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# Why Nutrition is not improving in Pakistan: an overview of Policy-related, Technical and Professional issues

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## ABSTRACT

In spite of contributions by international agencies, Nutrition status of Pakistan has not been improving since several decades. In preceding years focus on nutrition has been greatly enhanced, however likelihood of any significant improvement depends on identification and prevention of pitfalls that restricted progress in the past. Increasing the dose of a wrong medicine is unlikely to cure the disease. This paper reviews the previous activities and attempt to explore the gaps. While nutritional status can be assessed in a variety of ways, sustainable improvement in the nutritional status at the national level is not possible without identifying dietary inadequacies and taking measures to assure adequate food intake.

Human nutritionists are expected to have expertise for assessing nutritional status as well as for developing strategies for control of malnutrition. However in Pakistan professionals in the forefront of nutrition related activities lack the expertise to devise appropriate dietary interventions as many of them are neither nutritionists nor dietitians.

The nutrition intervention activities in Pakistan are hampered at all levels due to lack of quality control. From conducting of national nutrition surveys to provision of dietary advice, the quality of nutrition activities is affected to the point of threatening health and wellbeing. Without control of quality of nutrition related professional activities, investing in nutrition is like trying to fill the tank with a pitcher having several holes at the base. Hoping to develop and implement effective evidence based strategies in this scenario may remain an unfulfilled dream.

Thus in terms of policy, while making any intervention a plan for reducing stunting, assurance of quality of services rendered by team members is required. There is a dire need for a GOP commission that would streamline accreditation of relevant professional nutrition education and training programs, registration of human nutrition professionals and assuring quality of services provided by these professionals.

*Keywords: Nutrition surveys, Community Nutrition, Nutrition Surveillance, Pakistan*

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## Background

Nutritional status is not determined solely by affluence (Alderman 2010;Boyle et al. 2006) and dietary factors are found to influence it irrespective of income level (Arimond and Ruel 2004). Historical evidence indicates that improvement in nutrition and health precedes economic growth and justifies prioritizing nutrition for nation's progress (Suchit Arora 2002) . Still, in Pakistan, Diet and nutrition is yet not identified as a determinant of economic growth and this disregard is reflected in scale and effectiveness of nutrition programs.

Nutrition programs that can trigger positive change must be comprehensive and should lead to required actions and desired outcomes (Latham 2003;Webb et al. 2006). Effective

programs are based on comprehensive understanding of local nutritional issues (Frongillo, Jr. et al. 1997;Frongillo et al. 2003) require professional competence. Importance of professional competence of persons involved in nutrition programs has long been recognized, standards and criteria for these professionals have been suggested by experts as early as in 1941 (Shepard et al. 1941); and have been evolving since then(Hughes 2004;Kaufman 1986;Landman et al. 1998;Sims 1979). Accreditation as registered dietitian has been identified as important predictor of effectiveness among public health nutritionists by program directors (Sims and Kohli 1983).

In the view of the authors, in Pakistan these criteria are totally ignored in recruitment of team members for planning and implementation of nutrition programs and

this trend is a potential contributor to ineffectiveness of the programs. This paper aims at sharing available evidence for the above made assumptions and suggests ways for removing these blocks.

### Methods

A few major nutrition related activities undertaken by public sector various institutions and organization of GoP, NGOs, and media were reviewed to assess the validity of assumption that in Pakistan:

1. Professional competence of persons who undertake nutrition programs is dubious.
2. This limitation is a likely reason for low cost effectiveness of nutrition programs undertaken in Pakistan

### Results:

#### *Professional resources used for nutrition programs*

It is very unfortunate situation that in Pakistan human nutrition professionals are available since 1960s (Laall 1972; Rana Liaqat Ali Khan Government College of home Economics Karachi 2011) but has been rarely been found participating in national nutrition programs .

Examples of lack of interest in including nutritionists or dietitians in large public projects are quoted here:

**Describing the survey personnel NNS 2011 states:**

*"National Survey Coordinator, Senior Survey Coordinator and Survey Coordinators were senior medical doctor and lead social scientists with years of experience in nutrition related surveys nationally and internationally." NNS 2011*

**Similarly NNS 1988 mentions:**

*"Team members were regular employees of the Health Department seconded for the field work. Each team comprised of the following. Lady Doctor -1, L.H.V (Lady Health Visitor), -2 Technicians -2, Supporting staff -1, Driver NNS1988*

**Most probable reason is domination of medical experts in the process of selection.**

Advertisements of these posts mostly give non-specific criteria broad enough to facilitate recruitment of medical professionals or other personally preferred applicants.

For example in position of Nutrition Officer the qualification sought are "University Degree in Nutrition or Public Health or Medicine with emphasis on Maternal, Newborn, and Child Health; Knowledge of latest development and approaches to Nutrition". And then almost always those with medical degree are appointed.

The reason for ignoring this human resource may be lack of knowledge for intentional agencies but not for local stakeholders as these resources are often used for review and implementation of private projects where approval or participation by qualified persons is mandatory by donor agencies. Lack of interest of these graduates in working in nutrition projects is a less plausible reason as scores of communication are received by PNDS about rejection of these experts when they apply for posts for nutritionists. One of the dietitians reports her experience as follows:

*"I am writing to you to share my experience with United Nations recruitment process. I applied for the post of Nutrition Officer in one of the projects of UNICEF in August 2011 and got an interview call on one day notice..... We gave the test and only two of the nutritionist qualified for the interview and all the doctors failed. The doctors who were not able to pass the exam for that test had already worked for that post. I was given high hopes during nutrition but never got any post interview call...I have applied for 10 positions till to date and got an interview call once."*

Recently a well known medical university has initiated establishment of department of public health nutrition where the chairperson of the department is a food technologist (Anonymous T : 2012).

#### *Activities undertaken by public sector:*

In the present review quality of nutrition

activities undertaken by Public and private sector in Pakistan will be assessed on the basis of their potential for contribution in strengthening of national nutrition capability (Bagchi K 1989).

The potential of nutrition surveys to identify the problem is limited because the focus of survey is mainly on assessing indicators and much less or nil on identifying causal factors and studying association between all aspects of malnutrition. For example, none of the surveys provide association of malnutrition with dietary factors (Aga Khan University et al. 2011;Government of Pakistan 2002;National Institute of Health 1988).

No reports give any information about how the quality of whole project was assured and how the data from survey could be used by other professionals for further analysis or evaluation. Assessment of quality of dietary is difficult because dietary data and methods of its collection and calculations have seldom been completely reported e.g. none of the reports mentions which food composition tables were used or what method were used to assess subjects' energy requirements. Data collected is neither given insufficient details in reports nor made available to other professionals to facilitate dietary guidance. For example associations of food and nutrient intake with other markers of nutritional status have rarely been explored nor differences in diets of good or poorly nourished children given (Government of Pakistan 2002;National Institute of Health 1988).

Discords between observations within the reports or mismatch of observations with other sources of data have not been explained or justified. For example report of high rates of malnutrition in spite of reported frequent consumption of milk meat and eggs as main food by children in NNS 2001 (Government of Pakistan 2002).

Most of the activities lack comprehensive nutrition assessment and have technical limitations and thus have limited usability in terms of planning sustainable interventions to provide advocacy for uplifting the status of

nutrition in policy making. Mostly recommendations are focused on gender, economic and medical issues and not directly or mainly on nutrition (Aga Khan University , Pakistan Medical Research Council (PMRC) Nutrition, & Pakistan Medical Research Council (PMRC) Nutrition Wing 2011;Government of Pakistan 2002;National Institute of Health 1988).

It is a very disappointing situation that in spite of advancement in technology and communication facilities, in Pakistan, at face validity of dietary aspects of nutrition surveys has been greatly decreased since 1988.

NNS 1988 has been the most comprehensive and sensible nutrition survey but still cost effectiveness of this project is limited by techniques used for example re child feeding it states:

*"Questions on feeding habits were directed to the mother of a child under five years. Most related to "the most recently born" child. Hence the accuracy of recall would depend on the current age of that child. All data were manually analyzed, hence cross-relationships with other variables, such as age, educational level, etc could not be analyzed. It was also unclear in the analysis which particular child in the family this question referred to." NNS 1988.*

Methodology used for assessing adult food intakes in NNS1988 was expensive and elaborate as the food intake was observed and weighed. These kinds of data have immense value for understanding food habits and exploring dietary causes of malnutrition. However the data collected about portion sizes consumed, cooking method used and nutritive value of cooked foods neither been reported anywhere nor have been available to professionals for further use and analysis.

NNS 2001 states *"Main foods consumed by children are milk, boiled egg, roti and meat and wheat bread and rice are the two main cereals taken by mothers in Pakistan"*. This pattern of children's food intake firstly appears unusual for Pakistani

children and has never been reported in any other study. Presence of malnutrition with this pattern of food is feasible but needs exploration of those factors e.g. amount of these high protein foods eaten by children. But as no attempts are made to assess of adequacy of food and nutrition intake an individual level and relate it to nutritional status. (NNS2001).

Final report of NNS 2011 does not have any information about nutrient intake (Aga Khan University, Pakistan Medical Research Council (PMRC) Nutrition, & Pakistan Medical Research Council (PMRC) Nutrition Wing 2011).

None of the survey made any attempt to make its results comparable with the previous one. Each survey had a very different kind of team in terms of professional expertise. A recent report by DFID (Hall Andrew 2011) has also identified similar limitations in national nutrition surveys and states.

"Interpretation of the data from the nutritional surveys conducted in Pakistan is challenging."

**Regarding NNS 2001 and NNS 2011 it comments:**

"Neither data can be used reliably in this report for three reasons:

- First, the sampling method used in the 2011 survey may have over-sampled the youngest children in the age range 0 - 5 years which would lead to over-estimates of the prevalence of indicators of undernutrition. This can be corrected; re-analysis will provide valuable data.

- Second, the 2011 survey included children whose households had been affected by flooding, which may have resulted in an over-estimate of the usual prevalence of under nutrition, especially wasting.

- Third, the two national surveys used different growth references (NCHS in 2001 and WHO in 2011) to classify children as stunted, underweight or wasted, so comparisons cannot be made until the 2001 survey data is revised using the new WHO growth references

(WHO has developed a conversion tool). Ideally, a minimum of three data points are required to be able to detect a trend; hence meaningful interpretation may still prove difficult."

### **Activities By Private Sector:**

Nutrition activities undertaken by private sector are rarely monitored by any funding or administrative agency. A scenario shared by a dietitian is quoted here as an example:

*"When I came back from abroad after getting advanced degree in Public Health Nutrition, after long effort I found a contract of 3 months, in a project that was related to Zinc deficiency in a slum area of Karachi. In this project children were to be given Zn isotopes, without any assessment of zinc deficiency, with an assurance given to mothers that it would treat diarrhea. These children were already enrolled in another Zn supplementation program and receiving supplements and majority of mothers were giving a Zinc fortified cereal and Zinc fortified formula milk to children. I felt uncomfortable with the practices and left the project thinking if somebody give these Zinc isotopes in this manner to my child how I will feel."*

Due to lack of government interest in taking responsibility of quality of nutrition education being imparted to public, there are numerous instances where corporate sector and media is propagating non-scientific nutrition and harmful messages very freely. A few of the examples are consumption of fizzy drinks by cool kids, advertising margarine as an important food for linear growth, potential of green tea to substitute for exercise etc (you tube news paper ads to be referenced). Similarly lack of accreditation and licensing of human nutrition professionals promotes recruitment of non-qualified professionals at posts requiring nutrition services (Anonymous U 2012; Anonymous W 2011; Anonymous X 2012; Anonymous Z 2012) and thus not only limits potential for utilization of these personnel for reducing malnutrition actually increases the risk of augmenting malnutrition ".

### **Conclusion and suggestions**

Quality of community nutrition activities being undertaken in Pakistan need urgent attention and assurance of fitness of human resources to the responsibilities is an

important element for quality assurance. From a few relatively recent plans it is evident from few latest public actions among the public stakeholders realization of these issues has emerged. For example nutrition has been given more focus in latest five year plans and issues of quality and training has been identified in latest five year plan (Planning Commission Government of Pakistan 2012).

#### **Suggestions:**

National stakeholders and International donor agencies can play an important role in triggering the series of actions by including following clauses in terms of reference of any project funded by them.

Role specification should be clear enough for managers, government representatives and nutritionists to safeguard against influence of managers or public figures on technical decision.

It should be made mandatory that at all levels of nutrition related responsibilities only duly qualified person would be employed.

All procedures need to be judiciously explained

Date should be freely available to professional and students for further analysis.

All projects should include plans for independent evaluation of projects for quality assurance.

Objectives and survey procedures should provide sufficient potential for exploring modifiable life style practices and devising sustainable interventions.

For improving quality of nutrition activities Government of Pakistan needs to take following action:

For planning and implementing nutrition programs semi-independent institutes needs to be established that are lead by duly qualified nutritionists and have managerial staff and other experts in their team for providing support in the conduction of nutrition programs.

Role of Government representatives and donor needs to be limited to facilitators and nutrition institute should be directly

responsible and accountable for nutrition programs

Government of Pakistan should establish Pakistan nutrition council for registration of human nutrition professionals and accreditation of human nutrition courses that provide required knowledge base and skills to make the graduates eligible for registration as HNP. Till this is done professionals registered with PNDS as HNP could be considered eligible of nutrition related posts because at present it is the most credible system available in Pakistan for assuring competence of any professional to work as HNP (PANAP Committee 2012).

Government should make laws for controlling the quality of nutrition services being rendered by private sector and scrutiny of messages propagated for food ads and media.

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