"We used to get food from the garden." Understanding changing practices of local food production and consumption in small island states

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ABSTRACT

Many Small Island Developing States (SIDS) lead global rates in obesity and non-communicable chronic diseases (NCDs). Drivers for this are complex and include lack of food sovereignty, evidenced by an increasing reliance on cheap nutrient-poor food imports and a focus on export orientated cash crop production for much local agriculture. To better inform SIDS' policy goals of improving nutrition through increased local food production, we explored in two SIDS current practices of food production and consumption. Teams of researchers from the two main regional universities conducted 28 focus groups in Fiji in the Pacific and Saint Vincent and the Grenadines in the Caribbean with rural and urban communities of different socio-economic or land-owning status. In both countries home gardens were still common, valued as providing staple foods to households and contributing to health and livelihoods. Yet social changes had been experienced over the life course and across generations, such as increased purchase of foods, consumption of processed and often imported foods, and fast foods. While participants associated local foods with better nutrition and health outcomes than imported foods, some local foods were also acknowledged as unhealthy (e.g. locally produced tinned products, pesticide contaminated fresh produce). Finally, as food and related health advice moves globally, crossing national boundaries, and through formal and informal channels, local experiences can be confusing and contested. We suggest the need to understand temporal and spatial aspects of social practices, as social practices and their meaning change over time, travel globally and are experienced locally. To enhance and support re-localising food to counteract unhealthy consumption of ultra-processed, shop-bought, often imported foods, it is vital to understand these lived experiences of changes and resulting uncertainties, and to explicitly build on the longstanding positive relationships that people continue to express about home gardens and local food.

1. Introduction

Small Island Developing States (SIDS) have identified the urgent need to address high rates of malnutrition and its sequelae, including obesity and non-communicable chronic diseases (NCDs) (Tolley et al., 2016; WHO, 2014). Mostly located in the Caribbean and the Pacific, SIDS' population rates of overweight, obesity and NCDs exceed both those of many other low and middle income countries as well as high income countries (WHO, 2018; Sobers and Samuels, 2019). In the Caribbean, the risk of dying from an NCD before the age of seventy is the

highest in the Americas (WHO, 2018). In many countries in the Pacific, around a quarter or more of adults have type 2 diabetes, and at least two out three are overweight or obese (Kessaram et al., 2015; WHO, 2014).

SIDS are particularly affected by macro-level drivers of their NCD burden, including complex vulnerabilities in their food systems (FAO et al., 2017). One manifestation of this is a lack of food sovereignty, which can be defined as the right to "healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and [...] to define their own food and agriculture systems" (Wilson, 2012). Agriculture in SIDS is often geared towards food monocrops like sugar

cane, oil palm, and fruit and vegetables produced for export (Saint Ville et al., 2015; FAO, 2016). In many SIDS, current agricultural production reflects at least in part the legacy of colonial exploitation which instigated the production of cash crops for export, especially in the Caribbean (Graves and Richardson, 1980). In Pacific island countries, agriculture has been historically more diverse and focused on subsistence farming (Barnett, 2020). However, most SIDS now experience contemporary agro-food systems that encourage the commodification of food production and emphasise production of cash crops rather than for personal consumption (Iese et al., 2020). Contemporary shocks to agricultural systems include extreme weather events, which are becoming more frequent due to climate change (Mbow et al., 2019), and have the effect of further disrupting and displacing local food production, for example through food aid imports (Campbell, 2020). The Food and Agricultural Organization highlighted the "alarming trend" of "food import dependency in SIDS"; over 60% of food consumed is imported in the Pacific and Caribbean (and in some countries much more), and much of this imported food is ultra-processed, energy-dense and nutrient-poor (FAO, 2016).

While governments, local civil society and international organisations are aware of these complex food system challenges that underlie their burdens of malnutrition, efforts to support local food production for local consumption remain a challenge (Wilson and McLennan, 2019; FAO, 2016). Re-localising food requires understanding local food systems, their actors, their place in local and global networks, and power dynamics and systemic complexities (Nisbett, 2019). Although local communities are major actors in implementing such solutions, they are often not consulted in terms of their aspirations, preferences, challenges and constraints (Wilson and McLennan, 2019). For example, while there is some research exploring the "cultural acceptability" of particular foods in food interventions, it is also important to understand the acceptability and values placed on food sources and production practices (Hammelman and Hayes-Conroy, 2015) and query underlying assumptions such as "whose nutritional adequacy" is addressed (Hayes-Conroy and Sweet, 2015).

Within the public health field, there is a growing interest in understanding unhealthy eating less as an individual health behaviour but as inherently complex and *social* practices that are shaped by families, communities and situated in political-economic systems at various scales (Maller, 2015). While some health promotion approaches are still firmly rooted in individualised psychological models of behaviours that require educational or motivational intervention, unhealthy eating as a risk factor for obesity and NCDs is increasingly placed within understandings of socio-ecological, environmental or "upstream" drivers that create unhealthy environments and therefore behaviours (Kelly, 2019). A strong social science perspective can help to elucidate these interconnections, in understanding in what way "human agents" enact, perform and recreate these social structures. Sociologist Pierre Bourdieu's (1980, 1986) work especially placed social practices such as eating in particular social fields; eating as cultural capital has socio-cultural meaning within particular social groups, is learned through the life course, shared with others and performed with other social practices. Social practice approaches have established themselves as increasingly favoured social theoretical alternatives to psychological models of "health behaviour", and a social practice lens is foregrounded in our work in which we aimed to understand the interlinkages and dynamics of local food production, preparation and consumption. We built on contemporary social practice approaches which highlight that practices are both symbolic and material, and paid attention to objects and technologies (e.g. produce, land, tins, food processing, pesticide use) that shape such practices (Shove et al., 2012; Maller, 2015). Others point to the importance of social and environmental change and of the environments in which practices take place (Twine, 2015).

Our qualitative study aimed to contribute to this growing body of theoretical and empirical work by exploring social practices of local food production, procurement and consumption, and their perceived impacts on health and socio-economic wellbeing. We particularly aimed to focus on where these food practices take place – people's homes, communities, local and global markets – as a spatial dimension has to date been little explored in social practice research. The study was conducted in two case study countries, Fiji in the Pacific and Saint Vincent and the Grenadines (SVG) in the Caribbean, both middle income countries with high burdens obesity and related NCDs. The study was embedded in a larger project that undertook feasibility work in these settings to prepare for the evaluation of community-based food production initiatives in SIDS with the explicit goal to assess nutrition, health, social and environmental related consequences of such community action (Haynes et al., 2020).

2. Methods

2.1. Research design

We chose a focus group study design to initiate dialogue with local communities to explore what people understand to influence their food practices, and what part locally produced sources plays in this. We also explored participants' understanding of the connections between food practices, health and wellbeing, and the environment, and local discourses and narratives around these issues.

2.2. Settings and participants

Fiji is an upper-middle income Pacific country, comprising over 300 islands (CIA, 2020a). Most of the almost 900,000 inhabitants live on the two largest islands Viti Levu, the site of our study, and Vanua Levu. Fijians speak English, Fijian or iTaukei Bauan dialect (the indigenous and largest ethnic group) and Fiji Hindi (Fijians of Indian descent). Fiji gained independence after British colonial rule in 1970. SVG is an English-speaking, upper-middle income country which includes a chain of 32 islands in the Lesser Antilles of the Caribbean with a population of just over 110,000 (CIA, 2020b). The site of our study was its main island Saint Vincent. SVG gained full independence in 1979 after French and then British colonial rule. Around two thirds of the population are of African descent, and around a fifth are of "mixed" descent. There is a small indigenous Black Carib or Garifuna community. Tourism and agriculture are major industries in both Fiji and SVG.

We aimed for a diverse purposeful sample of participants that reflected the broad social, demographic and economic characteristics of the adult population. We recruited from the same communities as a related quantitative study from the overarching project (Haynes et al., 2020). In all sites, we aimed for a relatively even mix of gender and age groups, and a separate group of young adults (~18–20 years old).

In Fiji, we conducted 16 focus groups with members of the four communities (in total: N = 76, see Table 1). The rural "formal" community was a registered Fijian village comprising of six iTaukei land-owning units (*mataqali*) with about 30 households. Formal village households own land while informal settlements' households have land

Table 1
Focus groups composition in Fiji.

	Rural setting	Urban setting
Formal	FIJI01: Adult men (n = 5)	FIJI09: Adult men (n = 5)
	FIJI02: Adult women (n = 5)	FIJI10: Adult women (n = 5)
	FIJI03: Adolescent/young adult men (n = 5)	FIJI11: Adolescent/young adult men (n = 5)
	FIJI04: Adolescent/young adult women (n = 5)	FIJI12: Adolescent/young adult women (n = 5)
Informal	FIJI05: Adult men (n = 6)	FIJI13: Adult men (n = 4)
	FIJI06: Adult women (n = 5)	FIJI14: Adult women (n = 4)
	FIJI07: Adolescent/young adult men (n = 3)	FIJI15: Adolescent/young adult men (n = 3)
	FIJI08: Adolescent/young adult women (n = 7)	FIJI16: Adolescent/young adult women (n = 4)

lease or informal land arrangements. A neighbouring settlement was matched as a rural informal community of a similar size. The households were made up of mostly farmers (iTaukei and Fijians of Indian descent), most of whom were leasing land belonging to neighbouring villages. In the urban setting, a formal village was located at the outskirts of the capital city Suva, with two tribes (*yavusa*) and seven land-owning units (*mataqali*). The urban informal community was a neighbouring settlement located on native reserve land. The participants for each focus group in formal village settings were selected by the village headman (*turaga ni koro*). The government nominated advisory councillors (who function like village headman in informal settlements) who selected participants from informal settlements. More recruits from informal settlements came via faith-based leaders. This process was not negotiable by the international study team, and followed the guidance and procedures of the local research organisation with longstanding experience and rapport with local communities.

In SVG, we conducted 12 focus groups with members of four communities (overall N = 52 participants, see Table 2). Recruitment was undertaken with the help of a local recruiter and qualitative researcher. Although largely following the recruitment strategy for the related quantitative survey (for detail, see Haynes et al., 2020), the focus group participants from a rural, low SES community were from an adjacent village as the recruiter had personal contacts there; this is the only community that included indigenous Black Carib participants.

2.3. Data collection

Two research teams based at the main regional research institutions, the University of the South Pacific and the University of the West Indies, led the research in each setting. These local teams were highly experienced in community engagement, although new to the included communities, and represented several Pacific or Caribbean nationalities. Facilitators in Fiji included iTaukei Fijians. To facilitate discussion, each focus group was relatively homogenous, as shown in Tables 1 and 2. The focus group topic guide (see Supplementary Online Material) was developed jointly by all researchers during a planning workshop and piloted in each country.

In Fiji, focus groups were held at the two community halls of the formal communities and participants from the informal communities were transported there. Each of the four focus groups per community lasted about 60–120 minutes. A translated version (to iTaukei Bauan dialect) of the focus group guide was distributed to facilitators before the focus groups. Discussions were conducted in both English and Bauan dialect. In SVG, most focus group sessions were held at a central location in the capital city Kingstown, except the three rural/low SES focus groups which were held at a church in that community, and the male adult rural/high SES focus group which was held at a bar in that community. SVG focus group sessions lasted about 45–90 minutes.

2.4. Data analysis

All focus groups were audio-recorded and transcribed verbatim. In Fiji, focus group facilitators transcribed the interviews and translated them into English; the research lead checked all translation. In SVG, a

Table 2
Focus groups composition SVG.

	Urban setting	Rural setting
High SES	SVG07: Adult women (n = 4)	SVG05: Adult women (n = 3)
	SVG12: Adult men (n = 4)	SVG09: Adult men (n = 5)
	SVG11: Adolescent/young adult female (n = 4)	SVG08: Adolescent/young adult mixed gender (n = 4)
Low SES	SVG01: Adult women (n = 4)	SVG02: Adult women (n = 7)
	SVG06: Adult men (n = 3)	SVG04: Adult men (n = 4)
	SVG10: Adolescent/young adult mixed gender (n = 5)	SVG03: Adolescent/young adult mixed gender (n = 5)

local transcription service was used. These transcripts were initially analysed using a pragmatic approach of initial deductive coding according to project objectives, exploring anticipated practices and changes in food production and consumption, and connections made to health and wellbeing, socio-economic and environmental impacts. The lead researchers at the University of the South Pacific and the University of the West Indies analysed their own transcripts in collaboration with the research lead in the UK. Each analysis team then added more inductive insights in thematic analysis such as the importance of traditions in Fiji and social media influences in the SVG data.

Initial findings, summarised from deductive coding, plus unexpected insights, were then discussed with the whole project team in a workshop and further analysis planned for a second round of more open, reflexive interpretive thematic analysis (Braun and Clarke, 2019). The first author led the final thematic analysis and developed the themes in consultation with the local teams. The analysis team used the web-based qualitative research software Dedoose to allow for multi-person analysis across three countries (including the UK) and time zones (Dedoose Version 8.0.35, 2018).

2.5. Ethics and permissions

Written consent was obtained from each participant before the discussions started. Ethical approval was granted by local ethics boards at the University of the South Pacific and the University of West Indies Cave Hill Campus; ethics oversight was granted by University of Cambridge Psychology Research Ethics Committee. Additionally, permission was granted from the Ministries of Health of Fiji and SVG. For community access in Fiji, the research team participated in the *Sevusevu* ceremony, in which dried roots of the kava plant are presented to the village chief to request formal permission to enter the village, and performed the *iTatau* ceremony to request permission to leave the village after all focus groups were conducted (Turner, 1987).

3. Findings

We discuss three themes to explore social, temporal and spatial shifts in food practices across the life course and generations. The theme of "home-grown wellbeing and livelihoods" explores the persistent social meaning of and values placed in home-grown produce for communities' healthy nutrition as well as towards household incomes. The theme "local food transitions" traces the ways in which food consumption has been, nonetheless, markedly changing over lifetimes and across generations – from home produce to shop-bought foods to eating out. This theme also explores how this local nutrition transition links to perceptions of emerging health risks and uncertainties. Our third theme, "globalised messages", teases out that it is not just food products that travel across borders, but messages on health risks, and how these exacerbate uncertainties and worries about health consequences of changing diets. Common concerns largely outweighed any differences between Fiji and SVG and are emphasised here; similarly, our analysis did not find clear differences between male and female, young and old or rural and urban participants unless explicitly stated below. We draw attention to nuances and differential experiences where appropriate.

3.1. Home-grown wellbeing and livelihoods

All participants placed great value on home-grown food and saw it as an important source for their families' health and livelihoods. The focus groups started with encouraging discussion on staple foods in their households and communities.

> Facilitator (F): Alright, what about St Vincent in general, what are typical foods here that people do eat?
> Participant (P) (SVG, urban, higher SES, adult, female): Hard food (in unison).

P: Breadfruit.
P: Ground provision [traditional root crops e.g. yam, sweet potato, cassava]
F: Ground provision?
P: Because we grow it. You know? It's grown locally.

P (Fiji, urban, formal, adult, male): [we eat] tavioka, dalo [*Colocasia esculenta/*taro], […] *rourou* [taro leaves cooked in coconu milk], from the garden
P: from the garden; *bele* [Hibiscus manihot]
[…]
P: *uto* [breadfruit], *vudi* [plantain], from the garden still

Staple diets seemed intricately linked with home-growing – food "from the garden" – even in urban communities, and often focused on "hard food" or "ground provisions", that is, crops such as dalo (*Colocasia esculenta/*taro), cassava (*Manihot esculent*), wild yams, sweet potatoes in Fiji and yam, dasheen, eddo (types of taro), cassava and sweet potato in SVG. Home gardens are common across the Caribbean and the Pacific (Galhena et al., 2013), and participants were keen to emphasise the health benefits of home-grown produce, "*because we know what is healthy food, and we grow those food in our backyard for our own consumption. It also helps us to be accessible to the preferred food at an affordable price*" *(Fiji, urban, informal, female, adult)*. Food from home gardens was considered healthy, as was the practice of gardening itself.

P (Fiji, rural, informal, male, adolescent): My view is that the one who plants his own food is a […] healthier person, he exercises his body through the physical work and is more fitter by being exposed to the sunlight.

This shared understanding of home garden produce as healthy might be in part a success of government advice, as current nutrition guidelines in both countries encourage home growing to support healthy diets (FAO, 2006; WHO, 2013). While some focus groups (in particular in Fiji) connected some of their notions around health and food to the knowledge of forefathers (see in the next theme), which might echo notions of "healthy country, healthy people" in some indigenous peoples' knowledge and practices (Schultz et al., 2018), most health advice was connected to health professionals or government guidance. This was readily recounted in the focus groups, explaining that "*[t]he health department emphasises we just eat foods from our plantation if we to protect ourselves from these diseases like the NCDs [non-communicable diseases]. That is the reason we consume our own farmed food.*" *(Fiji urban, informal, male, adult)* For some participants, accelerating rates of obesity and non-communicable diseases were lived experiences in their families and communities, particularly singling out in their accounts diabetes and its complications, such as amputations.

F: Would you say that you are concerned about the health of your family and the community?
P (SVG, urban, low SES, adult, female): I am. Because […] I see more young people diagnosed with diabetes and hypertension. Like my friends, lots of my friends, I'm also seeing, 'cause I can speak for myself too, a lot of obesity […]. And – amputees!
P: And I'm not talking about people who are plus 60 [years of age] I'm talking about people in their 40's –
P: And 30's and in their 20s.
P: And it has an impact, economic, social, lots of things going on, so I have a lot of concerns.

As well as being healthy, the ready accessibility and affordability of home produce was equally important. Participants described their home gardens as a source of "free" food, a "smart" and affordable (if effortful) way to feed themselves and their families.

P (SVG, rural, lower SES, mixed gender, adolescents): […] we out here in the countryside, we prefer bush food. It's free, [laughs] you don't haa (have to) pay for it and you work hard for it, so you gotta enjoy your hard work.

Communities in both settings also placed great value on home food production as a social safety net in times of food shortage, to avoid additional costs for purchasing food or to generate additional income.

F: […] you see someone growing their own food, what do you think that says about them?
P (SVG, urban, lower SES, female, adult): Self-sufficient.
F: Self-sufficient. Yeah. Ok anything else?
P: It says they're smart. It says they want to cut down on spending on a particular item or they trying to make an extra dollar so.
P: It also says to me from the persons, like my friends, they have no other choice because they are trying to cut down [spending].

Galhena et al.'s (2013, p.7) review points to these multiple functions of home gardens. They not only provide healthy produce and fulfil a variety of social functions, including the preservation of local indigenous knowledge and practices, they also "contribute to income generation, improved livelihoods, and household economic welfare as well as promoting entrepreneurship and rural development". The review also points to the fuzzy distinction we found between owning a home garden, farming for subsistence or small-scale commercial farming in our settings (particularly in Fiji). Rather than trying to disentangle these, with our interest in the concept of food sovereignty, we emphasised a distinction between food sources: local home-produced (or shared) foods, local market- or shop-bought foods, or imported foods.

While narratives of home gardens evoked notions of control over availability, affordability and quality of food – a safe source of food for your family as the concept of food sovereignty underlines (Wilson, 2012) – home-growing also had its economic risks. Participants in both countries raised concerns about praedial larceny, despite strong values of community living and sharing.

P (Fiji, rural, formal, male, adult): Sometimes we are worried about planting a lot because someone else comes in and harvest your crop. [Laughter]
P: Some of the problem we facing eh, some they plant and some they go and harvest. ["Steal", explaining in English to co-facilitator] [Laughter]
P: Some specialist in planting and another specialist in pulling Laughter] P (SVG, urban, low SES, female, adult): I know of people who used to steal your provision, stuff from your land. So you plant stuff in your land and there was this one couple, on one time they do [cover themselves in] oil down from head to toe to steal people's vegetable. […] [Laughs]

These experiences of losing precious food and income through theft with little control to protect their hard work discouraged those growing their own food to continue planting. It stood in contrast to important social meaning ascribed to home gardening to be able to feed oneself healthily and affordably, and to do so through hard work and as a family and community. We found, as Murrieta and WinklerPrins (2003) argue, that home gardens served emotional and social functions beyond their utilitarian aim of providing food. As we shared two scenarios in our focus groups to gauge social values placed on home growing ("*Imagine you see someone in your community growing their own food …*") and fast food consumption ("*Imagine you see someone buying fast food …*"), participants commended the home grower for their hard work, good sense and health, while understanding those buying fast food as juxtaposed characters: "*a lazy person, he is a lazy person and finds it easier to buy food he is also susceptible to sickness*" *(Fiji, rural, informal, male, adolescent)*.

3.2. Local food transitions

Despite this importance of home gardens in participants' lives, they experienced an increasing shift away from home garden produce towards purchasing and eating outside the home and the different foods that come with these practices. This study was embedded in a larger interdisciplinary project, which included quantitative household data on food sources and diet and found that much food consumed was purchased rather than home produced (Haynes et al., 2020). These social changes towards consumption of shop-bought, processed and fast foods are widely researched as a global "nutrition transition" (Popkin, 2002). Changing food consumption patterns between and within countries are tightly linked in this literature to the detrimental effects of globalisation, including the influence and reach of global agribusiness, transnational food companies and international trade agreements on local food systems and ultimately dietary habits and health outcomes (Hawkes, 2006).

Our participants of all ages shared narratives of their own nutrition transitions. "*I used to go to [the bush] with my granddaddy,*" a teenage girl in St Vincent shared with us in a focus group discussion (SVG, rural, lower SES, mixed gender, adolescents). In Fiji, a young man echoed her experience, explaining that *"[p]reviously we use to get food from the garden however now we seem to be buying a lot" (Fiji, urban, formal, male, adolescent)*. These accounts of childhood memories point to both a lived experience or memory of gardening and foraging, but also a relatively recent change in and felt loss of these practices, even for the young people in the communities. While some narratives evoked some unspecified past in which these changes occurred – "*we used to*", or in Fiji often "our forefathers" – many located these changes firmly in their own experiences and lifetimes, or pointed to generational differences.

> P (Fiji, rural, formal, male, adult): My family, not all the foods satisfies family. I went fishing last week at the creek. I caught a lot of tilapia but my eldest son doesn't eat tilapia he went bought tinned tuna for himself.

While generational differences seemed an important observation by the older participants, most adolescents also recounted these changes as occurring in their own lifetime. This might suggest that even younger generations still placed a strong value on home-produced foods despite the growing attraction of purchased and branded foods.

To explain this change towards increasingly shop-bought food, some participants commented on the challenge of limited or no access to land for private renters who did not own their own land to grow their own food or raise livestock. Food therefore had to be sourced outside the home:

> P (Fiji, urban, informal, adult, female): We spoke earlier about backyard gardening in our community. If you come to see now there is hardly anywhere to plant because the landowners keep on bringing new families to settle in the settlement that they have taken up the spaces where we used to plant. […]
> F: Do you know of initiatives that help make food available in your community like farming or fishing initiatives?
> P: No because there is no land to farm. The only other initiative is by government with the social welfare food assistance.
>
> F: Where do you usually get your food?
> P (SVG, urban, low SES, female, adult): Market.
> P: Or plant […]
> P: Where I'm renting now, we don't have that luxury to plant what you want to so you just gotta buy everything. From market or the supermarket, sometimes it's imported.

Much is written about the complex conditions that drive this nutrition transition in SIDS, including the legacy of colonial land ownership and division, land pressures and loss, but also increasing migration and urbanisation (Connell et al., 2020). In Fiji, while native land is protected, land tenure is complex. Access to land is increasingly under pressure, driven by migration (internal and from other island nations) and loss of productive capacity through environmental change, such as salinisation (Campbell, 2020). In SVG, land arrangements are also often complex and informal, and land often restricted in size as a legacy of inadequate distribution of former plantation land (Saint Ville et al., 2015). Our participants also talked about incomers settling in their communities and putting more pressure on land, highlighting the *"luxury to plant"* and the little control they had to grow their own food. Even if access to land was provided, this could be taken away by landlords. They depended on family members or their own employment to feed their families. These experiences combined, including increasing pressure on access to land, increasing environmental threats and praedial larceny, as discussed earlier, may be key in understanding why home gardening is becoming less common despite study participants also lauding its benefits.

Participants also pointed to those who had land available but did not always make use of it. As one woman (rural, informal) in Fiji suggested *"land is there but they [young people] don't plant"*. Some connected this to larger social change with more labour opportunities outside the agricultural sector, and that home food production for subsistence and to make a living had also been a necessity, not a choice, for previous generations.

> P (Fiji, rural, formal, adult, male): In the past there are not many sources of income but mostly farming. From farming were able to feed our families and also earn some money.

Moreover, even participants who had access to land and seemed to cherish their home garden reported commonly buying food, either from local markets and smaller shops or from supermarkets or eating fast foods - if often out of financial reach.

> P (Fiji, rural, informal, male, adolescent): […] we are all farmers and most of the food we eat is from the garden.
> […]
> F: Anything else apart from the food from your surroundings?…
> P: Pizza.
> F: What?
> P: Pizza. If we can afford it.

This increasing preferences for processed foods such as noodles, pizza, fried chicken and tinned foods, the convenience of such foods (if too "lazy" to grow and cook home produce), and changes from communal practices such as sharing home produce within the community or family to more individualist diets (Haynes et al., 2020), suggests that larger cultural transformations of food preferences and practices intersect structural drivers (Connell et al., 2020). However, these transformations are more complex than the relatively linear concept of "nutrition transition" might suggest. For example, a brand-name for chicken was mentioned by some young Fijians as a desirable product they liked buying, but they justified their loyalty for that brand partly by explaining that they reared and sold chicken to the company. In other words, this was not merely a story of changing tastes and the allure of branded products but points towards changing opportunities for livelihoods as part of local food production. Antoher example for non-linear transitions is the freshly caught tilapia, mentioned earlier as rejected for tinned tuna by a younger Fijian generation. Tilapia is in fact not a native species to the Pacific and there are very negative perceptions and status associated with this ground-feeding fish found in rivers and ponds. Tilapia is eclipsed twice by the tuna – a high status ocean fish and tinned for convenience and labelled with a recognisable brand name.

Central to the analysis of nutrition transitions is an emphasis of the accelerating health risks from consuming processed foods (Hawkes, 2006). Our participants placed similar importance on these

consequences of moving away from home-grown food towards unhealthy eating. A woman in Fiji (rural, formal) explained, *"[…] healthy foods are the foods that we grow. It makes our body healthy like cassava. Our forefathers used to have tea with cassava. Now there's no more and we buy lots of imported foods from the store […] Some even get sick from the foods".*

Worries about the negative health impact were connected to sugar, salt and fat content and consequences for obesity and NCDs, and generally ascribed to imported foods. One group of Fijian men, however, pointed to locally produced food as increasingly processed and potentially unhealthy or harmful.

P (Fiji, urban, formal, male, adult): Tin meat, tin fish, the ones made in Fiji, [names local brand name], things like that are in Fiji.[…]
P: Noodles are [made] in Fiji.
P: All those things are Fiji products.
F: Does it matter if they are local or from abroad? Any difference?
P: I don't believe so. Maybe even unhealthier?
F: Fiji products have a lot of oil content, [same brand name of tinned fish] has a lot of oil, overseas product is dry instead.

Moreover, some drew broader connections between food and their health, and pointed to the risk of polluted foods and chemicals, worrying that *"[e]verything we importing […] I don't think it's healthy. Everything they using chemicals on these days. Even the lettuce now, and that's supposed to be healthy"* (SVG, urban, lower SES, adult, male). Again, that link was also drawn to local, not just imported, foods, and was related to the perception of poorly regulated pesticide use on *local* agricultural produce. Unregulated and uneducated use of pesticides were seen to affect food taste and variety, as well as bringing direct health risks.

F: Have you seen any changes in the food that you eat at home?
P (Fiji, rural, informal, female, adolescent): The taste of food.
F: The taste of food eh!! Why do you think that the taste of food has changed?
P: Like planted food – vegetables, before just the manure was used, now different types of chemicals are used and it affects the taste of food.

3.3. Globalised messages

Finally, as the previous theme showed, it was not just foods that travelled within and across national boundaries, but also notions around food; in particular, in relation to its potential health risks. Two local narratives of global mobilities of food and health messages that entered several focus group discussions illustrate the complex and sometimes contradictory experiences and valuations of food as health promoting or damaging.

As previously mentioned, Fiji participants readily recalled official government health advice to favour "home-grown food". However, we were surprised to find that several participants across different focus groups described their home-grown root crops as bad for their health.

P (Fiji, urban, informal, female, adult): We are changing the foods that we are eating because some of us have been diagnosed with certain diseases. […] Before we were eating a lot of root crops, but when we were diagnosed with some sickness we are trying to adhere to doctors' advice to cut down on certain foods, that's another reason for the changes.

P (Fiji, rural, formal, female adult): […] one thing that I know is that cassava is causing diabetes. If you eat a small piece of cassava and sweet potato which causes sickness. […] we eat lots of exported [meant imported] foods which cause diseases. It is good for us to eat

healthy foods like vegetables and improves our health and thinking […].

These participants worried that local root crops might cause diabetes, and in fact also shared that they had changed their diets away from their own home produce for fear of disease, but also referred to "healthy foods like vegetables". Our project partners in Fiji suggested that this confusion was not uncommon and arose because of past national recommendations to avoid starchy crops. This erroneous message was likely due to poor adaptation of nutritional guidelines from other (Global North) countries that discouraged high glycaemic index carbohydrate-rich vegetables such as potatoes. Staple starchy foods in the local diet such as sweet potatoes or taro, in contrast, are generally nutritionally valuable crops. Updated, current Fijian nutrition guidance explicitly encourages consumption of local staple crops and planting backyard gardens (WHO, 2013), but confusion remained in many of the Fiji-based focus groups (and similar studies of our partners). As health advice travelled across different settings, it seemed to have got lost in translation and added to uncertainties rather than provided guidance and reassurance.

In SVG, many discussions made reference to a recent viral social media story of "plastic foods" from China. This concern referred to both raw imported vegetables such as cabbage that seemed unnaturally unblemished and unperishable, and other imported products such as rice and cheese.

P (SVG, urban, low SES, adult, female): Cause some the stuff [from] overseas [is] fake, I've seen Chinese make fake cabbage, so I don't know.
P: Cheese, you don't even know where the cheese coming from.
P: Plastic cheese.
P: Don't know where all of it is coming from.
P (SVG, urban, higher SES, female, adult): I prefer the local cabbage taste […] Those imported cabbage, I find it too many layers and I find basically plastically, and I don't know. […] I feel a little safer buying local.

This heated discussion seemed somewhat surprising, especially as local markets have been for many years dominated by produce from the US, which also appears to be unblemished and seemingly unperishable compared to local crops. Perhaps social media acted as an amplifier of this unease. Suspicions voiced in these focus groups were clearly rooted in the unknown and unknowable sources of foods from supermarket shelves from global markets, fuelled by proliferating "health" messages spread through social media. While attention is often paid to transnational food corporations' strategies and marketing (Henry, 2016) – although this was not a strong theme in our own data – the influence of social media on food practices is less explored. Although social media messages might be less strategic and focussed, they are clearly no less persuasive.

Both examples – confusing advice on starchy crops in Fiji and plastic food scares in SVG – demonstrate tensions in how global movements of foods and health messaging are made sense of, reinforced and contested in local experiences. "New mobilities" literature can help to make sense of this unsettledness. As Mimi Sheller and John Urry (2006, pp.207/208) suggest, "the world seems to be on the move", which includes new forms of movement such as virtual travel through the Internet. They add that "issues of movement, of too little movement or too much, or of the wrong sort or at the wrong time, are central to many lives". Our local focus groups discussions captured such movements – formal nutrition guidelines as they travelled and got lost in translation, and as informal media fake news stories cross similar global boundaries – and how these were made sense of in local everyday lives.

4. Conclusion

In summary, in our focus group study in Fiji and SVG, we explored communities' current food practices, and changes from home gardens to local markets to global dynamics. Home food production, food sourcing and consumption practices were closely interlinked and situated in communities' home gardens in largely agricultural settings. Home gardens remained meaningful sources of healthy and affordable produce, and were seen to demonstrate hard work and communal values. Yet, participants experienced increasing shifts towards buying foods at markets, supermarkets and other food outlets, which provide foods otherwise not accessible and increasingly desired. These temporal social transformations of food practices were experienced in people's own lifetimes and over generations. Food purchased and consumed outside the home included local and imported foods. Food was connected with health, but which foods might be good or bad for their health was at times confusing and contested; they were concerned about a range of health risks and outcomes, including pollution, toxins, obesity and NCDs. This was at least in part driven by global dynamics such as food produce and health advice travelling across national boundaries, of unclear origins, and introducing ambiguities and uncertainties. Contradictions in food practices – placing much value on home growing and yet increasingly consuming shop-bought, processed and imported foods – seemed unresolved and formed part of everyday lived experiences of making trade-offs between health and convenience, and navigating uncertainties over the risks and benefits of different food types and sources.

Limitations of the study should be acknowledged. While the focus group design enabled us to learn about shared experiences and narratives that dominated local discourses around food, and were a familiar research design to local communities, our data are unable to support further analysis to better understand the underlying processes or reasonings behind some of the apparent contradictions described in this paper. Thinking through our gaps of understanding, an ethnographic research design – or even individual interviews – could have explored in greater depth a number of questions. First, while we asked about food sources and learned about the strong links participants made between food and health, we did not encourage discussion about the sources of their health beliefs beyond the recounted stories around confusing nutrition guidance and "fake food news". Nor could we explore in what way lived experiences of uncertainties might have encouraged further food practice changes – for example, if worries around health risks inspired a return to home gardening or perhaps increasing interest in organic growing methods. Finally, it seems important to explore how individuals might reconcile health ambitions and health worries, food security concerns and high financial costs of, for example, eating out.

A further limitation in our data collection might have been in the facilitation of the focus groups. Focus groups were facilitated by researchers local to the country or the region. (Limited resources also meant that graduate student researchers had to be trained to conduct some of the focus groups in Fiji.) This meant that the teams established easy rapport with the participating communities. However, some topics – such as understanding values placed on bought, processed or branded foods – had not been further probed during focus groups when there would have been the opportunity for follow up questions. We reflected that our young facilitators might have shared much of the experiences and social meanings of their participants and took the position of an "insider" rather than an "outsider", who could question taken-for-granted practices (Green and Thorogood, 2009).

Our approach to data collection and analysis ensured that we could draw out insights common to all settings. However, this did not allow for an in-depth understanding of each setting and country in its own right. The countries and experiences are, of course, unique in many ways, but we also see value in this combined, comparative perspective, in particular as there is an increasing political drive across SIDS to share experiences of vulnerabilities as well as routes to resilience (Tora, 2020).

Further limitations are more practical. Settings had to be pragmatically selected for easy reach, which precluded more remote communities and a wider range of communities; in particular, coastal fishing communities would have brought a stronger fisheries perspective to the study.

Our study, nonetheless, makes several contributions. Our findings speak directly to social science contributions to public health that consider eating, cooking, dining out and so on as social practices that are learned from and enacted with others, and aim to emphasise collective practices and the importance of understanding the wider social worlds and everyday experiences in which such practices take place (Delormier et al., 2009). Our study can contribute to this relational, social perspective and particularly emphasises the importance of understanding food *production* practices to understand how conditions for healthier food systems could be created (Blue et al., 2014). Our findings highlight the importance – and persistent social value – placed on food production practices and how these are connected to local diets (young people still valuing home-growing), coalesced with ideas and values about health and self-sufficiency, but also were contested (family members reject home-produced foods in favour of shop-bought alternatives) as communities experience transformations in their food practices and food systems (Warren et al., 2015). These marked shifts in social practices are little accounted for in the current, often public health based, literature on social practices (Blue et al., 2014). We argue that we need to pay more attention to locating social practices in place and time and the changes that occur within these dimensions. A new mobilities paradigm urges us to look beyond "static" social theoretical approaches, and pay more attention to the high fluidity in experiences and practices over time and space, but also to "moorings", as Sheller and Urry (2006) suggest. Some writings about social practice have engaged with this literature, in particular those with interest in mobile practices such as transport or tourism (Sheller and Urry, 2016). Yet, we agree with Shove et al. (2012) that *any* social practice account – beyond travel or transport – should consider its dynamic nature as well as understand how practices might be actively moored or anchored. As they caution (ibid, p.126), "practices […] happen somewhere and at some point". Understanding mobilities of social practices might help to not only pay attention to mobilities of objects (food), but also of social meaning of food practices (and formalised guidance around nutrition) as they travel between generations and across national boundaries. Identifying moorings or anchors of social practice, which in our case might include people's home gardens, helps in understanding factors that remain important in their everyday lives and provide a source of stability and comfort when feeling uncertain and unsettled.

Our study also contributes to accounts of lived experiences of a "nutrition transition" experienced across the world. Experiences and understandings of changes in food sources and consumption and how this might be a risk to one's health were complex. Health risks were a concern, disrupted and unsettled everyday practices and experiences with food, and were ascribed to both imported and local foods. "Unhealthy foods" were nonetheless increasingly consumed and desired. It seems important to pay attention to the symbolic value of home gardens as "moorings", as Sheller and Urry (2006) suggest, to anchor in an increasingly uncertain and disorienting world of extreme weather, accelerating disease rates and fake news. Emphasising that positive symbolic meaning might help to counter the increasing draw of branded and processed status symbols of pizza, fried chicken or noodles. This could also help to inform actions towards food sovereignty in SIDS and similar settings, and particular speaks to ambitions to emphasise that "food is more than just a commodity" (Gordillo and Mendez Jeronimo, 2013) and link to emotional and social functions of food and food production.

If the ambition is to re-localise food production to counteract unhealthy consumption of ultra-processed, shop-bought, often imported foods, it is vital to understand these interlinked practices, and meanings and social values placed on them. What might be required are local strategies to recontextualise rather than reintroduce home food

production for local consumption by explicitly building on the long-standing positive relationships that people continue to express about home gardens and local food. Home gardens and local produce could provide a familiar reference point or "anchor" for the creation of local strategies to mitigate the growing, interrelated, challenges of food insecurity and lack of food sovereignty, nutrition related NCDs and impacts of climate change (FAO et al., 2017).

Declarations of competing interest

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Appendix A Supplementary data

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References

Barnett, J., 2020. Climate change and food security in the pacfic islands. In: CONNELL, J., LOWITT, K. (Eds.), Food Security in Small Island States. Springer, Singapore.

Blue, S., Shove, E., Carmona, C., Kelly, M.P., 2014. Theories of practice and public health: understanding (un)healthy practices. Crit. Publ. Health 1–15.

Bourdieu, P., 1980. The Logic of Practice. Stanford University Press, Stanford.

Bourdieu, P., 1986. The forms of capital. In: RICHARDSON, J.G. (Ed.), Handbook of Theory and Research for the Sociology of Education. Greenwood Press, New York.

Braun, V., Clarke, V., 2019. Reflecting on reflexive thematic analysis. Qual. Res. Sport Exer. Health 11, 589–597.

Campbell, J.R., 2020. Development, global change and food security in pacific island countries. In: CONNELL, J., LOWITT, K. (Eds.), Food Security in Small Island States. Springer, Singapore.

CIA, 2020a. The world factbook: Fiji [online]. Available: https://www.cia.gov/library/publications/the-world-factbook/geos/fj.html. (Accessed 3 July 2020).

CIA, 2020b. The world factbook: Saint Vincent and the Grenadines [online]. Available: https://www.cia.gov/library/publications/the-world-factbook/geos/vc.html. (Accessed 3 July 2020).

Connell, J., Lowitt, K., Saint Ville, A., Hickey, G.M., 2020. Food security and sovereignty in small island developing states: contemporary crises and challenges. In: CONNELL, J., LOWITT, K. (Eds.), Food Security in Small Island States. Springer, Singapore.

Dedoose, 2018. Dedoose Version 8.0.35, Web Application for Managing, Analyzing, and Presenting Qualitative and Mixed Method Research Data. SocioCultural Research Consultants, LLC, Los Angeles, CA, Version 8.0.35.

Delormier, T., Frohlich, K.L., Potvin, L., 2009. Food and eating as social practice – understanding eating patterns as social phenomena and implications for public health. Sociol. Health Illness 31, 215–228.

FAO, 2006. Dietary Guidelines for St Vincent and the Grenadines [Online]. FAO, Caribbean Food and Nutrition Institute, Ministry of Health and the Environment and Agriculture, Forestry and Fisheries. Available: http://www.fao.org/3/a-as862e.pdf.

FAO, 2016. The State of Food Security and Nutrition in Small Island Developing States (Report No.: I5327E/1/01.16). Food and Agriculture Organization, Rome, Italy.

Galhena, D.H., Freed, R., Maredia, K.M., 2013. Home gardens: a promising approach to enhance household food security and wellbeing. Agric. Food Secur. 2, 8.

Gordillo, G., Mendez Jeronimo, O., 2013. Food Security and Food Sovereignty. Food and Agricultural Organization, Rome, Italy.

Graves, A., Richardson, P., 1980. Plantations in the political economy of colonial sugar production: natal and queensland, 1860-1914. J. South Afr. Stud. 6, 214–229.

Green, J., Thorogood, N., 2009. Qualitative Methods for Health Research. Sage, London.

Hammelman, C., Hayes-Conroy, A., 2015. Understanding cultural acceptability for urban food policy. J. Plann. Lit. 30, 37–48.

Hawkes, C., 2006. Uneven dietary development: linking the policies and processes of globalization with the nutrition transition, obesity and diet-related chronic diseases. Glob. Health 2, 4.

Hayes-Conroy, A., Sweet, E.L., 2015. Whose adequacy? (Re)imagining food security with displaced women in Medellín, Colombia. Agric. Hum. Val. 32, 373–384.

Haynes, E., Bhagtani, D., Iese, V., et al., 2020. Food sources and dietary quality in small island developing states: development of methods and policy relevant novel survey data from the pacific and Caribbean. Nutrients 12, 3350.

Henry, F.J., 2016. Globalization challenges to family nutrition in the Caribbean: the way forward. J. Family Med. Dis. Prevent. 2, 1–5.

Iese, V., Halavatau, S., N'Yeurt, A.D.R., et al., 2020. Agriculture under a changing climate. In: KUMAR, L. (Ed.), Climate Change and Impacts in the Pacific. Springer International Publishing, Cham.

Kelly, M.P., 2019. Cognitive biases in public health and how economics and sociology can help overcome them. Publ. Health 169, 163–172.

Kessaram, T., McKenzie, J., Girin, N., et al., 2015. Noncommunicable diseases and risk factors in adult populations of several Pacific Islands: results from the WHO STEPwise approach to surveillance. Aust. N. Z. J. Publ. Health 39, 336–343.

Maller, C.J., 2015. Understanding health through social practices: performance and materiality in everyday life. Sociol. Health Illness 37, 52–66.

Mbow, C., Rosenzweig, C., Barioni, L., et al., 2019. Food security. In: Shukla, P., Skea, J., Calvo Buendia, E., Masson-Delmotte, V., Portner, H.-O., Roberts, D., Zhai, P. (Eds.), Climate Change and Land: an IPCC Special Report on Climate Change, Desertification, Land Degradation, Sustainable Land Management, Food Security, and Greenhouse Gas Fluxes in Terrestrial Ecosystems.

Murrieta, R.S.S., WinklerPrins, A.M.G.A., 2003. Flowers of water: homegardens and gender roles in a riverine caboclo community in the lower Amazon, Brazil. Cult. Agric. 25, 35–47.

Nisbett, N., 2019. Understanding the nourishment of bodies at the centre of food and health systems – systemic, bodily and new materialist perspectives on nutritional inequity. Soc. Sci. Med. 228, 9–16.

Popkin, B.M., 2002. An overview on the nutrition transition and its health implications: the Bellagio meeting. Publ. Health Nutr. 5, 93–103.

Saint Ville, A.S., Hickey, G.M., Phillip, L.E., 2015. Addressing food and nutrition insecurity in the Caribbean through domestic smallholder farming system innovation. Reg. Environ. Change 15, 1325–1339.

Schultz, R., Abbott, T., Yamaguchi, J., Cairney, S., 2018. Indigenous land management as primary health care: qualitative analysis from the Interplay research project in remote Australia. BMC Health Serv. Res. 18, 960.

Sheller, M., Urry, J., 2006. The new mobilities paradigm. Environ. Plann. 38, 207–226.

Sheller, M., Urry, J., 2016. Mobilizing the new mobilities paradigm. Appl. Mobilities 1, 10–25.

Shove, E., Pantzar, M., Watson, M., 2012. The Dynamics of Social Practice: Everyday Life and How it Changes. Sage, London.

Sobers, N., Samuels, T.A., 2019. Diet and childhood obesity in small island developing states. Lancet Child Adolescent Health 3, 445–447.

Tolley, H., Snowdon, W., Wate, J., et al., 2016. Monitoring and accountability for the Pacific response to the non-communicable diseases crisis. BMC Publ. Health 16, 958.

Tora, L., 2020. Two Piglets for a Kayak: Fiji Returns to Barter System as Covid-19 Hits Economy. The Guardian, 8 May 2020.

Turner, J.W., 1987. Blessed to give and receive: ceremonial exchange in Fiji. Ethnology 26, 209–219.

Twine, R., 2015. Understanding snacking through a practice theory lens. Sociol. Health Illness 37, 1270–1284.

FAO, UN-OHRLLS & UN-DESA, 2017. Global Action Programme on Food Security and Nutrition in Small Island Developing States. Food and Agricultural Organization, Rome, Italy.

Warren, E., Hawkesworth, S., Knai, C., 2015. Investigating the association between urban agriculture and food security, dietary diversity, and nutritional status: a systematic literature review. Food Pol. 53, 54–66.

WHO, 2013. Food and Health Guidelines for Fiji [Online]. WHO, Ministry of Health, National Food and Nutrition Centre. Available: http://www.fao.org/3/a-as883e.pdf. (Accessed 27 June 2020).

WHO, 2014. Western Pacific Regional Action Plan for the Prevention and Control of Noncommunicable Diseases (2014-2020). WHO Regional Office for the Western Pacific, Manila.

WHO, 2018. Noncommunicable Diseases Country Profiles 2018. World Health Organization, Geneva.

Wilson, T.D., 2012. Book review: La vía campesina: globalization and the power of peasants. Rev. Radic. Polit. Econ. 44, 391–392.

Wilson, M., McLennan, A., 2019. A comparative ethnography of nutrition interventions: structural violence and the industrialisation of agrifood systems in the Caribbean and the Pacific. Soc. Sci. Med. 228, 172–180.