Relationship Between Motor Performance And Nutritional Status In Indonesian Children, Especially in Yogyakarta

Soepraptidjuari Soerais

The present study evaluated the motor competencies of Indonesian children of different nutritional status. A sample wos drawn randomly from the Tegalrejo district of Yogyakarta, Indonesia. The sample included 144 children aged 12 to 18 months, consisiting of 49 normal, 46 mildly protein-calorie malnourished (PCM) and 49 moderately PCM children.

The nutritional status of the children was identified and classified according to the Mid Upper Arm Circumference (MUAC) for age, as recommended by Jelliffe (1969) and Survey/Research Unit (1971) of the Directorate of Nutrition, Ministry of Health, Yakarta. Motor performance was assessed by means of the motor Scale of the Bayley Scale of Infant Development (Bayley, 1969) and a Composite Test based on tests of strength, balance, eye-hand co-ordination and speed performance. Anthropometric measurements including weight, height, MUAC, and triceps skinfold were recorded. Socio-economic background information was obtained by interview.

Analysis of data revealed that there were significant differences $(F_{(4,280)} = 54.17, P < .0001)$ among the three nutritonal status group in motor performance. The differences were observed in both the Composite Test and the Bayley Psychomotor Development Index (PDI) scores. Socio-economic background variables did not make a major contribution towards accounting for the variation in motor performance.

The Socio-economic background variables contributed 10.24% to the Composite Test score, and 9.31% to the Bayley PDI score. But a large percentage 56.45% of the Composite Test score, and 59.99% of the Bayley PDI score was attributable to the physical characteristic variables, the contribution of the socio-economic background variables was not significant.

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The Composite Test was found reliable, the split-half reliability coefficient obtained was 0.75. It was a simple and practical method, which highly correlated with the Bayley Motor Scale (r = .87).

Motor development of the Normal Group followed a normal pattern, the Mild PCM children scored on the borderline between normal and delayed, while the motor development of the moderate PCM children was delayed. The education of of the mother and the occupation of the father have little effect on motor development. However, motor development was significantly influenced by physical growth and by the nutritional status of the children. The measurement of mid upper arm circumference (MUAC) was found to be the best indicator in predicting motor development.

The measurement of mid upper arm circumference and the Composite Test are recommended for secreening of motor development of children in the age range 12 to 18 months, as they are reliable and practical methods. However, further detailed examination is required for those children who show obvious sign of developmental abnormality.

DIRTY SYRINGES MAY CAUSE JAUNDICE

Dirty syringes can kill children

bacteria

viruses

malaria parasites

JAUNDICE

VIRUS B
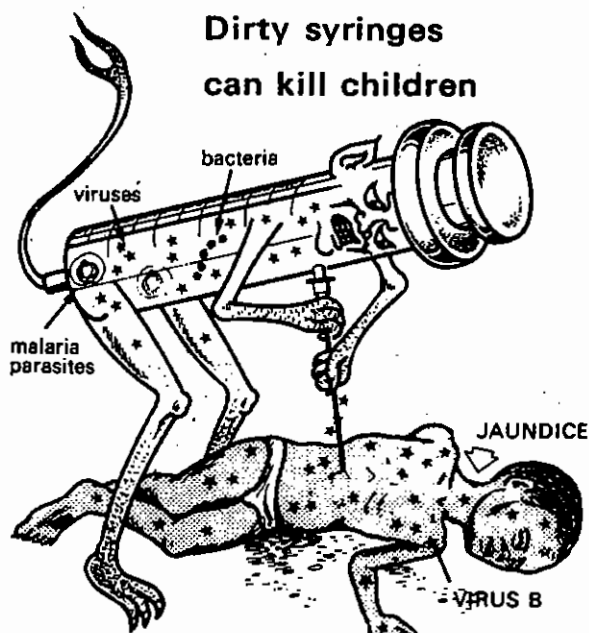
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