Nutrition-Sensitive Programming in Non-Humanitarian Food Assistance: Findings from a Situation and Readiness Assessment in Lagos, Nigeria

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ABSTRACT	KEYWORDS:
 Background and Objectives: Demand for and implementation of Food Assistance Programmes (FAPs) has increased, particularly with the COVID-19 pandemic. Although FAPs can improve nutrition outcomes, they will not automatically do so but must be deliberately harnessed for nutrition. Objective: This study assessed the readiness of FAPs in Lagos to implement nutrition- sensitive programmes. Methods: The study used a cross-sectional approach. Eight organizations were recruited using snowball sampling. Organizational readiness to integrate nutrition-sensitive approaches in programme implementation was assessed using an interviewer-administered questionnaire and key informant interviews. Readiness was scored across six dimensions of the community readiness model. Each interview was assigned a score ranging from 1 to 9 according to interview responses specific to different dimensions. and categorized as one of nine stages: 1-No Awareness; 2-Denial/Resistance; 3-Vague Awareness; 4-Preplanning; 5- Preparation; 6-Initiation; 7-Stabilization; 8-Expansion/Confirmation; and 9-Community Ownership. 	 Food assistance, Nutrition-sensitive approaches, Organization readiness Food insecurity
 Results: Readiness for nutrition-sensitive programming was low as the highest level of readiness was the Stabilization stage (efforts for adopting nutrition-sensitive approaches are underway and stable) and was observed in just one organization. One organization was in the Initiation stage (indicating deliberate nutrition actions were being taken). Four organizations were categorized at each of the Vague Awareness stage and two were at the Pre-Planning stage. Conclusions: The findings from this study highlight that sampled FAPs in Lagos are inadequately designed to improve the nutrition of their beneficiaries and organizations implementing FAPs do not show sufficient motivation to increase nutrition sensitivity in the short term. 	

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INTRODUCTION

Home to more than 20 million people, and Nigeria's economic capital [1], Lagos is a prime destination for

internal migration and has communities of vulnerable populations. There have been high migration rates

from rural areas to the state by immigrants in search of greener pastures and the state has become extremely urbanized [2]. This is putting a strain on the very limited access to basic amenities and affecting access to food. As in many parts of the world, the impact of the COVID-19 pandemic is not limited to its health implications alone. The economic impact of the pandemic in the populous state of Lagos affected access to food and left many individuals struggling to meet their food needs [3]. Anecdotal evidence indicates that various charitable organizations are providing food assistance services in a bid to address the food needs of increasing populations of vulnerable persons.

Food assistance generally involves the provision of food and related services for ensuring access to nutritious food, food availability and improved nutrition knowledge and practices [4]. Mostly common in humanitarian settings, food assistance is provided to the vulnerable during or immediately after emergencies to cushion the effect of food insecurity when access to food has been compromised, and is usually short-term [5]. Over time, the concept of non-humanitarian food assistance for the sustainable development of communities has evolved. Non-humanitarian food assistance, sometimes referred to as "development food assistance", is implemented by charitable and non-governmental organizations to address social issues such as systemic poverty or hunger [6]. This implies that food assistance programmes (FAPs) have become important food system elements for vulnerable households in both humanitarian and non-humanitarian contexts.

FAPs are mainly focused on alleviating hunger and buffering food insecurity [7], however, these programmes must be deliberately leveraged to improve nutrition outcomes. In an updated World Food Programme (WFP) Nutrition Policy [8], it is emphasized that nutrition-sensitive programming should be a crucial component of all initiatives to tackle malnutrition. Beyond meeting food needs, nutrition-sensitive programmes take a life-cycle approach by considering the populations who are most at risk for malnutrition and prioritising their overall health [9]. Nutrition-sensitive FAPs go beyond merely distributing food items to emphasizing other aspects that impact the nutrition and health of the beneficiaries of these programmes, such as social protection, and access to healthcare. To achieve sustainable progress, an integrated approach to programme implementation is necessary [10]. Right from the planning stage, programme implementers need to consider how their programmes can be harnessed to achieve nutrition objectives identified from a situation analysis such as addressing obesity, nutritionrelated non-communicable diseases and micronutrient deficiencies, and ultimately incorporate actions targeted at these goals [9, 10]. An example of a nutrition objective incorporated into an FAP may be improving the dietary intake of women of reproductive age or improving household food security. Achieving such FAP necessitates programme implementers themselves to be willing (sufficient motivation) and able (considerable capacity) to implement programmes with impact positive outcomes.

Assessing the readiness of organizations implementing programmes is important to planning and evaluating successful interventions [11]. For programme implementers to implement successful programmes, the ability to implement the programme, the capacity to do so in terms of knowledge and skills, as well as the availability of tools and resources are to be considered. Despite evidence that establishes how readiness as a factor can make or mar an intervention, there is limited information on how implementing organizations of charitable food assistance are willing to embrace and implement nutrition-focused initiatives [12]. The need to achieve optimum health for populations benefiting from food assistance calls for attention to ensuring that programme implementers at food assistance organizations are aware and willing to engage in initiatives that support nutrition-sensitive programming. It is important to gain insights from an organizational perspective to understand factors that may influence programme readiness in taking on nutrition-focused initiatives. This information is essential for stakeholders, technical advisors, and policymakers, to know whether organizations implementing FAPs are ready and/ or willing to accommodate innovations that better address the needs of the populations they serve and improve their existing implementation strategy [13].

This study examined the extent to which Lagos FAPs address causes of malnutrition and readiness to

implement nutrition-sensitive programmes. Methods

Conceptual framework: The term "community readiness" has been discussed in the scientific literature over several years, and within the context of organizational and community research. The concept of community readiness has been recognized as being important in programme intervention and implementation. This study used the Community Readiness Model (CRM) which is rooted in the transtheoretical theory of stages of change and recognizes that communities just as individuals or organizations are at different stages of readiness to address an issue [11, 14, 15]. The model assumes that an intervention programme might lack sustainability unless a community is ready for change [14]. Plested et al. [16] highlighted that the CRM can be applied in any "community". In this study, the community was defined as the programme implementers at food assistance organizations in Lagos. "Readiness" was defined as the willingness, preparedness and ability of organization(s) to act on an issue or implement a particular innovation [13, 14]. The scope of this study focused on food assistance services provided to the vulnerable outside the context or occurrence of an emergency, crisis, or conflict; and implemented by private, charitable food assistance organizations.

Data collection: The study was a cross-sectional, qualitative research conducted in Lagos Metropolis. Participating organizations were recruited using snowball sampling. Eight organizations that met eligibility criteria were sampled. The organizations were eligible if they had a core mission to provide food relief services to the vulnerable and regularly distributed food assistance parcels; not occasionally such as only during festive celebrations. The frequency of food distribution varied across organizations, ranging from weekly, biweekly, monthly, guarterly and several times a month. Organizational readiness to integrate nutritionsensitive approaches in programme implementation was assessed using an intervieweradministered programming questionnaire and key informant interviews. Focal persons directly involved in food assistance delivery as applicable to each organization and were knowledgeable about

programme implementation were deemed eligible as a "programme implementer". Programming questionnaires (checklists) and key-informant interviews comprising nutrition-sensitive elements were conducted among programme implementers. The programming checklist consisted of questions about whether they incorporated nutrition objective(s) and deliberate nutrition actions in programme delivery, had documents that guided FAP implementation, provided nutrition education to beneficiaries, collaborated or had personnel with nutrition expertise. Key informants were asked about the donations/resources that are available for their programmes, the use of standard operating procedures or other written guidelines, enabling factors to be able to better integrate nutrition into their FAPs and nutrition considerations/components that are integrated into the food assistance provided to beneficiaries, among others. The tools incorporated questions for a community readiness assessment based on the CRM.

Data analysis: Thematic analysis of verbatim transcripts of key informant interviews was conducted using NVivo 13. Data were manually coded to identify themes that emerged directly from interview responses. The coding involved reading and annotating the data to identify inductive themes. Manual coding followed a lengthy reading of the interview transcripts in search of key textual information provided in key informants' responses for familiarization with words, phrases, or clauses that represented the same meaning to the participants across the research questions and objectives. The key thematic findings were reviewed to see their correlation with the study objectives before moving to the draft report. Verbatim quotes from study participants are presented to illustrate key issues identified in the study.

Readiness scores were assigned to each participating organization based on responses from the programming questionnaire and interviews, and stages of organizational readiness were determined, using anchored rating scales of the six dimensions of the community readiness assessment: i) community efforts, ii) community knowledge of the efforts, iii) leadership commitment to address the issue, iv) community climate that facilitates change, v) knowledge about the issue; and vi) resources

available to address the issue [16]. The anchored rating scales include specific statements for scoring each of the dimension based on interview responses of the key informant. The scoring process for readiness levels followed a stepwise process as recommended by Plested and Colleagues [16]. Organizations were assigned a score ranging from 1 to 9 using the anchored rating scales of readiness [16], and according to the interview responses specific to different dimensions. This score is the average across the six dimensions of the assessment, and indicates the specific stage of readiness for each organization. The assessment categorizes readiness according to nine stages: 1-No Awareness; 2-Denial/Resistance; 3-Vague Awareness; 4-Preplanning; 5-Preparation; 6-Initiation; 7-Stabilization; 8-Expansion/Confirmation; and 9-Community Ownership.

He scoring begins with each scorer independently scoring the transcripts of the community leader interviews. The scorers are instructed to read each transcript carefully so that they have an overall understanding of the interview.

After reading the transcript, the scorers are to review the anchored rating scale associated with each dimension prior to scoring it. Starting with the lowest of the nine stages listed on the scale, the scorer should assess whether a community meets this stage and then each progressively higher. The scoring begins with each scorer independently scoring the transcripts of the community leader interviews. The scorers are instructed to read each tran-script carefully so that they have an overall understanding of the interview.

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intervention development and implementation, researchers must determine a community's level of readiness (Jumper-Thurman et al., 2007). The TEC's Community Readiness Assessment (CRA) was developed for just this pur-pose and was based on two sets of literature: psychological readiness and community development (Oetting et al., 1995). The CRA development team chose Prochaska, DiClemente, and Norcross's (1992) concept of an individ-ual's psychological readiness to address addiction behaviors and the stages for doing so. Recognizing that a community's stages of readiness were likely more complex than that for individuals, the team built on these stages using two processes from the community development research and literature: the innovation decision-making process and social action (Oetting et al., 1995).

The first process, innovation of decision making, explains the five stages individuals go through when undertaking new practices, and the second process, social action, looks at the stages groups go through in doing so. Basing the construction of the CRA on these bodies of research and literature, the ninestage community readiness model emerged. The TEC's Community Readiness Assessment (CRA) instrument is not the only instrument designed for assessing a community's level of readiness; other instruments have been developed such as the Community Key Leader Survey (Goodman, Wandersman, Chinman, Imm, & Morrissey, 1996), and the Minnesota Department of Human Service's Community Readiness Survey (Beebe, Harrison, Sharma, & Hedger, 2001). These surveys differ mostly in regard to the stages of readiness outlined and/or the method used to administer the instrument (i.e., mail, face-to-face interview, etc.). The Partners Addressing Cancer Health Disparities (PACHD) research team chose the CRA because it is a qualitative instrument and community leaders are the key informants, attributes that align well with the principles of community-based participatory research. Use of the CRA for the current project allowed for the full participation of community leaders, thus giving voice to their wisdom and knowledge of their community's readiness to address cancer issues. Community Readiness Scoring Process The TEC offers training on the administration and scoring of the CRA, as well as an online handbook that details an easy to follow stepby-step process. In the handbook, the TEC recommends that two people participate in the scoring process to "ensure valid results" (Plested et al., 2006, p. 15). 272 T. A. Schroepfer et al. intervention development and implementation,

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All food assistance organizations granted permission to conduct the research and programme implementers signed consent forms prior to participating in the study. In addition to this, they provided verbal consent to record the interviews, which was captured in the key-informant interviews. Ethical approval was obtained from the University of Ibadan/University College Hospital Ethics Committee (UI/EC/21/0096), and the Nigerian Institute of Medical Research (NIMR) Institutional Review Board, Lagos (IRB/21/036).

RESULTS

The sampled organizations' organizational practices and operations are described in Table 1. The study reveals that just three of the eight organizations explicitly incorporated nutrition objective(s), outcome(s), or indicator(s) in their FAPs. Only, two organizations targeted food assistance to nutritionally vulnerable groups (pregnant women and/or vulnerable children) and implemented their programmes based on nutritional status. Seven organizations had no in-house nutrition personnel and had never collaborated with external nutrition personnel. Although six of the organizations reported collaborating with other organizations to address multidimensional issues faced by beneficiaries, only two stated that they collaborated with other non-government organizations or private industries to deliver food assistance as part of a package of other services. Half of the organizations reported never having engaged or coordinated with government ministries, departments, or agencies in the design and delivery of food assistance projects.

Table 2 summarizes the findings from an assessment of program implementers' perceptions of nutritionfocused actions. The majority (5 out of 8) of the programme implementers agreed that inadequate nutrition may increase the risk of health challenges, and all the programme implementers agreed that providing food is different from addressing malnutrition. Four out of the eight programme implementers disagreed that food assistance beneficiaries would select fruits and vegetables if allowed to choose and six of them agreed that the beneficiaries they serve do not know the negative effects of unhealthy diets. The majority of the programme implementers also stated that the leadership of their organizations would buy into initiatives to allow them to better address the nutrition needs of beneficiaries. Likewise, personnel, including volunteers at the organization(s), would be interested in nutrition-related training. Five of the programme implementers affirmed and recognized that the role of addressing the nutrition needs of the beneficiaries lies with the organization.

Table 1: Organizational Practices and Operations

		per of O	rganizations
Operational Practices	Yes	No	Not sure o don't know
Incorporate nutrition objective(s), outcome(s) and indicator(s)	3	4	1
Develop from a comprehensive analysis of the nutrition situation in the locations in which you work	5	1	2
Include deliberate nutrition actions	3	3	2
	3	4	1
Facilitate the delivery of nutrition actions by other organizations	7	1	-
Address gender inequality	4	3	1
Contribute to improved nutrition knowledge among beneficiaries	1	6	1
Collect data on nutritional status of beneficiaries or potential beneficiaries		0	I
Focus on nutritional needs of vulnerable groups, especially women & children	8	-	-
Address location-specific causes of malnutrition	1	5	2
Consider acceptability of food assistance to beneficiaries, given their traditional beliefs and	4	3	1
foods, culture, religion, and food-sharing practices within households etc.			
Consider seasonality of food availability and affordability	6	1	1
Allow beneficiaries to choose which foods they receive	1	7	-
Address infant and young child nutrition	4	4	-
, C	7	1	-
Incorporate activities to empower women	,	•	
Deliberately address barriers to health services uptake and improve access to health services	6	2	-
Collaborate with other organizations to address multisectoral and/or multidimensional	6	2	_
issues faced by beneficiaries	•	-	
Incorporate activities to address structural factors affecting access to foods (e.g., prices and	_	5	3
location of markets)			
Presence of personnel with nutrition expertise	1	7	-
Availability of policy, strategy, or other document to guide quality, quantity, and other	2	6	-
parameters for foods provided to beneficiaries			
Availability of document that provides guidance on foods to restrict in accepting donations	1	7	-
or distributing foods			
Availability of document that provides guidance on foods to encourage in accepting	1	7	-
donations			

Table 2 Programme I	mplementer's perception abou	t receptiveness to nutrition-focused actions

Statements	Agree	Neutral /Undecided	Disagree
to demote a difference of the state of the state and the state of the			
Inadequate nutrition increases the risks of health challenges	8	-	-
Providing food is not necessarily the same thing as addressing			
malnutrition	8	-	-
At my organization, personnel (including volunteers) who deliver food			
assistance to beneficiaries have sufficient nutrition knowledge to	6	-	2
provide advice about healthy eating			
Persons who come to receive food assistance would listen to advice			
about healthy eating	5	-	3
If given a choice, most food assistance beneficiaries will select fruits			
and vegetables	-	1	7
Most food assistance beneficiaries are not interested in changing their			
eating behaviours	2	2	4
Most food assistance beneficiaries do not know the negative effects			
of unhealthy diets	6	-	2
The leadership of my organization would be interested in any			
proposal that will allow them to better address the nutrition needs of	8	-	-
beneficiaries			
At my organization, personnel (including volunteers) who deliver food			
assistance to beneficiaries would be interested in nutrition-related	8	-	-
training			
It is not the role of food assistance organizations to address the			
nutrition needs of beneficiaries	3	-	5

Four themes emerged from the key informant interviews including food substitution, beneficiaryspecific programme implementation, nutrition education and limited awareness of programme implementers about nutrition-sensitive approaches. When programme implementers were asked about

(potential) strategies to improve their FAPs, several reported food substitution as a means to ensure that foods perceived to be inappropriate for certain population groups were replaced or exempted:

> "We try to make it something that is balanced. For the ones that are diabetic, instead of giving them yam, we give them potato because the carbohydrate content is not the same as yam. For the non-diabetic seniors, we try to add things like unripe plantain. We try to make it balanced. We add vegetables and protein. For the nondiabetic seniors, we try to make it balanced, we add crayfish, smoked fish, beans, palm

oil, basic things that they need and sometimes we add supplements as well" (Organization 8)

Beneficiary-specific programme implementation was another strategy used by four organizations. Here, programmes are sometimes targeted to specific groups, particularly those with increased physiological needs (nursing mothers, senior citizens, and children).

> "Our programmes are not always the same. We may reach out to widows at this time, nursing mothers at another or individuals with a vocation. For the beneficiaries, there is no specific eligibility criteria. It is only about the need, and we do the research to confirm that they are actually in need for the food at that time" (Organization 7)

Programme implementers also identified nutrition education as a potential approach to optimizing nutrition-sensitive programmes at their organization:

"Nutrition education is important, asides just giving out nutritious food items because we have lots of people who have the wrong knowledge about nutrition and people lack access to nutritional facts. Besides rendering food relief services, we should be able to educate beneficiaries" (Organization 4)

"Food assistance organizations play an important role because they are interface between those that are not well-fed and better positioned to influence and educate these individuals on good nutrition and right combination of food. They should provide awareness on healthy eating and closely monitor those they provide foods to" (Organization 7)

It was observed that the implementing organizations were not fully aware of measures that could make their FAPs nutrition sensitive. It was acknowledged that they ensured food quality by checking the expiry dates of products received, food preparation hygiene, and batch test (by cooking) before bulk purchase, but did not check nutritional contents. The following quotes showed the patterns of responses identified:

> "This is a new development you have opened us up to. The only thing we consider before distributing food items is ensuring that it is in a healthy state, not expired and well-packaged. I think we need to start paying close attention to the nutritional value of what we provide. We do not take nutrition into consideration in deciding organizations to collaborate with" (Organization 7)

> ".... We try to screen expiry dates of products; for instance, if we see a product is expiring some months from the time of donation, we ensure to put it out on time so

that it doesn't get expired and so that those that will use it won't use expired products since they may be consumed over a period... We have never recorded any negative consequences in our years of operation" (Organization 3)

"To the best of our practice, we ensure we don't buy expired products. For food items like rice, we buy in small quantities to test (by cooking), before buying in bulk. Since we've had no issues with our suppliers, we have continued with them. We don't buy roadside food items, even if they are cheaper" (Organization 2)

Regarding readiness to adopt and integrate nutrition-sensitive approaches in programme implementation, some organizations were further along in their readiness level than others as shown in Table 3. The highest level of readiness among the sampled organizations was the Stabilization stage and was observed in just one organization with an approximate score of 7. A second organization was at the Initiation stage, with an approximate of 6. This means that the leadership of the first organization had efforts in place for adopting nutrition-sensitive approaches and these efforts were stable; and deliberate nutrition actions were being taken by the second organization. For the other six organizations, four were at the Vague Awareness stage (with scores of 2.58, 2.75, 3.25, 3.08); and two were at the Pre-Planning stage with scores of 4.29 and 4.04. Table 3 shows the individual scores of each organization across the six dimensions and the average score that gives the overall readiness score of the organization. Table 4 summarizes the stage of readiness of the food assistance organizations, as derived from the readiness score.

Table 3 Readiness Score of Food Assistance Organizations

CRA Dimensions	Org_1	Org_2	Org_3	Org_4	Org_5	Org_6	Org_7	Org_8
Efforts	6.25	2.75	8.25	9.00	3.00	2.50	3.25	3.25
Knowledge of current efforts	3.75	2.75	5.25	4.75	3.00	3.00	3.75	3.00
Leadership	4.00	2.75	4.50	7.75	3.50	2.75	3.75	3.00
Climate	4.25	3.00	5.25	8.00	4.25	2.50	4.00	4.00
Knowledge of issue	2.75	2.75	4.00	4.25	2.75	2.75	4.75	3.00
Resources	4.75	2.50	7.50	7.75	3.00	2.00	4.75	2.25
Overall readiness	4.29	2.75	5.79	6.91	3.25	2.58	4.04	3.08

Org: Organization

Table 4 Summary of Readiness Level of Food Assistance Organization

Food Assistance Organization	Stage of Readiness	Description
Organization 1	Preplanning	The organization clearly understands it is its role to integrate nutrition-sensitive approaches in programme implementation, but current efforts are not focused or substantial
Organization 2	Vague awareness	The organization understands that there is a need to improve nutrition among its beneficiaries, yet there is no motivation to do anything
Organization 3	Initiation	Deliberate actions are being taken by the organization to integrate nutrition-focused initiatives in programme implementation
Organization 4	Stabilization	The leadership of the organization supports the implementation of nutrition-sensitive programmes and staff have some relevant training/experience
Organization 5	Vague awareness	The organization understands that there is a need to improve nutrition among its beneficiaries, yet there is no motivation to do anything
Organization 6	Vague awareness	The organization understands that there is a need to improve nutrition among its beneficiaries, yet there is no motivation to do anything
Organization 7	Preplanning	The organization clearly understands it is its role to integrate nutrition-sensitive approaches in programme implementation, but current efforts are not focused or
Organization 8	Vague awareness	substantial The organization understands that there is a need to improve nutrition among its beneficiaries, yet there is no motivation to do anything

DISCUSSION

This study interviewed programme implementers at organizations delivering FAPs, to examine the willingness of non-humanitarian, charitable FAPs to plan, initiate, implement and sustain nutritionsensitive activities in the delivery of food assistance.

Findings showed that organizations implementing FAPs were generally not aware of measures that could make their programmes more nutrition sensitive. The FAPs were mainly focused on food distribution but some acknowledged that they had a role to play in addressing the nutrition needs of their beneficiaries. With increasing non-humanitarian food assistance programmes, especially following the COVID-19 pandemic [17, 18] there is an urgent need to understand the services provided by such programmes and identify how to make them meaningfully address food security and nutrition challenges [19, 20]. Previous studies assessing readiness of FAPs to deliver nutrition-sensitive services, for example, a study by Wetherill et al. [12], focus on high-income countries. Our study contributes to the literature by assessing readiness in an LMIC. Yet, the low readiness to implement nutrition-sensitive FAPs that was observed in our study is similar to that reported by other studies [12, 21].

Only half of the organizations in our study met the mandatory requirements recommended by WFP [9] for nutrition-sensitive programming, by including nutrition objectives in their programme implementation and contributing to the improved nutrition knowledge of their beneficiaries. Although studies [7, 9, 22] have emphasized nutritionsensitive targeting alongside the use of conditions and women empowerment as factors for nutritionsensitive programming, only four of the organizations considered these factors in their programme implementation. Most of the organizations addressed gender inequality and incorporated activities that empower women but only three of them included deliberate nutrition actions in programme delivery. Further, assessment of the nutrition situation analysis is an important criterion to be met, as it is necessary to determine the nutritional needs of potential beneficiaries, understand the drivers of malnutrition in the location, and evaluate existing partners implementing nutritionally relevant services that can

be leveraged [9]. More than half of the organizations had reported conducting a comprehensive analysis of the nutrition situations in the locations in which they work. However, no reports were provided to support this claim.

Among the sampled organizations, only two reported having a policy or strategy to guide the parameters for foods provided to beneficiaries, with just one specifically having a document that provides guidance on what foods to restrict or encourage in distributing foods and accepting donations. This finding was corroborated by the results from the qualitative interviews. Several studies [23-26] have highlighted the importance of having nutrition policies at these organizations to somewhat regulate what is being distributed to beneficiaries. Studies have reported that having documented nutrition guidelines was associated with improved nutrition service delivery [27]. Still, many FAPs are yet to have nutrition policy or strategy [23, 28]. The Chicago Council's report on Healthy Food for a Healthy World [29] proposed strengthening nutritionsensitive policies to support food systems. One of the key strategies recommended to achieve this is by ensuring that food assistance and social protection programmes increase access to nutritious foods. Food assistance organizations must hence have policies that encourage the distribution and delivery of healthy foods to the populations they serve.

The WFP guidance for nutrition-sensitive programming [9] emphasizes the need for personnel with nutrition expertise that will provide technical oversight in programme implementation. Indeed, technical assistance by nutrition professionals has been associated with improved nutrition services in FAPs [30]. However, our study revealed the limited priority of organizations implementing FAPs for the technical advisory of nutrition experts in the design and implementation of their programmes. Only one organization had an in-house nutrition staff and/or collaborated with nutritionists. Generally, there was an encouraging receptivity and commitment of the organizations to welcome initiatives that will help them better address the nutrition needs of their beneficiaries. Likewise, the organizations demonstrated responsibility in understanding that it was their role to address the nutrition needs of their beneficiaries. The study

found that programme implementers were interested in delivering nutrition-focused actions, however, they lacked the knowledge, funding and expertise to move in this direction. These findings are consistent with studies by other authors [26, 31]. Similar to these other studies [26, 31], our study found that implementing organizations of FAPs were not sufficiently aware of measures that could make their programmes nutrition sensitive. Most of the programme implementers interviewed in our study mentioned a greater focus on ensuring food quality such as batch test of the food purchased, expiry dates and food preparation hygiene, without considering the nutritional value of the foods they provide. Also, nearly all the food assistance organizations had never provided or distributed nutrition education materials to their beneficiaries. Providing nutrition education to beneficiaries may help them make healthier food choices and develop healthy habits even if the food assistance stopped. Yet, the limited provision of nutrition education we observed is not unique. Studies of FAPs in other contexts similarly observed limited provision of nutrition education to beneficiaries [32, 33].

One of the reasons for not implementing nutritionsensitive programmes may be the limited resources available for the volume of beneficiaries that needed food assistance. Other studies of FAPs have reported that inadequate resources and a concern that a greater nutrition focus could reduce quantities of foods distributed, has limited implementation of nutrition-sensitive FAPs [23, 34]. Other factors that have been reported to limit nutrition-sensitive food assistance programming, some of which was reported in our study, include inadequate infrastructure; absence of nutrition personnel; and low demand for nutrition services by programme beneficiaries [23, 31-33]. The fact that FAPs depend on food donations, and programmme implementers have little control over donated items, has also been highlighted as a contributing factor to limited nutrition sensitivity of FAPs [23, 35].

Given the scope of the study, the current data on food assistance programmes in the nonhumanitarian sector of LMICs is regrettably inadequate, specifically relating to nutritionsensitive programming. The concept of nonhumanitarian food assistance and charitable food

distribution by private organizations in itself is relatively new in the study location. Other authors [36] have highlighted the limited evidence about FAPs from LMICs and suggested cross-country knowledge sharing to improve global effectiveness of FAPs. In other countries where FAPs are being implemented, similar challenges to those identified in our study have been addressed. In some instances, high-income countries have structures and guidance to oversee the activities of organizations delivering FAPs. Our study underscores the need to pay closer attention to services delivered by non-humanitarian FAPs in LMICs and support the design of contextually appropriate FAPs that effectively improve food security and nutrition.

Our study was limited in the number of food assistance organizations sampled, as well as the fact that the study was conducted in just one of 36 states in Nigeria. Hence, the sampled organizations may not be representative of functional, nonhumanitarian food assistance organizations in the study location as well as nationally. Other limitations include that the study relied on just one key informant per organization, since perspectives of the same situation can vary from person to person.

CONCLUSIONS

Overall, the findings from this study highlight that sampled FAPs in Lagos are inadequately designed to improve the nutrition situation of their beneficiaries, and organizations implementing FAPs do not have sufficient motivation to increase nutrition sensitivity in the short term. Increasing organizational capacity for nutrition-sensitive programming may result in higher readiness to integrate nutrition-sensitive approaches in FAP organizations.

The study suggests a need for guidelines to direct non-humanitarian FAPs in Nigeria, and perhaps other low- and middle-income countries, and greater nutrition accountability of organizations delivering non-humanitarian FAPs. Moreover, food assistance policies should be in place to regulate the activities of these organizations to ensure that standards are being followed and possibly to localize the sphere minimum standards adopted in humanitarian settings.

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Conflicts of Interest Disclosure

The authors declare no conflicts of interest.

Author Contributions

Conceptualization and Methodology: OTT, OAA & SIE, Data curation & analysis: OTT, Investigation & original writing: OTT, Writing, review & editing: OAA & SIE, OTT, OAA, AJO, FS, VA & AJO Supervision: SIE & OAA

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