**Application of Z-scores in assessment of growth and nutritional status in children**

Prabhaker Mishra

Sanjay Gandhi Postgraduate Institute of Medical Sciences, India

**Abstract**

Anthropometric measurements are used to assess the size, shape and composition of the human body. Percentiles and Z-scores are routinely used in clinical practice to assess and monitor children’s growth and nutritional status and also widely used in the analysis of data from child nutrition surveys and epidemiological studies. Although Z-score is widely recognized as the best method of anthropometric data to assess the growth and malnutrition as well as risk of overweight, underweight, stunting, thinning etc. Z-score (or SD-score) is ratio of difference between observed value of the data and median value of the reference population w.r.t. standard deviation value of reference population. i.e. $Z$ score system expresses the anthropometric value as a number of standard deviations or Z-scores below or above the reference mean or median value. Usually $Z$-score is calculated for weight-for-height, weight-for-age, height-for-age, and BMI-for-age. The aim of this study is to discuss the methods of computation of $Z$ score for children for their anthropometric measurements and its advantages and disadvantages over percentiles.

He had published 82 research papers in various national / international journals. His expertise area is applied and medical statistics.

**Speaker Publications:**


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