



Sex differences in head and trunk shape between Rampasasa Pygmy and Javanese children in Indonesia

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ABSTRACT

Ecological, demographic, and economic changes have significant implications for the population, particularly for children. In Indonesia, there is a scarcity of data on the anthropometric characteristics of children with short stature. This study aimed to compare sex differences in head and trunk shape of Rampasasa Pygmy and Javanese children. The participants in the study were 61 Rampasasa Pygmy children from Flores (32 boys and 29 girls) and 722 Javanese children from Yogyakarta (360 boys and 362 girls) aged 8 to 14 years. Because of their unique characteristics, the sample size for Pygmy children cannot be determined. Height, weight, sitting height, bi-acromial and bicristal breadth, length and breadth of the head were measured on each subject. Anthropometric indexes included the biacromial index ($\text{biacromial}/\text{height} \times 100$), bicristal index ($\text{bicristal}/\text{height} \times 100$), trunk index ($\text{bicristal}/\text{biacromial} \times 100$), cormic index ($\text{sitting height}/\text{height} \times 100$) and cephalic index ($\text{breadth head}/\text{length head} \times 100$) were calculated and classified. The statistical analyses were performed including tabulating the means and standard deviations for the various body dimensions and proportions of Pygmy and Javanese children. The results showed that Pygmy children were found to be shorter (in stature and sitting height), smaller (in bi-acromial breadth), and lighter (in weight) than Javanese children. Pygmy and Javanese children have narrow shoulders and pelvises, as well as rectangular trunks, with the exception of Yogya boys, who have intermediate trunks. Pygmy children have brachycephalic and macrocorm characteristics, whereas Javanese children have hyperbrachycephalic and mesocorm characteristics. In conclusion, there are no differences in shoulder breadth, pelvic breadth, or trunk shape between boys and girls in either population; however, there are differences in head shape and trunk height proportion between Pygmy and Javanese children overall.

BIOGRAPHY

Neni Trilusiana Rahmawati has completed his Ph.D. at Otsuma Women's University Tokyo, Japan. She is the head of the Bio- & Paleoanthropology Laboratory and a lecturer at the Department of Nutrition and Health, Faculty of Medicine, Public Health, and Nursing, Universitas Gadjah Mada Yogyakarta Indonesia.



2nd International Conference on
PEDIATRICS AND HEALTHCARE
May 13-14, 2024 | Bangkok, Thailand

Presenter Name: Neni Trilusiana Rahmawati
Mode of Presentation: Oral/Poster
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