FEEDING THE FUTURE- CAMPUS FOOD ENVIRONMENTS

WITS UNIVERSITY CASE STUDY

PRELIMINARY RESULTS

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EXECUTIVE SUMMARY

Introduction

Food environments are the physical and social environments which influence the nature and extent of food choices available to individuals, and the food practices individuals enact amidst constraints. University campus food environments influence the food practices of students, staff and visitors.[2] They have become an important focus of food systems research, because universities are public institutions that have a mandate to serve public interests. Further, students, the key population of a university campus, perform better academically if they eat nutritious food.[3,4] Most students are at a life stage during which they are forming lifelong food habits. Campus food environments that encourage healthy food practices can thus promote health, in both the short and long term.

Study design

We conducted a mixed-methods study to develop a comprehensive understanding of the Wits Braamfontein campus food environment.

Preliminary results

Context

A range of participants reported that government austerity measures influence the WBC food environment and individual food practices. These included cuts to university core funding and the National Student Financial Assistance Scheme.

We were unable to identify an institutional policy that guided the provision of nutritious food and drinks on WBC. Food and nutrition, if addressed at all, were generally addressed in broader policies such as those guiding student conduct, procurement and/or sustainability.

Food environment

Availability- Unhealthy food, including deep fried, sugary and salty packaged snacks, and sugary drinks were widely available. For example, all food outlets sold sugary drinks and most sold deep fried foods. Healthy food such as fresh fruit was available from a minority of food outlets.

Accessibility and convenience- Unhealthy food and drinks were also more accessible and convenient, because they were more available and cheaper to purchase than healthy food options.

Promotion- Unhealthy food and drink promotions were common, and included advertisements, sponsorship and giveaways.

Sustainability- Sustainability was a relatively new consideration of university management. Sustainability initiatives centred on the use of biodegradable packaging for takeaway foods and establishing food gardens.

Quality- University management staff recognised nutritional value as an important marker of quality, but were more focused on hygiene and safety, and providing food that fitted with student preferences. Students considered value for money, taste and satiety.

Micro food environment

Despite adequate knowledge of healthy food, students reported preferring unhealthy foods due to price and taste. For students there was a lack of facilities for storing and preparing food on campus.

Implications and recommendations

Based on the preliminary results, we recommend:

- In the short term, taking actions which require fewer trade-offs and investment, such as removing sugary drinks from the dining hall menu, making fresh fruit more widely available and regulating unhealthy food giveaways.
- In the medium-long term, developing policies (including a campus-wide food and nutrition policy) and interventions (including health promotion activities) to create a healthy food environment.

INTRODUCTION

Food environments are the physical and social environments which influence the nature and extent of food choices available to individuals, and the food practices individuals enact amidst constraints (Figure 1).[1] University campus food environments influence the food practices of students, staff and visitors.[2] They have become an important focus of food systems research, because universities are public institutions that have a mandate to serve public interests. Further, students, the key population of a university campus, perform better academically if they eat nutritious food.[3,4] Most students are at a life stage during which they are forming lifelong food habits. Campus food environments that encourage healthy food practices can thus promote health, in both the short and long term .

A food environment sits in the middle of a socio-ecological food system. It is conceptualised as having six elements: availability, affordability, convenience, quality, sustainability and promotion. A food environment is influenced by, and in turn influences, both social structures (the outer layers of the food system) and individual practices (the inner layers of the food system) (Figure 1).

The outer layers of the food system include ecological, socio-cultural or political factors and various sectors of the economy, that influence aspects of the food environment. These include what food is available and affordable to various individuals, the extent to which different foods are promoted, and the extent to which food production, processing and distribution is (socially and environmentally) sus-

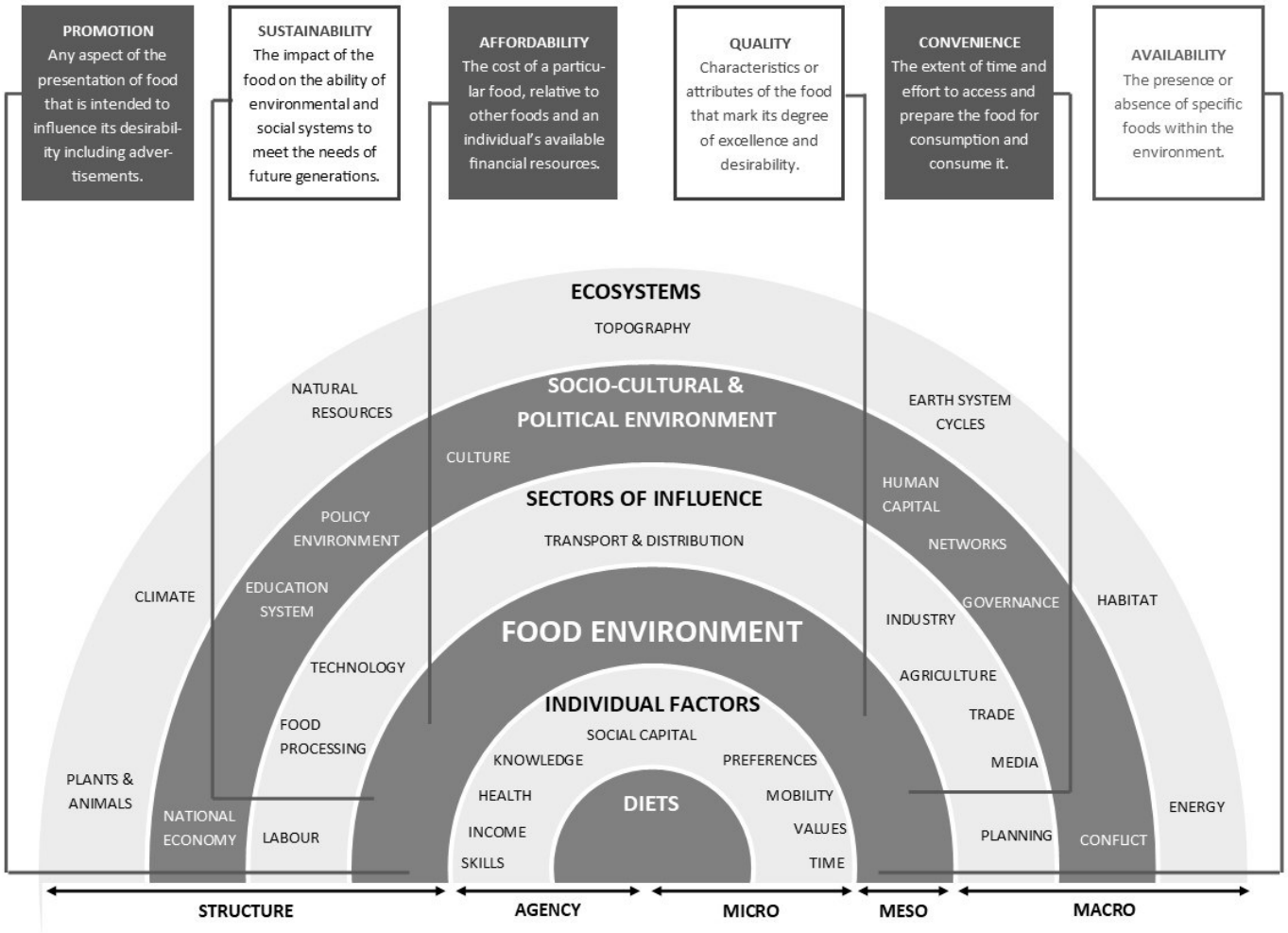

Figure 1: Socio-ecological model positioning the food environment and individual factors, within the broader food system

INTRODUCTION

tainable. For example, public procurement policies (part of the *political environment*) may mandate public institutions purchase fresh produce from local, small-medium sized farmers. Such policies aim to improve the accessibility, sustainability and nutritional value of food available at public institutions such as universities and hospitals.

The inner layers of the food system influence the extent to which individuals have agency to make various choices within the food environment. Individual choices also influence the food environment and the macro-layers of the food system. For example, if nobody purchases healthy food options, food providers may stop stocking them, and farmers and food companies may produce less of the healthy food options.

Aim

This report summarises preliminary results from a study of the food environment of the east and west Braamfontein campuses of the University of the Witwatersrand (hereafter referred to as Wits Braamfontein Campuses and abbreviated to WBC). The aim of the report is to describe key preliminary findings to university stakeholders, including students, staff and food sellers. The objectives are to: (1) increase stakeholder awareness of nature of the food environment and its potential effects on health and (2) catalyse a dialogue about how the food environment can be shaped to be more conducive to health, that informs further data analysis and report writing.

The report describes the methods used to select participants and collect and analyse data and the context in which the WBC is situated. It provides an overview of key preliminary findings about the broader food system in which the WBC food environment is situated, before describing each of the six elements of the WBC food environment. The report concludes with a discussion of the implications of the key findings and tentative recommendations for initial steps that might be taken to shape a healthier food environment at WBC.

STUDY DESIGN

The study used a participatory, multiple methods approach, to develop a comprehensive understanding of the WBC food environment. The research team involved five students who were members of Wits UNICEF Volunteers Club and/or UNICEF's #FixMyFood campaign. They were employed to comment on the study design, collect data and disseminate results to other students.

We used three qualitative approaches — (1) participant observation of (a) everyday and (b) event food environments; (2) interviews with key informants who were university management staff or food outlet managers; and (3) focus groups discussions with students. Qualitative data collected using the different methods were combined and analysed thematically.

The study also incorporated an audit of all food retail outlets and vending machines on WBC. These data were analysed using descriptive statistics. The preliminary results of the qualitative and quantitative analyses are combined, compared and contrasted.

STUDY SETTING AND CONTEXT

The context in which the WBC food environment exists, is characterised by widespread and increasing socio-economic deprivation and increasing austerity. Despite a large agricultural sector, food prices in South Africa have risen rapidly, by almost 70%, in the 5 years from 2019, at a higher rate than inflation.[5] The policy environment enables the food industry to profit from producing, manufacturing, advertising and selling foods that are socially and environmentally unsustainable. There is no mandatory, government-monitored regulation of the advertising and sale of unhealthy foods and beverages in South Africa.[6] Despite a large agricultural sector, many of the foods manufactured and sold in South Africa are highly processed and harmful to health because they are high in sugar, salt and/or fat.[7] Fresh produce, including meat and vegetables, have been amongst the foods that have increased in price the most since 2019.[5] There have been reductions to university's core funding and students' bursaries, alongside exponential increases in the number of students admitted to tertiary education institutions since the end of apartheid.[8]

PRELIMINARY RESULTS– CONTEXT

A range of participants reported that government austerity measures influence the WBC food environment and individual food practices. For example, university managers reported that students demand energy dense, low cost food (e.g. hot chips and fat cakes), which they recognised was unhealthy. For example one said that although all food retailers were required to provide one healthy option, it's, "Kotas, and the burgers, their chips … Students love that." The university relied on income from unhealthy food and drink marketing, including event sponsorship, on-campus giveaways, advertising and corporate philanthropy to fund student activities and services. For example one said that companies including Nando's and Red Bull, "would pay for whatever time they want on campus [doing promotions and]… that's how we then pay for all the leadership training, [student conference travel and the like]."

Students living in university residences reported that their NSFAS bursaries, only covered the cost of two meals per day, five days per week from the university's dining hall, despite the university's efforts to reduce meal prices. Several students mentioned incurring debts from eating additional (weekend) meals, including one who was not aware that the food she was eating on weekends was not covered by her NSFAS bursary.

We were unable to identify an institutional policy that guided the provision of nutritious food and drinks on WBC. None of the university management staff key informants referred to such a policy when asked what guides food arrangements on campus, nor did we identify one through targeted online searches. Food and nutrition, if addressed at all, were generally addressed in broader policies such as those guiding student conduct, procurement and/or sustainability. For example, the student Code of Conduct[9] prohibits students' possession of alcohol on campus. Yet there was no policy regulating the sale and promotion of alcohol on campus, beyond the standard requirement for a liquor licence. Procurement policies focused on food hygiene and safety and supply chain reliability, at the expense of social, environmental and nutrition considerations.

PRELIMINARY RESULTS– FOOD ENVIRONMENT

Availability

***Student FGD Participant 5**: We do have a wide range of food but it's a wide range of like fast food.*

***Participants**: Fast food. Yeah.*

***Student FGD Participant 5**: Like you won't find something like a healthy alternative … [at] dining halls there would be like vegetables … [otherwise it] is just fast food. (Students, focus group discussion)*

A wide variety of food was available within the WBC food environment, including a limited range of healthy, vegan and Halaal options. For example, fresh fruit was sold in one of twenty-two food outlets and provided at dining halls only on some days. Conversely unhealthy food, including deep fried, sugary and salty packaged snacks, and sugary drinks were widely available (Figure 2). When shops and dining halls were closed (typically 18:00 to 06:00) the only food available for purchase was from vending machines, which did not offer any healthy options (Figure 2).

The majority of food outlets sold mostly unhealthy food and drink options. For example, the menu for one fast food outlet, included the categories; Torpedo Rolls (white bread rolls filled with meat, cheese and chips); Gatsby (half metre long, white bread rolls filled with chips and processed meats, available in full or half roll sizes); Seafood (all options fried and served with chips); Chips; and Extras. The only healthy option on the 30-item menu was a Greek salad, as part of the Extras menu. Several students noted the lack of traditional foods including *dombolo* and *ujeqe* (steamed bread), *umngqusho* (samp and beans) and *maas* (sour milk).

Sugary beverages, including energy drinks, cold drinks and fruit juices, were available in most shops and vending machines, as was bottled water. Beverages sweetened with non-nutritive sweeteners were available at most shops. From early 2025, chilled, filtered water was available free of charge via one machine located near the university's main lawns, and in dining halls to which access was restricted to students who purchased meals there. Alcohol was available at two outlets on campus, both restaurants. Although ostensibly only available with food purchases, we observed alcohol being sold at one of the outlets, to customers who did not purchase food. Hot beverages were sold at several outlets.

In dining halls, three meal options were available to students during lunch and dinner services: (1) a meal containing starch, protein and vegetable or salad portions; (2) fast food (e.g. a burger and chips); or (3) a snack pack containing three packaged snacks such as crisps and sweets. All options included a choice of either bottled water, 100% fruit juice box or sugary cold drink. Fast food was reported and observed to be popular. For example, we were told that, "lunch is probably 60% fast food and 40% main meal and then at supper time it sort of reverses" The vegetable and salads were not always healthy, for example chakalaka, made from tinned beans, spices, mayonnaise and oil, was frequently one of two salad options students could choose from at the dining hall. Some students reported that the variety of dining hall meals was limited.

Daily meals (Halaal) and grocery packs distributed to students for free through the Wits food program, were more or less healthy, on different days. For example, on some days fast foods such as hotdogs containing processed meat and no vegetables were provided, while on other days a meal of starch, vegetables and protein was served. These free meals were available to all students, Monday-Friday during teaching sessions, from 12:00-13:30. However, students reported the meals sometimes ran out, especially on days when meat or fast food was provided. Grocery packs were available to students who registered and included salty and/or sugary condiments, spreads and other processed foods (e.g. spices and peanut butter), as well as minimally processed staples (maize meal and rice). They could be collected once per month per student. On Tuesdays and Thursdays only.

Availability (cont.)

University food management staff actively shaped the food environment to match the demands of students, while still trying to ensure healthy options were available on campus. For example, they reported that one of the tender criteria for food retailers was a requirement to offer a healthy option such as salad, among their products, but there were no restrictions on the sale of unhealthy foods such as portion size or minimum price restrictions. Meals provided in dining halls were required to contain specified portions of protein, starch and vegetables, which ostensibly constituted a nutritionally balanced meal. However, we were not made aware of any restrictions on unhealthy ingredients such as salt and oil, in the cooked components of the meal. We heard that university staff had negotiated informally with the dining hall catering service providers, to offer snack pack and fast food options which they were not contracted to provide, and which did not meet the portion specifications.

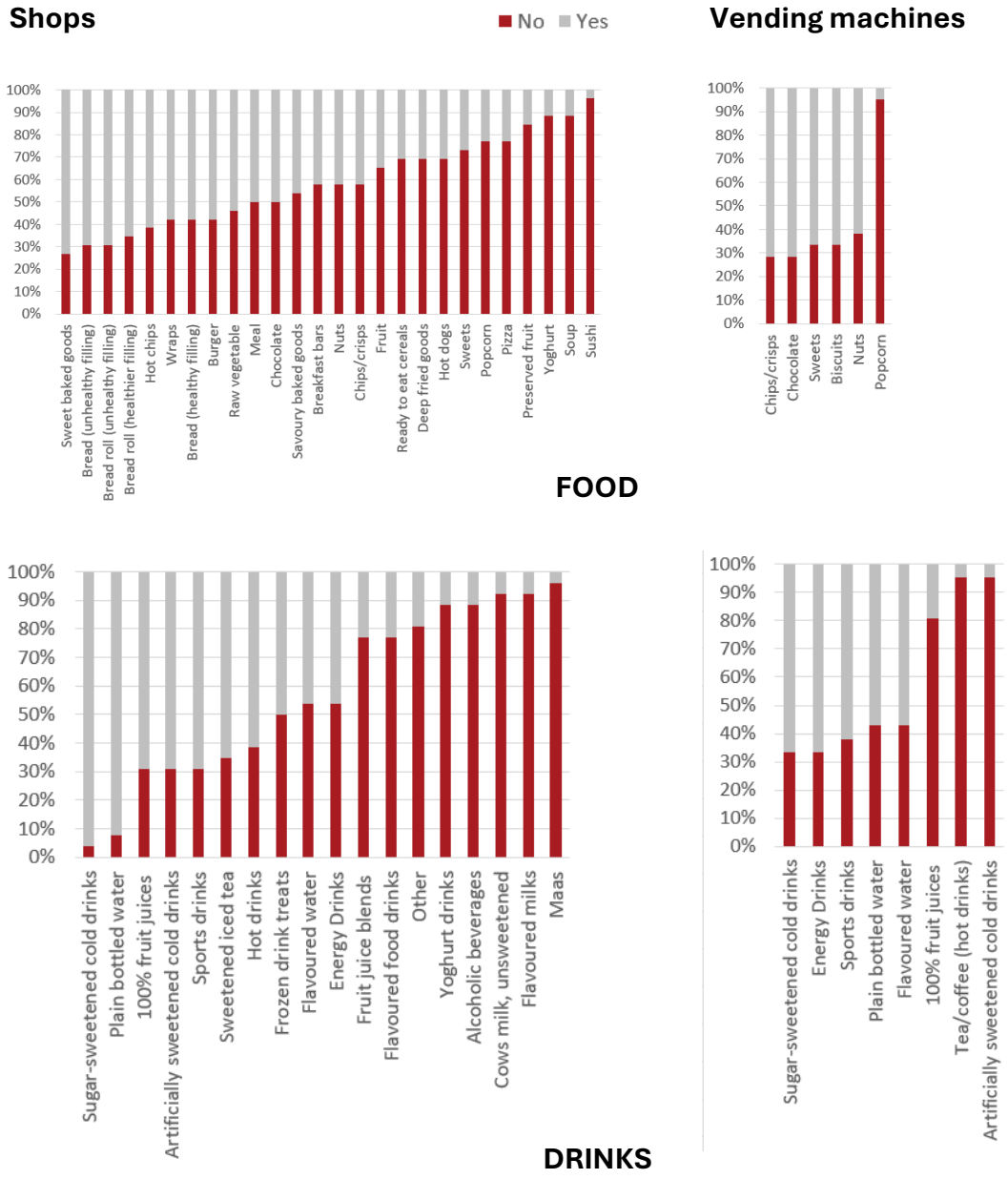

Figure 2: Availability of food and drink type, at shops and vending machines

PRELIMINARY RESULTS– FOOD ENVIRONMENT

Affordability and convenience

I feel like if there was healthier food available, I would go for it. But half the time the healthier food is more expensive. That's the only reason why I don't go for it. (Student FGD participant)

Unhealthy food, partly because of its more widespread availability, was preferred by students, primarily due to its lower price. However, the wider availability of unhealthy food, including from vending machines, also made it more accessible than healthy food. Unhealthy foods and drinks were almost always cheaper than healthier foods. Exceptions were bottled water compared to sugary drinks, and healthy daily meals provided to students through the Wits Food program at no cost.

Unhealthy food was typically also more convenient to access than healthy food. For example, vending machines that sold exclusively unhealthy snacks, sugary drinks and (sometimes) water were spread across the campus, including in student residences. The daily meals provided at the Wits Food Program were much more difficult to access with queuing often taking up to 2 hours. Two food outlets, which sold healthier options that were amongst the lowest priced, typically had long queues of people waiting to purchase during peak times. For example, one day a researcher waited for 30 minutes during off-peak time, for a freshly cooked vegetable and noodle stir-fry to be prepared. An outlet that sold a vegan and Halaal curry, rice and salad bowl for ZAR20, typically had a queue or 30 or more customers in the lunch period. One student in the queue told us she had walked ~10 minutes from her last lecture to join the queue, because the food was affordable. Yet she would not have time to eat before her next lecture, which she would be late for, due to waiting in the queue. She would store the hot food in her bag for an hour before eating it.

Promotion

Food and beverage promotions were ubiquitous and typically encouraged the purchase of unhealthy foods and beverages in large portions. For example, meals sold at the outlet mentioned above, were all offered on the menu board in small and large options, with large portions 10% more than small portions. Several outlets offered meal combos, which enabled purchasers to add unhealthy items such as hot chips and sugary drinks, to snack meals such as burgers or hotdogs. During orientation week, many clubs and societies and several Wits departments, gave away unhealthy food and drinks, to entice people to engage with their displays or become members.

Promotions for unhealthy foods and drinks, including advertising, sponsorships and giveaways, were pervasive. Several food outlets advertised specials that encouraged larger unhealthy food purchases. For example, one advertised discounted prices for purchasing two of the same unhealthy products (e.g. chocolates, energy drinks, crisps and cold drinks). Screens located in eating and study areas throughout the campus, played a loop of film that included numerous advertisements for unhealthy food products such as meat pies, sugary drinks, chewing gum and energy drinks. Companies promoted unhealthy food and drinks (including alcohol) on campus through sponsorship of events such as sport matches and orientation week activities, and once-off promotions (referred to by many as activations). For example, we were told, "SAB [South African Breweries] is actually the anchor sponsor [of the Fresher's bash] because they come with the stage and they pay for the artists." There were also numerous billboards, signs and other fixed advertising for unhealthy food and drinks brands or products, around the campus.

PRELIMINARY RESULTS– FOOD ENVIRONMENT

Sustainability

Sustainability was a relatively new consideration of university management staff but was the focus of a university strategy. Increasing the sustainability of foods available within the WBC environment, revolved around reducing waste by banning plastic bags, using biodegradable takeaway packaging and utensils, composting food waste and providing drinking water fountains. However, dining halls had shifted to serving all lunches in single-use takeaway containers (albeit disposable) rather than plates, and prohibited staff from serving any meals into reusable containers brought by the students, due to hygiene concerns. Several food gardens had been established on WBC. They provided some produce to the Wits Food Program and opportunities for students to volunteer and enact the university's sustainability values.

Quality

For students, quality, which is defined in the food environment framework as characteristics that mark a food's excellence, was discussed in terms of visual appearance, freshness, safety, taste and value for money. Many students reported preferring foods that were cheap, filling and tasty, such as hot chips.

University management staff recognised nutritional value as an important marker of quality, but were more focused on hygiene and safety, and providing food that fitted with student preferences. For example, they invested significant resources in food safety monitoring processes such as checking expiry dates, storing and testing food samples for bacteria, and monitoring food retailers.

PRELIMINARY RESULTS– MICRO FOOD SYSTEM

Students and staff we spoke to demonstrated an adequate understanding of what food and drinks were and were not healthy, and of the reasons why a healthy diet was important. Yet we observed people consuming predominantly unhealthy food, and many students that we spoke to indicated a preference for fast food, not only because it was cheap and convenient, but also because they were satiating and tasty. For example one student said, "I just like fast food because it's tastes good it's not about nutrition just it tastes good." Students spoke about lines for free daily meals increasing, and food running out, on the days that fast food such as burgers was provided. For example, in one group discussion:

***Participant 4**: When they are serving … maybe pap and the long sausage [or] burgers. Because that day it gets full.*

***Participant 7**: Like people … see that and they [are] like, oh let me just go to WCCO.*

***Participant 4**: I want a burger.*

Student who lived in catered residences lacked food storage and preparation facilities. Those who lived off campus were sometimes affected by prolonged electricity cuts that caused their refrigerated food to spoil.

IMPLICATIONS AND RECOMMENDATIONS

The preliminary results of our study, demonstrate the complexity of creating a healthy university campus food environment in the South African context. As in other countries, institutional-level policies and mechanisms for governing the university food environment are limited.[11] There is a dearth of food and nutrition-specific policy, at the national, provincial and institutional levels.

The preliminary results highlight numerous opportunities for shaping the WBC food environment, so that it does more to encourage healthy food and drink choices. To fundamentally change the food environment, medium-long term policy and program development work is needed. It will involve trade-offs, for example between, on the one hand generating revenue and responding to student demands, and on the other promoting health and learning. Opportunities to positively shape the food environment in the short term, which require fewer trade-offs and investment to implement, also exist.

Based on the preliminary results, we recommend in the short term:

- Removing sugary drinks from the standard meal offering at dining halls.
- Making healthier fast food options, such sandwiches and wraps with healthy fillings, available as alternatives to burgers and chips.
- Including seasonal whole fruit in the dining hall offering every day.
- Regulating unhealthy food giveaways including during company activations and club, society and departmental displays (e.g. discourage or ban offering sweets and snacks as enticements to join a student society).

We further recommend, urgently commencing discussions with students, staff and other stakeholders, to assess the feasibility of, and **start planning towards**:

- Encouraging use of reuseable drink bottles, and discouraging the use of single-use disposable plastic bottles:
  - By providing additional water stations.
  - Restricting the provision of bottled water during catered events funded by the university.
  - Phasing out the sale of water in single-use disposable plastic containers.
- Formulating a university-wide nutrition policy, which provides clear guidance on:
  - Accepting revenue from unhealthy food and drink companies.
  - Increasing the accessibility of healthy food and drink.
  - Healthy food subsidies.
  - Promotion of healthy food.
  - Regulating marketing of unhealthy food and drinks (including alcoholic beverages) on campus.
- Developing and implementing health promotion campaigns to increase awareness of the association between the food environment, individual food practices, (student and staff) health and academic success.
- Including diet and nutrition-related non-communicable disease screening and counselling services amongst the services (currently focus on sexual and reproductive health) offered free by the university health service to students.
- Lobbying the federal government to reduce austerity and raise university core funding and NSFAS student funding, to cover the full cost of providing and accessing education, including the cost of living during the study period.
- Lobbying the federal government to implement policies that would positively influence the food environment, and strengthen the mandate of the university to enforce food environment regulation, including:
  - Draft Liquor Amendment Bill (2016), which proposes increasing the minimum legal age for purchasing alcohol and regulating alcohol sales and advertised.
  - Draft regulation R3337, which proposes front of package warning labels on all packaged foods high in sugar, salt and/or fat.

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