

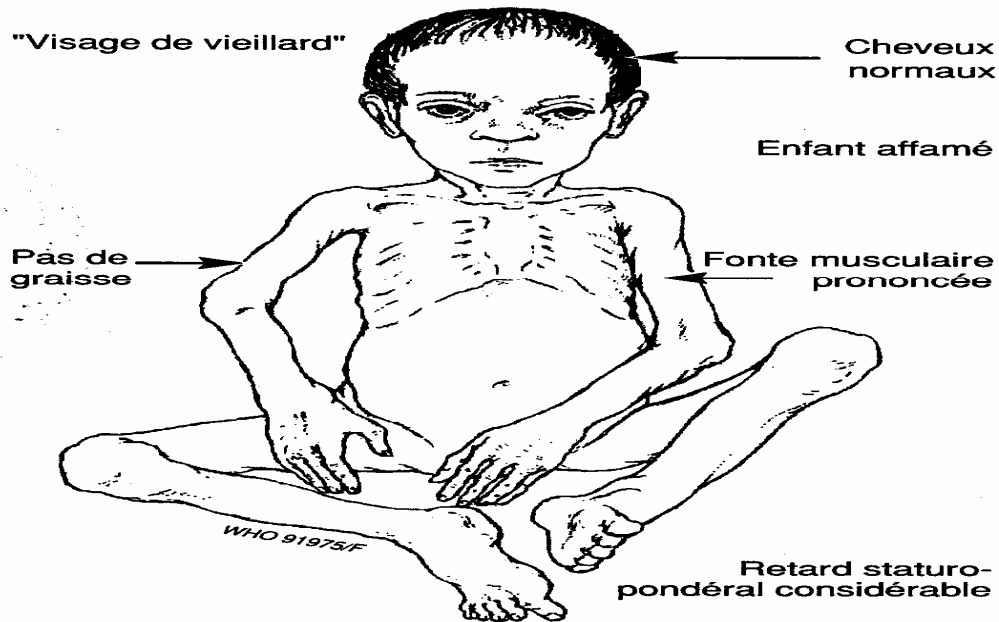
USE OF ANTHROPOMETRY FOR EVALUATION OF NUTRITIONAL STATUS IN CHILDREN

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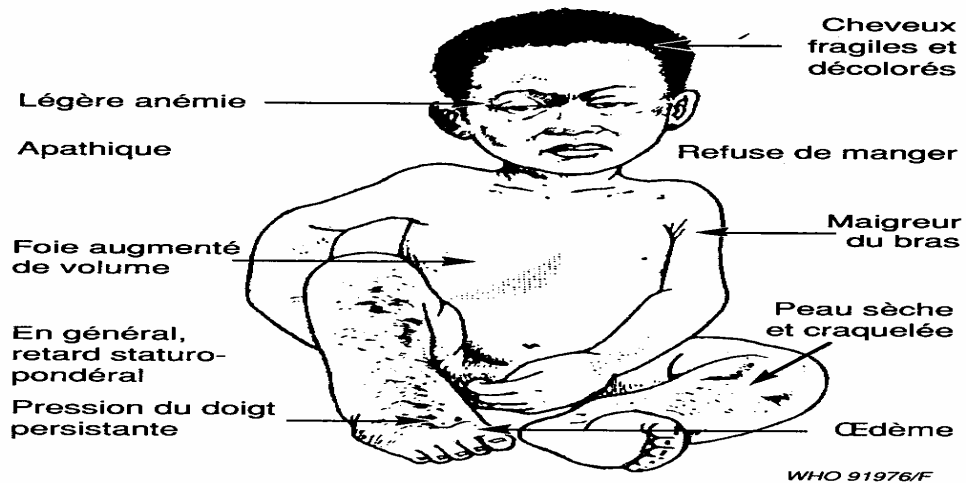
INTRODUCTION

- **EVALUATION OF NUTRITIONAL STATUS**
 - IN CLINICS
 - IN THE FIELD

Marasme



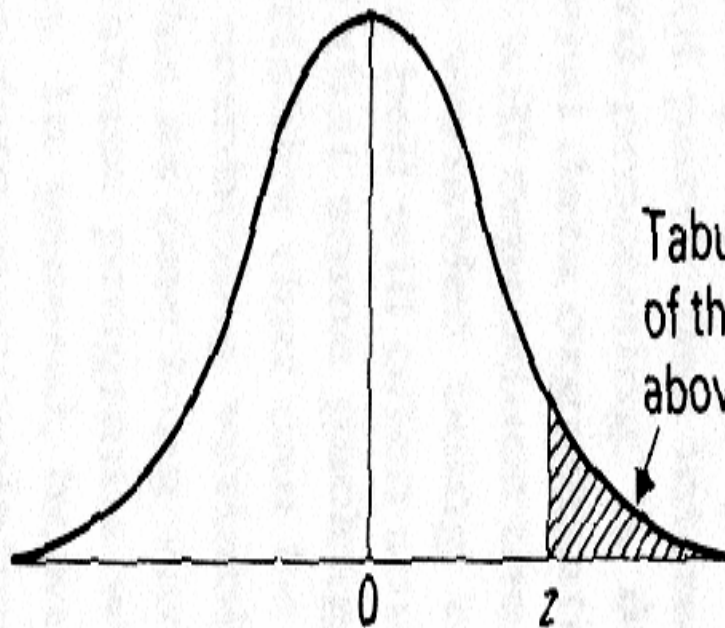
Kwashiorkor



WHAT TOOLS?

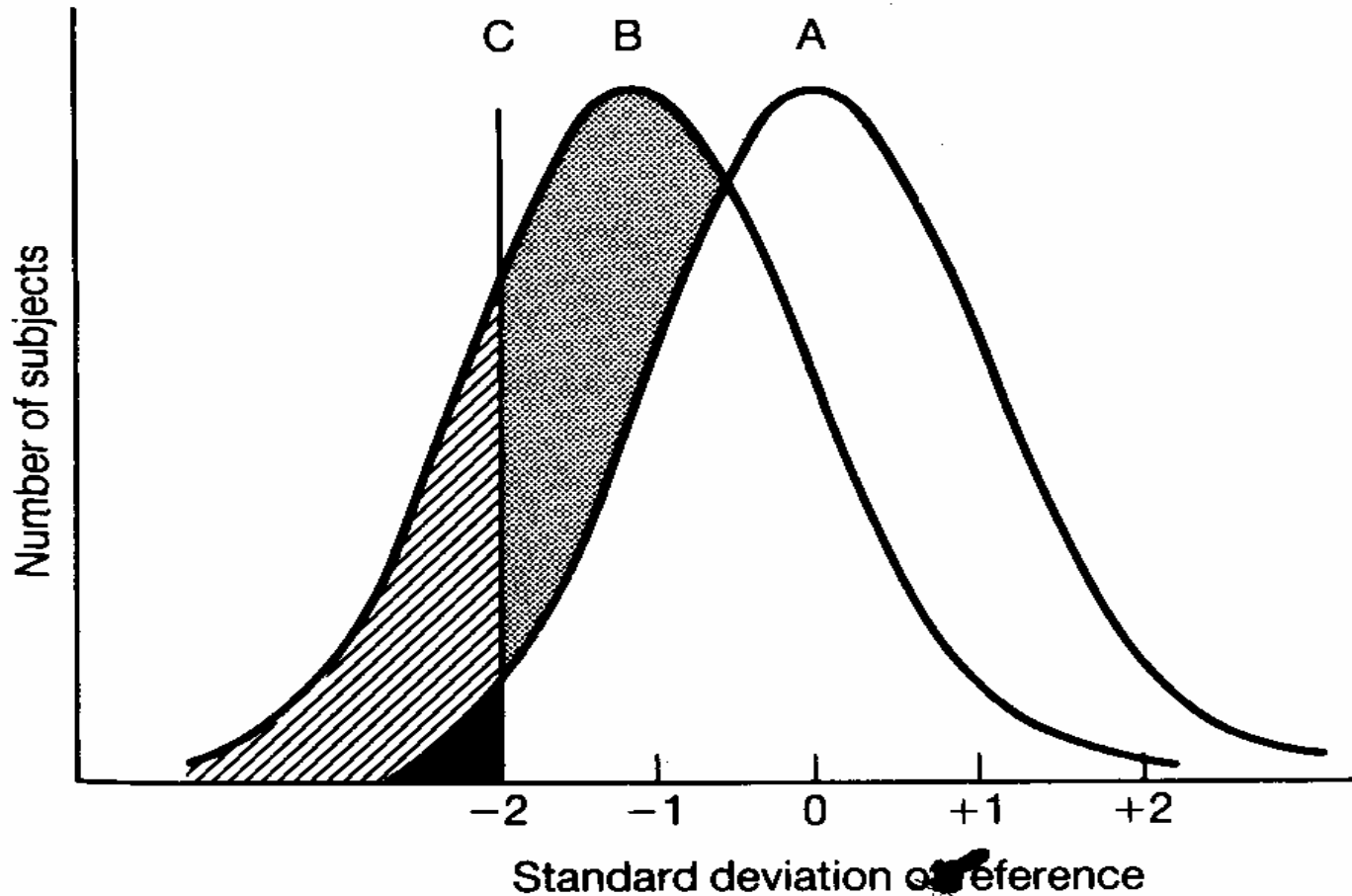
- **WEIGHT for age**
- **HEIGHT for age**
- **ARM Circumference**
- **CRANIAL Circumference**

GAUSSIAN DISTRIBUTION

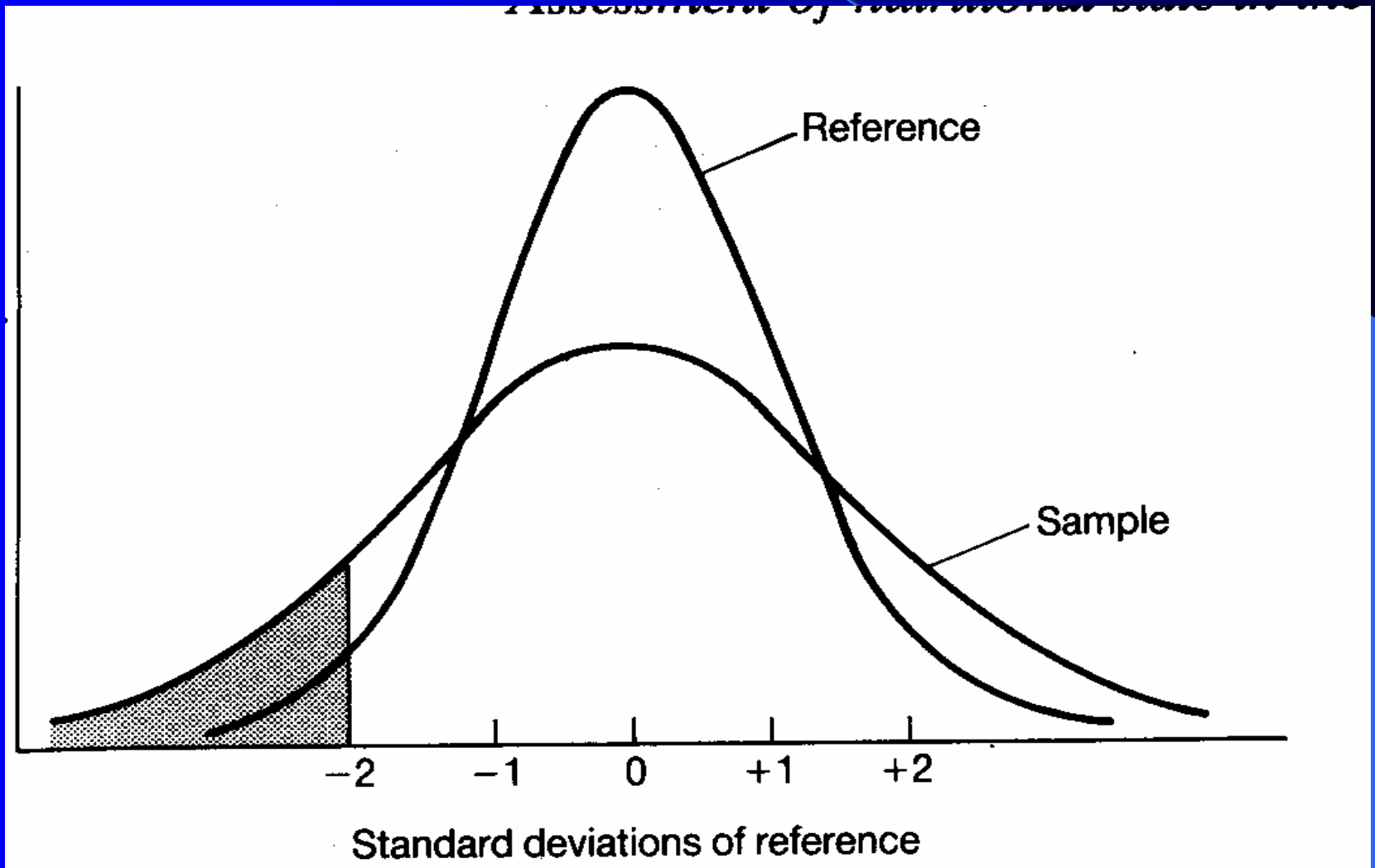


Tabulated area: proportion of the area
of the standard normal distribution that is
above z

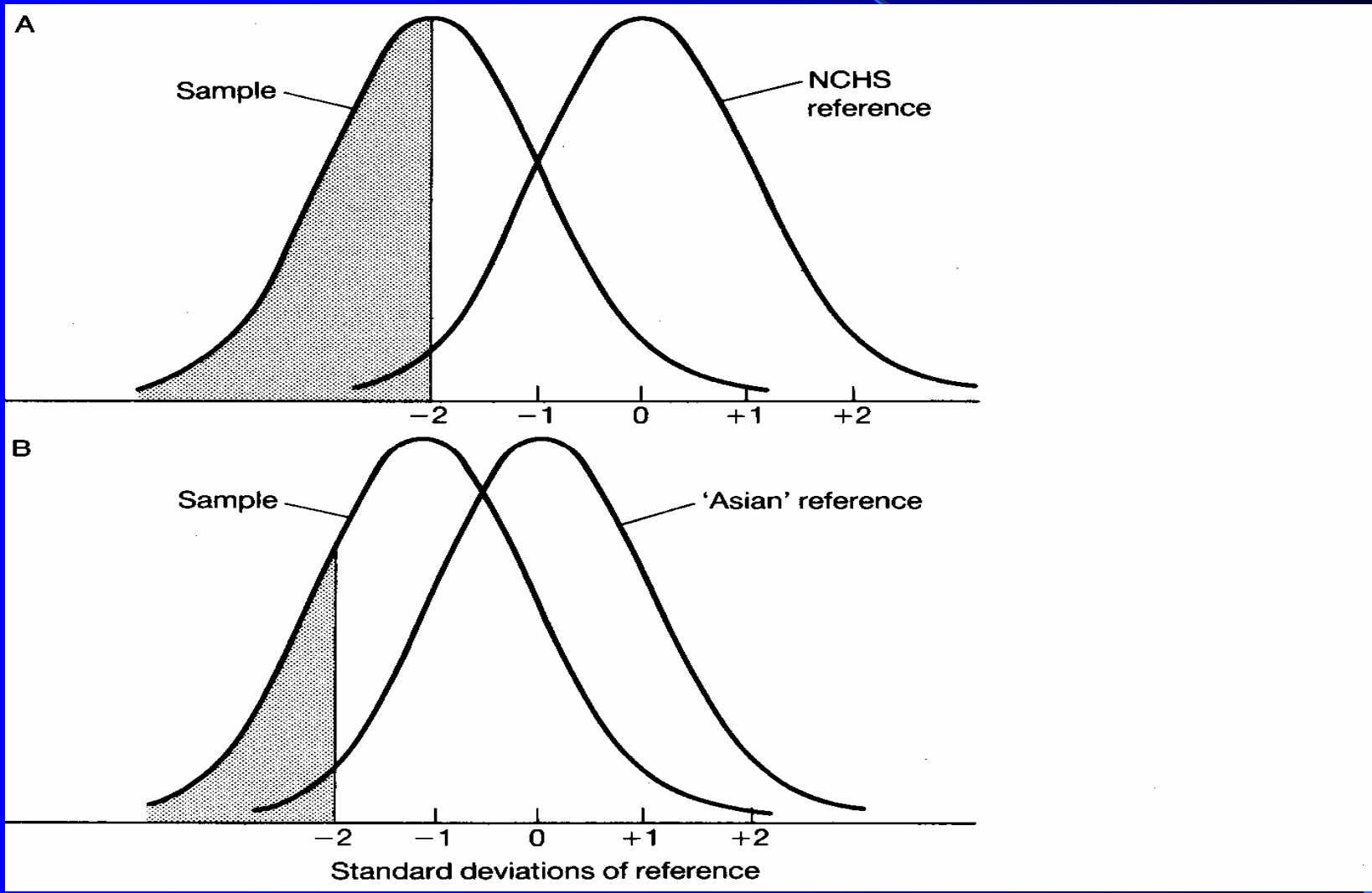
STANDARD DEVIATION(σ) and MEAN(μ) AS DESCRIPTORS

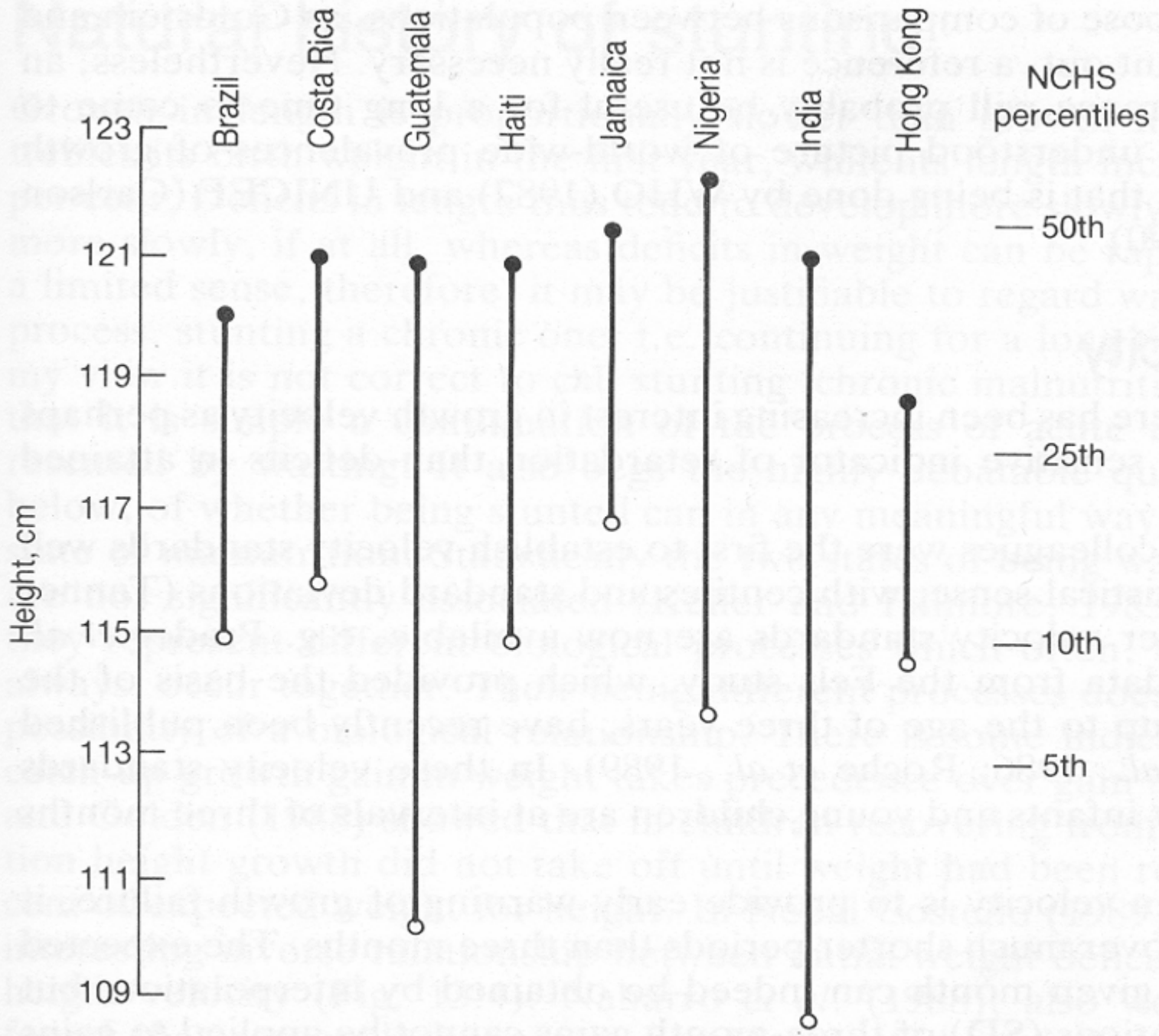


Standard deviation of reference



MEAN AND STANDARD DEVIATION AS DESCRIPTORS



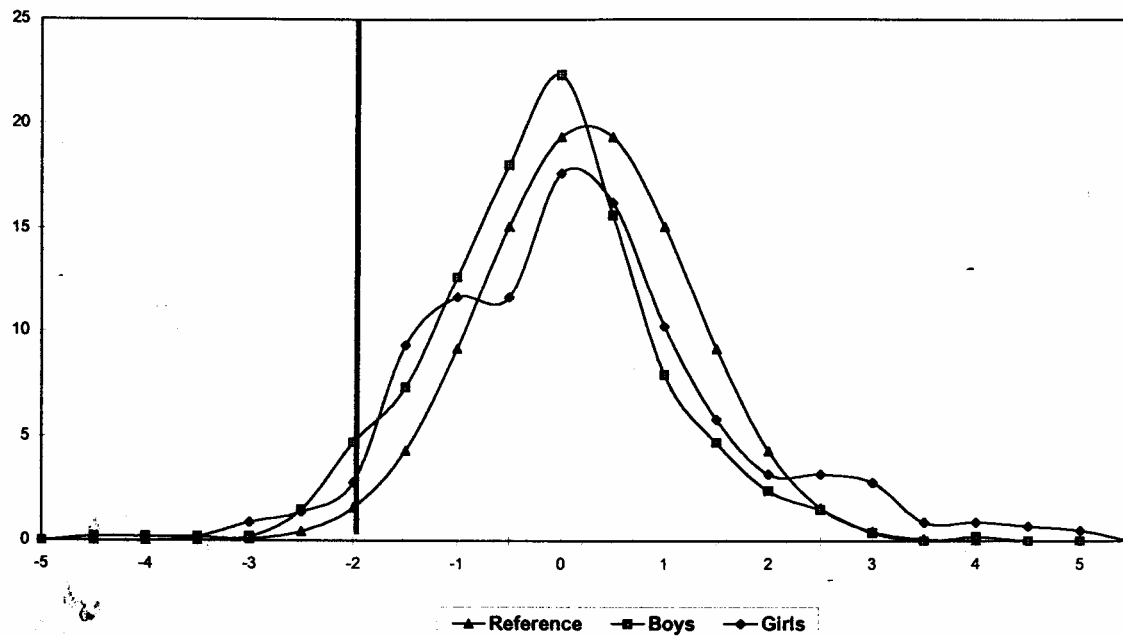


WEIGHT/AGE GOMEZ CLASSIFICATION

CLASSIFICATION	WEIGHT/WEIGHT/AGE %
NORMAL	> 90
GRADE I	75 – 89
GRADE II	60 – 74
GRADE III	< 60

WEIGHT for AGE Z-SCORE

Fig. 4.4.1B: Weight-for-Age Z-score, males and females 0-60 months



Weight for age

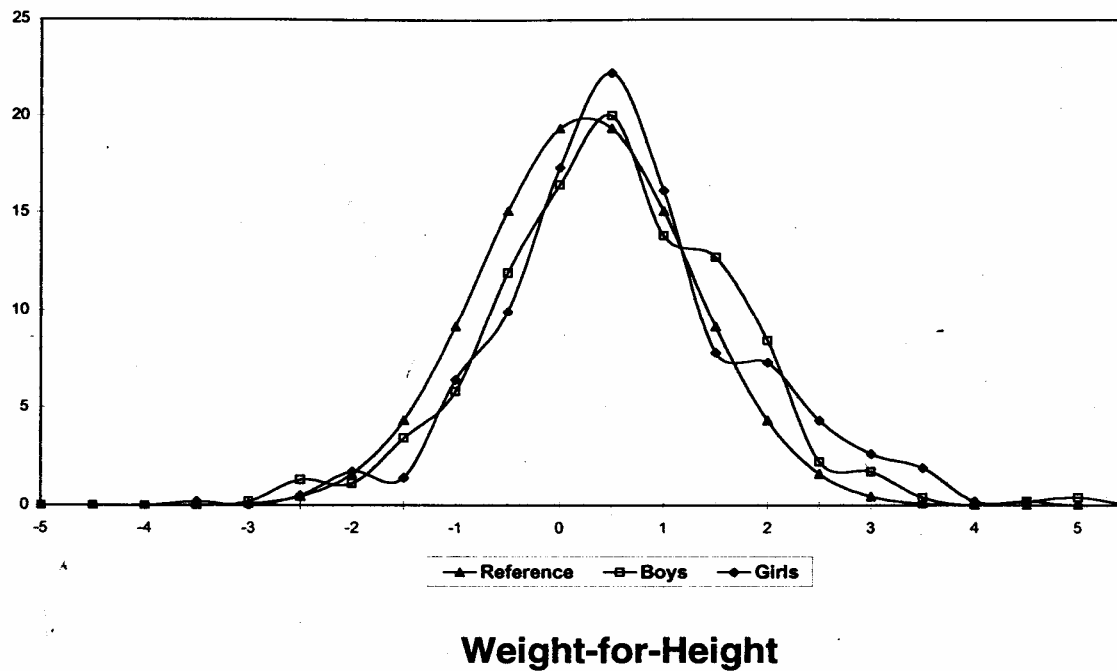
From Ganyam NYAMNDI thesis: Bali children 1998

WEIGHT for HEIGHT

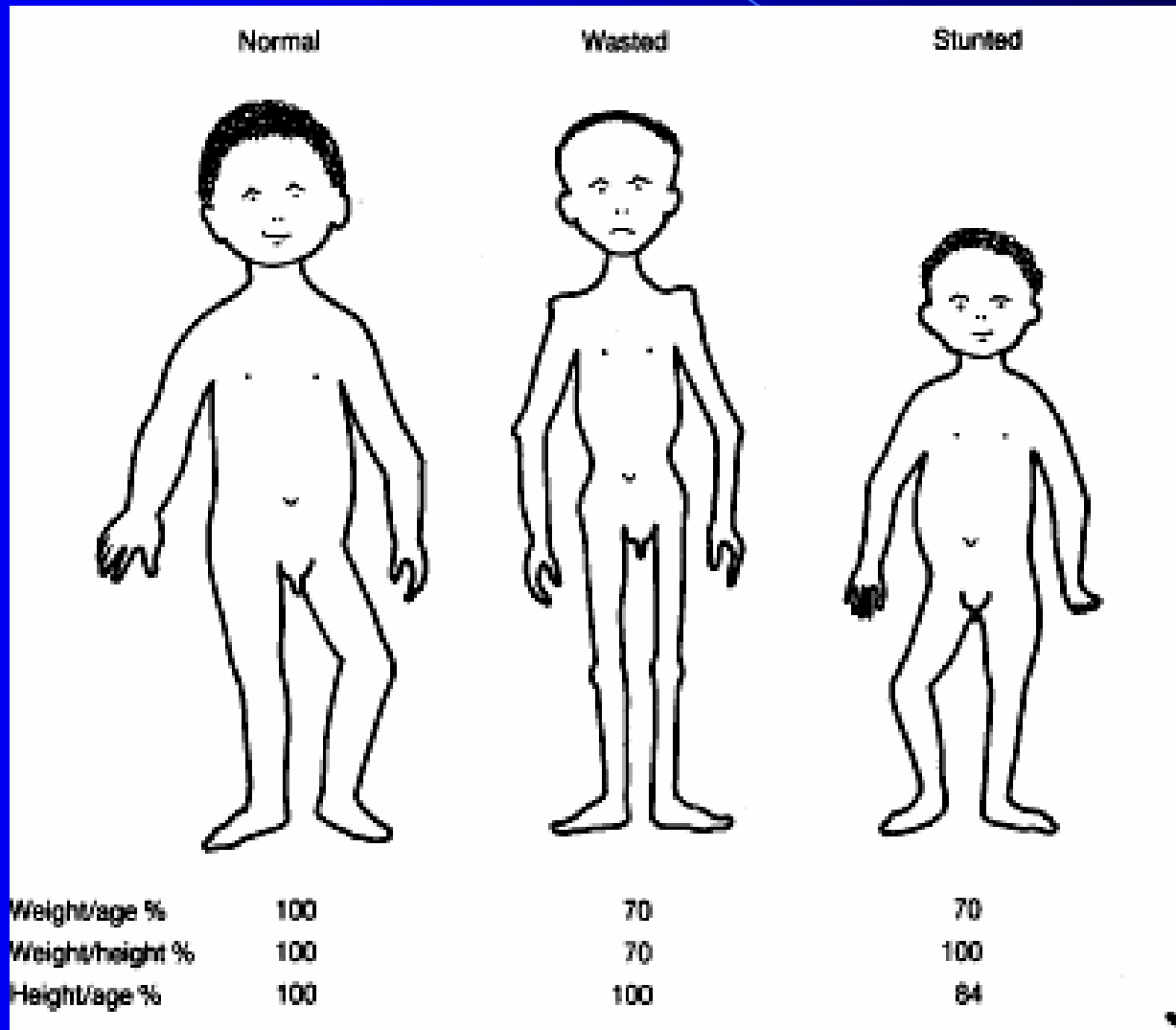
- $\% \text{ W/H} = 100 \times (\text{W} / \text{W}_{\text{a}_{\text{NCHS}}}) : (\text{H} / \text{H}_{\text{a}_{\text{NCHS}}})^2$

WEIGHT for HEIGHT Z-SCORE

Fig. 4.4.1c: Weight-for-Height Z-score, males and females 0-60months



WASTING & STUNTING (Waterlow, 1992)



WATERLOW WEIGHT for HEIGHT CLASSIFICATION

T/T₅₀ %	P/P₅₀ %	CLASSIFICATION
> 90	> 80	NORMAL
> 90	< 80	ACUTE PEM
< 90	> 80	CHRONIC PEM
< 90	< 80	SEVERE CHRONIC PEM

WELLCOME CLASSIFICATION

WEIGHT/AGE % of NCHS	OEDEMA	
	Present	Absent
> 80	Non nutritional	Normal
60 – 80	KWASHIORKOR	UNDERNUTRITION
< 60	KWASH- MARASMUS	MARASMUS

JELLIFFE CLASSIFICATION ARM/CIRCUMFERENCE

ARM CIRCUMFERENCE (cm)	NUTRITIONAL STATE
> 14	NORMAL
12.5 – 14	Mild-Moderate
< 12.5	SEVERE MALNUTRITION

CONCLUSION

- ANTHROPOMETRICAL PARAMETERS
 - IN CLINICS:
 - Classification based on:
 - WEIGHT for AGE
 - HEIGHT for AGE
 - CLINICS:
 - IN THE FIELD:
 - Classification based on:
 - WEIGHT for Height
 - AC or AC/CC