

## KEY FINDINGS OF THE NATIONAL NUTRITION SURVEY OF 2011

### The Context

Under-nutrition is one of the modifiable threats to global health and child survival especially in poor and under developed settings. Over the past 20 years there has been little change in the prevalence of malnutrition in the population despite more food availability and an overall increase in caloric intake per capita. The purchasing power of people is decreasing day by day. In Pakistan, large family size forced to expense 46 percent of the family income on food while food expenditures in India are 35 percent. Pakistan stands second highest in the stunting rate (44%) since many decades, after Afghanistan which suffered with all odds (Social, Political, Economic, etc.). Nepal and India jointly share the stunting rate at 43 percent. Pakistan has lower rates of underweight as compare to other SAARC countries, but still Bhutan, Srilanka and Maldives have better rates of underweight. Food insecurity has become one of the major national problems in Pakistan. The NNS 2011 shows that 58% of households are food insecure and 9.8% of these are food insecure with severe hunger. This portrays the poor nutritional status of the Pakistani population and has consequent implications on the nutrition, growth and health of the population. The National Nutritional Survey was conducted in 2011 from a total of 27,963 households to assess the national nutritional status of women and children. This policy brief highlights the finding of the nutrition survey and gives a brief overview of the nutritional status of women and children in Pakistan.

### Methodology:

This was A Cross-Sectional Survey. Each city/town was divided into a number of small compact areas called Enumeration Blocks (EBs) consisting of 200 to 250 households. The rural sampling frame, comprising 50,572 mouzas/dehs/villages, was used for drawing the sample for this survey. For the entire sample of 30,000 households (SSUs) was collected from 1500 Primary Sampling Units (PSUs) -618 urban and 882 rural. As urban population was more heterogeneous therefore, a

### SALIENT POINTS AND RECOMMENDATIONS

- 58% of the households are food insecure.
- 18% of Women aged 15-49 years are under weight.
- 31% of children are underweight.
- Nutrition status of <5 years children has shown no improvement from last 46 years
- Anemia has worsened among both pregnant and non-pregnant women and pregnant women in urban areas are having more iron deficiency anemia.
- Pakistan may be witnessing the double burden of under nutrition and obesity within rural and urban women of reproductive age.

higher proportion of sample size was allocated to urban domain. Sample size calculation was based on expected prevalence rate of wasting and stunting in children less than five years and mothers' iron deficiency anemia.

### Women's Nutritional Status

In the Nutrition Survey 2011, 72% of index mothers<sup>1</sup> were aged 20-34 years and 60% of them were uneducated. This contrasts with 55% of the sample from the 20-14 year old age bracket and 57% women having no education in the nationally representative Pakistan Demographic and Health Survey 2012;

### WOMEN NUTRITIONAL STATUS

Indicators	National	Sindh	Punjab	Baluchistan	FATA	AJK	KPK	Gilgit
<b>BMI</b>								
Underweight	18		NA					
Normal weighing	53							
Overweight	19							
Obese	10							
<b>Anemia</b>								
Hb Deficient (NPW)	51	62	49	49	45	41	36	23
Hb Deficient (PW)	51	60	50	48	0	43	28	35
Iron Deficiency Anemia( NPW)	20	23	20	16	16	19	5	10
Iron Deficiency Anemia( PW)	26	25	27	31	0	28	15	30
<b>Micronutrients</b>								
Vitamin A Deficient ( NPW)	43	36	43	50	83	13	72	39
Vitamin A Deficient ( PW)	49	50	47	62	0	31	85	45
Calcium Deficient ( NPW)	51	44	52	60	81	6	71	45
Calcium Deficient (PW)	58	50	63	63	0	4	61	71
Vitamin D Deficient (NPW)	85	91	83	83	85	95	80	96
Vitamin D Deficient ( PW)	86	85	88	78	0	85	77	96
<b>Energy Intake/day</b>								
Energy Intake/day( K.Cal/day)	1984	1855	1854	2099	2284	2095	2414	2155

CHILD NUTRITIONAL STATUS								
Indicators	National	Sindh	Punjab	Balochistan	FATA	AJK	KPK	Gilgit
<b>Growth</b>								
Severe Stunting ( 0-59month)	24	26	17	32	36	12	25	22
Wasting rate	17	19	6	18	10	18	18	9
Under weight	31	40		42	13		24	
<b>Anemia</b>								
Anemia	62	73	60	58	86	45	47	40
Ferritin deficiency	44	40	48	35	15	44	21	36
iron deficiency anemia	33	32	36	23	26	28	13	21
<b>Micronutrients Deficiency</b>								
Vit- A Deficiency ( 0-59month)	56	58	53	81	100	37	78	82
Zinc Deficiency ( 0-59month)	37	39	35	34	34	49	34	33
Vit- D Deficiency ( 0-59month)	41	43	42	40	26	33	30	32
Iodine Deficient ( 6-12 years)	37	35	39	35	10	65	26	70
<b>Breast Feeding and Weaning</b>								
Early initiation of Breast Feeding	41	51	41	63	79	38	74	62
Exclusive breast feeding till 6 months	65	68	58	64	36	64	88	73
Weaning age ( 6-8months)	52	63	50	49	55	36	36	52
Minimal acceptable meal frequency	66	67	68	61	71	69	52	56
<b>Energy Intake / Day</b>								
Energy Intake/day( K.Cal/day)	692	715	616	1165	998	816	939	563

suggesting considerable oversampling of younger women of reproductive age. Almost half (47%) of the women reported to have had 3-5 pregnancies in past five years while 22% reported having 6 or more pregnancies. 64% of pregnant women had sought antenatal care during their last pregnancy and among these, 26% reported having taken nutritional supplements during their last pregnancy.

Among the surveyed women, 18% had low BMI and were underweight, 53% women have normal weight, 19% were overweight and 10% were obese<sup>2</sup>. There was slight higher underweight among rural women (20% vs. 14%) while overweight/ obesity was more common among urban women (39% vs. 23%).

### ISSUES IDENTIFIED

- The survey oversampled certain age groups thus making it difficult to apply these findings nationally
- Nutritional Status Varies widely across the country. The differences are more regional (i.e. between provinces) than along the urban rural divide
- Poverty-nutrition interaction in Pakistan is strongly influenced by the degree and form of female subjugation.
- It can be argued that some of the maximum gains for maternal education can be achieved by reducing high fertility rates, inappropriate child spacing and early marriages.

Only half of the women (51%) had normal hemoglobin levels. Among the anemic women, 20% among non-pregnant and 26% among pregnant women had iron deficiency anemia. There were little differences among rural and urban women. The micro nutrient deficiency

<sup>2</sup> The BMI was divided into four categories namely underweight having BMI of <16 to 18.49, Normal having BMI of 18.5 to 24.99, over weight having BMI of 25 to 29.99 and obese having BMI of >30.

is also seen in both pregnant and non-pregnant women. As expected, the Vitamin A, Vitamin D and Calcium deficiency was higher among pregnant women than among non-pregnant women.

### Children's Nutritional Status

Children 0 – 59 months of age were included in the survey. At national level 31% children were underweight. The underweight rates have remained constant during last one decade while stunting and wasting have increased. This is true for all provinces except in AJK. Nationally, severe stunting was observed among 24% of children aged 0-59 months and wasting at 17%. Education of the mother was closely associated with malnutrition, child stunting, wasting and underweight status

Even more concerning is the finding that 62% of children are anemic with some regions such as FATA showing up to 86% prevalence of childhood anemia. As expected, severe anemia is more common in rural than in urban areas. Overall 56% index children<sup>3</sup> were found vitamin A deficient (23% severely deficient 33% mild deficient). Zinc deficiency among index children in Pakistan was 37% and vitamin D deficiency was 41%. Pakistan has had a number of programs that promoted iodine supplementation. Perhaps as a result, nationwide the prevalence of severe iodine deficiency has come down to 2.2% from 23%

### VACCINATION STATUS

	On recall	Card verification
BCG ( on mother recall)	86.6%	31.5%
Measles	64.6%	23.1%
Pentavalent	76%	30%
Oral Polio drops	95%	27.2%

An overwhelming majority (95%) of mothers reported that their children received Oral Polio drops at least once, while almost half (52%) reported that their children had received polio drops more than 7 times.

The indicators for breast feeding practices including its early initiation after birth and exclusive breast feeding were not satisfactory and even worse in urban areas.

<sup>3</sup> Index Children: (aged 0-59months)

Almost half of the mothers start weaning late thus putting children at risk of malnourishment at young age.

### **Interpretation of Key Findings**

The link between malnutrition and poverty is well recognized as is the relative poverty of women and children within a household.

These findings suggest very high rates of malnourishment of women and children and are extremely alarming.

The lack of differences between rural and urban areas is unexpected and warrants a more detailed sub-provincial analysis. It would also be useful if data were disaggregated by wealth status, family size and correlated with economic indicators such as family income.

While some level of malnutrition may be addressed using a program approach, as was seen for iodine deficiency, these findings suggest a more holistic economic and development approach to address malnutrition which ultimately is the end result of poverty.

Specific programs that may help with this malnutrition may include those that promote women's autonomy and prestige within households, increase employability and specialization of household members (especially the women). Family planning programs that reduce family size and space children and targeted food supplement programs aimed at the extremely malnourished families.

Future research must include some measure of the nutrition status of other members of the households as a comparator.

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Supported by USAID's Small Grants Program: **Synthesizing Evidence for Policy and Action: Bridging the Gap between Knowledge and Results to Improve Health Outcomes**

**Disclaimer:**

This report was made possible with support from the American people delivered through the U.S. Agency for International Development (USAID). The contents are the responsibility of Research and Development Solutions, Private Limited and do not necessarily reflect the opinion of USAID or the U.S. Government.

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