Fig 1 Comparison of child stunting with WHO standards

Trans-SEC

Innovating Strategies to safeguard Food Security using Technology and Knowledge Transfer

Factors Influencing Stunting among Children in Rural Tanzania: An Agro-climatic Zone Perspective

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Background

Stunting is an important cause of morbidity, mortality and poor intellectual development in infants and children in most of the developing countries including Tanzania. The high prevalence (35%) of stunting reflects an emergency situation and the existence of chronic undernutrition. This highlights the urgent need to prioritize interventions to prevent stunting and undernutrition in Tanzania. In addition, there is substantial regional variation of stunting, which implies that there could be inherent factors in each area that are responsible for causing stunting. However, there is paucity of information on factors influencing undernutrition in different climate zones in Tanzania.

This poster presents the prevalence of stunting in children in Tanzania and draws linkages to agro-climatic conditions and related factors. We have also attempted to unravel the complex interactions of determinants of undernutrition in the Tanzanian context.

Methodology

- **Study design:** Cross-sectional baseline survey
- **Study areas:** Morogoro and Dodoma regions
- **Study population:** Mothers and children
- **Sample size:** 120 mother-child pairs.
- **Agro-ecological zones :** semi arid-Chamwino - Dodoma and Sub-humid-Kilosa - Morogoro
- **Method:** Interviews using Semi-structured questionnaires to assess household socio-economic and demographics status , nutrition knowledge and consumption patterns
- **Nutritional assessment:** Measurement of weight, height and haemoglobin level of children and mothers /caregivers
- **Anaemia cut-off points:** in children haemoglobin concentration < 11.0 g/dL and non-pregnant women was <12.0 g/dL
- **Logistic regression** models were used to establish relationships between stunting and multiple categorical variables

Table 1: Prevalence of stunting and underweight in children (%)

	Dodoma		Morogoro	
Prevalence	Ilolo n = 30	Ndebwe n=33	Nyali n=28	Changarawe n=29
Stunting	56.7	45.5	33.3	31.0
Moderate stunting	30.0	24.2	11.1	13.8
Severe stunting	26.7	21.2	22.2	17.2
Underweight	23.3	21.2	22.2	17.2
Moderate	20.0	21.2	18.5	13.8
Severe underweight	3.3	0.0	3.7	3.4

Results and Discussion

- Stunting rate 41%
- Severe stunting rate 21%
- Body Mass Index of below 18.5 - 11% of women
- Anaemia - 17% children and 16% of women
- Significant inter-regional variations (Table 1)
- Determinants of child stunting:
- **Dodoma:** child's sex and age, duration of breastfeeding, household size, use of iodized salt and the distance to a water source.
- **Morogoro:** child's age, duration of breastfeeding, literacy status of mother and Body Mass Index of mother.

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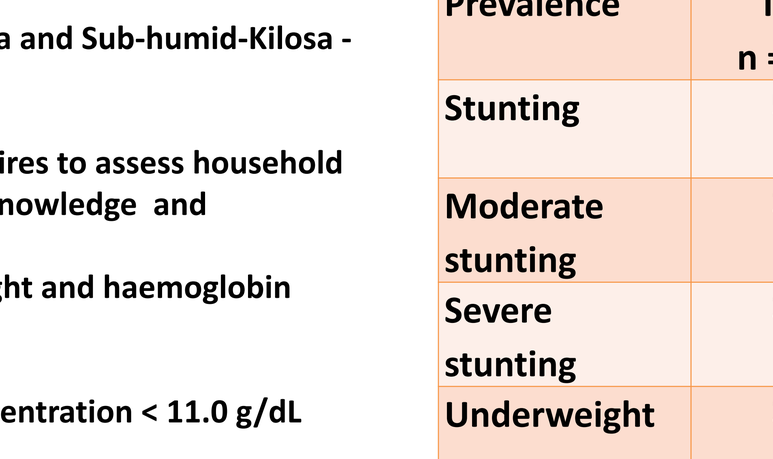

Conclusion and Recommendations

- Factors causing malnutrition vary according to different agro-ecological conditions.
- Agro-climatic variations somewhat predict the variation in child stunting.
- Need for area specific nutrition interventions not blanket interventions
- Implementing agro-climatic sensitive well thought actions may help to reduce undernutrition and food insecurity in specific areas.

BMBF Federal Ministry of Education and Research

BMZ Federal Ministry for Economic Cooperation and Development

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