

A Study on the Ease of Crotch Length for Women's Slacks Pattern

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Due to the expansion of women's area of activities, the number of slacks-wearing women and the frequency of slacks-wearing are increasing. And, in these days, women in their early twenties want to have slender silhouette around their loins and thighs. This resulted from the change of figure and fashion. To design suitable pattern, the general, systematic study on pattern design which reflects the design method of educational and industrial pattern is necessary.

The purpose of this study is to suggest a methodology to grasp the design method of industrial slacks pattern for women in their early twenties, and to suggest modernistic application measure and design method which reflects the design method of industrial slacks pattern.

It is also the purpose of this study to extract important items while designing slacks pattern and evaluate them thereby designing beautiful and motion-suitable slacks pattern.

In the first stage of this study, I did somatometry, selected subjects, and measured the amount of change of body surface. In the second stage, I extracted important design items and analyzed industrial slacks pattern. In the third stage, I divided the experiment into 3, and evaluated them on human bodies thereby suggesting slacks pattern for women in their early twenties

The result of this study is as follows:

1. As a methodology to grasp the design method of industrial slacks pattern, I did questionnaire, and analyzed application measures and the design method of industrial slacks pattern, the results of which are as follows:

1) The result of the questionnaire showed that the design of rear center gradient was most important and the rear center gradient was designed by shifting waist line and hip line to a suitable degree. So, in this study, I selected the rear center gradient as an important design item, and by expressing the design method of rear center line with rear center gradient and the amount of rear center line's movement, I analyzed industrial pattern and designed experimental pattern.

2) The result of analyzing industrial slacks pattern was that, below the waist by 4cm, the girth was measured and the ease of 0~1cm was applied to it, and the ease of hip girth was 3.2 ± 1.2 cm, and rear center gradient was 2.2 ± 1 cm, and front crotch extension was 2.8 ± 0.5 cm, while rear crotch extension was 6.3 ± 0.5 cm.

2. By comparing rear center gradient which was selected as an important design item with

total crotch length and hip girth, I selected industrial pattern and educational pattern, and evaluated them on human bodies, the result of which was that the fitness of industrial pattern was better in the appearance & movement test of experiment 1 pattern. In the result of ANOVA analysis, there were meaningful differences in 8 items: the ease of front waist girth, the ease of front abdomen, the ease of front hip girth, rumples in the side lines, the location of rear waist line, etc.

3. On the basis of patterns of A company and B company which were evaluated favorably in the experiment 1 pattern, I designed 3 patterns by using the same total crotch length and rear center gradient and changing the location of rear center line, and analyzed the experiment 2 pattern, the result of which was that the bigger the amount of movement of rear center line was, the shorter the rear crotch extension was. In the evaluation on human bodies, the amount of movement of rear center line made difference in the fitness of rear crotch, and the fitness of © pattern with long crotch extension was evaluated most favorably.

4. The experiment 3 pattern which was designed by modifying and supplementing © pattern which had been evaluated most favorably among experiment 2 patterns, was evaluated favorably both in appearance test and movement test. The design method of slacks pattern suitable for women in their early twenties was suggested as follows: the location of waist girth is below waist by 2.5~3cm, the ease of waist girth is 0~1cm; the ease of hip girth is 2~3cm; total crotch length is body size - 5cm; rear center gradient is 2.5 ± 0.5 cm; rear crotch extension is 7 ± 0.5 cm; front crotch extension is 3cm.

From the above mentioned results, I can draw meanings in this study as follows. First, in this study, I suggested the methodology to grasp the design method of industrial slacks pattern, and, by collecting industrial slacks patterns and analyzing them, I extended the range of study to the actual spot of industry. Second, by showing the design method of rear center line with rear center gradient and location of rear center line instead of angle concept, I suggested the method to improve hip fitness and make the design easier.

Therefore, if subsequent studies on the design method of rear center line according to somato type and materials on the basis of this study follow, they would be able to suggest the design method of slacks pattern which is generalized and more useful.