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Child Malnutrition in Pakistan: Evidence from National Nutritional Survey 2018

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Abstract

Malnutrition is one of the gravest obstacles to a child's optimum growth and development. To understand the on-ground situation, it is crucial to identify the indicators contributing to child malnutrition. The purpose of the study is to determine the factors behind child malnutrition leading to stunted growth. Data was retrieved from the National Nutritional Survey (MNS), 2018. The prevalence and frequency of malnutrition were assessed using data from NNS (2018) to find empirical results of four main variables, i.e., stunted, underweight, overweight, and wasted. The key drivers of undernutrition result in low birth weight, which is a causal effect of maternal nutrition and low nutrient intake; however, the situation differs by province. Punjab has shown a significant decline in stunting, while stunting levels in Sindh remain static. Another issue is that barely more than a third (38 percent) of children less than 6 months of age are exclusively breastfed.

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Introduction

Trivial nutritional intake is compounded by contagion results in malnutrition. This marginal dietary intake is normally caused by insufficient knowledge of sanitation and its correlation with clean drinking water, marginal alternatives from food chain shortage unequal sources of income. High infant mortality rate, low literacy and widespread malnourished children & mothers are the mainly momentous societal problems of the developing countries and Pakistan is no exception. For example, child malnutrition is regarded as a significant risk factor for morbidity and mortality, accounting for almost fifty percent of worldwide child fatalities (Cheah et al., 2010). Physical and mental growth of a malnourished child is badly affected, and many researchers have pointed out its impact on their lives. It also impacts child morbidity rates and jeopardizes their physical and mental development, leading to diminished educational achievement (Chirwa & Ngalawa, 2008; Nazirullah et al., 2023).

Correlation between different causes of malnutrition as multi-dimensional and cross-cutting effects. Few researchers have been found that the causes of child malnutrition are interconnected and multi-faceted, including several facets of life.[3] Food-insecurity and physical health of mothers as correlated factors contributing towards the high prevalence of malnutrition among children has also been identified. Food instability, inadequate maternal nutrition, recurrent illnesses, health service usage, and child development are seen as the primary determinants of malnourishment (Linnemayr et al., 2008). The malnutrition factors are also compounded by gender discrimination, poor social norms, inadequate health services, low levels of care, and unforeseen environmental situations.

Current data indicates a link between the child's gender, birth order, number of siblings, family income, cleanliness, environment, maternal education level, and children's nutritional condition. Such variables have differential cross-cutting effects on the nutritional levels associated with the distribution of genders. Gender disparity in the nutritional condition of school-aged children (6-15

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years) has been identified via the use of underweight and stunting as indicators of nutritional status (Regmi, 2022).

Problem Statement

Many children in Pakistan suffer from malnutrition, placing the country among the top in the world for this problem. Pakistan is the second most malnourished country in Asia, according to a food policy study released by the International Food Policy Research Institute (IFPRI Pakistan). When compared to other emerging nations, Pakistan has the highest frequency of malnutrition. Pakistan came in at number 148 out of 172 nations in a new poll by Save the Children called Silent Childhood. The following countries are ranked: Sri Lanka (61), Iran (80), China (41), Sudan (144), and India (116) (Albuquerque et al., 2024; Birhanu et al., 2024). The dilemma of children in these nations, who fall into the categories of under or over-malnourished and who, on average, do not live to be five years old, is the primary emphasis of this study.

According to the most recent National Nutritional Survey (2018) in Pakistan, which was carried out by the Federal Health Ministry and UNICEF Pakistan, 17.7 percent of children under the age of five experience wasting, while 4 out of 10 children under the age of five experience stunting. With almost one-third of children underweight (28.9%) and a high prevalence of overweight (9.5%) in the same age range, the additional weight of malnutrition is becoming more and more noticeable. Overweight children under the age of five essentially quadrupled between 2011 and 2018, rising from 5% to 9.5% (Habib et al., 2023).

Study Significance

Many researchers have adopted different approaches to look at the phenomenon of malnutrition in children of Pakistan. Some studies are conducted on the basis that poverty has a direct linkage with malnutrition, low-income groups having a shortage of diversity in daily food items are more prone to fall into this category. Some studies have also revealed that along with poverty, there are some other factors like poor sanitation, unsafe drinking water, acute infections, and polluted environment that act in parallel directions to enhance the quantum of malnourished children in Pakistan. Apart from these issues, limited or no knowledge about malnutrition by the whole society also plays an integral part in taking this phenomenon in an upward vertical direction. Un-hygienic places of child labor having dirty or polluted environments around many children stuck in this vicious cycle of poverty-driven lifestyle is another key factor boosting this menace of a malnourished new generation of Pakistan. The significance of this study is that it looks into the different approaches discussed above deeply and comes up with some concrete suggestions/recommendations for policymakers to help them devise more dedicated and results-oriented strategies to curb this menace. This study is also an attempt to think out of the box to discover new dimensions of the seriousness of this problem and how to take positive steps in addressing the issue while hitting its root causes. The questions that will guide this research study are to determine the contributing factors to the phenomenon of child malnutrition in Pakistan and to analyze the intensity of the problem of malnutrition among children nationwide.

Literature Review

Factors Contributing to Child Malnutrition

The relationship between hunger and poverty lacks definitive agreement in the research (Beuchelt & Virchow, 2012). Numerous studies are inherently conflicting, exhibiting mixed outcomes (Exime et al., 2021). Multiple studies have shown that malnutrition is a symptom of poverty since individuals lack the cash to purchase nutritious and diverse food (Tamasiga et al., 2023). Conversely, some researchers in their scientific studies have concluded that there is no correlation between the two (Andrianarison, 2022).

Gender Biases in Nutritional Choices

The National Nutrition Survey report indicates that in Punjab one out of eight adolescent girls and nearly two in eight adolescent boys are underweight whereas 41% of the adolescent girls are anemic. Whereas in Sindh province it was identified that adolescent girls bear the double burden of malnutrition and that 40% of them were found to be anemic. Malnutrition among children and their mothers is very severe in Balochistan province as it is facing drought for the last two years. The Balochistan government has formed a nutrition cell with the help of the World Bank and UNICEF to deal with this issue. A survey conducted by the National Nutrition Cell revealed that women suffering from malnutrition in Balochistan are 49 per cent. Moreover, anemic mother's ratio is at 49 per cent, anemic deficiency among children below five years was 57 per cent and 29 per cent women of the whole province fall under iodine deficiency (Buckland et al., 2020).

Mother's Education Level

Global research indicates that one in nine individuals worldwide is malnourished, with a greater prevalence in wealthier nations. Pakistan, India, and Bangladesh are the host nations and permanent residence for 50% of the world's children who are malnourished. Pakistan has among the second highest rates of newborn mortality among children in South Asia (Jahan, 2020; Khan et al., 2020). Recent studies indicate that in Pakistan, 43.7% of children are stunted, 15.1% are wasted, and 31.5% are underweight. Situations are far worse in rural regions than in metropolitan ones. Stern stunting occurred in 21.9% of children, whereas severe wasting was seen in 5.8% and underweight in 11.6% (Rajeshwar, 2024). The impact of maternal education on children's nutritional conditions has been documented for decades and is more significant than any other predictor. The capacity to acquire health information, proficient management of resources, and access to micronutrient intake, together with appropriate feeding habits, are key factors by which maternal education impacts child health. Despite their educational accomplishments, intelligent moms often have underweight children, contributing to the issue of illiteracy. This underscores the importance of the time and attention devoted to children, which an active and highly qualified woman cannot provide, so depriving her children of the benefits of her education (Mumtaz et al., 2020).

Availability of Prenatal and Postnatal Healthcare Services

Numerous contemporary evaluations of maternal, newborn, and child health (MNCH) and mortality have highlighted that a wide array of treatments are available with the potential to reduce deaths and disabilities (Carandang et al., 2021). The significance of MNCH differs; proficient treatment at healthcare institutions has shown efficacy in enhancing child survival and preserving mother's lives (Makinde et al., 2022). Preventive, promotional, and supporting tactics are ideally implemented via society support groups and health professionals, while other techniques need a robust connection between healthcare referral institutions and community-based initiatives. To reduce mother and child mortality rates, it is essential to enhance MNCH at the basic medical level (Carandang et al., 2021).

Mother's Health and Birth Weight of Babies

The 2018 National Nutrition Survey (NNS) indicates that women of reproductive age, between 15 and 49 years, are experiencing a dual incidence of malnutrition. One out of seven which makes 14.4% is undernourished showing a decline from 18% in 2011, whereas an increase has seen in overweight and obesity. The obese or overweight ratio was 28% in 2011 which has risen to 37.8% in 2018 (Katherine Kalaris, 2024). Urban or rural disparity is evident of the fact that women of urban areas are more obese and overweight whereas malnourishment ratio is higher among rural areas of Pakistan. Birth weight of newborn babies has a direct link with the health and nutrition level of mothers as the baby gets all his/her required energies firstly when in the womb and secondly from the breast milk by their mothers (James et al., 2020).

Government initiatives to Deal with the Problem

Federal Health Ministry is the Government of Pakistan's representative responsible for all health related initiatives, issues, and administration at National level. Although after 18th constitutional amendment, the subject of health has been devolved to provinces, but this Ministry is custodian of all Federally administered hospitals in Pakistan (Alobo et al., 2021). Several studies responsible for drafting and implementing different health related regulations and coordination among provinces, international agencies, and all other relevant stakeholders (Prinja et al., 2016). Ministry (NHSRC) has started many programs countrywide which are directly or indirectly affecting malnutrition to bring Pakistan among the countries having lower levels of malnourished children (Moxon et al., 2015).

Sehat Sahulat Program (SSP)

The Universal Health Coverage (UHC) has started to control child malnutrition in marginalized segments of society. For example, the Ministry of provincial governments with collaboration has started an initiative called the Sehat Sahulat Program (such as, previously known as Prime Minister's National Health Program) (Khan et al., 2023). The residents of Pakistan who are considered to be living under the poverty line are the prime target of this program and it is hoped that the issue of malnourishment both among children and their mothers will be addressed effectively (Farooqui et al., 2024; Golra et al., 2022).

De-Worm Islamabad Initiative

As many children suffer from intestinal worms, which cause many malnutrition-related symptoms to grow in those children, the government has decided to launch a pilot project, "Deworm Islamabad Initiative," initially at the ICT level this year. If successful results are achieved, then the same will be replicated in other parts of the country (Nadeem et al., 2025). Pakistan has been ranked among the top 10 countries in the world that have the highest trend of carrying intestinal worm infections among its children according to the ranking index WHO. The tendency of high side prevalence is normally recorded in school-going children, and it has a direct linkage with poor sanitary conditions, hygiene, and low-quality drinking water (Ali et al., 2020). Most of the nutrients consumed by children having intestinal worm infections are interfered with by these worms, and the results are malnourishment and anemic conditions that further lead to poor physical development and mental impairment. This poses a serious threat to children's productivity, health, and education (Wardiyah et al., 2023). Ramagopalan et al. (2024) proposed that required funding can be effectively address the issue of a malnourished future generation. It requires a healthy amount of budgetary allocation, and to make it sufficient, a constant flow of funds is needed. Nutrition is normally funded by developmental funds, and support from regular operating budgets is lacking now.

Methodology

This research employs a quantitative, observational, and cross-sectional methodology to examine the incidence and frequency of malnutrition via secondary data derived from the National Nutritional Survey (NNS) 2018. The research emphasizes statistical analysis to identify tendencies and variations in malnutrition across various demographic and regional factors. Rigorous analysis of the data available on the subject has led to the conclusions and recommendations drawn at the end of this study, which might be fruitful for policymakers to take effective policy measures to curb this menace of Malnutrition among Pakistani children.

Data Source

The empirical research used publicly accessible data from the National Nutritional Survey (2018), an extensive assessment aimed at evaluating the nutritional condition of the population. NNS 2018 comprises comprehensive data on anthropometric measures, nutritional consumption, socioeconomic variables, and health indicators obtained from a nationally representative sample. The prevalence and frequency of Malnutrition were assessed using data from the National Nutritional

Survey (2018) to find empirical results of four main variables, i.e., stunted, underweight, overweight, and wasted. It has a direct linkage with the future of humanity around the globe; an attempt has been made to discuss and explain this phenomenon as per the set objectives of the study.

Inclusion and Exclusion Criteria

All participants were included in the NNS 2018 dataset. Individuals with comprehensive anthropometric and dietary data. Participants from all areas were included in the NNS 2018 survey. For instance, individuals with absent or partial dietary data were eliminated. Participants exhibited severe outlier values indicative of measurement inaccuracies.

Data Analysis

Frequency and percentages for categorical variables were calculated, along with the prevalence rates of various kinds of malnutrition.

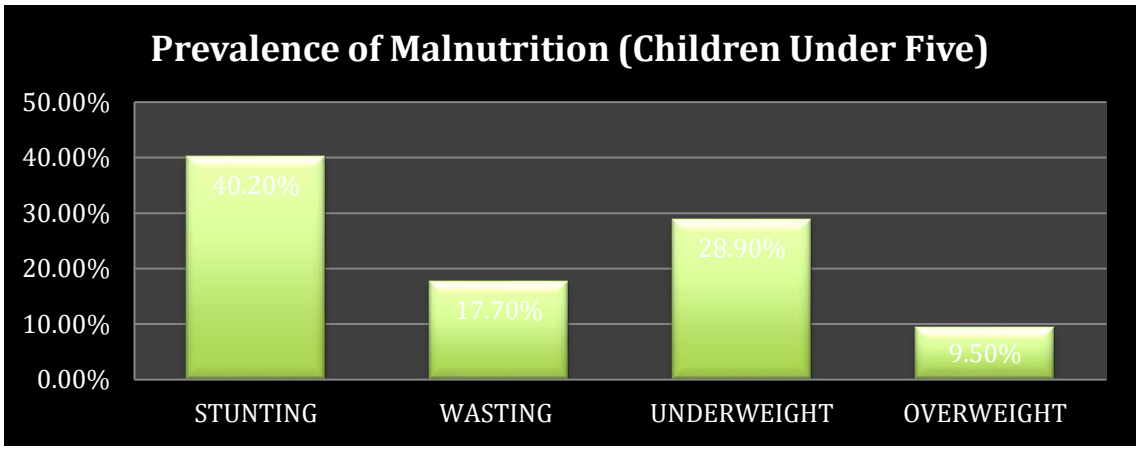
Ethical Considerations

This research utilizes secondary data from the National Nutritional Survey (2018), negating the need for ethical clearance from an institutional review board (IRB). Information confidentiality and ethical criteria shall be rigorously adhered to in accordance with the conditions of data use rules.

Results and Findings

According to the findings of the National Nutritional Survey (2018), the prevalence of malnutrition in children of Pakistan (under five years of age) is quite alarming. Despite various Governmental and Civil Society initiatives, the stunting percentage is 40.2%, wasting at 17.7%, underweight at 28.9%, and overweight at 9.5% in the whole country. The different factors discussed above play a pivotal role in the creation of such a situation where a large number of children are suffering from malnutrition. Short-term change in the intervened areas refers to the adoption of policies that guarantee a long-term and sustainable effect. Poverty and variation in the food supply are some of the chronic factors that need immediate response. The state has to formulate policies to address such issues, and the implementation mechanisms must focus on a constant and sustainable approach to tackle the malnourished youth of this country.

Figure 1: Prevalence and frequency of child malnutrition in Pakistan(under five years)

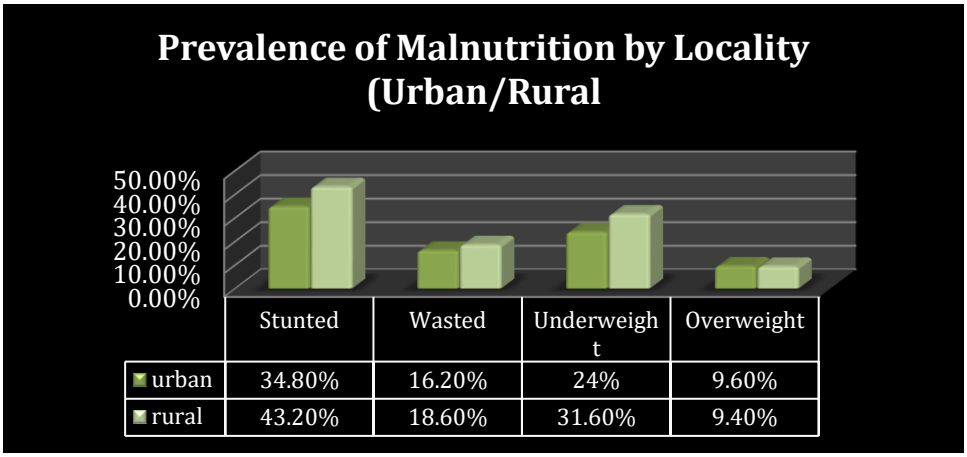


Source: National Nutritional Survey, (2018)

The latest data gathered from all parts of the country is evidence of the fact that Malnutrition among children of Pakistan is growing at a faster pace, and the Urban/Rural divide shows some alarming facts about the prevalence of this phenomenon. The percentage of Stunted children is 34.80% in urban areas and 43.20% in rural areas of Pakistan. The category of wasted children reflects a 16.20% prevalence for urban and 18.60% for rural areas; underweight children show 24% for urban and 31.60% for rural areas of the country. Finally, the overweight category of Malnutrition

in Pakistan is recorded as 9.60% for urban and 9.40% for rural areas. The data analysis shows that rural areas have a higher tendency of malnourished children as compared to urban areas; the categories of stunted, wasted, and underweight children are on the higher side in rural areas of Pakistan, whereas only the category of overweight or obese children shows minor trend on the higher side for urban areas. Mother's health, dietary intake, non-availability of micro-nutrients filled with diverse food items, low level of hygiene, and absence of basic health units are some of the causes that play a crucial role in the growth of this menace of Malnutrition in rural areas of Pakistan. Overweight obesity in urban areas of Pakistan is mainly caused by different factors, which include the dosage of nutrients by different food items available for the residents of urban areas in comparison to residents of rural areas and excessive usage of alternative milk and other food products for babies instead of Mother's milk. Awareness campaigns must be started immediately as these things are badly affecting our future generation.

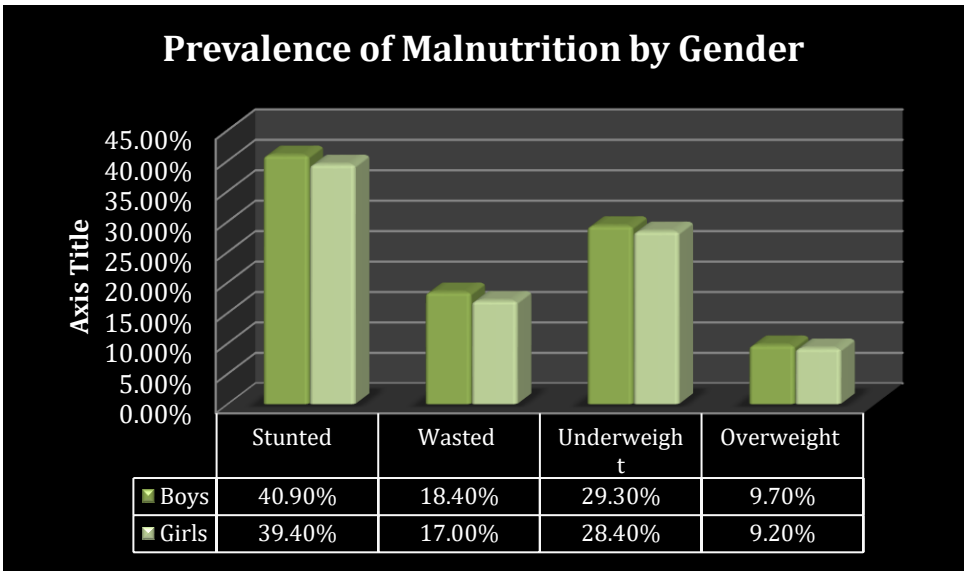
Figure 2: Prevalence of Malnutrition by Locality (Urban/Rural)



Source: National Nutritional Survey, (2018)

It has shown some strange facts as it is widespread thinking in many societies that male members of any household in Pakistan are treated differently when it comes to gender division. Pakistan, being a patriarchal society, is supposed to be gender biased when it comes to the distribution of goods and resources the household offers. However, survey results are quite opposite to this approach as the boys are found on the higher side of the malnourished segment of the country as compared to girls. 40.90% of boys are stunted as compared to 39.40% among girls, 18.40% of boys fall under the category of waste, and girls are at 17.00%, male children of the country are 29.30% underweight, and females are at 28.40%, and lastly 9.70% male children are obese in comparison to 9.20% female babies. Although the difference is not that huge, it should have been on the higher side for female children as most of the International and national NGOs and Civil Society organizations are of the view that there is a very high percentage of gender discrimination in Pakistan. Most of them are very vocal in different TV talk shows, Seminars, workshops, etc. The latest results of the malnourished children of Pakistan are contrary to their claims of gender discrimination in all aspects of life. These results clearly indicate that at least food distribution among children of any household in Pakistan does not support the idea of gender discrimination. Simple food items with no or limited knowledge of parents of necessary nutrients for the growth of their children are one major cause of malnutrition.

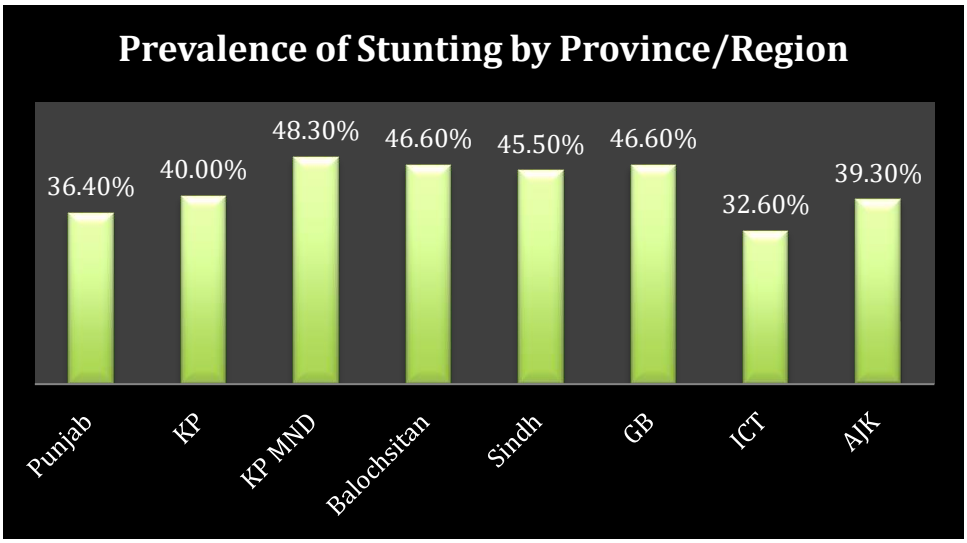
Figure 3: Prevalence of Malnutrition by Gender



Source: National Nutritional Survey, (2018)

Region-wise distribution of children with stunted growth in Pakistan reflects that Punjab Province has 36.40% prevalence, Khyber Pakhtunkhwa (KP) at 40.00%, Newly Merged Districts of KP at 48.30%, Balochistan at 46.60%, Sindh at 45.50%, Gilgit-Baltistan (GB) at 46.60%, Islamabad Capital Territory (ICT) at 32.60% and Azad Jammu & Kashmir (AJK) at 39.30%.These figures are quite alarming as much is to be done at the Provincial level as well. After the 18th constitutional amendment, the subjects of food security and health were transferred to provinces, and the declaration of an emergency to deal with this issue was the need of the day. Drought-hit areas of Balochistan, Children living in the Thar desert of Sindh, war-trodden and militant-struck areas of KP, rural areas of Punjab, especially southern Punjab, large areas of GB and AJK where basic needs of health and other necessary life enrichment facilities are scarce, need immediate attention of the policymakers. High priority should be given to addressing this issue of malnutrition as our future generation has a direct dependency on today's policies that may guarantee its basic human right to get the full chance of living a healthy life.

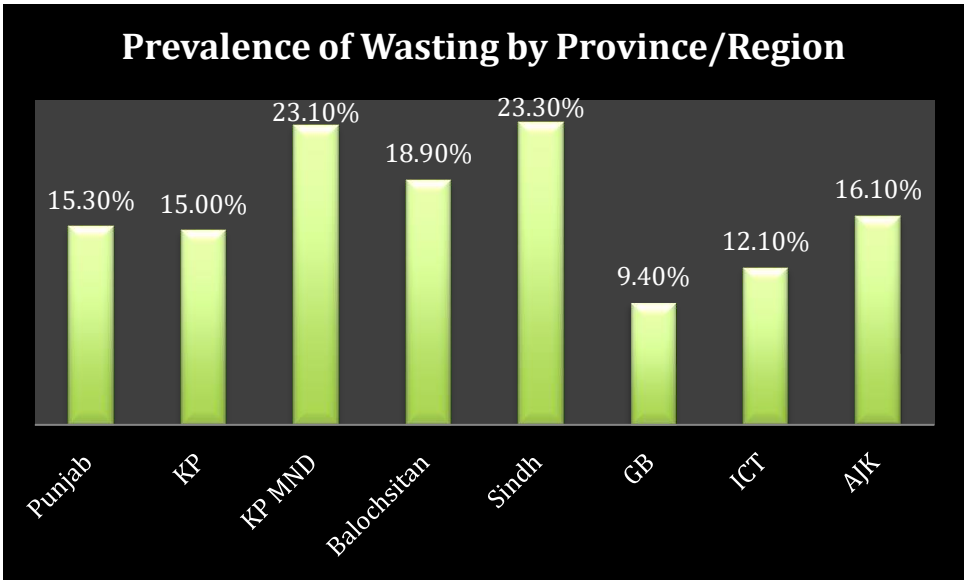
Figure 4: Prevalence of Stunting by Province/Region



Source: National Nutritional Survey, (2018)

Region-wise distribution of wasted children in Pakistan indicates that Punjab Province has 15.30% incidence, Khyber Pakhtunkhwa (KP) at 15.00%, Newly Merged Districts of KP at 23.10%, Balochistan at 18.90%, Sindh at 23.30%, Gilgit-Baltistan (GB) at 9.40%, Islamabad Capital Territory (ICT) at 12.10% and Azad Jammu & Kashmir (AJK) at 16.10%. Wasting refers to low weight for height, which means that the required weight in comparison with the height and age of the child is not as per the good growth parameter recognized the world over. Although the percentage of wasted children is on the lighter side as compared to stunting in Pakistan, the prevalence of such a category should not be tolerated at any stage as many diseases attack constantly, and the mind development stages of these children are at high risk of under-development.

Figure 5: Prevalence of Wasting by Province/Region

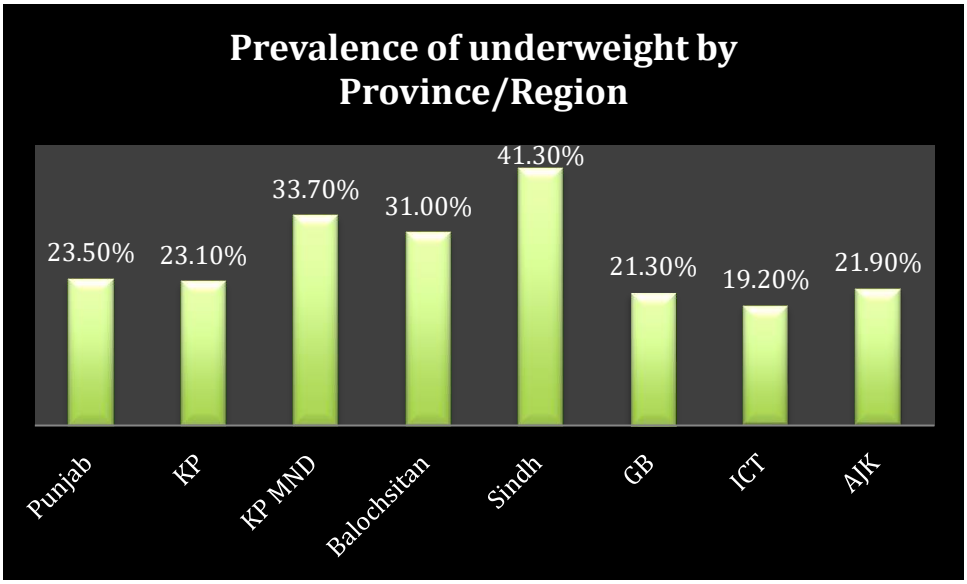


Source: National Nutritional Survey, (2018)

The prevalence of the underweight category among children of Pakistan is also on the higher side as compared to previous statistics of NNS 2011. In Punjab province, the percentage of underweight children is 23.50%; in KP, it is 23.10%, whereas in newly merged districts of KP, it is

33.70%, Balochistan has 31.00% of underweight children, Sindh has the highest ratio of 41.30%, GB has 21.30%, ICT has 19.20% and AJK shows 21.90% of underweight category among child population. Food security measures are not up to the mark in the country, and much food is wasted each day in Pakistan. People are also not well aware of the food intake parameters, as most think positively about the amount of food available for their households rather than focus on the diversity of food items that carry different nutrients necessary for human growth. Vitamin A deficiency is very common in almost every child in Pakistan, and most women are anemic, which, as a result, gives birth to children with many deficiencies of iron, vitamin A, vitamin B, calcium, etc. This results in poor growth of many children who may not take an active part in the country's development and bring good to their lives.

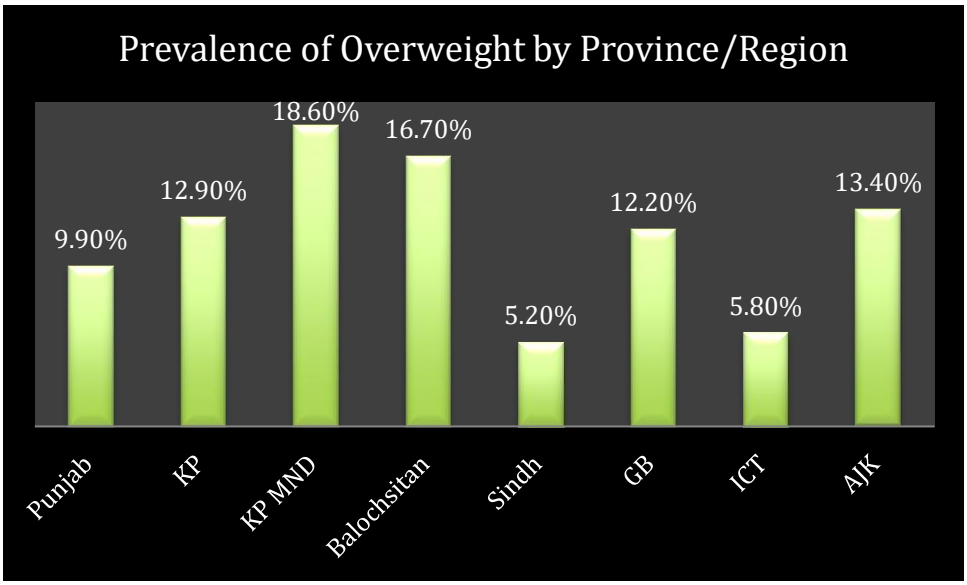
Figure 6: Prevalence of underweight by Province/Region



Source: National Nutritional Survey, (2018)

The term overweight or obesity refers to a state of the human body where the required weight as per height, age, and stature is much on the higher side, and it can lead to many diseases like heart problems, low tendency for an active lifestyle, blood sugar, high blood pressure, etc. The latest data reflected by the NNS 2018 reveals that in Punjab province, the percentage of overweight children is 9.90%, in KP, it is 12.90%, and in newly merged districts of KP, it is 18.60%, Balochistan has a 16.70% ratio, Sindh has 5.20%, GB has12.20%, ICT has 5.80%, and AJK has a ratio of 13.40%. The high prevalence of obese children in the newly merged districts of KP, Balochistan Khyber Pakhtunkhwa, AJK, and GB is in stark contrast to the children living in Sindh and ICT. Food patterns, food intake, and other factors in high-prevalence areas must be explored, and critical analysis must be done to reach the root cause of overweight children in such areas.

Figure 7: Prevalence of overweight by Province/Region



Source: National Nutritional Survey, (2018)

Discussion

The key drivers of malnutrition result in low birth weight, with a causal effect of maternal nutrition and low nutrient intake; however, the situation differs by province. The study showed that Punjab has shown a significant decline in stunting while stunting levels in Sindh remain static. Moreover, just 38% of babies less than 6 months old are nursed consistently. The province of Punjab is taking the lead toward improvement in nutritional status of children. The province maintained adequate funds for a child nutrition program. This program focus on combining a water, sanitation, and hygiene (WASH) for the Pakistani citizens.

Taking a page from Punjab's IRMNCH and Nutrition Program, the Sindh government has set up Rs 4.5 billion for the Nutrition Support Program (NSP), which would cover nine districts. The whole province is now part of an Accelerated Action Plan (AAP) that is multi-sectoral and encapsulates all of the nutrition-specific initiatives envisioned by the NSP. In 2019, the AAP and the NSP will be combined. In order to combat malnutrition in three districts of Sindh, a new initiative called "Program for Improved Nutrition (PINS) in Sindh" has been launched with financial support from the European Union. In order to bring the AAP into harmony, the program's scope could be expanded to include an additional 10 districts.

The government of Khyber Pakhtunkhwa proclaimed a health emergency related to malnutrition. The regional health agency was ordered to address the problem and put anti-malnutrition strategies into action immediately (Majeed & Munir, 2020). The program has a budget of Rs14 billion, including Rs1.6 billion coming from the Australian government's Department of Foreign Affairs and Trade (DFAT). At first, the program consisted of just two areas; in 2018–19, seven more regions were added. The Stunting Prevention Rehabilitation Plan, an Additional Multi-Sectoral Initiative Worth Rs. 796 million The SPRING initiative, which stands for Integrated Nutrition Gain, is nearing completion (Saqlain et al., 2020). Political instability in the region of Balochistan has hindered the successful execution of health "arranging" despite the high prevalence of malnutrition across all dimensions. There is a substantial correlation between continual political meddling, the frequent deployments and movements of healthcare professionals, and poor service performance in the health sector. To combat severe starvation in children, pregnant women, and nursing mothers, the Balochistan Nutrition Initiative for Mothers and Children (BNPMC) is the only initiative operating throughout seven provinces (Turk et al., 2021).

Conclusion

Poverty is generally considered a rural phenomenon in Pakistan. Dietary intake of all members of a household is ensured as the rural population is largely self-sufficient in food production despite the fact that a large segment does not own agricultural land. Apart from this, the Pakistani culture is deeply embedded in social support, and different government-owned and civil society interventions also support low-income families. Therefore, the linkage of malnutrition with poverty is on thin lines in rural areas. In contrast, poor, urban vicinities are more prone to this connectivity as the nuclear family with very low income and no social support falls into the realm of malnourishment.

Factors like illness, low and heavy intake of nutrients, nutritional status of mothers, and environmental, communal, and large dependency on junk food are deeply rooted in the nutritional status of children. Mothers' inefficiency or lethargic behavior in making healthy diets for their children and easy availability of substandard and unhygienic ready food items are also strong contributors to the growth of malnourishment in Pakistan. Constant and rapid episodes of illness, including different kinds of infections and diarrhea, diminish the body's capability to alter food into vigor. Pakistan still has a high rate of diarrhea, and environmental conditions at home are also not up to the mark. Government or civil society's interventions have played a positive role in improving the child's nutrition status. However, the sustainability factor is still not addressed, as the micronutrient level drops again when these interventions are stopped.

Recommendations

The involvement of Lady Health Workers (LHWs) has shown significant contribution as the outreach was at an expansionary level, and people at large were also educated about the importance of such nutritional intakes for human growth. In this regard, the following recommendations are made:

- More focus is needed on studying the causes of malnutrition from the infancy stage. Neglected areas may be highlighted, and a strong mechanism must be adopted to strengthen children's nutritional status.
- The state should take sustainable measures, and parents should be constantly guided to keep a strong check on their children's physical and mental development. State organs should provide assistance to curb this menace of malnutrition effectively.
- Effective programs for assessing mother's physical health and their awareness about malnutrition and its effects must be launched at the country level. Therefore, maternal factors may also be included in future studies as they have a strong linkage with the dietary intake of infants, autonomy, and child growth recording sensitivity of mothers. The dietary preferences of mothers to their children should also be included in future exploration of causes of malnutrition. The dietary Diversity (DD) recall method can be utilized to learn about the preferences mothers have for the food they give to their children.
- Micronutrient deficiency, its impacts, and awareness among the masses must also be included in studies that use qualitative and mixed-method research so that the long-neglected silent cause of micronutrient deficiency can be marked.

Author Contributions:
The Conception and design: Zahid Rehan Khan. Collection and assembly of data: Sania Zohra. Statistical Analysis and interpretation of the data: Zahid Rehan Khan. Drafting and Critical revision of the article for important intellectual content: Zahid Rehan Khan.
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