



The prevalence of anaemia among children in Northern Uganda: Urban-rural comparison

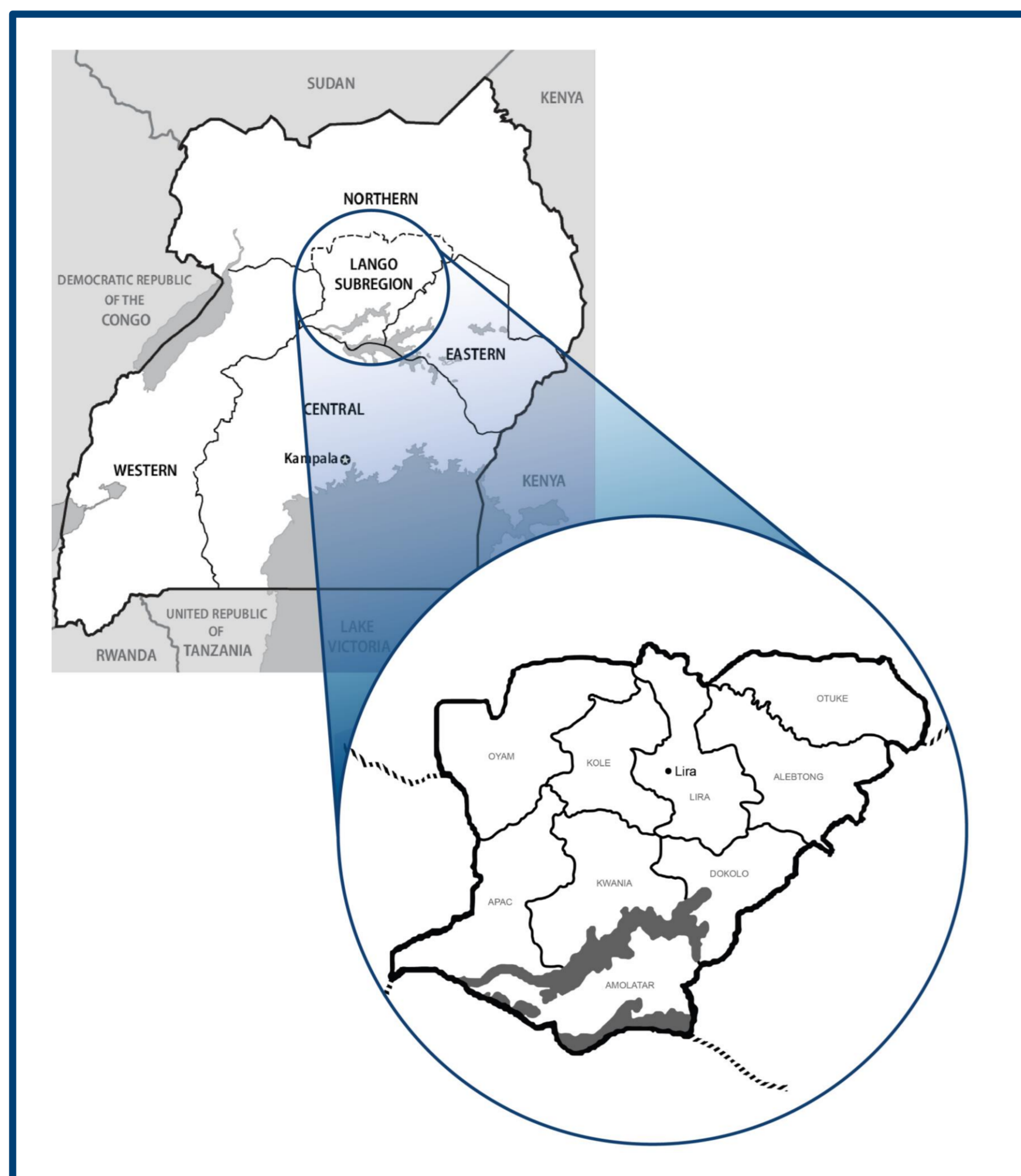


Figure 1: Map of Uganda with a zooming section of the Lango Sub-Region in Northern Uganda, including the study site, a health centre in Lira Town.⁵



Figure 2: Impressions at the study site in Lira Town (Lango Sub-Region), Northern Uganda.

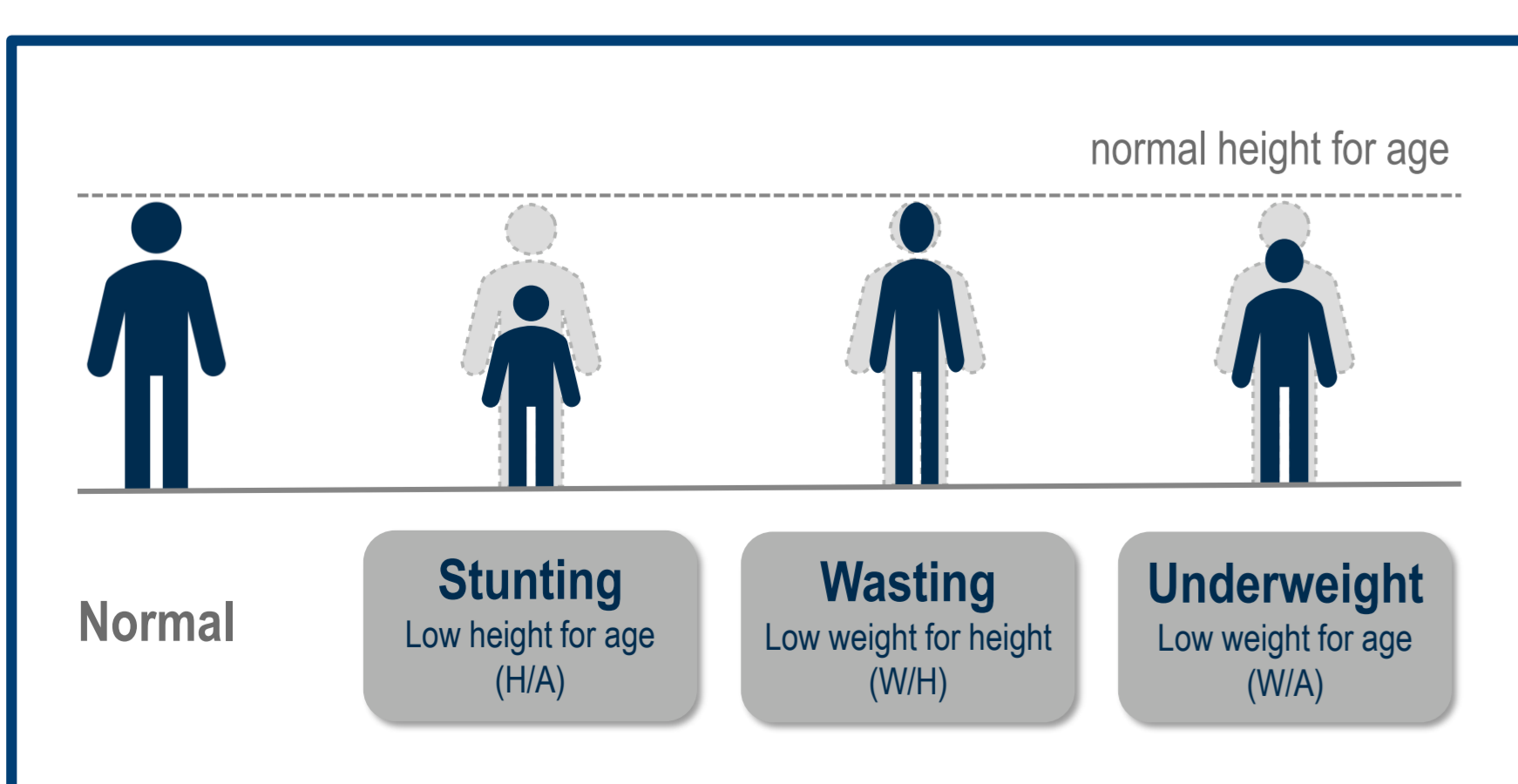


Figure 3: 3 Phenotypes of undernutrition (Stunting, Wasting, Underweight).

Background

- Malnutrition and anaemia are wide-spread health issues in Uganda¹ with profound impact on human health and the development of the entire country²
- In more than 50% of all cases, anaemia is caused by iron deficiency³
- Anaemia
 - = reduced concentration of haemoglobin (red blood pigment) in erythrocytes⁴
 - is affecting 2.36 billion people worldwide³
 - underlies a multifactorial etiology in developing countries⁵

Objectives

- Assessing the prevalence of anaemia among children (6-59 months) in Northern Uganda
- Analysis of the residence as influencing factor (rural-urban comparison)

Methodology

- Retrospective cross-sectional study
- Study site: a health centre in Lira (Lango Sub-Region), Northern Uganda → predominantly rural
- Sample: all children (6-59 months) treated within 5 weeks (May/ June 2017), n=273
- Assessment of haemoglobin concentration and anthropometric measurements

Results

- 90.8% of children (6 to 59 months) were anaemic (= haemoglobin concentration <11.0 g/dl)
- Prevalence classified by severity:
 - 42.3% severe anaemia
 - 38.2% moderate anaemia
 - 10.3% mild anaemia
- Mean haemoglobin concentration: 7.45g/dl (SD=2.76)
- Residence: 73.9% rural, 26.1% urban
- Significantly higher haemoglobin concentrations among children from urban compared to rural areas (Figure 4), but not a significantly lower prevalence of anaemia
- Rural residence was significantly associated with a higher severity of anaemia

Conclusion

- Severe public health challenge of anaemia among children (<5 years)
- Comprehensive analysis of the major risk factors of anaemia → improvement of interventions to counteract anaemia and to better address the predominantly rural population in Northern Uganda

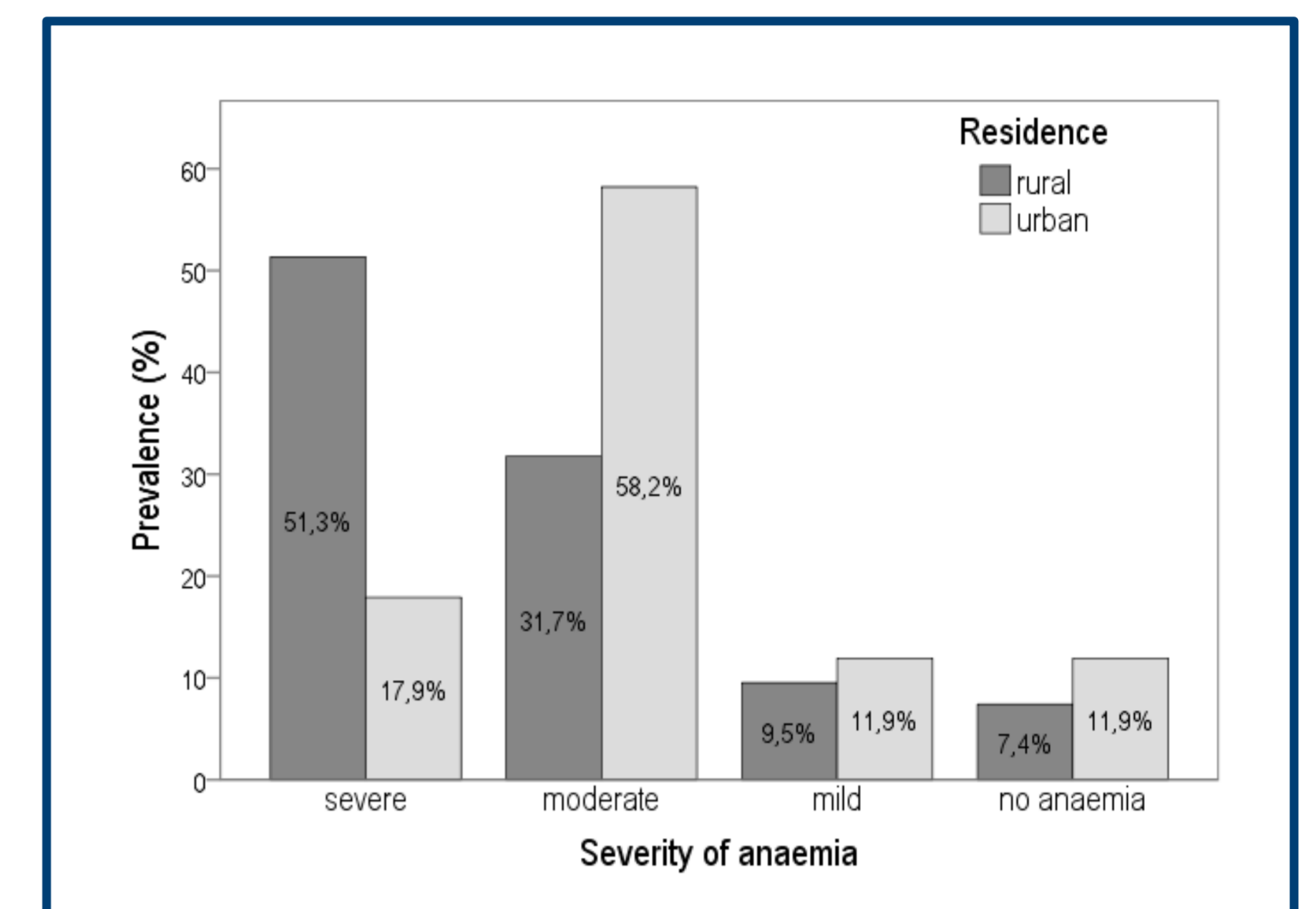


Figure 4: Severity of anaemia among children (aged 6 – 59 months) differentiated according to residence (rural/ urban).

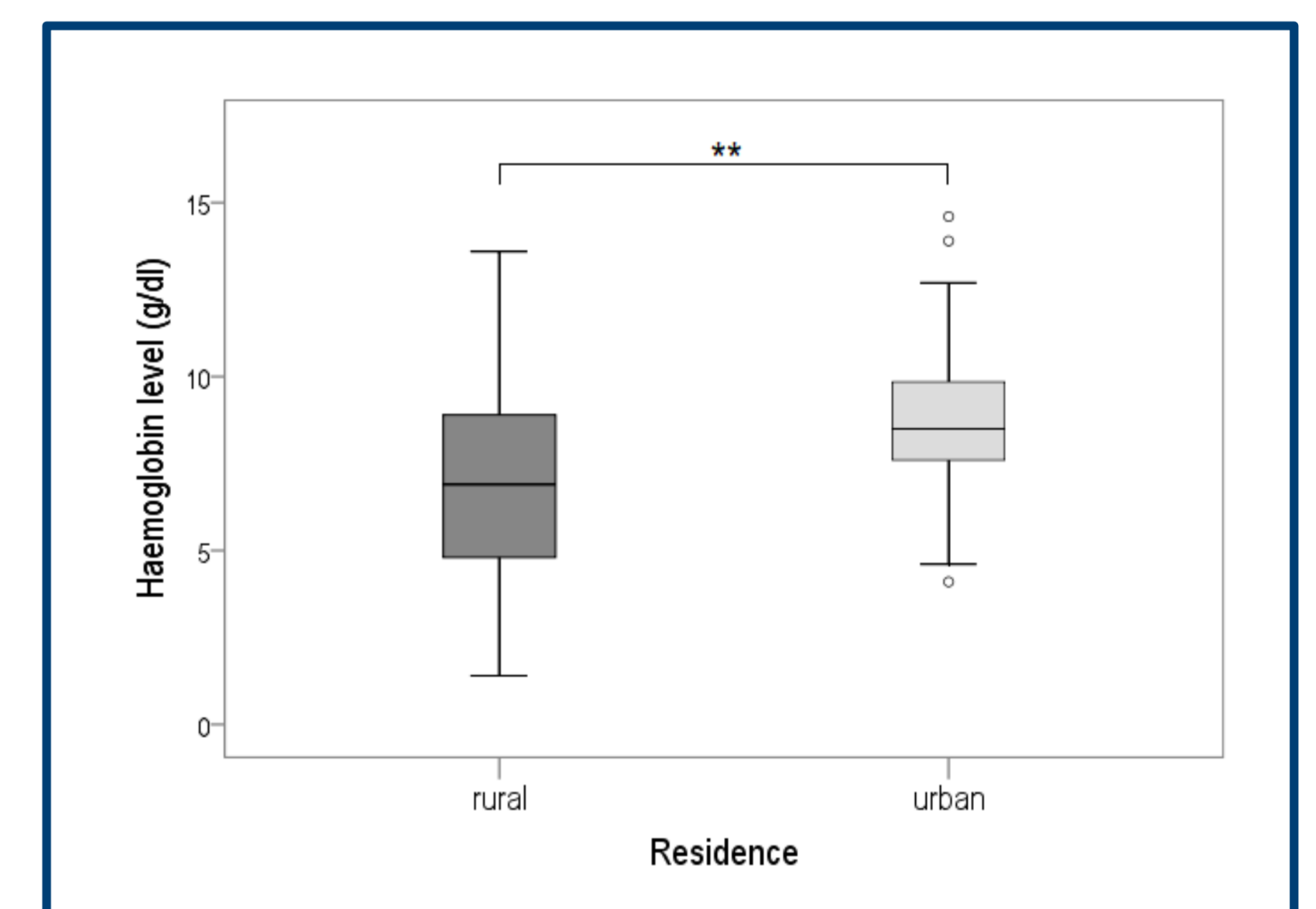


Figure 5: Distribution of haemoglobin concentrations among children (aged 6 – 59 months) differentiated according to residence (rural/ urban).

Table 1: Prevalence of anaemia among children at the age of 6 – 59 months in Northern Uganda.

	No anaemia (Hb≥11.0 g/dl) %	Anaemia (Hb<11.0 g/dl) %	Severe A. (Hb<7.0 g/dl) %	Moderate A. (Hb 7.0-9.9 g/dl) %	Mild A. (Hb 10.0-10.9 g/dl) %
Total (n=272)	9.2	90.8	42.3	38.2	10.3
Sex (n=272)					
Male	6.6	93.4	40.4	41.7	11.3
Female	12.4	87.6	44.6	33.9	9.1
Age in months (n=270)					
6 - 11	10.3	89.7	36.2	46.6	6.9
12 – 23	7.4	92.6	37.0	44.4	11.1
24 – 35	12.5	87.5	41.1	35.7	10.7
36 - 47	7.5	92.5	55.0	25.0	12.5
48 - 59	8.6	91.4	51.4	31.4	8.6
Nutritional status					
Wasting (n=57)	8.8	91.2	40.4	40.4	10.5
Stunting (n=39)	7.7	92.3	41.0	35.9	15.4
Underweight (n=53)	11.3	88.7	39.6	41.5	7.5
Residence (n=256)					
Rural	7.4	92.6	51.3	31.7	9.5
Urban	11.9	88.1	17.9	58.2	11.9

References

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Abbreviations

Hb: Haemoglobin
SD: Standard deviation

