

A Study on the Body Measurement of Toddlers Aged 2-4 I

Jin Kim* and Hee-Soon Sohn

Dept. of Clothing & Textiles, Sookmyung Women's University

I. Introduction

An toddler will grow rapidly for toddler first year after birth; toddler becomes taller and taller fast, while toddler subcutaneous fat is accumulated rapidly. By toddler second year, the toddler will grow less fast compared with toddler first year, but toddler will weigh 4 times more than when toddler was born, being taller 1.6 times. At the same time, toddler breast and waist circumferences become smaller with toddler legs longer. Namely, while adult's body form changes horizontally, toddler's body form changes vertically. Researchers have continued to measure and analyze toddlers' body forms, but the literature about 2~4 aged toddlers' body forms does not seem to be sufficient. Hence, it is deemed very significant to analyze 2~4 aged toddlers' body forms and thereby, classify them into some categories.

II. Discussion

2~4 aged toddlers were sampled to be subject to body measurement. Their body measurements were analyzed to calculate minimum, maximum, mean and SD. The results of this study can be summarized as follows.

A total of 8 items about toddlers' height were measured. 2-year old toddlers' average height was 92.9cm, 3-year-old ones' 99.2cm and 4-year-old ones' was 104.7cm. Namely, the toddlers grew 6.3cm on average every year. The SD of their height was between 2.8 and 4.8, which means that the SD becomes larger as toddlers grow older.

A total of 6 items about toddlers' width were measured. 2-year old toddlers' average neck width was 7.7cm, 3-year-old ones' 7.9cm and 4-year-old ones' was 8.0cm. Namely, The SD of their neck width was between 0.5 and 0.6.

A total of 4 items about toddlers' thickness were measured. 2-year old toddlers' average hip thickness was 12.8cm, 3-year-old ones' 13.2cm and 4-year-old ones' was 13.5cm.

A total of 10 items about toddlers' circumference were measured. 2-year old toddlers' average neck circumference was 24.7cm, 3-year-old ones' 26.3cm and 4-year-old ones' was 26.7cm.

Namely, the SD of their neck circumference was between 1.4 and 1.5.

III. Conclusion

As a result of analyzing 2~4 aged toddlers' changing body forms, it has been found that changes of their breadths and depths are related with their body aspect ratios. That is, their breadths grow more than their depths in general, which means that as they grow older, their body forms tend to change into more or less flat forms. Such a change of body form seems to be attributable to physical growth rather than morphological change. It has been confirmed by this study that toddlers grow more vertically or in terms of height and length rather than horizontally or in terms of breadths or depths.

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