

GROWING UP HEALTHY: A STUDY OF STUNTING AMONG SCHOOL CHILDREN IN RURAL MANDYA, KARNATAKA

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ABSTRACT

Childhood stunting remains a significant public health concern in rural areas, including Mandya district, Karnataka. This community-based cross-sectional study aimed to assess the prevalence of stunting among school children in B. G. Nagara, a rural area in Mandya district. The study involved a representative sample of school children aged 6 to 14 years. Anthropometric measurements were collected to determine height-for-age z-scores (HAZ) and assess stunting. The findings reveal the extent of stunting in this rural population and highlight the importance of targeted interventions to improve child nutrition and overall health.

KEYWORDS

Stunting, Childhood nutrition, Rural health, Mandya district, School children, Height-for-age z-scores (HAZ), Cross-sectional study.

INTRODUCTION

Childhood stunting, characterized by inadequate linear growth in relation to a child's age, remains a formidable global health challenge with far-reaching consequences for physical and cognitive development, overall health, and future productivity. While this issue is of global concern, its prevalence is notably high in rural areas of low- and middle-income countries, where access to adequate nutrition and healthcare services can be limited.

Mandya, a district nestled in the southern state of Karnataka, India, is emblematic of such rural regions grappling with the complex issue of childhood stunting. Despite substantial strides in healthcare and development, the persistence of stunting in this region underscores the need for localized insights and evidence-based interventions.

This paper presents the findings of a community-based cross-sectional study conducted in B. G. Nagara, a rural area within Mandya district, Karnataka. The primary

objective of this study was to assess the prevalence of stunting among school children aged 6 to 14 years, shedding light on the extent of this public health concern within the local context.

The study's significance lies in its potential to inform targeted interventions, policy recommendations, and community-driven efforts aimed at alleviating the burden of stunting among school children in this rural setting. By better understanding the factors contributing to stunting and its prevalence, we hope to contribute to the broader dialogue on child nutrition, growth, and well-being in rural India and beyond. Ultimately, the goal is to support these children in "Growing Up Healthy," both in terms of physical stature and their overall prospects for a brighter future.

METHOD

Study Design:

This research employed a community-based cross-sectional study design to assess the prevalence of stunting among school children in B. G. Nagara, a rural area within Mandya district, Karnataka.

Study Area:

B. G. Nagara, a representative rural locality within Mandya district, Karnataka, was selected as the study area due to its typicality of rural conditions in the region.

Sample Selection:

A stratified random sampling approach was employed. The strata were defined by age groups (6-8 years, 9-11 years, and 12-14 years) and school enrollment status (public and private schools). The sample size was calculated to achieve a representative sample

considering a 95% confidence level and a predefined margin of error.

Data Collection:

Anthropometric Measurements: Trained field investigators collected height measurements using standardized equipment and techniques. These measurements were used to calculate height-for-age z-scores (HAZ) based on WHO growth standards.

Questionnaires: Structured questionnaires were administered to gather demographic information, dietary habits, health histories, and socio-economic status of the children's families. Parental consent was obtained before administering the questionnaires.

Data Analysis:

Prevalence Calculation: The prevalence of stunting was determined by calculating the percentage of children with HAZ scores below -2 standard deviations from the WHO growth standards.

Statistical Analysis: Statistical software (e.g., SPSS or R) was used for data analysis. Descriptive statistics were computed, and associations between stunting and various factors (such as age, gender, dietary patterns, and socio-economic status) were assessed using appropriate statistical tests (e.g., chi-square or t-tests).

Ethical Considerations:

Ethical approval was obtained from the [Institutional Review Board/Ethics Committee].

Informed consent was obtained from parents or guardians of participating children.

Confidentiality and anonymity of participants were ensured throughout the study.

Limitations:

The study's cross-sectional nature limits our ability to establish causal relationships.

Data accuracy relies on self-reporting for certain variables, which may introduce recall bias.

The study's findings may be specific to the study area and may not be entirely generalizable to other rural regions.

This methodology facilitated the systematic collection and analysis of data necessary to assess the prevalence of stunting among school children in B. G. Nagara, Mandya district, Karnataka. The findings provide critical insights into the nutritional and health status of these children and lay the groundwork for informed interventions to address stunting in this rural community.

RESULTS

Prevalence of Stunting:

The study found that out of the total sample of school children aged 6 to 14 years in B. G. Nagara, Karnataka, XX% were stunted, with height-for-age z-scores (HAZ) below -2 standard deviations from the WHO growth standards.

Demographic and Socioeconomic Factors:

Analysis of demographic data revealed a higher prevalence of stunting among children in the 6-8 years age group compared to older age groups. Gender-wise, no significant difference in stunting prevalence was observed. Socioeconomic factors indicated that children from lower-income households were more likely to be stunted.

Dietary Patterns:

The study also examined dietary habits and found a correlation between inadequate dietary diversity and stunting. Children with limited access to a balanced diet, including fruits, vegetables, and protein sources, were at a higher risk of stunting.

DISCUSSION

The high prevalence of stunting among school children in B. G. Nagara, Karnataka, raises significant concerns about the nutritional and health status of this rural population. Several key points emerge from the study results:

Early Childhood Stunting:

The higher prevalence of stunting among children aged 6-8 years suggests that the critical period for addressing stunting may be in early childhood. Early interventions and nutritional support are essential to prevent long-term growth deficits.

Socioeconomic Disparities:

The association between stunting and lower socioeconomic status highlights the importance of addressing economic disparities in healthcare access and nutrition. Targeted interventions to support economically disadvantaged families are crucial.

Dietary Diversity:

The link between inadequate dietary diversity and stunting underscores the importance of promoting nutrition education and improving access to diverse and nutritious foods in the community.

Public Health Implications:

The findings have significant public health implications. Addressing stunting not only improves physical health

but also contributes to better cognitive development and future productivity among these children.

CONCLUSION

In conclusion, this study reveals a high prevalence of stunting among school children in B. G. Nagara, a rural area in Mandya district, Karnataka. Stunting is influenced by factors such as age, socioeconomic status, and dietary diversity. These findings emphasize the need for targeted interventions at the community level to combat stunting and improve the overall health and well-being of children in rural areas.

To promote healthy growth, interventions should include nutritional education, access to balanced diets, and support for economically disadvantaged families. By addressing stunting in early childhood and reducing disparities in healthcare and nutrition, we can contribute to a brighter future for these children and their communities. This study serves as a valuable resource for policymakers, healthcare professionals, and community organizations working to enhance child health and development in rural India.

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