

Cost of Diet: Provincial Comparison

Introduction

The prevalence of undernutrition has shown little change in Pakistan over the last several years. The Pakistan Demographic Health Survey (PDHS, 2017-18) and National Nutrition Survey (NNS, 2018)¹ show 38% and 40% of children below five years of age are stunted, respectively. There are **provincial differences**, for example, in Multiple Indicator Cluster Surveys (MICS 2018-19), 50 % of children in Sindh province are stunted and 41% are underweight, while in Punjab (MICS 2017-18) these rates are 32% and 21% respectively. Therefore, province wise Cost of Diet (CoD) analysis is essential to determine policy implications specific to province. The CoD of four provinces—Khyber Pakhtunkhwa (KP), Punjab, Sindh, and Balochistan—is compared in the brief that follows.

Methodology

Cost of the Diet (CoD) Analysis surveys were conducted in 2018 in 17 livelihood zones in 12 districts across four provinces and three administrative regions (Azad Jammu and Kashmir, Gilgit-Baltistan and Islamabad Capital Territory) of Pakistan. The four provinces are the key focus.

CoD software is used to calculate four types of diets that recommend intakes of energy, protein, fat and micronutrients based on specifications to limit the intake of foods and nutrients to avoid toxicity. The four diets are presented for the individual or family under discussion (refer to figure 1). While all four diets are analyzed in the study, the focus is on the affordability of two key diets: NUT and FHAB, with additional discussion of EO diets (refer to policy brief #56 for more information about the methodology).

Figure 1: Four types of Diet

Food habits nutritious diet (FHAB): Meets recommended intakes for energy, protein, fat and 13 micronutrients based upon typical dietary habits of households in the assessment district or livelihood zone

Nutritious diet (NUT): Meets recommended intakes for energy, protein, fat and 13 micronutrients

Energy-only diet (EO): Meets only recommended average energy specifications

Findings

The FHAB diet costs 4 to 5.2 times as much in Punjab as a diet that merely satisfies energy needs. Out of the four provinces, Punjab has the most expensive FHAB diet, and KP has the least expensive FHAB diet at 2.3 to 3 times.

Across all four provinces, vitamin B12 and calcium were the hardest nutrients for the software to meet using locally

Salient Features

- Cost of Diet studies estimate costs, identify local cost-effective alternatives, and suggest interventions to overcome malnutrition caused by poverty.
- Overcome income gap with income generation, cash transfers, food vouchers, or cash for work programs.
- Some food taboos wrongly lead to avoidance of healthy foods such as beef and pulses for pregnant women in all four provinces.

available foods. However, in **Sindh, pantothenic acid, folic acid, vitamin C and vitamin B2 nutrients were hard to meet locally as well.**

Some nutritious foods are taboo for pregnant women and lactating mothers. **Beef and pulses were strictly avoided in all four provinces.** Consumption of food is influenced by local customs and culture as well as cost. Interestingly, banana is believed to result in diabetes during pregnancy in Punjab. Dairy products, such as eggs and yogurt, are assumed harmful for pregnant women in Balochistan. In tribal areas of KP, foods that have warm effects are considered to be harmful for pregnant women and fetus. In Sindh, some pulses, such as lentils, are avoided by breastfeeding mothers because of the belief that they cause abdominal pain to mother and child.

Additionally, a similar pattern was seen in all four provinces; whereas, the cost of the FHAB diet was marginally higher in the autumn, there were **no significant seasonal variations** in the daily cost of the eating habits diet. However, in Punjab prices of food commodities relatively lower in winter.

The following corresponding results were found in all four provinces:

- The availability of **nutrient-rich foods was not a key barrier to poor households** obtaining a nutritious diet.
- Very poor, poor, middle and better-off households cannot afford a FHAB diet.
- Breastmilk significantly contributes to the energy, protein, fat and micronutrient needs of the child aged 12–23 months.

In this assessment, reference to HIES 2015–2016 for household incomes and the proportions of food and non-food expenditure are determined (refer to table 1).

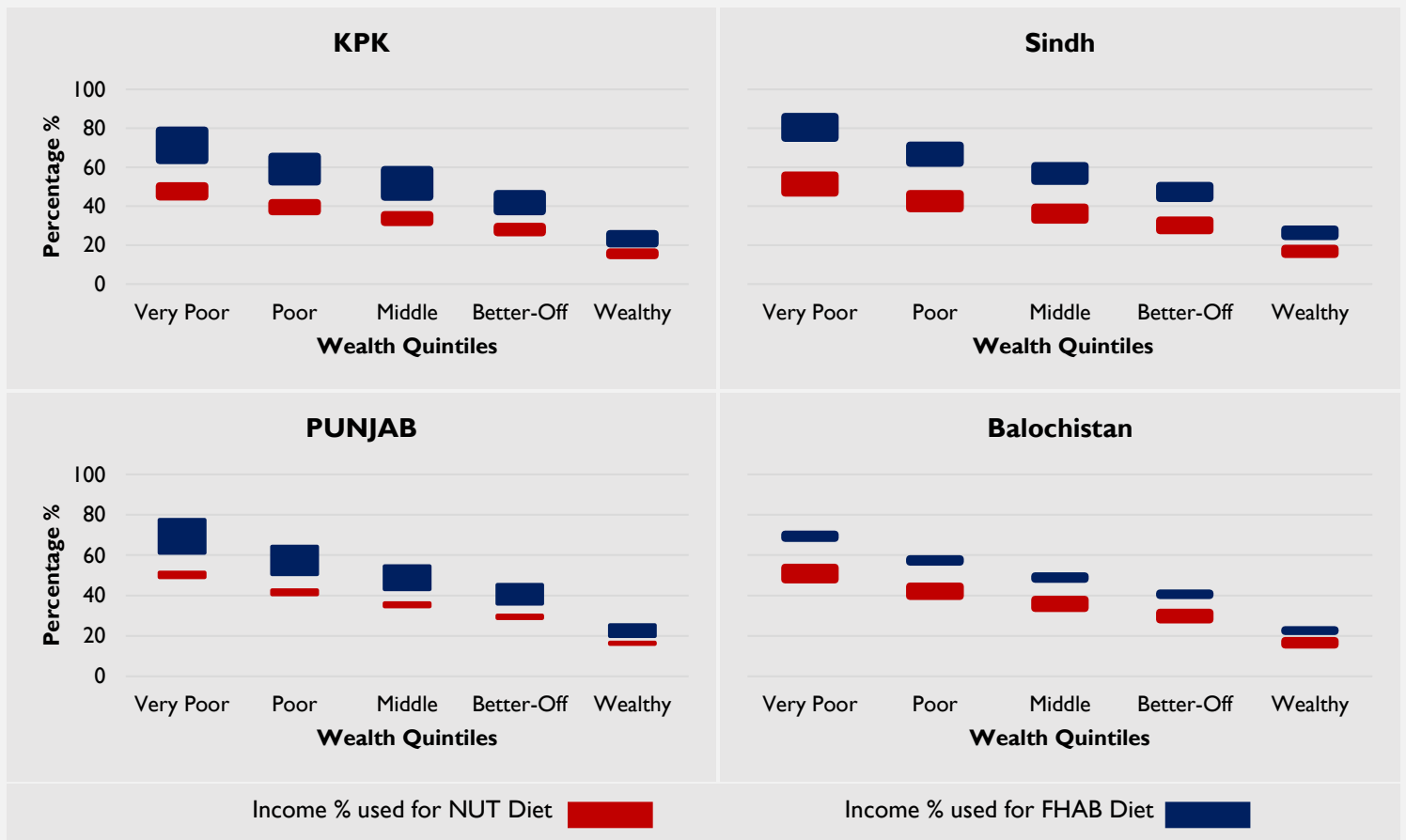
Table 1: Annual Income in 4 Provinces by wealth quintile

Wealth Quintiles	Annual Income	Non-food Expenditure	
		Annual Expenditure	% Of income
Very Poor	236,904	139,830	57 - 59
Poor	285,912	172,927	60 - 60.5
Middle	336,240	201,890	60
Better-Off	404,016	236,908	58.6
Wealthy	725,412	399,977	50.1 - 55.1

¹National Nutrition Survey 2018, <https://www.unicef.org/pakistan/reports/national-nutrition-survey-2018-key-findings-report>

²Cost of Diet Report – Pakistan 2018, <https://www.unicef.org/pakistan/reports/cost-diet-analysis-report-pakistan>

Figure 2: Nutritious (NUT) and Food Habit Nutritious (FHAB) Diet Expenditure Proportion



To determine affordability, the cost of each diet plus essential non-food expenditure is deducted from the total income. All of these estimates are based on multiple assumptions and variable parameters. Percentage of income used for non-food expenditure falls in the ranges of 50% to 60% for all provinces.

Using the annual incomes for each wealth quintile, we determined the ranges of annual percentages of income used for NUT and FHAB diets (refer to figure 2). The figure 2 represents that **FHAB diet is not affordable for very poor, poor and middle households**, while even the **NUT diet is not affordable for very poor and poor households**.

Interpretation

According to the data, the affordability gap for a healthy diet for very poor and poor households is 50% and 40% of income, respectively. The findings suggest that existing consumption patterns are unlikely to alter without an increase in income for very poor, poor and middle in all four provinces. Cash transfers, food vouchers, cash for work programs, or income-generating activities could all be used to close the income gap. Household economic approach studies particular to districts could identify activities.

To ascertain whether poverty may be limiting households from receiving a food that is sufficiently nutrient-dense, it is critical to estimate cost. Programs for social security and cash transfers can be informed by an assessment of the difference between household income and the cost of a diet.

Conclusion

- The CoD analysis reveals that although nutritious food is available in the local markets, very poor, poor and middle households cannot afford the FHAB diet given their dietary habits and levels of income.
- There was no major difference in respective to income percentage used for food expenditure across the four provinces. Indicating that no province is better off than the other. However, to keep in mind the study sampling used is not representative of Pakistan as it is not random and has selected districts with the highest levels of undernutrition and as requested by each province.
- Lactating mothers are the most expensive members of the family because of their increased requirements for energy and micronutrients.
- The analysis shows the importance of breastfeeding with appropriate complementary feeding to a child aged 12–23 months.
- Some food taboos were reported such as, beef and pulses were considered harmful for pregnant women in all four provinces. Thus, indicating that interventions based on food or nutrients alone will be insufficient and behavioural modification is necessary to promote dietary diversity and prevent stunting.

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