Journal of Health & Medical Economics
2020
ISSN 2471-9927
Vol.6 No.2

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

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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.

Biography:

Prabhaker Mishra (DOB: January 1979), presently is working as Associate Professor in SGPGI Lucknow-India. He had completed his PhD in Statistics on the topic "Statistical Study of Human vulnerability and Risk. Assessment of Natural Hazards in Orissa" as Senior research fellowship (ICMR) in 2010. He had worked as Assistant Professor (Biostatistics) in the Department of Community Medicine, in medical colleges during 2011 to 2014. He had co-supervised 12 MD students; and presently other 31 MD /2PhD and 1PhD students are pursuing under his co-supervision /supervision.

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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5th World Congress on Public Health and Nutrition; London, UK- February 24-25, 2020.

Abstract Citation:

Prabhaker Mishra, Application of Z-scores in assessment of growth and nutritional status in children, Public Health 2020, 5th World Congress on Public Health and Nutrition; London, UK- February 24-25, 2020 (https://publichealth.healthconferences.org/abstract/2020/application-of-z-scores-in-assessment-of-growth-and-nutritional-status-in-children)