. The next section will examine food security in South Africa in terms of international definitions of food security, types of food insecurity, and the food system's role. We then look

at South Africa's food system and the role of the state pre-lockdown on 27 March 2020. We shall focus on constitutional rights, the relief measures in place and under the management of the state and end the section by revisiting food system resilience in South Africa. This discussion will be followed by the research methodology that was used in the two rounds of the UJ/HSRC survey. Thereafter we will present and discuss this evidence. The paper concludes with some recommendations for government and its partners to strengthen the emergency relief component of the food system. These recommendations are crucial to achieving zero hunger before 2030.

South Africa's food security, nutrition and hunger status in the international and local context

The pre-pandemic food security, nutrition and hunger status of South Africa

Despite serious concerns about household-level food access, South Africa is internationally considered relatively food secure. The Global Food Security Index (GFSI) ranked South Africa as 44th out of 133 countries and the most food-secure country in Africa [14]. The rating measures national food availability, affordability, safety, and quality. Yet, it overlooks different means of food access and household dynamics in a country where one-third of the population is unemployed, and a quarter lacks adequate access to food. Access is a crucial challenge for many in South Africa due to persisting structural and socioeconomic inequalities that result in malnutrition and hunger for households and individuals [37,39].

Unlike many other African countries, few South African households (15%) engage in agriculture and food production ([49]: 61); the majority purchase their food [47]. Poor South Africans access food in many ways, such as purchasing, producing, harvesting from the wild and relying on the state (if they meet the criteria) and social networks [25]. Those who farm are mainly rural residents, and 79% do so to supplement household food supplies. The government pays scant attention to these producers and focuses on large-scale land reform beneficiaries, but with limited success. Thus, much of the national food supply and exports are produced by mainly white large-scale commercial farmers, with smallholders (mostly black African, coloured and Indian farmers) struggling to enter the agricultural value chain beyond the local level [8,37,39], indicating some inequalities in the food system. The improved GFSI rating is because South Africa is one of a few net-exporters of agricultural goods in Africa. However, the country increasingly imports wheat, rice and maize, processed meats, vegetables, and sugar [14]. Many of these foodstuffs are the mainstay diet of the poor but access is dependent on their availability to and affordability by consumers. The ability of households to access and ensure adequate food is influenced by variable factors such as rising unemployment, transport costs and food prices, and the weakening South African Rand (ZAR).

The most recent Global Hunger Index Report [10] ranks South Africa 60th out of 107 countries with a score of 13.5, suggesting that it experiences only moderate hunger. However, the study only includes countries with sufficient national data to calculate Global Hunger Index (GHI) scores. Thus, many low- and middle-income countries are excluded by default, thereby skewing the scores in favour of countries with good national data. Notably, much of the South African data used in the recent GHI are relatively old due to the limited number and periods of the national surveys from which the data are extracted [10]. While there is a lower hunger score, the report notes that the proportion of South Africans who are undernourished is increasing and has been steadily climbing since 2002, an increase from around 5% to 8%, despite South Africa's GHI score improving [10]. Although more households achieved improved access to food and there were fewer people experiencing hunger than in 2002, diets are not diverse or ideal, and individuals are not consuming a balanced diet [58]. While the social grant rollout since 2002 reduced food insecurity remarkably, it does not seem to ensure nutrition security. Official statistics indicate that in 2019, 10% of households and 11% of individuals experienced hunger ([49]:59), with more than 60% of these households residing in urban areas. Due to long-term inequalities, accessibility to food and the experience of hunger is more likely to affect black African and coloured households, female-headed households and larger households. According to StatsSA [47], inadequate access to food will not always result in hunger for the entire household. Furthermore, vulnerability to food insecurity does not mean that a household or individual will always experience hunger. Hunger is indicative of severe food insecurity. Similarly, adequate access to food does not imply good nutrition [47].

Rising unemployment in South Africa

As most South Africans purchase their food [25,47], employment and affordability have a significant impact on access to food, the type of diet, general levels of food and nutrition security, and ultimately experiences of hunger. Using StatsSA data, Trading Economics [52] indicated that at the end of 2017, 27% of the population were unemployed and between January 2018 to January 2019, this situation remained largely unchanged. However, unemployment had officially reached 30% by January 2020. South Africa entered the lockdown with one of the highest unemployment rates this century. At lockdown on 27 March 2020, South Africa was in an economic recession, accounting for some of the rises in unemployment. Over the next three months, the subsequent global lockdown resulted in a drop in demand for food and other exports. Falling export demand caused a 17% contraction in the economy from April to June, which resulted in further job losses and reduced wages for those employed in March 2020 [41]. From April to June 2020, the hard lockdown impacted food imports, many of which are part of the staple diet of the poor [25], resulting in higher food prices and the inability to acquire basic foodstuffs. Equally concerning is that in its definition of unemployment, StatsSA includes only those between the ages of 15 and 59 who are actively seeking employment but excludes those discouraged and no longer seeking employment. Thus, the actual

figures are higher. In December 2020, the unemployment figure, including discouraged individuals, was estimated at 43.1% compared to the official figure of 30.8% [41].

South Africa in the context of international definitions and types of food security and insecurity

International definitions and South African situation

The 1996 World Food summit definition states that 'Food security occurs when all people at all times have access to sufficient, safe, nutritious food to meet their dietary needs for an active and healthy lifestyle' [16]. On the other hand, food insecurity prevails 'whenever the availability of nutritionally adequate and safe foods or the ability to acquire acceptable foods in socially acceptable ways is limited or uncertain' ([34]: 43). The World Summit on Food Security identified four pillars of food security: *availability, access, utilisation and stability* [18].

Availability relates to the supply of food through production, circulation and trade. South Africa is mostly food secure in terms of national production and distribution [4], although this is changing with the importation of various commodities. The FAO [[17]:1] defines accessibility as:

Access by individuals to adequate resources (entitlements) for acquiring appropriate foods for a nutritious diet. Entitlements are defined as the set of all commodity bundles over which a person can establish command given the legal, political, economic and social arrangements of the community in which they live (including traditional rights such as access to common resources).

Access is where South Africa is most insecure, and StatsSA uses access to measure food insecurity and vulnerability to hunger [47]. StatsSA investigates food security by considering inadequate and severely inadequate access to food and experiences of hunger. The first occurs when people have trouble meeting their basic food needs, and the second occurs in the event of a life-threatening lack of access to food, and both can lead to experiences of hunger. StatsSA combines the first two variables into one expressed as vulnerability to hunger ([47]: 8). Poorer households cannot obtain sufficient and nutritious food, which often negatively impacts dietary diversity, as meals are composed mainly of foods high in macronutrients and low in micronutrients [30,59]. The consumption of adequate micronutrients is often beyond the affordability of poor households. Rural households regularly harvest and store nutrient-rich leafy vegetables and fruit from the wild [24], but this opportunity is not available to urban households [25]. Access to food includes social networks that provide access to food [25]. These networks failed or were constrained due to lockdown regulations leading to increased hunger.

Utilisation involves the use of food so that it is safe, ingestible and retains the desired nutrients. In South Africa, this is a daily struggle for those who are food insecure as the foodstuffs they have access to have limited micronutrient content, and as such, micronutrients are lacking in their diets [24,58], resulting in malnutrition and undernourishment. Stability refers to the continued and uninterrupted ability to acquire sufficient food over time, even in the event of shocks. Thus, a solid and resilient food system should strive to ensure that these four pillars remain optimally constant or return to such a position soon after encountering a shock. A shock to the economy and subsequent limited access to food, due to purchasing ability, such as the GER, when individual hunger peaked for two years [47,55], and the COVID-19 pandemic, should not impact too significantly or for too long on food stability if the food system is resilient. Therefore, during a natural disaster, in terms of stability, in which government continues to perform its welfare and oversight role diligently, we would not expect food insecurity levels to fluctuate enormously. Considering the impact of the GER, we would expect the government to have planned for future crises and to step in with measures to mitigate their effects on food security. If prices hiked initially, we would expect them to return to normal levels within a reasonable period as emergency measures are rolled out and regulations introduced to curtail food price fluctuations rampant during shocks [55].

In the years following the GER, StatsSA [47] indicated that neither household nor individual access to food or vulnerability to hunger returned to their 2007 levels. This lack of improvement further indicates that the state learned little from the GER experience [55]. Within the food system, government plays a vital welfare role in providing food for poorer households through various programmes (see Section 4). Non-government humanitarian aid organisations (NGOs), individually and as part of extensive national networks, often in conjunction with local food retailers, wholesalers and international donors, play a similar role in reaching those households and individuals not reached by the state. Despite these laudable programmes, 20% of the population and 18% of households remained chronically food insecure at the start of the COVID-19 lockdown [49].

Types of food insecurity and hunger in South Africa

According to Devereux [12], three types of food insecurity prevail: *chronic, transitory and seasonal* [12]. All three types are evident in South Africa. Chronic is a permanent state of food insecurity, defined as the persistent, long-term lack of access to sufficient food. In such a situation, households are continuously at risk of being unable to access the food needs of all members, and experiences of hunger are common. The StatsSA figures above indicate that approximately 18% of households experience chronic food insecurity due to inadequate access when the pandemic began. Transitory food insecurity occurs when food is unavailable during specific periods. It is temporary and acute, and happens in many ways: natural disasters affect food production, causing crop failure and subsequently decreased food availability; conflicts decrease access to food;

market instability, including supply and food commodity speculation, results in food-price spikes that reduce food purchasing ability [55]; and temporary loss of employment or reduced productivity also affect access to food. Before the COVID-19 pandemic, South Africa's most recent severe transitory food insecurity was the GER, but South Africa has not returned to the pre-GER levels. Recurring transitory food insecurity can increase the susceptibility of households to chronic food insecurity [12]; thus, its effects should be mitigated rapidly, but this was not the case following the GER, and it took about two years for the levels to stabilise but at levels higher than those in 2007 [47]. This suggests that the food system is far from resilient to shocks and takes long to recover from these. Seasonal food insecurity refers to the regular pattern of local food production growing seasons and fluctuating employment when seasonal labour demand is reduced. This is common in the South African agricultural value chain, mainly in production and processing. The COVID-19 lockdown regulations inadvertently caused severe transitory food insecurity in many countries, including South Africa [53,61].

Government obligations in the South African food system

The Constitutional right to food

The right to food is a human right enshrined in South Africa's 1996 Constitution. Section 27(1)(b) states that 'everyone has the right to have access to sufficient food and water'. Section 27(2) extends this right by obliging the state to 'take reasonable legislative and other measures, within its available resources, to achieve the progressive realisation of each of these rights'. Section 28(1)(c) emphasises that all children have the right to basic nutrition. Despite these sections of the Constitution, the state is not responsible for directly providing food to South African residents. Its obligation is to facilitate this access through legislation, regulation and partnership development. This obligation is limited by the caveat 'within its available resources'. A lack of sufficient funding resources is cited as a reason for the lack of willingness to fulfil constitutional obligations [55]. However, the exclusionary practices in compiling the 2017 strategic plan suggest that government is not taking its partnership role seriously and using available non-financial resources. As a signatory to various international treaties, including the International Covenant on Economic, Social and Cultural Rights (ICESCR) of 1996, which it signed in 1994 and ratified in 2015 [43], the state has legal obligations to respect, protect and fulfil the right to food for South Africans. Unlike the SDGs, such covenants are legally binding in terms of the Constitution of 1996 and compel the state to directly provide access to food when an individual or group is unable to achieve this right due to circumstances beyond their control.

We believe that such circumstances include national disasters, such as the COVID-19 pandemic. In agreement with Pereira and Drimie [39], we acknowledge that much of the lack of tangible progress to reduce inequalities in the food system and thus improve food and nutrition security and reduce hunger since 2011 stems from powerplays within the food system arising from the lack of cohesion among the many role-players. Seekings [45] has noted the inability of the Department of Social Development (DSD) to accurately report on figures as to how many people they assist and the government's desire to be exclusive, rather than inclusive, in its policy formulation in recent years. Seekings [45], argues that the government has failed to address food accessibility, security, and general well-being. According to Van Wyk and Dlamini [55], government has a welfare role but should increase its regulatory function, especially during food shortages and price hikes. It is thus necessary to consider the role of government in the food system, particularly with regard to food insecurity among the poor. Due to space constraints, we will not examine the regulatory measures around trade, tariffs and pricing.

Schipanski, MacDonald, Rosenzweig, et al. [[44]:601] emphasise that food systems comprise composite social, ecological, and economic relationships and are incredibly complex because they involve many actors within the system. Actors include national governments, local and international producers, processors, wholesalers, produce markets, retailers of various scales, and consumers in addition to numerous brokers, importers and exporters who play essential roles. National governments and international organisations, such as the World Trade Organisation (WTO), typically regulate trade tariffs, produce quality and safety, and regulate global trade volumes. In many countries the national government plays a crucial role in ensuring that those households and individuals in the direst circumstances can obtain sufficient food, for example through food subsidies, pricing policies, food stamps, or public distribution; but these may have less desirable contingent outcomes ([55]:3). Other state interventions are based on welfare or social programmes. The South African government follows the latter approach in line with its redistributive development state model. The DSD, at the national and provincial level and its national agency, the South African Social Security Agency (SASSA), perform a crucial welfare function by providing food parcels and grants to needy people and households. Such activities and grants are distinct from the usual basket of social grants such as pensions, disability, child and care grants. SASSA operationalises most welfare activities.

State pre-pandemic food relief interventions

According to SASSA (2014), households and individuals could receive food aid (social relief of distress food parcels) from SASSA in the form of vouchers, food parcels, or in some instances cash, if they met one of the following criteria: required food aid while child grants were being processed; in a desperate situation but not eligible for a social grant; medically unfit and unable to work for a period less than six months; unable to get maintenance from the other parent of their children; upon the death of the primary breadwinner; if the breadwinner was in prison for less than six months; or if the area or community they resided in was affected by a disaster but not officially declared a disaster area (drought-stricken

Table 1
Typical pre-lockdown social relief of distress food basket provided by DSD and SASSA.

FOOD GROUP	ITEMS & QUANTITIES
Starch	Maize meal - 10 kg Rice - 8 kg Potatoes - 7 kg
Protein	Pilchards - 6 × 400g tins Baked Beans - 6 × 410g tins Lentils - 2 kg Milk Powder - 1kg or UHT milk - 6 litres
Vegetables	Butternut - 10 kg
Seasoning	Onions - 2 kg Vegetable Cooking Oil - 2 litres
Non-food	Soap - 2 bars
Total monthly cost for food a single food parcel per month as of February 2020	ZAR 704.00*

Source: adapted by authors from PMG [38].

* Note this is the DSD cost, but the SASSA cost included the sourcing, handling and distribution costs and totalled ZAR 1500.00.

and flooded areas or where housing had been destroyed). This social relief of distress intervention is for a short duration – usually three months with the possibility of renewal for a further three months but is not renewable after six months. The onus is on the applicants to prove their circumstances meet the criteria and prove their lack of income at the time of application. Food parcels are a relatively common form of the social relief of distress package. Table 1 presents the pre-COVID-19 relief basket, including food and non-food items. Not all the food parcels were equivalent across the country but varied according to suppliers and distributors – a select handful of NGOs, approximately one in each of the nine provinces, who had successfully tendered for this activity [38]. Bread was sometimes included but is not indicated in the general parcel in Table 1.

Three things concern us about the content of the basic pre-pandemic food parcel. First, the high macro-nutrient, sugar and fat content of these parcels and the lack of green and leafy vegetables indicates it is far from nutritious. Second, parcels given to households or individuals have the same volume and contents irrespective of household composition and size. They are usually based on a household of four people. Third, the DSD and SASSA seem to deal with food parcels on a small scale. During February and March 2020, before the declaration of a national state of disaster, SASSA distributed a total of 7 863 food parcels nationally and suggests that it would be difficult to do this at scale in national emergencies as demand increases.

The DSD funds a national network of 235 provincial-level Community Nutrition and Development Centres (CNDCs) that provide prepared meals to the poor. The Department of Basic Education (DBE) provides a school feeding programme through the National School Nutrition Programme (NSNP) to various primary and secondary schools to ensure that learners in impoverished areas receive at least one nutritionally balanced meal per day. But disparities exist in terms of resources allocated and in March 2020, the DBE had a budget of ZAR 7 billion for their programme, and SASSA had only ZAR 400 million for its food parcel programme. However, without the state welfare role in the food system, we can only anticipate increasingly higher numbers of food insecurity and hunger, particularly as the South African economy has declined rapidly over the last decade and unemployment has steadily increased year on year. The extended reach of the various social grants has helped, but there remain many who do not have access to such grants despite their eligibility [1]. The grant system fails them, as it does the unemployed from 18 to 59 years of age and those with incomes slightly above the income means test poverty line used to identify eligible grant-recipients. Such households and individuals fall entirely outside the social grant system, and most cannot access other welfare activities, such as food parcels, during ‘normal’ times. Thus, the CNDCs and the NSNP play a crucial role in stabilising food insecurity.

Lack of integration undermines the system

The DSD plays an essential role in hunger reduction through its social protection and welfare activities and, along with other departments, such as health, agriculture and trade, is responsible for policies and strategies for food and nutrition security. In this respect, the Department of Agriculture, Land Reform and Rural Development (DALRRD) is tasked with ensuring sustainable production among all farmers of different scales for household consumption and commercial sales. An essential task of DALRRD is to reduce inequalities in the agricultural value chain, which is primarily dominated by large-scale white producers, the most significant contributors to national and export foodstuffs, and the handful of corporations that dominate the remainder of the agricultural value chain. Yet, it is the convenor of the National Food and Nutrition Strategic Plan. The integration of the state actors within the food system is fraught with inter- and intra-departmental competition, mainly due to diverse macro-level foci and attempts to obtain financial resources from National Treasury for their work. Between 2008 and 2010, some of the authors worked closely with various departments in the cluster dealing with food security and noted inter- and intra-departmental collaboration challenges. We observed the inability to collaborate and integrate their different activities that focused on food security. Furthermore, there is little integration amongst the state food and nutrition security

panels and the private and NGO sectors [45]. The latter usually work synergistically in most cases and have set up networks to ensure redistribution of food and dissemination to the many poor households that fall beyond the reach of the state.

Doherty et al. [13] assert that food system resilience is dependent on three different social-ecological system capacities: absorptive (enabling system persistence), adaptive (enabling incremental system adjustments), and transformative (enabling profound system changes by intentionally crossing thresholds). Schipanski, MacDonald, Rosenzweig, et al. [44] argue that although social-ecological resilience research has increasingly addressed adaptive capacity, social justice and inequalities can influence the ability of actors within a system to self-organise through the distribution of rights and access to resources. Thus, although food systems can be resilient, they may be inequitable. In this regard, efforts to reduce inequalities are essential to increase adaptive capacity, supporting a transformation to a more resilient and equitable food system [15]. This is crucial in the South African context because not only is it not resilient but South Africa has the highest level of income inequality in the world with a GINI coefficient of 62% [35]. However, calls to reduce prevailing inequalities by overhauling the agrarian production system and the food value chains that are integral to the food system are unheeded by the state [8]. Some scholars recently illustrated how small-scale producers, who are persons of colour, manage to enter local value chains through the support of NGO organised or self-driven cooperatives, local retailers, and different hospitality sector firms [37]. Unfortunately, these successes remain the exception rather than the rule, and small pockets of this type exist alongside the primary agricultural value chain with its emphasis on large-scale producers and corporations, including, processors, input suppliers, markets and retailers [39]. Should a country's food system be weak or lack resilience in one or more components, then the onset of a national shock, such as the COVID-19 pandemic, is likely to have devastating consequences for those who generally struggle to access adequate food and thereby increase the number of those who go hungry.

Methodology

The University of Johannesburg's (UJ) Centre for Social Change and the Human Sciences Research Council's (HSRC) Developmental, Capable and Ethical State (DCES) division conducted an online survey during 2020 and 2021 among South African adults (18 years and older) to determine the socioeconomic impacts of the COVID-19 pandemic, with a particular emphasis on lockdown experiences and attitudes. This longitudinal online survey used a messaging platform called Moya, similar to WhatsApp, with a membership of 4 million people across South Africa. Approximately 1.6 million people make use of the platform monthly, and 800 000 use it daily. The platform is operated by biNu, which has collaborated with the HSRC on several previous surveys. Anyone with a mobile phone could receive and respond to the survey, whether or not they had airtime or data available. Users of the Moya platform are predominantly South African adults aged younger than 40 years and mainly African or coloured, a demographic segment that constitutes 55% of the current estimated national population aged 15 years or older. To ensure a more diverse sample, the researchers also distributed a Uniform Resource Locator (URL) link to the online survey employing other electronic media (WhatsApp, Facebook, email, SMS) to obtain responses from minority groups that were underrepresented among users of the Moya platform. Such groups included older persons of all races, especially black Africans in rural areas. The responses were anonymous, as were the Internet Protocol addresses of respondents.

The survey was conducted in several rounds, findings from the first two of which are engaged in this paper. Round One lasted from 13 April to 4 May 2020, during which a total of 12,312 usable responses were collected. These data were downloaded on three dates (18 April, 27 April, 4 May). Round Two ran from 3 July to 8 September 2020, which added a further 7,966 usable responses, downloaded on three dates (18 July, 31 July, 8 September). It is noted that this a non-probability survey with recognised shortcomings to representativity. Consequently, the UJ/HSRC Survey project team decided to weight the data and provided weighted datasets for analysis in this paper. Research has indicated that the generalisation of findings from opt-in cellphone or internet surveys after well implemented weighting procedures are more contested than probabilistic surveys such as face-to-face and random telephone surveys if they employ weighting [21]. StatsSA data are publicly available to inform the weighting procedure. The two datasets were weighted using StatsSA's Community Survey of 2016 [46], and matched on race, age and educational attainment.

The effect of the weighting on the selected demographic variables is most visible in race when comparing the Round 1 survey unweighted Black African respondents (64%) with the weighted respondents (77%). The Black African weighted results are well aligned with the 2019 mid-year population estimate of 81%. On the other hand, the Coloured and White respondents decreased respectively from 20.6% to 9.2% and from 11.4% to 10.0%. Runciman, Rule, Bekker et al. [42] provide a detailed description of the methodology and weighting procedure used in the UJ/HSRC survey. Our use of the weighted dataset in this paper (as per Runciman, Rule, Bekker et al.) reveal some slight differences in the charts and tables of about 1%-2% in some cases and in contrast to using the unweighted data. However, the trends discussed remain the same.

The qualitative data were drawn from a single open-ended question in which respondents were asked the following: 'Do you have a message to send to the President? If so, please type it in the space below.' The responses were identified by searching for key terms in all official languages. Terms included variations of the following: Food, food parcels, hunger, hungry, starving, and corruption. The quantitative data includes questions about whether the respondents had been exposed to any of a list of six experiences during the lockdown. This article draws on two of these experiences, namely 1) 'You have gone to bed feeling hungry', and 2) 'Someone else in your household has gone to bed hungry'. We looked at these experiences for the sample across the two rounds and then compared experiences of hunger in terms of employment status

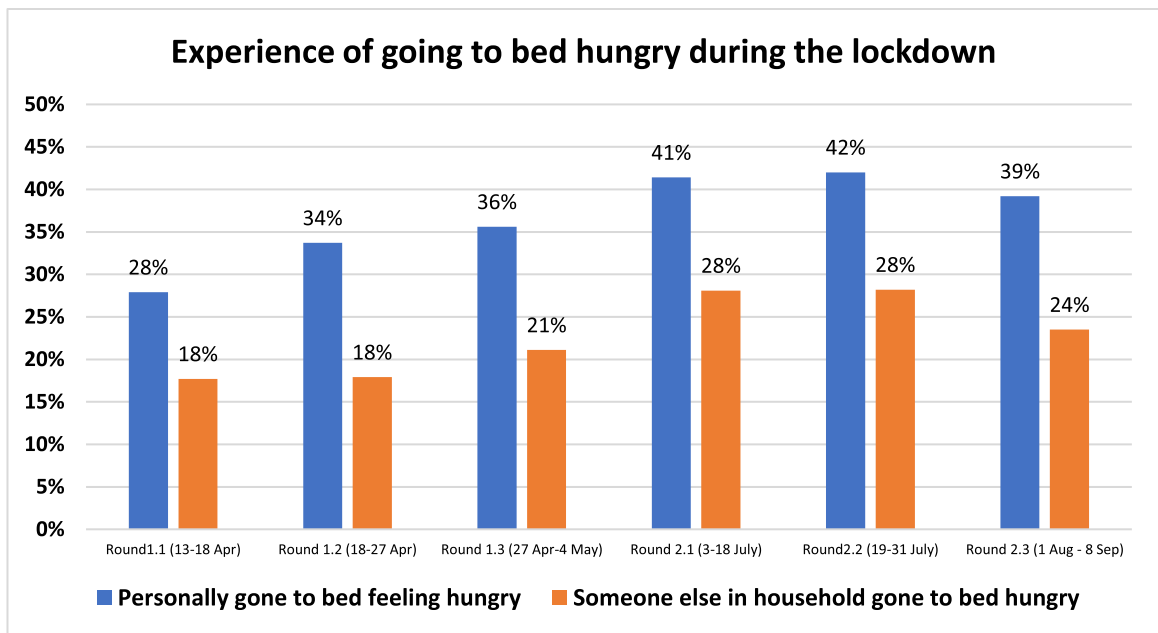


Fig. 1. Experience of going to bed hungry during the lockdown
Source: Authors' own calculations.

at the time of lockdown. This was followed by assessing if support for the distribution of food parcels declined based on people's experience of hunger and for the sample as a whole.

Hunger during the lockdown

In the following message to President Ramaphosa, a respondent highlighted the plight of some families during the first months of lockdown:

It's so painful seeing poor families going to bed without food, please Sir, just have mercy they are also human beings they need food. I've got a family near me, they are very poor it breaks my heart, the saddest part is that we are 8 in the house and I still have to supply them with food, I can't watch them starving. I have 3 kids. I took another 3 in, they are my aunt's children that had nowhere to go, and I had no choice. It's really too much. I'm worried what are they going to eat for the next coming 2 days? (*Black African female residing in the Free State Province: 25-34 years of age; completed secondary schooling and employed full-time*)

This appeal for food illustrates that from the start, families struggled to put food on their tables. While emphasising that the South African food system is fragile and cannot withstand a major shock like the COVID-19 pandemic, the statement also shows the significance of social networks. During the lockdown, food insecurity, measured in terms of personal and household hunger, increased way above the pre-pandemic levels of hunger of 11% for the population and 10% for households [49]. More than a quarter (28%) of adults said that they had gone to bed hungry by mid-April 2020 and more than two-fifths (42%) by the end of July. The proportion stabilised at 39% during the subsequent two months. Similarly, the proportion of adults reporting that someone else, including children, in their household had gone to bed hungry during the lockdown increased from 18% in mid-April to 28% in mid-July, with a slight decrease to 24% by early September (see Fig. 1). In terms of both criteria these figures are way above the pre-pandemic figures. The lowest figures were recorded during the first wave of Round 1, conducted within two weeks of the harsh lockdown regulations of Level 5 being imposed. Yet, these figures for households and individuals were almost double to quadruple, respectively, those reported by StatsSA in 2020 and increased rapidly before stabilising. Although, the experience of inadequate access to food may not imply an experience of hunger, the opposite holds true, and hunger is evidence of inadequate access to food within a household. Furthermore, as relief measures were stepped up and gained traction from June onwards, between July and September 2020, we still see high incidences of both respondents and others in the household going hungry.

There are several causes for the increase in hunger. During the first two months of lockdown, loss of employment, and the closure of schools that denied scholars access to the NSNP increased hunger as the state was ill-prepared to provide sufficient rapid relief through food parcels and other measures. The food relief system illustrated its weakness by the inability of the state to immediately roll out emergency relief measures, including food parcels. The national state of disaster was declared before the state had identified and organised disaster relief measures. The data in Fig. 1 further show this

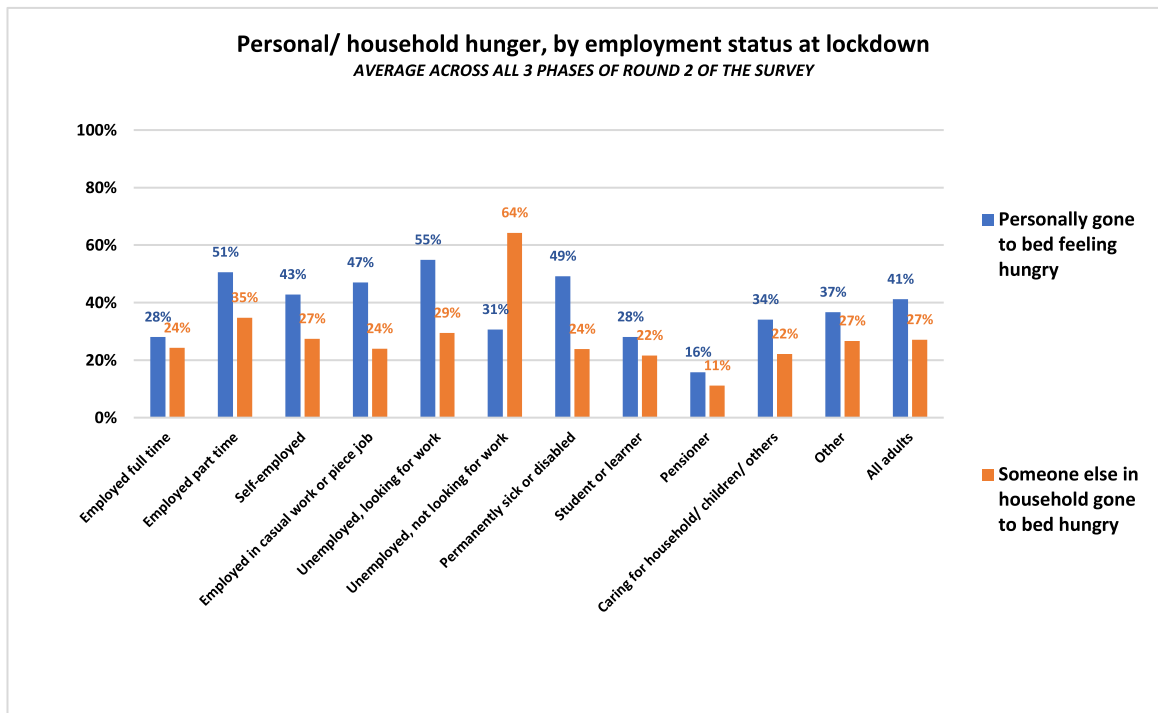


Fig. 2. Personal/household hunger Round 2, by employment status at lockdown
Source: Authors' own calculations.

ill-preparedness, as figures remained high through July and September 2020. However, following the national disaster declaration on 27 March 2020, SASSA claimed to have distributed 116 206 food parcels in six weeks from 1 April to 11 May 2020 [38]. This amount is more than 14 times the number distributed in the preceding two months! According to Seekings [45], the figures for the distribution early in the pandemic are incorrect. The Minister of Social Development acknowledged that it was difficult to keep track of recipients as parcels procured and packaged and eventually distributed could be subject to double-counting because procurers are often different to the distributors [38]. The state has learned little from recent shocks since 2008, as well as rising unemployment to cope with COVID-19 and the effects of the lockdown.

The COVID-19 pandemic and the subsequent lockdown measures illustrate increased intensities of household-level hunger and affected household food nutrition as incomes dropped and food choices were reduced [31]. This situation was exacerbated by the increase in the prices of basic foodstuffs [57]. Food prices rose in April 2020 [33] but by June 2020, the prices of vegetable oils, sugar and dairy products recorded multi-month highs after sharp declines in May, while meat and cereals remained lower [20]. Despite the reduction in lockdown measures and the opening of the economy by July 2020, unemployment remained high, and by January 2021, it had reached an all-time high of 32.5% unemployment [52]. More specifically, the pandemic and subsequent lockdown illustrated severe fissures in the state's ability to support the vulnerable – particularly the poor, the unemployed and single-headed households [31].

Hunger and employment

Decent employment is a necessary means of ensuring food security and avoiding hunger. The quote below illustrates how the termination of employment, because of the lockdown measures, increased hunger within households.

The worst thing about the lockdown for me is that I and my family are really struggling to make ends meet. We don't have jobs so we're struggling to put food on the table. We have no money nor jobs, we can't even afford to buy electricity, food or sanitary products. We urgently need help from our government with food parcels. We are really struggling and we're a family of 8 trying to survive on daily basis. Please help us. (Coloured female residing in the Free State Province: 25-34 years of age, has some secondary education and is employed in casual work or a piece job)

Personal and household experiences of hunger varied significantly by employment status (see Fig. 2). Those least likely to have reported hunger were either pensioners (in South Africa anybody over the age of 60 years), who would have been accustomed to a fixed income or full-time employees who could rely on a regular salary. The proportions in these categories who went to bed hungry were nonetheless not insignificant, at 28% for employees and 16% amongst pensioners. In contrast, almost two-thirds of adults (64%) who were unemployed and not actively looking for work lived with people who had

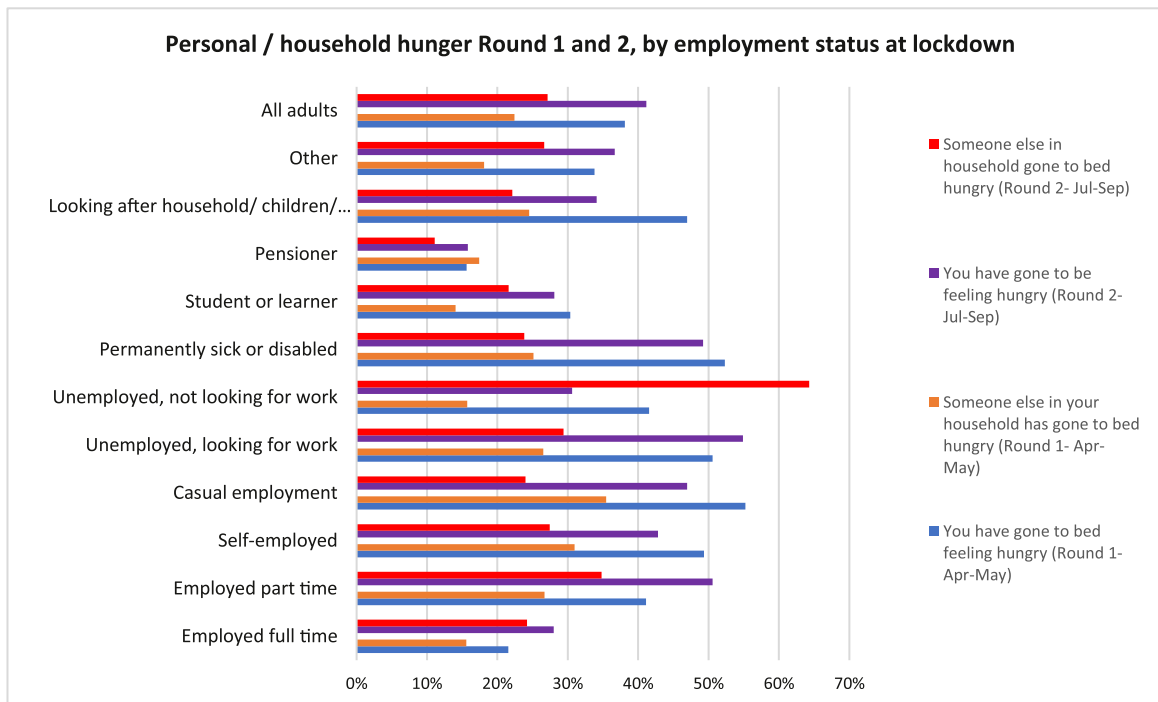


Fig. 3. Personal/household hunger Round 1 and 2, by employment status at lockdown
Source: Authors' calculations.

gone to bed hungry during the lockdown period. More than half (55%) of the unemployed who were looking for work had personally gone to bed hungry, as had similar proportions (47%) amongst those in casual employment or piece jobs or who were permanently sick or disabled (49%). These figures are important as they draw on Round Two of the survey and illustrate responses about hunger during the period after the government had started rolling out relief interventions through increasing social grants, the COVID-19 specific social relief of distress grant (SRD) and food parcels.

In Fig. 3, we notice that in Round 2, some categories of employment showed slight reductions in hunger and others showed slight increases. This was to be expected as people returned to work, remained unemployed and as some relief interventions reached these individuals. However, in the category 'unemployed and not actively looking for work', the percentage of the number of cases of 'someone else in your household has gone to bed hungry' had quadrupled in contrast to Round 1, from 16% to 64%. The percentage of those in this category who had personally gone to bed hungry had dropped by 10% between Round 1 and Round 2. At this point, we can only surmise why there was a significant increase in others in the same household having gone to bed hungry in Round 2. It is possible that the relaxation of interhousehold movement restrictions by Round 2 enabled the 'unemployed and not actively looking for work' more freedom to re-establish their social support networks and source food for themselves, but possibly they were unable to share the food they acquired with others in their household. This category of the unemployed have spent years ensuring support from others to survive. While they are not actively looking for work, they will have had to ensure their survival in numerous ways. Reduced movement restrictions may have meant that more people joined other households, and these household were unable to provide newcomers with sufficient food to ward off hunger. Given household dynamics, the multiple challenges that arose from the COVID-19 pandemic, and that resilience at the household level is not yet well documented in the existing literature about the pandemic, it is important to explore the data further to understand this significant change.

The demand for and reservations about food parcel accessibility and composition

In April 2020, the government introduced food parcels and the COVID-19 Social Relief of Distress (SRD) Grant (ZAR 350 per person per month) and gradually rolled these out. The criteria for both changed slightly [22] in contrast to pre-pandemic criteria. In essence, the SRD grant was open to any resident over 18 years of age who had no income and was not resident in a state-subsidised or funded facility, child-headed households, and included those whose temporary disability grants had lapsed before March 2020. The latter were now eligible for the SRD grant, but no longer receiving the temporary disability grant of ZAR 1,860. However, the official website, SACoronavirus.co.za, noted on 17 April 2020 that food parcels were open to 'anyone who may need them' [23].

Interestingly, Human Rights Watch reported in May 2020 that only those in possession of South African identity documents received food parcels [29], and those without such documents did not receive parcels. The Western Cape Government

[60] announced in April that in terms of national regulations, the once-off food parcels provided by the Western Cape DSD during April 2020 would end on 4 May, to be replaced by the SASSA SRD grant for which the destitute would need to reapply. By June 2020, SASSA had taken over responsibility for the food parcel acquisition and distribution. Thus, there was a delay between lockdown and the implementation of food relief measures. Due to increased demand and rising prices, the total SASSA food parcel cost was reduced from R1500 to R1200 per parcel. Some of the components were later changed due to demand for sanitary items and baby food. The content of these food parcels was criticised for its inability to cater for diverse households, feed a household with more than four members and retained the high macronutrient content [56]. According to the Pietermaritzburg Economic Justice and Dignity Group [40], the cost of the readjusted SASSA food parcel was roughly a quarter of that identified as a nutritious food basket in consultation with recipients in various centres across the country.

In the quote below, a female respondent requested food parcels to ensure her household's food security and avoid contact with neighbours to prevent the spread of the coronavirus, but upon whom she was now reliant for food after being unable to work because of the lockdown restrictions.

During the lockdown those who were working are not working at the moment, which means no work no pay ... we went to bed hungry, no food for 3 days until the neighbours helped us. ...if it's possible I think the President must help people like us with food parcels so that we can stay at home avoid going outside. As a mother, I can't just sit there and watch my kids die of hunger. Please do something because it's really bad so that we can avoid getting the virus by going outside to beg from the neighbours. *(Black African female residing in Gauteng; 35-44 years of age; has some secondary schooling, employment status undisclosed)*

Another respondent emphasised how essential food parcels were when being prohibited from working but reported that parcels were not being received monthly as anticipated and needed.

The worst thing about this lockdown is that I am a vendor and I try by all means to put food on the table. We are very grateful that they have given us food parcels but I think it should be every month because we are unable to work to put food on the table for our children. SO PLEASE CAN WE GET FOOD PARCELS EVERY MONTH *(Black African female residing in North West Province: 35-44 years of age; completed secondary schooling and self-employed)*

Those who had experienced hunger personally or in their households were more likely than the average to agree with the government policy proposal that food parcels should be given to everyone who needed them. However, the proportions who supported this proposal declined substantially between Round 1 and Round 2 of the survey (see Fig. 4).

We can only surmise why the support for the distribution of food parcels declined. First, it is possible that Round 2 respondents were less in need of food parcels because some had returned to work or that government monetary relief interventions were now reaching people in need. Second, there was great concern about the quality and quantity of the contents of food parcels. One respondent pointed out: 'We need food, food parcels don't even last 2 days, some days we going to bed hungry' *(Black African female residing in KwaZulu-Natal, 35-44 years of age, completed secondary schooling, employed full-time)*. This statement confirms that household size and demand exceeded the average size of four people used to compile food parcels (see [56]). Several survey respondents from around the country noted that food parcels did not provide baby food. Third, the rollout of food parcels was criticised in a special report by the Auditor-General [3] because the distribution of food parcels became more expensive, prone to corruption and delay [9]: -individuals and companies exploited the pandemic for their benefit [7,11] resulting in higher food prices and smaller food parcels; similarly, SASSA's decision in June 2020 to put out tenders for new service providers to implement the COVID-19 food parcel rollout instead of using the many established non-profit organisations around the country that were already involved in such initiatives [45]. This decision increased the costs as food prices started to increase and delayed the rollout of the food parcels to those most in need. Fourth, respondents reported corruption with food parcel distribution and allocation at the local level. Such experiences and observations may have deterred them from wanting food parcels in the future and desiring cash paid directly into their bank account. Quotes from the survey illustrate concerns with the local distribution of food parcels.

AmaFood parcels la eBuhle Park anikwa abantu abangawadingi bese kuthi abalambile bayaqhubeka babulawa yindlala
(Food parcels here at Buhle Park are received by people who do not need them much and those that need them, continue to suffer from hunger.) *(Black African male residing in Gauteng: 45-54 years of age; completed tertiary education and employed full-time)*

Hunger all the time, children want food that is not there because everyone is indoors not working. Even the food parcels pick certain people. *(Black African female residing in Gauteng; 18-24 years of age; some secondary schooling and currently unemployed but looking for work)*

Other respondents emphasised how local officials were abusing the food parcel distribution system.

I would like the President to have a firm hand on the mayors because they are taking the food parcels for themselves not the community. *(Black African male residing in Gauteng; 18-24 years of age; completed secondary schooling and currently a student)*

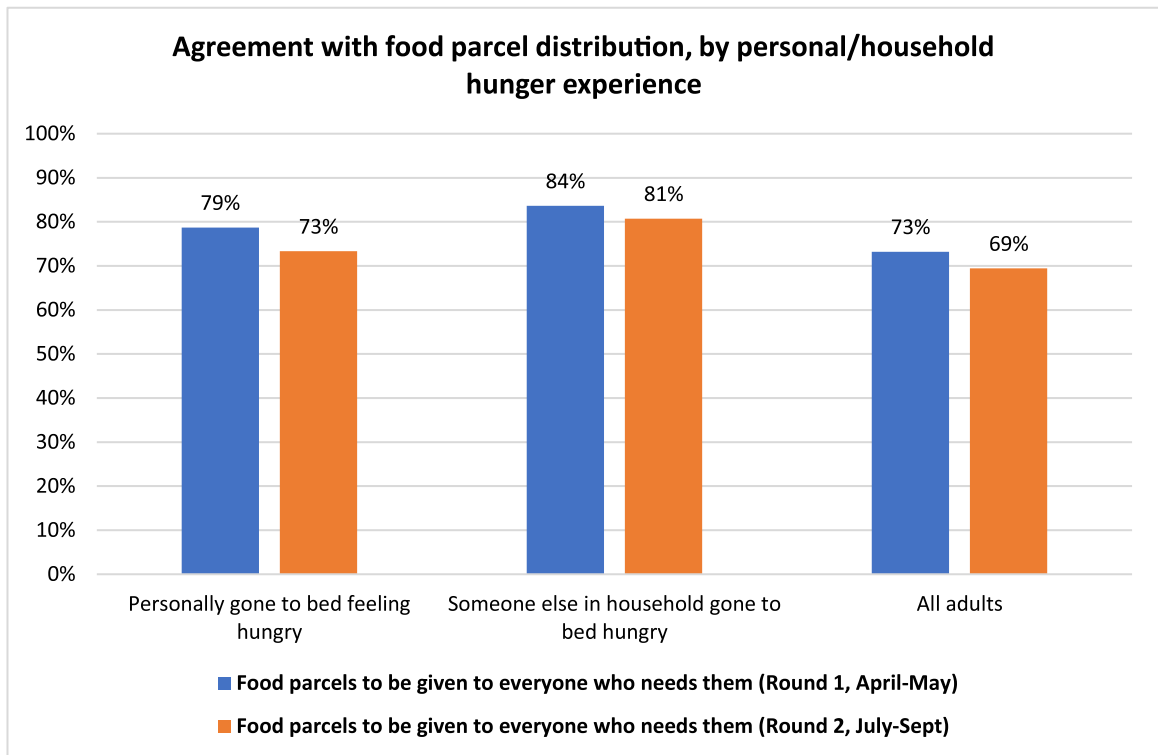


Fig. 4. Agreement with food parcel distribution by personal and household experiences of hunger
 Source: Authors' calculations.

I understand the need for the lockdown, ... [but] please help the needy, our counsellors give SASSA food parcel forms to their relatives not the needy, it's ok that they hire only their friends but this level of greed is now too much to ignore. (Black African female residing in Mpumalanga; 25-34 years of age; completed tertiary education and employed doing casual or piece work)

Consequently, it appears that South Africa's food system, even during times of enormous shock is subject to various inequities in terms of access to food, and the belated but positive state relief measures have been constrained by local corrupt behaviour and weak coordination.

Conclusion

While the State, through the Constitution and as a party to International Conventions, has a legal obligation to respect, protect and fulfil the right of individuals to food and to progressively achieve this, our data show that this is not being realised and notably so during the pandemic. Despite the gains between 2002 and 2007, South Africa's food system is not resilient during a global shock with its national ramifications, aggravated by disaster measures that reduce movement, income and access to food. Individual experiences of hunger increased from pre-lockdown levels of 11% to highs of between 27% and 42% that lasted over the five months of data collection. Household hunger increased from 10% to a high of 28% stabilising at around 24% in September 2020. Although 46% of South African households were receiving at least one social grant in 2019 [49], increases in hunger suggest that grants may not provide a sufficient buffer, especially during a national disaster. The state increased the value of many of these grants for several months in 2020. It introduced the social relief of distress grant and the broader distribution of food parcels, including those who were not receiving a social grant or any other income. Government realised that existing measures would be inadequate during the pandemic. Our data show these interventions did not stop the rising tide of hunger.

Jobs were shed, and 'official' unemployment rose to an all-time high of 32.5% by January 2021. Economic hardships prevented people from securing adequate food [31] and [52] subsequently relying on an unprepared state for food relief. Unpreparedness is illustrated by the slow pace of introducing food relief measures that should have contributed to reducing food insecurity, as well as the inability or refusal to work with existing charities that have long provided food to the poor. Such exclusionary practices have contributed to the extremely high increase in experiences of hunger. Like Seekings [45], we fail to comprehend why some of the large NSNP budget was not revised and funds partially reallocated to SASSA and long-term existing civil society interventions. Van der Berg [54], argues that learners were likely to attend about half the

school days during the 2020 school year. Realistically, the NSNP could have been cut by about half and the funds reallocated to household relief, thereby providing food for learners and households.

The state was unprepared and unable to mitigate the lockdown effects. Lockdown measures focused on controlling the virus and did not consider the effects on vulnerable households. People experienced a lack of food with consequent hunger, exacerbated by delays and corruption in the food parcel distribution process. Increased costs in distributing parcels, and their insufficiency to meet the diverse needs of different sized households further compounded hunger.

High food prices make basic and nutrient-rich foodstuffs unaffordable and inaccessible to many. It is inevitable that without proper state intervention, hunger and food insecurity will continue to escalate, particularly if unemployment continues to rise and food prices increase.

So, what can the government do to prepare for future pandemics and continue to meet its Constitutional obligations? The state and civil society and private sector partners need to ensure that the high incidences of transitory food insecurity, illustrated by the data presented, do not result in chronic food insecurity. They need to learn from the challenges experienced so far and work together with civil society and the private sector. Greater inclusion is necessary, and as Vermeulen, Muller, and Schonfeldt [56] indicate, the nutritional value of food parcels must be improved. As Waterworth [57] and Seekings [45] argue, the state needs to urgently deal with both high unemployment and high food prices to tackle the problem at grassroots level; the prices of certain staples and nutritious food need to be regulated, and state subsidies introduced, where feasible, to ensure sustainable prices and access [55].

Furthermore, it appears that the NDP is not effectively ensuring food security or moving towards zero hunger as there has been little change in hunger since 2011. To understand the weaknesses in the food system generally [39] and during times of disasters, further research on flaws in the system, including inequities in participating in the system [37] and ways to overcome these is required. Although the present study employed a non-probability survey, the weighted results assisted to provide policy direction that emphasised the need to reduce hunger and food insecurity significantly. Future studies must be carefully designed to gain a deeper understanding of how the 'wicked problems' of hunger and food insecurity can be addressed in a more comprehensive manner. Moreover, as Schipanski, MacDonald, Rosenzweig et al. [44] and Béné, Headey, Haddad and von Grebmer [6] argue, an understanding of the factors contributing to system-wide resilience, including household and individual level, is required. The COVID-19 experience has indicated that while social grants might keep food insecurity and hunger experiences static during 'normal' times, they have lost their impact to reduce hunger and food insecurity significantly, especially during disasters. The state and partners will need to think creatively about new ways to address long-term food insecurity and hunger, and to prepare for disaster relief while keeping sight of SDG 2 – zero hunger - and SDG 12 - Responsible consumption and production.

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The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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