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Nutritional Sustainability via Positive Deviance: Challenges for Teaching, Research and Extension

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Abstract: Indices of malnutrition, maternal morbidity and mortality, alongside rampancy of diseases and food insecurity are still major challenges confronting Nigeria and indeed the developing world. Positive Deviance (PD) is one developmental approach that seeks to identify and optimize existing resources and solutions within the community to solve community problems, without brining in "alien" handouts developed without communities socio-cultural and economic considerations. This approach, identifies people or groups within communities who share in the same resources with the rest of the community, but are however able to uniquely enhance a more better and sustainable standard of living. This paper examines how PD works and notes major milestones of PD, especially in the spheres of nutrition, nothing equally the constraining challenges to PD. Relevance of PD on target directions of related Millennium Development Goals (MDGs) is positively highlighted. The need for nutritionists and academics to seek collaborative links with research institutions as well as government and non-governmental partnerships in driving this bottom-top developmental initiative in research and extension endeavors is one strong recommendation noted, amongst others.

Key words: Positive Deviance (PD), positive deviance inquiry, MDGs, malnutrition, food insecurity, morbidity, mortality

INTRODUCTION

Despite remarkable economic growth during the past two decades, the number of undernourished people in the developing countries remains stubbornly high, at around 854 million according to the Food and Agricultural Organization (FAO, 2006). New interventions and strategies aimed at producing results across the MDGs like food fortification, introduction of Vitamin A in foods, amongst others have yielded positive results globally. Most of these strategies have actually been developed and handed out generally, taking the world as a single community, with keen exploration of nutritional resources at local community levels.

Symptoms of current global food and agricultural policy system have been noted to include widespread nutritional problems, including hunger, obesity, chronic diseases and agriculture related health risks such as Avian Influenza (Van Braun and Islm, 2008). Global interventions, especially Aid has been doled out to nations and target communities, with not much effort invested in deriving community resources based solutions, particularly those driven from a positive deviance developmental paradigm.

Traditionally, deviance refers to intentional behaviors that depart from organizational norms that threaten the well-being of an organization, its members, or both (Bennett and Robinson, 2000; Robinson and Bennett, 1995). Although, the study of deviance has change from inception, one common thread that unites most deviance scholarship is a focus on negative: harmful behaviors, marginalized individuals and so on. It is curious if the scholarly gains from research on deviance have been limited by its almost exclusive focus on negative behaviors (Spreizere and Sonenshien, 2004). Positive deviant behavior is a common practice that confers advantage to the people who practice it compared with the rest of the community. Such behaviors are likely to be affordable, acceptable and sustainable because they are already practiced by at risk people, they do not conflict with local culture and they work (David *et al*., 2004). Positive deviants are people whose behavior and practices produce solutions to problems that others in the group who have access to exactly the same resources have not been able to solve. It is important to identify these people because they provide demonstrable evidence that solutions to the problem already exist within the community (Sparks, 2004). Positive deviance is voluntary, purposeful and discretionary, rather than forced or coerced, involves a departure from the norms of a referent group and is therefore often unexpected (Spreizere and Sonenshien, 2004).

Sternin (2007), noted that the common developmental paradigm called KAP (knowledge, attitude and practice), relies on the premise that if you change peoples knowledge this should lead to a change in their attitude and practice, but this does not rely work for behavior change. He pointed out that acquiring the knowledge of

how to brush your teeth and not to indulge in the consumption of large quantities of alcohol, amongst others does not result in behavioral change among individuals. Sternin draws a distinction that, PD reverses that paradigm to PAK (practice, attitude and knowledge), as, it begins by enabling people to change their practice, which then changes their attitude and ultimately they internalize new knowledge.

Sparks (2004) and Sternin (2007) have stressed that, people empower themselves and PD create a climate in which demonstrably successful solutions emerge within the community and are discovered by the very people whose behavior needs to change and it is they who decide to change their behavior. Positive Deviance Inquiry (PDI) therefore, is a methodological approach that is asset based, that seeks to identify and optimize existing resources and solutions within the community to solve community problems (Sternin *et al*., 1998) and has been used successfully to design nutrition programs since the 1980's (Berggren, 2004).

'Malnutrition' encompasses a broad range of nutritional deficits and relates both to quantity and quality of food and lifestyle pattern. Often it's assumed that insufficient quantity of food, leading to inadequate intake of energy (kilojoules/calories) and protein, is the major nutritional problem in developing countries. Indeed protein-energy malnutrition is a serious issue and research have shown that even mildly underweight children are twice as likely to die of infectious diseases, while moderately or severely underweight children have a five-to eight-fold increase in mortality risk (Black *et al*., 2003).

Yet in recent years it has become clear that micronutrient malnutrition (vitamin and mineral deficiencies) contributes substantially to the global burden of illness and mortality (Caulfield *et al*., 2004). The presence, however, of a few very poor families in their communities with well nourished children, (positive deviants), provides justification that it is indeed possible today, despite poverty, inadequate water and sanitation, to have a well nourished child (http://www.hbs.edu/socialenterprise/pdf/positive%20Deviance%20description.pdf).

Objectives:

- To represent PD as a practicable developmental strategy that could demonstrably provide more specifically related solutions to the nutrition question among developing communities
- To describe how PD works essentially by drawing from local and global milestones in nutrition and other related endeavors
- To propose a practical guide on how PDI can be methodologically applied.

Positive Deviance Inquiry (PDI)

How it works: This whole process begins with an invitation from somebody who is working with the community. People whose behavior needs to change are the ones who discover the solution that already exists within their system (Sternin, 2007). PDI has four key steps-define (unlike best practices methodology, where organizations and NGO's define problem and even outcomes), determine (PD can only be applied if someone is already exhibiting a desired behavior or status), discover (look for uncommon practices/ behaviors by the PDs to find better solutions) and design (through this process, the community 'discovers' practices/behaviors that are feasible for all and buys into the process, vetting and analyzing its results) (Sparks, 2004 and Berggren, 2004).

The group begins its work by defining the problem and describing what success would look like- which is the inverse of the (conventional) problem statement. Next, the group determines whether there are individuals who have already achieved success. If there are such people, they are the positive deviants. Next, the group discovers the uncommon but demonstrably successful behaviors and practices used by the positive deviants to solve the problem. And finally, the group designs an intervention which enables its members to practice those demonstrably successful but uncommonly applied practices (Sparks, 2004; Marsh and Schroeder, 2002 and Sternin, 2007).

The positive deviance approach involves partnering with communities to: develop case definitions; identify four to six people who have achieved an unexpected good outcome despite high risk; interview and observe these people to discover uncommon behaviors or enabling factors that could explain the good outcome; analyze the findings to confirm that the behaviors are uncommon and accessible to those who need to adopt them; design behavior change activities to encourage community adoption of the new behaviors; monitor implementation and evaluate the results (Berggren, 2004; Sternin *et al*., 1998; Sparks, 2004). This approach to behavioral and social change takes advantage of the community's existing assets or strengths. The success of the approach rests on its ability to mobilize the community to identify role models within its midst who use uncommon, but demonstrably successful, strategies to tackle common problems. In contrast, most international health initiatives are prescriptive, top down, or donor driven and difficult to sustain without ongoing external resources (David *et al*., 2004).

Positive deviance successful milestones: In a community in the mountains of Peru, a PD strategy has changed the lives of children who had been destined for chronic malnutrition. It was found that mothers could have well-nourished children if they initiated breast feeding soon after birth, exclusively breast-fed until six months old and then introduce nutrient dense foods. It was clear that certain household practices, such as giving a child his/her own plate, not withholding food to

punish a child, hand washing (before meals, before food preparation, after changing nappies or after toilet) and using toilets rather than open fields, all helped mothers to raise well-nourished children. Conversely, many of the mothers not following these practices had malnourished children (Lino and Ruiz, 2007).

In Egypt, contrary to custom, parents of poor but well-nourished children were found to feed their children a diet that included eggs, beans and green vegetables. Child nutrition programmes that provided opportunities to parents of malnourished children to follow this and other new behaviours, such as hand washing and hygienic food preparation, improved child growth (Marsh and Schroeder, 2002).

Using the PD approach in Vietnam, more than 250 communities rehabilitated an estimated 50,000 malnourished children from 1991-1999. Of even greater significance, their younger siblings, many of whom were not yet born at the time of the nutrition programme implementation, are benefiting from the same levels of enhanced nutritional status. Simply stated, positive deviance provided a tool for completely changing the conventional wisdom regarding nutrition practices in these communities (Agnes *et al*., 2002 and PD Initiative Projects, 2007).

After finding that nutrition demonstrations were not significantly alleviating the problem of childhood malnutrition, Save the children (US)-Mali used the positive Deviance Approach to design an intervention with the goal of reducing the prevalence of infant malnutrition and mortality (Basic Education Strategic Ovderhaul II/, 2004). Several International NGOs have done PD Nutrition progrmmes in Mozambique over the past three years enabling poor families with well nourished children to achieve significant superior nutritional outcomes for their children than do their neighbors with access to the same resources.

Other related instances of PD milestones: In 2006 PDI was employed in hospitals in the United States on the problem of Methicillin-resistant Staphylococcus Aureus (MRSA). Hospital acquired infections such as MRSA kill 90-100,000 people a year. It seemed like an intractable problem, in that all hospitals have it. The major cause of hospital-acquired infections is due to health care providers not washing their hands. Doctors and nurses have probably heard that it is a good idea to wash your hands, but that knowledge does not translate into practice or behaviour change. PDI has brought to fore significant leeway in reducing the infections (Sternin, 2007).

In Egypt the enlisting of positive deviants as advocates against the practice of Female Genital Mutilation (FGM) was extremely successful. The willingness and in many cases eagerness of individuals in the community who were not circumcised to talk abut the practice reverberated throughout their communities. Having enlightened Sheiks and medical doctors campaign against FGM was not nearly as compelling as learning from friends and neighbors that it was possible in that community to be a virtuous woman without undergoing the procedure (PD Initiative Projects, 2007).

Strength and weakness in PD: The use of PD provides two distinctive advantages for those working in advocacy. First, by discovering and sharing the actual successful practices and behaviours utilized by the positive deviants, advocates can make those behaviours accessible to others. The second is the enlistment of the PDs themselves as advocates (http://www.hbs.edu/socialenterprise/pdf/positive%20Deviance%20description.pdf).

The PDI approach does, however, has limitations, as it requires discovering uncommon positive examples, typically at a prevalence of 1-10%. Rare examples are costly to identify and common examples fail to stimulate new thinking. By extension, the approach is inappropriate for settings where positive behaviour is impossible due to non availability of services or foods. Scale-up requires many people with skills in community mobilization, participatory research and positive deviance, which may limit uptake (Seth *et al*., 2003; Dearden *et al*., 2002; Marsh *et al*., 2002).

Researchers have questioned the efficiency of the approach, given the presumed limited generalizability of findings from local inquiries and the desire to mobilize each community through self discovery. Practitioners now need to test the assumption that positive deviance is, of necessity, a small scale approach by evaluating the effectiveness of different intensities of inquiry (number per population size). Also, the challenge of systematically describing and valuing the additional unintended benefits accrued by communities that have taken part in positive deviance programmes, may pose critical revelations (Berggren and Wray, 2002; Mackintosh *et al*., 2002).

Possible implications of PD towards related MDGs 1, 4, 5 and 6: According to Badiane (2008), the rate at which poverty is been reduced is well bellow what is required to meet the first MDG1 of halving the population of poor and hungry people by 2015, even as the average poverty levels in Africa have decreased by only about 6% during the past 10 years. Maternal and child undernutrition contributes to more than one third of child deaths and more than 10% of the total global disease burden (Black *et al*., 2008).

De Onis (2008) on this premise notes that, reducing infant and young child growth retardation is essential to achieve the MDG related to child survival (MDG4) as well

as the eradication of extreme poverty and hunger (MDG1). From MDGs indicators in Nigeria 2007, less than 5 child mortality rate is at 138/1000 and infant mortality rate at 86/1000. On nutritional status based on indicator 4 of MDG, underweight, stunting and wasting prevalence is 25, 34 and 11% respectively (National Bureau of Statistics, 2008). Realizing the MDG targets must see to evolving local communities' strategies and interventions in view of the specificity and peculiarity of local problems and encouraging mass applications of the PD approach will evolve multiple perspective solutions to common global problems in more sustainable manner towards nutritional sustainability.

Conclusion: Positive deviance is a development approach that seeks to identify community resources, noting particularly what are the positive things going on and exploring how best these can be harnessed. The belief and realization that, within a community lays individuals and resources that can be identified and exploited is a dependable strategy that could improve and sustain community nutrition and also engender community ownership and trust. Resource orientations and availability even within Nigeria varies across communities, consequently PDI stands out in leading the way to their better harnessing for nutritional sustainability, rather than waiting for more comprehensive global inputs and solutions.

Recommendations:

- The community resource based PD represents a more dependable approach and it is imperative for researchers and extension workers to consider further some community peer reviewing to augment possible potential lapses in the event of some outright inadequacies or dearth of community distinguishable resource pool.
- Where no positive deviant is not readily identified or willing to standout and participate, it may be important to enlarge the geographical focus and extend situational analysis widely, particularly along similar resource and or vulnerability lines of adjoining locations or communities.
- From an immediate research and extension angle, nutritionists in the universities and related institutions can map up little geographic areas within their operating environments and on experimental basis attempt applying the PDI methodological to familiarize with its operations towards a wider application.
- Towards positive innovative research and extension, universities, especially nutrition and home management departments must take steps by deviating from conventional research methods and emphasis more longitudinal survey designs by introducing PDI in selected locales to see how the nutritional status of such communities can be enhanced. Selected students could be assisted to embark on a longitudinal research with a PD focus.

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