CHANGING THE LANDSCAPE OF BEHAVIOUR CHANGE IN NUTRITION-SENSITIVE PROJECT OUTCOME WITH SOCIAL ECOLOGICAL MODEL

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ABSTRACT

Northern Nigeria experiences some of the world’s worst human development index. In Nigeria, nearly one in five children under the age of 5 dies each year with 40% in the North linked to malnutrition. Extreme poverty, hunger and malnutrition are common in northern Nigeria where half the children under 5 are stunted. Rural poor households in the North are now vulnerable due to rises in food prices, for which most produce only less than 25% of their own food and have to buy the rest. Key to resolving the issue of malnutrition in Northern is the gap in knowledge and skills on creating a transformative impact in changing this situation will require an implementation of a model that promotes behaviour change and empower affected population to take action in solving their issue. A qualitative assessment using semi interviews and focus group discussions were conducted to assess the ecological model effectiveness of one of the nutrition-sensitive programme implemented in Northern Nigeria to address the effect of malnutrition on wellbeing of children and pregnant women. The results present a model that can be adopted, with significant learning on using a most effective and context-specific strategies that can be scalable, continued and sustained by the government at the state and National.

KEYWORDS: Ecological model, Malnutrition, Nutrition knowledge and skills.

1. BACKGROUND

In Nigeria, the rural population accounts for 52% of Nigeria’s total population (World Bank, No Date). The surviving population suffers tremendously in searching for shelter, clothing and most importantly food. Therefore, it would be factual to mention that the advent of insurgency in Nigeria has significantly contributed to the growing crisis in food insecurity. Several persons in the affected areas in Northern Nigeria can barely afford one square meal a day. This greatly increases the borderline of malnutrition and hunger in Nigeria. Malnutrition in Nigeria has been an issue for many years and continues to be a challenge faced by many vulnerable families and children, especially in certain geographic areas of the country (FMOH, No Date). The situation grew significantly worst especially in the North were 72 percent of the population live below the poverty line, compared to only 27 percent in the South (World Policy Institute, 2013).

Rural poor households in the North are now vulnerable due to rises in food prices, for which most produce only less than 25% of their own food and have to buy the rest (Cost of Diet Study, 2015; SCI 2010). A new households’ social norms, rules and customs is being developed to govern what and how much food is eaten, when and by whom and who benefits first when extra food is available. The Household Economic Analysis and Cost of Diet study (2015) estimated that a poor household will require £10-£14 a month to buy food. With more than 53.5% of Nigeria’s population living on less than 1.90 USD, achieving this is more difficult in Northern Nigeria. However, this was one among other indices that informed the cash transfer benchmark of 3,500 Naira (£10) to pregnant women in Jigawa and Zamfara States to support access to food. Invariably, access to food for population in the Northern might not translate to improved nutrition. This is because rural poor with £10 can only buy what they can afford, and will also be interested in using this amount to meet other needs. Therefore, malnutrition will persist.

One of the world’s global challenges is malnutrition in children and at pregnancy. Malnutrition is referred as ‘inadequate nutrition’ which leads to early mortality experience by mothers, infants and children below the age of 2 (Black et al, 2008; Bhutta et al, 2008, 2013; Santosh, 2013; Tomkins & Watson, 1989). UNICEF (2015) attributes cases
of stunting and wasting especially among under 5 children in Northern Nigeria to severe poverty, hunger and malnutrition. Further evidence has shown that about 66% of children in Northern Nigeria are stunted, 35% underweight and 7% children are wasted (CDGP Baseline Quan, 2014; NDHS, 2008). Although Nigeria is not enlisted among the 20 global worse cases of stunting and underweight among children under five (UNICEF, 2007), in-country statistics should present some concerns to Government and stakeholders, especially now that Nigeria is recovering from the impact of insurgency.

Nigeria Government might be slow to responding to the issue of food insecurity and malnutrition in Northern Nigeria. This does not deter several other development programmes who are initiating several strategies to curb the menace of food insecurity and malnutrition caused by insurgency and related factors. Save the Children with funding from Department for International Development (DFiD) is leading a consortium to delivery nutrition-sensitive social protection programme – The Child Development Grant Programme (CDGP). CDGP is implemented in Jigawa and Zamfara states in partnership with Action Against Hunger (AAH), private sector organizations and civil society organizations. The programme is a five-year pilot programme aimed to tackle poverty and hunger leading to a reduction in malnutrition in children (CDGP Quan, 2014; SCI, 2010). The CDGP provides a Cash Transfer grant of 3,500 NGN per month for over 70,000 pregnant women, during their pregnancy and until their child reaches the age of 2. The cash transfer is accompanied by nutrition education, advice and counselling. The predictable monthly cash transfer is expected to contribute to increased food security, improve intake of nutritious food, leading to improvement in child nutrition within beneficiary households.

CDGP in tackling malnutrition aligns with McLeroy et al (1988) ecological model to understand deeply the situation and programme strategically. The programme using the model is able to understand and build relationship between intrapersonal, interpersonal, community, institutional and policy factors as it relates to malnutrition in children. This further helped the programme address these factors holistically with approaches that are more likely to be sustainable. The paper aims to analyze effectiveness of approach adopted by Child Development Grant Programme (CDGP) in addressing the crisis of malnutrition. The assessment of CDGP in addressing the crisis is compared with a known change model developed by McLeroy et al in 1988.

2. METHODOLOGY

This was a qualitative study that involved in-depth interviews (IDIs), focus group discussions (FGDs) with selected stakeholders. Key stakeholders as participants were those involved in the design and implementation of Child Development Grant Programme (CDGP). Direct beneficiaries were also selected as part of study participants. Five (5) respondents were recruited for In-depth Interviews. The interviews solicited the participants’ perspectives how the Child Development Grant Programme has been able to address malnutrition in line with the socio-ecological model. Also, two Focus Group Discussions (FGDs) sessions were conducted across Jigawa and Zamfara states. The allowable range of FGD participants per group was 6-10 participants. Each FGD was conducted in an appropriate meeting room that was conducive to the number of participants, privacy, and the need to audio-record the session. Participants at the FGDs were mainly beneficiaries of the CDGP. Participants’ responses evaluate the impact of CDGP across their personal wellbeing and community wellness. The researcher also captured five (5) case studies of participants who were willing to express their emotions on the impact created by CDGP.

3. THE CONCEPTUAL FRAMEWORK

Several theories are needed to address varied challenges that arise in health promotion (Glanz & Rimer, 2005). Theories are essential to evaluate the effectiveness of interventions in a given situation across all levels - individual-level, organizational-level, and community-level interventions (Best et al, 2003). CDGP also adopts the socio-ecological model to ensures that individual and community characteristics is a deciding factor to the outcome interventions implementing across all levels – persons, family, community, institutions and policy (Spring, 2007). The Social Ecological Model (SEM) is a theory-based framework for understanding the multifaceted and interactive effects of personal and environmental factors that determine behaviors, and for identifying behavioral and organizational leverage points and intermediaries for health promotion within organizations. There are five nested, hierarchical levels of the SEM: Individual, interpersonal, community, organizational, and policy/enabling environment (Figure 1). Table 1 provides a brief description of each of the SEM levels. The most effective approach to public health prevention and control uses a combination of interventions at all levels of the model.
Table 01: A Description of Social Ecological Model (SEM) Levels.

<table>
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<tr>
<th>SEM Level</th>
<th>Description</th>
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<tbody>
<tr>
<td>Individual</td>
<td>Characteristics of an individual that influence behaviour change, including knowledge, attitudes, behavior, self-efficacy, developmental history, gender, age, religious identity, racial/ethnic identity, sexual orientation, economic status, financial resources, values, goals, expectations, literacy, stigma, and others.</td>
</tr>
<tr>
<td>Interpersonal</td>
<td>Formal (and informal) social networks and social support systems that can influence individual behaviours, including family, friends, peers, co-workers, religious networks, customs or traditions.</td>
</tr>
<tr>
<td>Community</td>
<td>Relationships among organizations, institutions, and informational networks within defined boundaries, including the built environment (e.g., parks), village associations, community leaders, businesses, and transportation.</td>
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<tr>
<td>Organizational</td>
<td>Organizations or social institutions with rules and regulations for operations that affect how, or how well, for example, MNCH services are provided to an individual or group.</td>
</tr>
<tr>
<td>Policy/Enabling Environment</td>
<td>Local, state, national and global laws and policies, including policies regarding the allocation of resources for maternal, newborn, and child health and access to healthcare services, restrictive policies (e.g., high fees or taxes for health services), or lack of policies that require childhood immunizations.</td>
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4. PRESENTATION OF FINDING AND DISCUSSION

Addressing health challenges like malnutrition in Nigeria is challenging. Armstrong et al (2006) asserted that a rethink is needed in the way health promotion and public health interventions are carried out and proposes multi-sectoral (working together) approach to strengthen policy and practices. Professionals believe that behaviour-centered approach can improve behavior towards addressing health challenges using a multi-sectoral approach (Vermeer et al., 2013; Hardy et al., 2013). At the intrapersonal level, which are factors mostly within the control of an individual (Stokols, 1996), the CDGP focuses on accessing lack of nutrition knowledge and skills to reduce barriers in choosing a healthy nutrient (Fitzgerald et al, 2008; Shepherd et al, 2006). Low knowledge level on nutrition (Wardle, Parmenter, & Waller, 2000), and skills in preparing local-nutritious meals (Hughes, Bennett, & Hetherington, 2004) is reported to challenge nutritious food intake with what is available in the North. This has informed CDGP strategies of creating behavior change

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communication interventions to increase information and knowledge on the need to consume nutritious food. Among such interventions adopted to scale-up nutrition knowledge and skills include food demonstration, one-on-one counseling and voice automated messages through mobile phones.

Interpersonal ecological level involves interventions targeted at addressing factors affecting core social relationship between the individual with friends, family, colleagues and peers. Empirical evidence reveals that children’s food consumption is not unconnected with their guardian’s knowledge of nutrition and quality meals (Gibson, Wardle, & Watts, 1998; Reinaerts, de Nooijer, Candel, & de Vries, 2007). Cullen et al (2001) and Shepherd et al (2006) posited that nutrition patterns of young people are also influenced by their peers as quality meals are associated to learning from parents and others from fast food through socializing with friends for pleasure. To tackle this influence, CDGP builds a network of nutrition champions who connect and reach out to peers with ideas on how to prepare nutritious meals from locally available food stuff, good infant feeding practices and building a formidable network to promote advocacy for children’s nutrition.

The programme also addresses community and institutional level factors which addresses socio-economic barriers and cultural norms that could hinder change in behavior and practice towards quality nutrition outcomes. Nutrition behaviour can be influence created preference on exported/canned foods, fruits and food by poorer household (Horowitz, Colson, Hebert, & Lancaster, 2004; Satia et al, 2005) and fewer food banks that has local food and fruits (Morland, Wing, Diez Roux, & Poole, 2002) for poor household. CDGP addresses this structural gap using Nutrition Technical Working Group constituting key stakeholders with skills and interest in promoting nutrition standard for children. This TWG should resource and coordinate cash transfer and food distribution programme with the aim of meeting up food needs of its populace.

Community participation is also one approach to addressing behaviour change at community and institutional level. Community involvement and participation is first determined by a participatory assessment at the point of community entry. Community participation have been considered in several global and regional discuss as an element or principle that drives decision making towards achieving sustainable programme development (Shackleton et al, 2002). This informs the need to engage communities in participatory planning and budgeting (Songorwa, 1999). Child Development Grant Programme (CDGP) aligns with Rahman (2005) that plans or programmes entirely developed by external experts, regardless of their technical experience, will not motivate community to participate during implementation. This further justify that it's never enough to refer to a project, ‘community-based’ when actual community stakeholders and beneficiaries are not involved in all stages of the project implementation (Chirenje et al, 2012). To achieve this, CDGP has developed several strategies instituting community participation including participation in plans development, quarterly reviews, studies, routine post distribution monitoring and monitoring of payment & registration agents. Structures like Beneficiaries Reference Groups (BRGs), Technical Working Committees (TWCs), State Steering Committee (SSC) are few structured established by benefiting communities to ensure full participation in the project.

CDGP in addressing policy level factors engages in the development of Social Protection Policy to influence Social Policy programmes in implementing states amidst challenging policy level environment in Nigeria cum with weak governance. International Food Information Council Foundation (2007) reiterated that choice of food to be consumed among the rural poor is determined by the cost. Monsivais & Drewnowski (2007) further posited that healthier and nutritious food are expensive when compared with food with less-nutrients thus the need for policies regulating pricing and food security will have direct influence in nutrition patterns. Nutrition assistance programme can become an important source of nutritious food for rural poor helping to stabilize food insecurity (Fox, Hamilton, & Lin, 2004). Within this consideration, CDGP policy engagement will focus on ensuring social protection is mainstreamed as government responsibility and an effective coordinating system established and strengthened to coordinate social protection programmes.

5. CONCLUSION AND RECOMMENDATION

Every nutrition programme should be dynamic and flexible to meeting growing demands and changes, especially during emergencies. It was also observed that effort towards delivering cash transfer within a stipulated period was unconsciously higher when compared to providing nutrition-oriented interventions to beneficiaries. This also led to low participation in nutrition activities by beneficiaries. To minimize the risk and improve programme quality, a recalibration scenario was introduced which imply slow down enrolment and prioritizing nutrition interventions. This also imply that relaxing the requirement to “saturate” villages (i.e. enrol all Traditional Wards in the village) with the intervention by the end of the programme without compromising the evaluation and will ensure an impactful and quality programme.

The programme having been able to distribute cash transfers at scale in rural areas in the Northern Nigeria, using innovative technology is also faced with challenges around the cost-effective delivery of cash transfers in remote rural
settings. This has become a key concern for government engagement and sustainability. Technologies utilized for cash transfer should take into considerations local contextual issues such as telecommunication network, internet access and human capacity. Learning from the programme should be used to inform state and federal level social emergencies programmes, policy, budgeting and implementation and to provide evidence on that a well-designed humanitarian assistance can bring intended results.

**List of Abbreviations**

- AAH: Action Against Hunger
- BRGs: Beneficiaries Reference Groups
- CDGP: Child Development Grant Programme
- DFiD: Department for International Development
- FMOH: Federal Ministry of Health
- RCT: Randomized Control Trails
- SCI: Save the Children International
- SSC: State Steering Committee
- TWCs: Technical Working Committees
- UNICEF: United Nation Children Fund
- USD: United States Dollars

**REFERENCES**


