

Effect of bust line position on appearance of upper garment

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Abstract. We investigated the effect of the difference between positions of bust line of body and garment on the appearance. We made five upper garments which the length between the side neck point (SNP) and the bust point (BP) were different. Four dress forms, B1, B2, B3 and B4, which the length between SNP and BP are 23.5cm, 23.0cm, 26.3cm and 26.4cm respectively were prepared. The garments appearances worn on each dress form were compared. It was found that the upper garment which was made for matching to the length between SNP and BP of the body is not always evaluated in a good appearance. For the evaluation in the side direction, the silhouette is the most important. In order to design or choose an upper garment with a good appearance, it is necessary to consider the position of bust line.

1. Introduction

When buying a garment, it is important to choose a garment matching the size of wearer's body. Individualized garment manufacturing focus on making a fitting garment [1]. Even for ready-to-wear clothing, customers try to find a suitable size of garment for their sizes. However, a garment with suitable size does not always show a good appearance of a wearer in wearing state. Jacket appearances, which were made by the same pattern and face fabric, were different by bonding different adhesive interlining [2].

Various beautiful proportions have been proposed for human body and clothing respectively [3, 4]. Even clothing measurements are fitted for body measurements, those proportion may be different. However, the effect of the proportions difference on the wearer's appearance is not clear. In this study, we investigated the effect of the difference between positions of bust line of body and garment on the appearance.

2. Experiments

We made five upper garments which the length between the side neck point (SNP) and the bust point (BP) were different. Four dress forms, B1, B2, B3 and B4, which the length between SNP and BP are 23.5cm, 23.0cm, 26.3cm and 26.4cm respectively were prepared. Table 1 shows specification of each dress form. Figure 1 shows pictures of dress forms. The garments appearances worn on each dress form were compared. We used a patternmaking method [5] that can change the length between SNP and BP. Using measurements of B1 dress form (Kiiya Co., Ltd, 9AR, Height 158 cm, Bust 83 cm, Hip 91 cm), we made an upper garments as setting the length between SNP to BP as 25cm. Then, we made



other four garments as setting the length between SNP and BP, 23cm, 24cm, 26cm and 27cm. The garments were named as BL23, BL24, BL25, BL26 and BL27. Figure 2 shows an upper garment of BL25 on B1. Pictures of the garment wearing on each body were taken from the front and side directions. The garments appearances were compared in a Scheffe's paired comparison (Nakaya's variation) with the pictures. Six evaluation items; amount of wrinkle, fit, attractive, beautiful, young and slim were used. For the side direction, two evaluation items; front and back lines were also used as shown in Table 2. Subjects were 20 Japanese university students in their 20's.

Table 1 Specification of dress form

Part \ Symbol	B1	B2	B3	B4
Manufactured Country	Japan	Japan	France	Great British
Bust (cm)	87.0	86.4	85.7	87.4
Waist (cm)	63.6	60.6	67.6	64.2
Hip (cm)	93.2	87.6	93.4	92.5
Length between SNP and BP (cm)	23.5	23.0	26.3	26.4

**Figure 1.** Picture of dress form.**Figure 2.** Picture of upper garment (BL25, B1)

3. Results and discussion

Table 3 shows the garments of the highest average preferences for each dress form in the front direction of entire garment. In the items of fit, attractive, and beautiful, BL26 was highly evaluated for B1 and B2, which the lengths between SNP and BP are close to 23 cm than BL23. On the other hand, BL25 was highly evaluated for B3 and B4 which lengths between SNP and BP are close to 26cm than BL26. Therefore, it was found that the upper garment which was made for matching to the length between SNP and BP of the body is not always evaluated in a good appearance.

For the side evaluation, BL25 was evaluated as the most beautiful for all bodies except for B2. Garments of the highest average preferences for all items in the side direction and ones of the front line in the side direction were the same. Therefore, for the evaluation in the side direction, the silhouette is the most important.

Table 2 Evaluation Item on part

Evaluation Item	Part	
	Front	Side
Many wrinkles – Few wrinkles		
Fitting – unfitting		
Attractive – not attractive	Shoulder, bust, waist, entire	bust, waist, entire
Looks young – looks old		
Looks slim – looks fat		
Beautiful – not beautiful		
Beautiful silhouette – not beautiful silhouette	Waist line	Front line

Table 3 Garments of the highest average preferences for evaluation item (front, entire)

Evaluation item	Dress form			
	B1	B2	B3	B4
Amount of wrinkle	BL26	BL25	BL25	BL25
Fit	BL26	BL26	BL25	BL25
Attractive	BL26	BL26	BL25	BL25
Beautiful	BL26	BL26	BL25	BL25
Young	BL23	BL24	BL25	BL25
Slim	BL24	BL26	BL25	BL25

4. Conclusion

To investigate the effect of the difference between positions of bust line of body and garment on the appearance, a sensory test was carried out using five upper garments by changing the length between SNP and BP. As a result, it was found that the upper garment which was made with the same length from SNP to BP of the body is not always evaluated in a good appearance. In order to design or choose an upper garment with a good appearance, it is necessary to consider the position of bust line.

Acknowledgments

This work was supported by JSPS KAKENHI Grant Number JP24220012 and JP16K45678.

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