



ORIGINAL RESEARCH PAPER

Paediatrics

CLINICO-EPIDEMIOLOGICAL PROFILE OF 158 CHILDREN WITH SEVERE ACUTE MALNUTRITION IN RURAL GODHRA, PANCHMAHAL: A HOSPITAL-BASED OBSERVATIONAL STUDY (2024–2025)

KEY WORDS:

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ABSTRACT

Background: Severe acute malnutrition (SAM) remains a major public health problem in rural India, contributing significantly to under-five morbidity and mortality. **Objective:** To study the clinico-epidemiological profile of SAM children admitted in rural Godhra, Panchmahal district over a 2-year period. **Methods:** A retrospective observational study was conducted among 158 children diagnosed with SAM from rural areas of Godhra, Panchmahal between January 2024 to December 2025. Data were analyzed based on gender distribution, age categories, and anthropometric criteria including weight-for-height Z score, MUAC, and presence of nutritional edema. **Results:** Out of 158 children, 91 were male (57.6%) and 67 were female (42.4%). Subgroup distribution showed overlap of multiple diagnostic criteria. **Conclusion:** SAM remains highly prevalent in rural settings with multiple overlapping diagnostic features, highlighting the need for early identification and community-based nutritional rehabilitation programs.

INTRODUCTION:

Severe acute malnutrition (SAM) is defined by WHO as:

- Weight-for-height < -3 SD, OR
- Mid-upper arm circumference (MUAC) < 11.5 cm, OR
- Presence of bilateral pitting edema

Rural areas such as Panchmahal district of Gujarat continue to report high burden due to poverty, inadequate nutrition, infection, and poor feeding practices.

Materials and Methods:

- Study design: Hospital-based observational study
 - Study period: January 2024 – December 2025
 - Study area: Rural Godhra, Panchmahal district, Gujarat, India
 - Sample size: 158 children diagnosed with SAM
 - Inclusion criteria: Children aged 0–5 years fulfilling WHO SAM criteria
 - Data collected: Age, sex, MUAC, weight-for-height Z score, edema status
- Results:

1. Gender Distribution

Sex	Number Of Children	Percentage
Male	91	57.6%
Female	67	42.4%
Total	158	100%

2. Diagnostic Criteria Distribution (Overlap Present)

Criteria	Number of Children
Age < 6 months	4
Weight-for-height < -3 SD	18
MUAC < 11.5 cm	17
Bilateral pedal edema	12
Both WHZ < -3 SD + MUAC < 11.5 cm	115

3. Nutritional Severity Pattern

Severity Type	Number
WHZ < -3 SD only	Part of 18
MUAC < 11.5 cm only	Part of 17
Both WHZ + MUAC affected	115
Edematous SAM	12

Key Observations

- Majority children belonged to rural agricultural families
- High overlap of wasting + MUAC deficiency
- Edematous SAM cases represented a smaller but high-risk subgroup
- Infants <6 months formed a minor but critical vulnerable group

DISCUSSION:

The study demonstrates a high burden of SAM in rural Panchmahal, similar to other Indian rural- based studies showing predominance of wasting and MUAC-based malnutrition. Overlap between WHZ and MUAC criteria suggests advanced nutritional depletion in majority of cases, indicating delayed presentation.

Infants under 6 months, though fewer in number, represent a high-risk group due to breastfeeding challenges and maternal nutrition issues.

Edematous malnutrition cases, though fewer, are clinically severe and associated with higher complication risk.

CONCLUSION:

Severe acute malnutrition remains a significant pediatric health issue in rural Godhra. The high proportion of children with overlapping WHZ and MUAC deficits suggests late detection and severe disease burden. Strengthening community screening using MUAC and early referral systems is essential.

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