

EVALUATION RESEARCH ON THE FOOD SECURITY PROGRAMME EFFECTIVENESS TOWARDS MANAGING FOOD INSECURITY AT A SOUTH AFRICAN UNIVERSITY

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ABSTRACT

Post-2000 South Africa has seen increasing levels of household food poverty, subsequently food insecurity is a rising phenomenon among university students. Recent sources estimate campus food insecurity across South African universities at 26%. At the University of KwaZulu-Natal (UKZN), food insecurity is 51.3% and in 2012 the Institution implemented the Food Security Programme (FSP) to address the problem, in the form of meal vouchers and food hampers to students in need. However, the FSP has not been monitored or evaluated; and lacks documented interpretation of managing the intervention. Therefore, the significance and outcomes of the programme are not yet understood. Through an explorative research design, data were generated from key informants using in-depth interviews. A purposive sample included four middle and three senior managers of the FSP to determine the key informants' experiences and perceptions in managing the food security interventions in higher education institutions. The findings revealed that the FSP is not formalised and it operates as a self-help initiative linked to a social responsibility activity of the UKZN. 'Underestimation' and 'denial' of campus food insecurity implications resulted in the lack of prioritisation and mainstreaming of the programme. Ultimately, the FSP lacks sustainable funding, personnel, and infrastructure. As reasoned by the respondents, there is a social stigma associated with food aid. Suggestions and institutional recommendations are made.

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INTRODUCTION

Food security according to the 1996 World Food Summit, “exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life” (FAO 1996: 2). Food insecurity (FI) is simply, being without stable access to a sufficient quantity of affordable nutritious food on a daily basis. Approximately, >800 million people around the world are reportedly food insecure of which nearly 400 million live in sub-Saharan Africa. In wealthy regions such as North America and Europe, FI is reportedly affecting 8% of the population (FAO 2019).

In the low and middle-income countries, national nutritional programmes have been implemented to respond to severe FI conditions such as hunger and malnutrition. In South Africa, government implemented the National School Nutritional Programme, to increase concentration for learning and school attendance. This has resulted in the capacity enhancement of the children’s learning ability; and reduction of learner absenteeism and dropping out of school (Basic-Education 2013). However, no sustainable measures have been taken by the government to address the issue of FI among learners attending Higher Education (HE).

Globally, food and nutrition security policies and programmes broaden their efforts in addressing the current constraints to food consumption, and future threats to food security. Given that as

interventions, community food aid programmes are designed to increase food access to improve the beneficiaries’ physical and mental wellbeing, they need to be evaluated (Barrett 2002; Crawford, Pattugalan & Dale 2010). Monitoring and evaluation research utilises social procedures to investigate the efficacy of social interventions such as food aid programmes. Often, such interventions impact more people than it is commonly acknowledged. Programme evaluation is necessary because it applies systematic study to social intervention to provide an understanding of how well it achieves its goals. Hence, it makes valid findings about social programme effectiveness and those with influence or interests related to their modelling, furtherance or programme refinement.

PROBLEM STATEMENT

As FI in the HE sector is not prioritised by the government, institutions like University of KwaZulu-Natal (UKZN) implement measures themselves to address the problem. Moreover, it has been several years since the FSP was implemented at UKZN, making substantive evaluation possible. This evaluation study was carried out in 2016 with field data being collected between August-November 2016 across the UKZN’s five campuses in Durban, and Pietermaritzburg cities.

RATIONALE AND OBJECTIVES

The aim of the research was to evaluate the FSP at UKZN by exploring whether it was achieving what it set out to do. The rationale for this evaluation study also lies in recent doctoral study by (Sabi 2018) which revealed that a significant proportion (nearly 90%) of UKZN key stakeholders, including the targeted programme beneficiaries, lacked knowledge about the existence of, or the operations of the FSP. Against this background, the research objectives were to explore the following: rationale behind the establishment of the FSP; how the programme is being implemented, successes of the programme; challenges of the programme; and how those challenges are being managed.

THEORETICAL BASE

Being an evaluation study, this research is guided by the monitoring and evaluation framework, using an explorative evaluation approach. Exploratory evaluation is pertinent when there is little knowledge with regards to the subject matter (Yin 1994) because it fosters the diagnosis of the case and screening of alternatives to uncover new objectives. The appraiser's responsibility is to furnish the most desirable knowledge to decision-makers, based on circumstance with the issue to be addressed and approaches for resolving it (Yin 1994).

ETHICS

This research received clearance [ethical protocol number HSS/137/0515D] from UKZN's Human Social Science Ethics Committee. The key informants' involvement was discretionally; they signed a written consent as evidence of their voluntary participation in the study. They were also informed about the purpose of the research and the reasons for which they were selected.

RESEARCH METHODOLOGY

This qualitative explorative case study aimed at :1) exploring the key informants' experiences and perceptions of student FI and its implications; 2) identifying the successes and challenges affecting the FSP implementation. In investigative research, a qualitative approach enables participants to gauge their underlying motives, cognizance or attitudes by interpreting the behaviour of others rather than themselves. This research also extricates possible approaches for reaching decision-makers' objectives.

POPULATION AND SAMPLING

All seven stakeholders who are directly involved in managing the FSP, were purposely targeted because they constitute the FSP management

team. Out of seven, six of them participated in the qualitative study and one declined. Of the six participants, four of them work as heads of the University's student counselling office in their respective colleges where, among other things, they manage issues of students' FI. The heads of the student counselling office are certified psychologists. The other two sampled participants were senior managers for the UKZN's student support programmes whose tasks include managing issues of student FI.

MEASURES AND PROCEDURES

Face-to-face individual in-depth interviews were held with the key informants between August and November 2016. All interviews were conducted in natural settings ¹(Janesick 1994). The respondents were interviewed separately. Each interview took approximately 25 minutes; and most of the questions were open-ended. In particular, the questions bordered on the justification for the emergence of the FSP, how it was being implemented, and whether it was meeting its aims and objectives. To preserve their confidentiality, the six respondents are labelled R1, R2, R3, R4, R5, R6; where 'R' stands for respondent.

STUDY SETTING

UKZN is a public university that resulted from merging two independent universities (the University of Durban-Westville and the University of Natal) in January 2004. (University of KwaZulu-Natal 2013). It is organised around five campuses and four colleges (Humanities, Law & Management, Health Sciences, Agriculture, Engineering & Science) in KwaZulu-Natal Province, South Africa. Many students are historically disadvantaged (University of KwaZulu-Natal 2015). Before 2012, issues bordering on FI resulted from the rising number of the student enrollment in the University's alternative access, and the foundation programmes ² (University of KwaZulu-Natal 2015) where it was established that most of

¹ A realistic approach was used to study the phenomenon as experienced by the respondents in their natural environment. Interviews conducted in such settings are prone to disturbances such as background noises and disruptions of participants.

² Prospective students are from resource-poor schools and do not meet the required point scores for admission to specific programmes. The access programmes identify candidates who have the potential to excel academically.

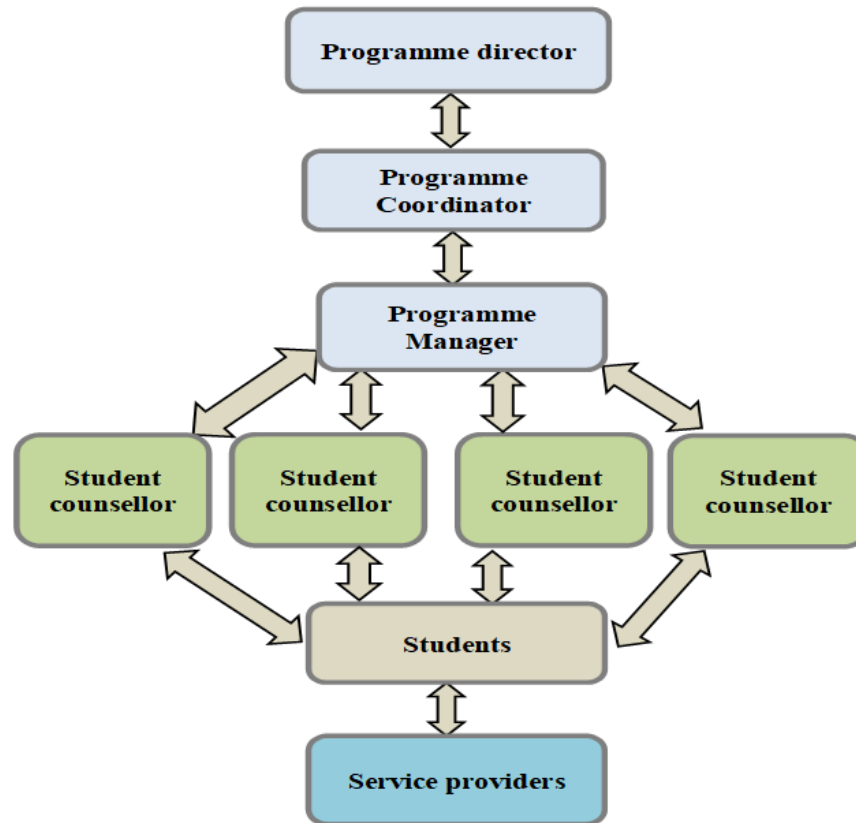


FIGURE 1: AN ORGANOGRAM OF THE UKZN-STUDENT FSP: SOURCED FROM (SABI, 2018)

these students were from resource-poor backgrounds and lacked sufficient funds for their HE needs. Subsequently, UKZN's student demographic profile had a high rate of historically disadvantaged student enrollment in access programmes, compared to the mainstream programmes (Sabi 2018). Ultimately, there were reported cases of campus FI, linked to poverty. This enabled UKZN to establish an 'intervention' to help severely FI students access free food from the UKZN's student support system (Sabi 2018). This strategy was meant to be a stop-gap measure whereby meal provisions were made through food donations from within and outside UKZN community. Additionally, some contingency funds were directed at caring for students that urgently needed support systems including food, and sanitary products (for female students) (Sabi 2018).

It was not until 2012, that the Student Services Division instituted a 'support fund' to manage the emergent problem more sustainably. Funds were secured through donations from UKZN

staff members across the campuses using a stop order system from their monthly salaries to support what would be known as the 'UKZN Food Security Programme' -FSP. This was actualised by initiating a 'student support fund' or 'meal grant'. The staff were informed about the remittance through their work forums including meetings, or by the word of mouth from the stakeholders.

THE UKZN-STUDENT FSP

Organisationally, the UKZN Executive management, comprises the Vice-Chancellor as the institutional head and 12 other members, including the Director of Student Services. The FSP operates under the student services division. At institutional level, the student services division is expected to coordinate students' academic, community experiences and responsibilities on student needs including financial aid, health and counselling, accommodation, and student governance. Therefore, the FSP is an initiative, to help address campus FI. The FSP is organised

around, the Director of Student Division; as Head of the programme, the UKZN Projects' Manager, as the FSP administrator, Senior Student Development Specialist- as the programme coordinator, student counselling managers (in colleges) as counsellors for student support, and service providers as suppliers of food and meal vouchers (Sabi 2018). Figure 1 shows the FSP organogram.

OBJECTIVES OF THE FSP

- To provide food access to FI students on campuses.
- To create awareness about the problems of FI and its impact on student well-being.
- To provide food security counselling to the students.
- To promote a culture of self-support, self-reliance, and responsiveness of abundance amongst FI students.

The target beneficiaries are students who lack the means to feed themselves while undertaking their studies. They are mostly self-identified or identified by key stakeholders including their peers, SRC (Student Representative Council) or any UKZN staff.

ANALYSIS

Interviews with individual participants were audio-recorded, transcribed verbatim and coded into 'issues' or entities (that seemed to dominate the respondents' perceptions and experience on the subject matter) that was typed in the Microsoft computer Software-Notepad and subsequently analysed through the Pajek (64 bits, Version 4.09) computer software which structured the data into a network of themes³. The magnitude, framework, and all network compositions derived from the content and thematic analysis. They included similitude of the 'issues' relating to specific questions that were asked during the interviews. The analysis of 'issue composition' included the stability of the connectivity among the 'issues'. Research disciplines such as

project management are known to reveal nexus of characteristics that could be perceived as complex systems (Spector et al. 2001). From this perspective, the FSP is a complex system that involves various actors and characteristics such as emergency responses, referrals, counselling or psychoanalysis, internal feedback, and decision-making.

THEME NETWORK DEVELOPMENT

During the theme network development, the network between 'issues' was considered and designed into an interconnection of themes. For example, under the main theme, 'management of the FI intervention', the vertex representing 'unsustainable programme' has a direct link with the vertex 'no clear policy' but not with the vertex 'improves self-esteem'. The network depicted in Pajek was actuated by the Kamada-Kawai algorithm energy transformation that positions vertices according to their linkages and local proximity of each other (Kamada & Kawai 1989; Bezuidenhout et al. 2012). This algorithm method facilitates clearer visual interpretations of the actuated networks as depicted in Figure 2. As a result, a major network of data relating to the topic was developed; these helped to clarify and understand complexities in the FSP management and to diagnose possible avenues of enhancing the programme which may be the case in other HE institutions experiencing similar challenges. The main domain system network had a more descriptive theme map of research findings relating to the FSP success, challenges, and proposed recommendations.

LIMITATIONS

Some possible limitations to this research include that initially, researchers had sought to sample beneficiaries of the programme (student currently on the FSP). However, due to ethical concerns, based predominantly on the confidentiality of the programme beneficiary, and how the FSP is implemented, (through the student counselling office), researchers could

³ A group of vertices representing the respondents' perceptions and experiences on the FSP. Each vertex label represents a specific 'issue'. A theme network represents an energised map of loosely or interlinked 'issues' which, are visualised by coloured boundaries as depicted Figure 2. Each coloured boundary represents a sub-theme.

not interact directly with beneficiaries to get their perspective and experiences concerning the FSP. Therefore, there could have been a risk of biased data from respondents as the programme beneficiaries were not interviewed at this juncture of the research. However, some of their perspectives and experiences were expressed by the counselling staff as respondents. Another limitation is that due to the nature of the study (and it being qualitative research) the small sample size of six respondents, the results cannot necessarily be generalised.

RESULTS

Theme: Management of the food security programme

This evaluation of the FSP as an intervention programme, highlights the strengths and the most key challenges concerning the management of UKZN student FI. The theme map (Figure 2), depicts harmonised data collected during the interviews. The larger nodes or vertices project a high betweenness of centrality because of their connectivity with several other 'issues'. The red dots depict the primary research focus. For instance, the number of 'issues' related to the management of FI was 50 whereby 'issues' like 'unsustainable funding', 'looks at broader contexts', and 'prefer privacy' are some of the research focal points. In a network, any triangular connectivity (in yellow nodes) depicts strong ties among issues that can be easily operationalised as a causal-effect interconnection of an issue (Batagelj & Mrvar 2004). The big black arrows reflect the focal point of the dominant issue projected in a network. From the data analysis, the four main themes developed were: Screening of the beneficiary; successes of the FSP; challenges of the FSP; recommendations for the programme enhancement.

DISCUSSION OF KEY FINDINGS

Analysis of the FSP implementation: an overview

As an overseer of the FSP, the director facilitates the support fund, which is dispatched

to the coordinator's office. The implementation process is facilitated by the administrator and the coordinator by liaising with the service providers who operate some campus cafeterias, and to make the payment of meal vouchers to all the student-counselling centres in the colleges. The vouchers would be costed as a student 'meal allowance' calculated from the monthly donations by some UKZN staff. At the counselling office, the beneficiary would be given the meal voucher after being screened and counselled. The meal is nutritious as it includes a fruit/vegetable or fresh juice, a carbohydrate and a protein, and it is redeemed once a day, valued between R35.00-R45.00 (\$2.20-\$2.80 in 2016) (Sabi 2018).

The screening process of beneficiaries

The beneficiaries are identified through various platforms including referrals by the university clinic department. The beneficiary is mostly identified when he or she lack means to feed themselves. Also, whereas the student counselling office is responsible for screening the beneficiary, part of the screening process is managed at the 'Campus Health Clinic', making it one environment where FI students are identified by certified medical personnel (a nurse or a doctor), when they are diagnosed with malnutrition-related symptoms such as dizziness, inability to concentrate, depression, lack of appetite for food or drink, and stomach upset. In cases where the student's health is severely affected by hunger, the student as a 'patient', is fed at the clinic as an emergency measure. However, in most instances, the clinic would refer the student to the College Counselling Centre to determine the main cause and the extent of his/her FI. According to respondent 4 (R4), screening of an FI student at the clinic includes the following:

If the student shows up and during the evaluation, the nurse may realise that, that student might have presented symptoms like a headache, cramps, dizziness, nausea, and realise that, all combined, the student ate their last meal three days ago.

However, most cases of FI are reported directly to the counselling office where a certified

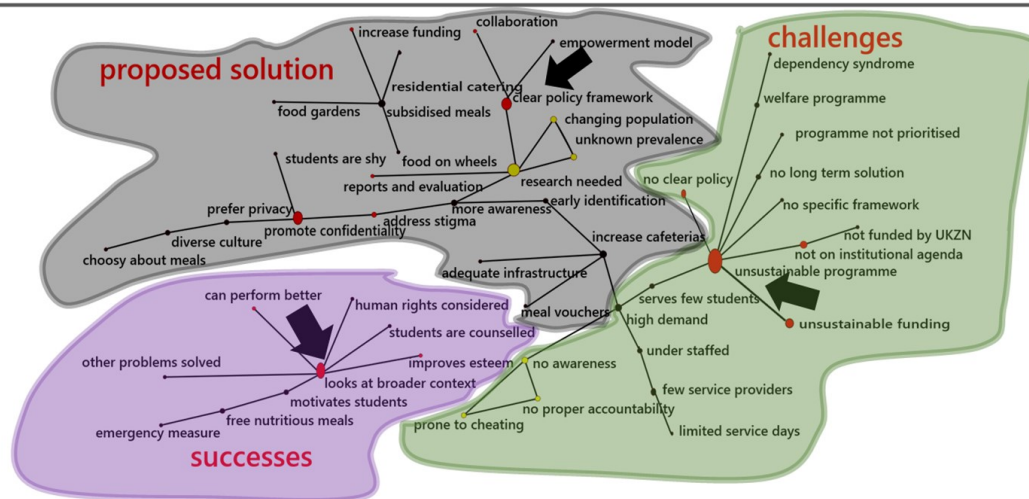


FIGURE 2: FSP MANAGEMENT-THEME MAP. SOURCED FROM (SABI, 2018)

psychologist evaluates the student's financial circumstances to establish whether the beneficiary would be on the FSP for a short period or not; this is what is known as the 'verification process'. Following this process, the counsellor informs the beneficiary about the FSP meal voucher and issues it to him/her, which would be used to purchase a meal from the university cafeteria. Due to ethical considerations, the screening process is confidential (an individual, face-to-face meeting). Depending on financial availability, multiple vouchers are issued to financially needy FI students throughout the semester. However, out of nearly 10% of critically FI students across UKZN (Sabi 2018; Sabi et al. 2019) only about 100 students are on the programme each year, constituting <1% of potential beneficiaries.

SUCCESSSES OF THE FSP

Addressing broader issues

In terms of meeting its main objective, results in Figure 2 show that the FSP has been successful because it has been instrumental in addressing emergency hunger-related issues among FI students who otherwise would not have access to free nutritious food during the semester. The main theme identified under the successes of the FSP is that the programme looks at the broader context of caring for a needy student especially in emergency cases when they are referred to the programme by the university clinic, and are cared for physically and emotionally. This approach also echoes the

programme's consideration for 'food access' as, one of the pillars of food security (United Nations World Food Programme 2009) and a basic human right enshrined in the Bill of Rights and Section 26 and 27 of the 1996 Constitution of South Africa (Republic of South Africa 1996). Additionally, most of the respondents expressed satisfaction in their ability to care for the beneficiary in terms of proving both counselling and guidance on food budgeting, and in facilitating some temporary employment for critically FI students. This approach enables the student to close their financial gaps, which affect their food basket while on campus. From the interviews, respondents [R1] stated:

We can say for those we assist with hunger, we see them in counselling and we offer them support and skills. For those we feel that the reality is very harsh, and they have no money or support from their families, we give you options. We would rather look at your needs and get you a part-time job.

Respondents also explained that some students are vulnerable to FI due to a lack of budgeting skills resulting in their financial mismanagement. Various studies (Mendes-Da-Silva et al. 2012; Lyons 2007; Letseka & Maile 2008) have reported similar trends of financial risk behaviour of students and the implication on their food basket. These studies revealed that students who mismanage their finances and are from impoverished backgrounds, are more vulnerable to hunger. In spite of having limited resources

such as personnel, physical infrastructure and, financial resources, the FSP has been successful in providing both counselling and meals to some beneficiaries using the college offices. Furthermore, while only one meal is redeemed per day, the meal voucher is more than what a National Student Financial Aid Scheme (NSFAS) beneficiary was allocated in 2016 (R800.00 per month, for food and educational costs such as stationery) which, translates into R26.60 for a meal per day. Some respondents indicated that the FSP is also successful in considering the real effect on student academic performance. As R4 mentioned:

It does help them to focus better and for me, that is one of the major impacts of the programme.

Figure 2 also depicts that the provision of free nutritious meals motivates students to perform better academically. This perspective of motivation was closely associated with improved esteem needs and the ability of beneficiaries to excel academically as reflected by Maslow's Hierarchy of Needs Model which, emphasises food as a basic need that leads to improved self-esteem needs, and self-actualisation (Maslow 1954).

Furthermore, whereas the programme assists financially needy students who lack means to sustain their food budget, Figure 2 shows that largely, some factors such as delayed student payment of their financial aid packages by the Department of Higher Education and Training through NSFAS, contribute to FI. The most affected are students who depend on government funding to purchase some groceries during the semester. On this issue, R5 stated:

At peak periods, students are hungry, because the Department of Education supply chain, works from April to April next year. Registration is from January to February. From January to April, students are hungry so we bridge that gap for those who do get funding but the money comes late.

In summary, the FSP looks at the broader context of students because the screening process that constitutes counselling and psycho-education of the student, facilitates other sustainable options of assisting the students. As perceived by R2:

What is important is the optimal functional brain in the university, so it's much more than just handing a voucher. The programme looks at the broader issues of nutrition, study skills and time management of looking at other resources that they can tap in and the whole question of resilience.

CHALLENGES OF THE FSP

Results in Figure 2 show that, despite having such a critical programme, which has been instrumental in caring for FI students, the study identified several challenges affecting the implementation stage of the FSP. Figure 2 summarises the interview results from UKZN's student-FSP management issues. The detailed description of these results is discussed in the proceeding section.

POLICY ISSUES: LACK OF A REGULATED FRAMEWORK TO PROGRAMME MANAGEMENT

Issues regarding the programme sustainability were associated with an absence of a clear institutional policy guideline to support the FSP which has been in existence across UKZN campuses for several years.

R6: *The challenges are issues with coordination and having a proper policy or framework in place that would help to manage this and provide clearer guidelines.*

R4: *I am uncertain about the future, the fact that there is no proper or policy framework put in place. I think it needs to be addressed in a more university approach rather than it feels like a reactive response by identifying an issue and then being proactive about it.*

Respondents were also concerned that the meal voucher system was not a sustainable solution for resolving campus FI during the semester because it restricted the beneficiary to redeem their meals on university days. For example, the FSP's operation is in parallel with the university academic calendar such that the beneficiary can only access food on university days and not on weekends, public holidays, or semester holidays. This increases students' vulnerability to hunger. In particular, the respondents expressed their dissatisfaction with the programme implementation and complained about the whole system of programme management being unsustainable. Such sentiments were shared by R2 and R4:

R2: I think it's a complex issue that we need to really sit together and really come up with something which is viable, which is easy to implement, which has the corporate sector on board, which has shops and so on onboard, which has students themselves on board, which is sustainable....

Respondent R6 added that the FSP was also challenged with dependency among the beneficiaries:

I think both the staff and then the community should draw it up, and the staff will have to manage it And, it should be one that creates a sense of self-sustainability rather than dependency. I think we need to shift from a dependence model to something that provides dignity and some sustainability.

R5 affirmatively stated:

It's not sustainable, or especially in the long term and we are not looking at students in terms of response to, for example, that it's a transformation issue, that it's an issue that is related to access.

RESOURCE ISSUES: FUNDING, INFRASTRUCTURE, AND PERSONNEL

While the UKZN provides some infrastructure such as college offices, and personnel for the FSP, it does not financially support the

programme. It is reasoned that a well-established and regulated framework would guide the operation of the FSP by providing, for instance, a strategy of raising funds more sustainably. The study findings also show that the absence of the institutional policy guideline resulted in inadequate resources to support many students more sustainably and effectively. As highlighted earlier in the foregoing, the FSP is financed voluntarily by some university staff from their own 'pockets'. Within this context, the respondents perceived that the funding system is unsustainable because, often, the well-wishers are not consistent in providing their monthly contribution to the programme. As a result, very few FI students (about 100 beneficiaries annually) access free meals from the UKZN cafeterias. This is a significantly small population of the targeted beneficiary compared to the prevalence of FI, that stands at is 53.1% of which 10% are severely food insecure (Sabi et al. 2019). Another concern for inadequate funding is that the voucher system results from monthly contributions raised. R5 suggested a collaborative approach to ensure financial sustainability.

R5: I think it [FSP] needs a lot of assistance from the private sector. It needs sustained and consistent fundraising efforts.

Furthermore, the problem of inadequate financial resources was linked to limited infrastructure and personnel. The study established that, the FSP lacked specific personnel employed to operate the programme. Instead, in their capacity as student counsellors, their department attend to all students regardless of the student's socio-economic circumstances including the issue of FI. From this perspective, the psychologists are 'mere volunteers' for the FSP because they attend to students who directly report to them or are referred to them by any designated staff at the institution. As a result, there is an absence of an official position of their roles in the FSP other than being the student counsellors. For instance, it takes an FI student to make an appointment with a psychologist who would

subject him or her to screening to determine whether the student should receive food assistance or not. In the study, some respondents complained about the 'compulsory' screening process. R6 stated:

One does not necessarily need counselling because they are hungry, it's a poverty and social-economic issue.

Similarly, views expressed by R2 depicted dilemma in the FSP implementation:

I would say, we would need about two or three additional members of staff per campus. Without the necessary human resource input, that is the major challenge. That is where implementation is a challenge, which is why we are looking at centralising it to student services and actually have it to operate from the student health clinic or the campus HIV/AIDS Unit.

More so, R6 had similar views as R2, depicting the dilemma on the implementation of the programme:

We've been told that the food voucher system was an interim measure. So it's not a bottomless pit, we need to look at other strategies. Previously we had food parcels but that was what we started with before. The problem around that was the storage of food parcels and the expiration dates of the food.

Furthermore, inadequate infrastructure for food provision is another challenge compromising the programme implementation. The beneficiary is dependent on the availability of cafeterias at UKZN campuses—to redeem the meal. Some campuses have few service providers which, leaves the beneficiaries with a limited choice of accessing their 'preferred' meals. This negates the importance of 'food preference' which is one of the principle aspects of ensuring food and nutrition security.

Other factors associated with financial burdens of FSP include very low publicity for the FSP which affect the programme awareness in the UKZN community. As perceived by the researchers, funding has more effects on

ensuring the number of beneficiaries than the programme marketing at the institution. As a result, the majority of UKZN stakeholders particularly the students have no knowledge about the intervention programme. While reacting to the issue of programme awareness, R5 revealed that:

If this programme was well marketed to the students to let the wider population know that there is such a programme on campus, I can almost guarantee that the numbers will skyrocket and sometimes we do not have funding to manage this, so financing for us is the first major challenge.

R6 explained that:

We don't market it [FSP] for a good reason. If we market it, we will fill up the whole University so, they [students] come through institutional support arrangements. A student will hear from other students to come to us. They come and they see the admin [assistant administrative officer] and they say they are hungry.

The views expressed above, shows a close association between financial burden and the programme's inability to benefit all the students who are in the predicament of FI.

ACCOUNTABILITY ISSUES

Closely linked to the issue of programme awareness is problematic accountability issues. Some respondents explained that there was no need to make public the FSP because the "system' is prone to cheating". The respondents were suspicious that some of the students would take advantage of accessing free meals. R4 stated:

We have reports of the voucher being sold off. I suppose with any programme, there are going to be loopholes and only when it's tested would you be able to see how to address that.

Similarly, R6 stated:

I have reservations again because students, who have funding, for example, should not be eligible... So, that is the

main criterion, the student should not have funding. There needs to be evidence that they don't have other financial support. That's problematic again because students don't have those documents [proof of financial inadequacy].

The sentiments also reveal that such interventions programmes are prone to abuse if no proper criteria for screening are instituted. Previous studies have reported FI students exchanging their meal vouchers for money (Gwacela 2013). R5 was concerned that there were two categories of programme beneficiaries at UKZN:

They're those who don't have the money and they don't have food, and they're those who have the money but have no food because they mismanage it.

R2, complained about the lack of proper accountability to measure the programme negatively impact on the student wellbeing:

The programme [FSP] has been unable to establish the impact of the FSP due to a lack of information from the college office.

However, this research revealed that such knowledge lacking resulted from an absence of a monitoring and evaluation system in place such that, the FSP management could not establish the prevalence of student FI across UKZN. The respondents were also concerned about the lack of research on the state of FI at the institution which they thought, compromised the programme implementation. As explained by R4:

The other challenge is that we do not know and we have been unable to establish the prevalence of food insecurity at the University and that needs to be done. Under the current system, the way it is running is that we will not be able to provide meals for that number of students [target beneficiaries] then.

NEGATIVE PERCEPTIONS: STIGMA ISSUES

The implementation stage of the FSP is also affected by negative perceptions attached to

food aid programmes because some students prefer anonymity to being beneficiaries of 'a welfare programme'. Students react like that to avoid social stigma. Commenting on the subject matter, R1 complained that:

I don't like it to be seen as a food programme. There shouldn't be the stigma attached. There should be easy access to whoever wants to, we need catering residences.

A more descriptive view on the relationship between student FI, food aid, and stigma was explained by R3:

They [beneficiaries] pitch up during exams, before exams, after exams, beginning of the year and end of the year when they finish their money. That's the time you see them. Particularly, you will see them from late January to April. They don't come in big numbers, there is a stigma attached to that. So, they will come in one -by -one, and once we know them, we work with them, we don't need to ask them.

Previous research (Sabi et al. 2019) on UKZN campus food insecurity, revealed that about 40% of the target beneficiary were not willing make use of or recommend the FI interventions to anyone. This study also identified that the UKZN has some other FI interventions that enable students to access free meals. As R2 stated:

There's the 'Hare Krishna' [a charity organisation] that comes in on Mondays and Wednesdays and there are queues of students getting food, there's food but it's not only for hungry people. ... the whole university can crowd there.

According to R6:

There are people [staff] that have on-going standing support for the students, they [hungry students] know who they [staff] are, and the students will go and eat discretely to them....

The existence of several food support arrangements, formal and informal, is evident that FI is a real issue at UKZN and that many

affected students prefer anonymity of free food access to being perceived as dependents of a 'welfare programme'. The sentiments expressed by R2 also indicate that individuals who are FI are less likely to feel stigmatised when food is distributed to the beneficiary without being subjected to the 'screening process'.

CONCLUSIONS AND RECOMMENDATIONS

While, the FSP has been successful in providing food, counselling and guidance to programme beneficiary, this research concludes that largely, the programme has not met its main objective of facilitating food security to the majority of students who are unable to cope with hunger during the semester. This is because, the programme has very few resources to benefit the majority of potential beneficiaries. As a result, efforts to extend the programme to the wider community were impeded by the lack of financial support from the university that resulted in a shortage of personnel, infrastructure and service providers. The study also identified that at implementation stage, the FSP lacks the much needed regulated framework to foster more effective and efficient management of the FI intervention. For instance, it was much harder for the FSP stakeholders to estimate the prevalence of student FI across university campuses due to the lack of a monitoring and evaluation system in place. There was also the problematic social stigma attached to FI and food aid that prevented many targeted beneficiaries from accessing the programme. As a result, there is a lack of openness about FI experiences among university students, leading to a very low turnout of the potential beneficiaries.

Research that will measure the FSP impact on the beneficiary's academic performance and wellbeing is highly recommended. The study also recommends the following:

Research results by Sabi (Sabi 2018) on the "Development of a framework for managing food security programme: an analysis of student food insecurity and the interventions at the University of KwaZulu-Natal, South Africa" be shared with

the university community particularly, the FSP management.

Additionally, UKZN 'Campus Health Clinic' should have the services of dietitians or nutritionists whose area of expertise includes the management of FI and malnutrition problems. Furthermore, instead of relying on psychologists, the University should appoint some experts such as social workers and / or dietitians to manage the FSP. To make the FSP more sustainable and to avoid relying on staff financial handouts, UKZN should mainstream the programme, and establish a monitoring and evaluation framework for the FSP, for research and accountability purposes.

UKZN should also consider restoring residential catering to enable students to access a stable supply of nutritious food without the 'fear' of being stigmatised.

More so, the study recommends that due to UKZN's close proximity to the local business community such as supermarkets, the University could lobby the corporate sector to allow students on the FSP to redeem the meals using a voucher system at an affordable price daily.

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REFERENCES

- Barrett, C. B., 2002, 'Food security and food assistance programs', *Handbook of Agricultural Economics*, 2, 2103-2190.
- Basic-Education, D., 2013, Case Study for the

- National School Nutrition Programme, Government Printers, Pretoria.
- Batagelj, V. & Mrvar, A., 2004, 'Pajek—analysis and visualization of large networks', in *Graph Drawing Software*, 77-103, Springer, Berlin.
- Bezuidenhout, C. N., Bodhanya, S., Sanjika, T., Sibomana, M. & Boote, G. L. N., 2012, 'Network-analysis approaches to deal with causal complexity in a supply network', *International Journal of Production Research*, 50, 1840-1849.
- Crawford, N., Pattugalan, G. & Dale, K., 2010, 'Protection and food assistance programmes: promoting safety, dignity and more effective hunger outcomes in humanitarian crises', *Revolution: From Food Aid to Food Assistance*, 231-254.
- FAO, 1996, Rome Declaration on World Food Security and World Food Summit Plan of Action, *World Food Summit 13-17 November 1996*, Food and Agriculture Organization of the United Nations, Rome.
- FAO, 2019, The State of Food and Agriculture 2019, Moving forward on food loss and waste reduction, *The State of The World*, Food and Agriculture Organization of the United Nations, Rome.
- Gwacela, M., 2013. 'Exploring food insecurity and socio-economic factors affecting academic performance: a case study of first year students on probation and at-risk of academic exclusion', *MSC thesis*, Food Security Programme, University of KwaZulu-Natal.
- Janesick, V. J., 1994. 'The dance of qualitative research design: Metaphor, methodolatry, and meaning', in N. K. Denzin & Y. S., Lincoln, (eds.), *Handbook of qualitative research*, 209–219.
- Kamada, T. & Kawai, S., 1989, 'An algorithm for drawing general undirected graphs', *Information Processing Letters*, 31, 7-15.
- Letseka, M. & Maile, S., 2008, *High university drop-out rates: A threat to South Africa's future*, Human Sciences Research Council, Pretoria.
- Lyons, A. C., 2007, Credit practices and financial education needs of Midwest college students. *Networks Financial Institute Working Paper*, 23.
- Maslow, A. H., 1954, 'The instinctoid nature of basic needs', *Journal of Personality*, 22, 326–347.
- Mendes-Da-Silva, W., Nakamura, W. T. & Moraes, D. C. D., 2012, 'Credit card risk behavior on college campuses: evidence from Brazil', *BAR-Brazilian Administration Review*, 9, 351-373.
- Republic of South Africa, 1996. *The Bill of Rights of the Constitution*, Government Printers, Pretoria.
- Sabi, S. C., 2018, 'Development of a framework for managing food security programme: an analysis of student food insecurity and the interventions at the University of KwaZulu-Natal, South Africa,' PhD thesis, Food Security Programme, University of KwaZulu-Natal.
- Sabi, S. C., Kolanisi, U., Siwela, M. & Naidoo, D., 2019, 'Students' vulnerability and perceptions of food insecurity at the University of KwaZulu-Natal', *South African Journal of Clinical Nutrition*, 1-8.
- Spector, J. M., Christensen, D. L., Sioutine, A. V. & McCormack, D., 2001, 'Models and simulations for learning in complex domains: Using causal loop diagrams for assessment and evaluation'. *Computers in Human Behavior*, 17, 517-545.
- United Nations World Food Programme, 2009, 'Emergency Food Security Assessment Handbook second edition / January 2009'. *Emergency Food Security Assessment Handbook*. (2nd ed.), Rome.
- University of Kwazulu-Natal, 2013, 'Strategic Plan 2007-2016: University of KwaZulu-Natal', viewed 5 September 2016, from <https://www.ukzn.ac.za/wp-content/miscFiles/aboutus/strategicplan.pdf>.
- University of Kwazulu-Natal, 2015, 'Transformation — Part of everyday business at UKZN. UKZN' Advertorial', viewed 5 September 2016, from <http://www.mg.co.za/article/2015-09-04-00-transformation-part-of-everyday-business-at-ukzn>.
- Yin, R. K. 1994. Discovering the future of the case study. Method in evaluation research. *Evaluation practice*, 15, 283-290.
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