

A Study on the Slacks Basic Pattern and the Lower Garments Sizing System according to Lower Body Types of Adolescent Boys

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I. Introduction

The physical growth in adolescent periods appears to develop big individual differences in growth rates, suggesting the difficulties to standardize the manufactured apparel. This study specifically focused on the standardization of adolescent apparel, especially on trousers for adolescent boys. The basic materials for this study are obtained from the observations of physical characteristics and classification of physical figures based on the characteristics from waist down. Thus, this study presents the standards for the slacks basic pattern and the lower garments. sizing system

II. Research Method

This study was performed by using the physical measurements of adolescent boys (14~19 years old, n=1344) based on the 'the fifth Korean national physical standard reports' surveyed by SIZEKOREA.

For data analysis were performed descriptive statistics, factor analysis, cluster analysis, ANOVA, *t*-test, Duncan test, correlation analysis, crosstabulation using SPSS Ver. 12.0.

III. Result

The results from this study are as follows.

At first, according to the analyses of physical changes, most items including height, circumference, length, breadth, and depth were increased at the age of 14~18 and gradually reduced at the age of 19.

2) The factors which compose the lower body resulted were appeared that the first factor was vertical factor, the second factor was horizontal factor, the third factor was hip length, and the last factor was buttock-popliteal length.

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3) Formalization of physical figures for adolescent boy's lower body analyzed from factors grouped three types. Type 1 (Tall) represents a generally tall group, which are tallest in vertical factors and buttock-popliteal length, as tall as type 2 and taller than type 3 in horizontal factor and are normal in hip length. Type 2 (Medium) is normal type, which is normal in horizontal factors and tallest like type 1 in vertical factors, tallest in hip related characteristics and whose average values of all items are most similar with those of adolescent boys. Type 3 (Small) is the smallest group which are smallest in horizontal factors and hip length and normal in vertical and buttock-popliteal length.

4) The basic parts that we used to propose the apparel sizing system distinguished by physical figures were Waist Circumference (Omphalion) (every 3cm regular gap) and Hip Circumference (irregular gap). Physical figures assigned 5 to Type T, and 4 to type M. The reference measurement items were divided into 7 items which are correlated with apparel manufacture.

Second, the slacks basic pattern for adolescent boys was obtained from the modifications and adjustments of the selected pattern out of six educational and industrial slacks basic patterns. The modifications and adjustments by dressing were done based on Crotch, Thigh Circumference, waist circumference (Omphalion), hip circumference.

Therefore, this study can distinguish the apparel sizing system between the types and sizes of manufactured apparel, so develop the fitness and satisfaction with the apparel. Furthermore, it also figures out the frequency distribution of general physical figures and minimizes the apparel manufacturer's burden on overstock.

IV. References

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