

# Preference for Clothing Colors Based on College Students' Personality

Cong Meng  
College of Textile and Clothing Engineering  
Soochow University  
Suzhou, China

Xiaofeng Jiang  
College of Textiles and Clothing Engineering  
Soochow University  
Suzhou, China

**Abstract**—The purpose of this study was to explore the association between college students' personality types and clothing color preference. Firstly, the personality classification of the subjects was carried out by the questionnaire. Then, eight hues and four tones in color-space were applied to three kinds of clothing, and the subjects carried out behavioral experiments. The results show that: (1) there is a significant difference in clothing color preference between college students with introverted unstable personality and introverted stable personality. College students with introverted unstable have a lower preference for clothing color, and they like light-colored clothing. (2) College students with introverted and have obvious differences in their color preference for clothing. Comparatively speaking, groups with extroverted unstable personality prefer clothing of various shades and hues. College students with introverted and unstable personality are most likely to reject dark blue-green clothing, while college students with extroverted and unstable personality are the most likely to reject dark purple clothing. (3) There is also a significant difference between College students with introverted and unstable personality in the color preference of clothing. College students with introverted and unstable personality dislike dark blue-green clothing most, while college students with extroverted and stable personality dislike pure yellow clothing most. College students with introverted and unstable personality fluctuate greatly in their preferences for clothing of various hues and tones, while college students with extroverted and stable personality have similar preferences for clothing of various hues and tones.

**Keywords**—Clothing color; Personality type; Color preference; College students

## I. INTRODUCTION

Color is a key factor influencing consumers' preference for clothing [1]. In the existing literature, scholars are more committed to studying gender, age and other factors of color preference, and the conclusions are different.

Early research focused on the preference of different types of groups for abstract colors. In 1962, Japanese scholars investigated the color preferences of Japanese primary and secondary school students, adult women and adult men, and found that most adult men preferred blue to orange, and most adult women preferred blue-purple to yellow [2]. In addition, Liu Shaoying and colleague studied the color preference of children aged 4-6 years, and the results showed that the color preference order of young children was red, yellow, orange, blue, purple and green. There are obvious differences in color preference between male and female children; there was no significant difference in color preferences among young children of different ages [3]. Some scholars have conducted research on the color preference of students from

Kindergarten, primary school, middle school, high school, and college respectively. The results showed that blue is preferred for all ages, except for preschool children, and those of all ages like green least [4].

In 1960, the Japan Color Institute distinguished abstract color preference from figurative preference when investigating color preferences among young children [2]. Scholars have concluded that an individual's preference for abstract and figurative colors is irrelevant [5]. In the car color preference experiment, the favored color order is blue, gray and red [6]. For the home decoration color, beige is preferred. For the wall, floor, ceiling color, people prefer the traditional color, which is greatly different from the color preference of sofa and bedding [7]. More scholars have studied children's preference for candy color [8]. Some researchers conducted color preference experiments on Chinese students by text description, and found that students prefer abstract colors and object colors have a large difference. Their preferred abstract colors are white and blue, while the preferred object colors are white and red [9]. Color preferences are related to the profession. Some researchers surveyed volleyball players and found that their favorite clothing color was red, yellow followed, and the most exclusive clothing color of the athletes was green [10].

Personality is a series of cognitive habits, behavior patterns and emotional experiences that individuals reflect on their environment or when they encounter outside life [11]. In general, personality is the product of psychological and physiological cooperation, compared with the external environment stimulation has a certain degree of extroversion and stability, it determines the different thinking patterns and behavior characteristics between individuals. At present, there are researches on personality and color preference, most of which focus on color preference of people with brain damage or mental abnormality. Some scholars investigated the preference of students of different personalities for nine colors (red, orange, yellow, green, blue, purple, gray, white, black), and showed that extroverted and emotionally unstable students preferred blue [12]. Choungourian chose the MPI questionnaire, using words to examine the color preferences of the extroverted and neurotic individuals, and found that the neurotic individuals preferred red and purple, while the transverse individuals preferred yellow-green [13]. The relationship between abstract color preference and personality of female college students shows that the personality characteristics of female college students are positively or negatively correlated with their preference for color system and tone [14]. Therefore, color preferences are influenced by factors such as age, gender, and race.

Existing literature relating to the character and clothing color preference related are very few, so this study will use experimental test methods to investigate the relationship between college students' personality and clothing color.

## II. EXPERIMENT

### A. Subjects

In this experiment, 32 college students (17 men and 15 women) were selected as subjects. None of the subjects had a history of mental illness or brain trauma, normal vision, no color blindness or color weakness, and all participants participated voluntarily in the experiment.

### B. Materials

We investigated preference for 32 chromatic colors, and the individual color was the same as those reported in Palmer and Schloss [15]. These colors were defined by eight hues: Red(R) , Orange(O) , yellow(Y) , Green-yellow(GY) , Green(G) , Blue-green(BG) , Blue(B) , and Purple(P) , consisting of four tones in color-space: Saturated (S) , Light (L) , Dark (D) , and Muted (M) . Clothing colors are processed through Photoshop software, coloring 32 colors in three representative dresses, resulting in 96 clothing color pictures, as shown in Figure 1.



Fig. 1. Clothing color sample

### C. Methods

Participants entered the laboratory one by one to carry out the experiment. The experiment was divided into two parts: personality test and behavior test. The personality test uses the Eysenck personality scale, and the subjects are surveyed in two dimensions: E dimension (introversion and extroversion) and N dimension (stable and unstable). Behavior experiments use E-Prime for programming and Likert 5-point method for evaluation, and the experiment lasts about 20 minutes.

### D. Results

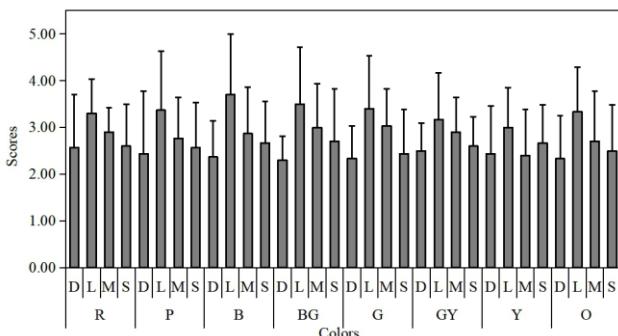


Fig. 2. Evaluation of preference for clothing color of the introverted unstable personality group

Figure 2 reflects the preference of introverted and unstable students for clothing colors. It can be seen from the figure that this group has a low scores on clothing colors preference, and they prefer light colors most. Among them, bright blue is the most preferred color, followed by bright blue-green. Introverted and unstable personality groups are the most repulsive of dark colors, among which dark blue and green have the lowest scores. In addition, this group does not like brightly colored clothing relatively.

Figure 3 shows the preference of students with introverted and stable personality for clothing color. It can be seen from the figure that, in addition to the red hues, this group prefers light colors and rejects dark colors most. Among them, light blue-green is the most preferred color, while dark orange color is the most hated color. Particularly, for the red hues, college students with the introverted stable personality preferred dark red.

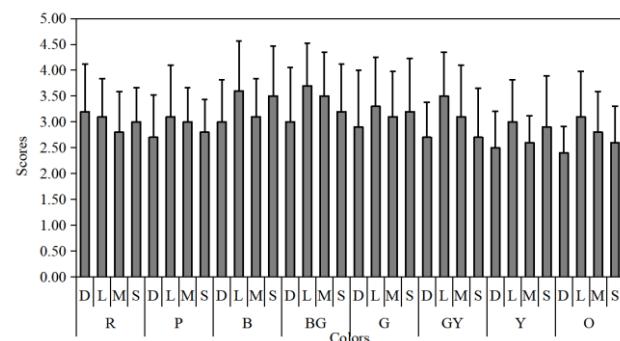


Fig. 3. Evaluation of preference for clothing color of the introverted unstable personality group

Figure 4 reveals the preference of college students with extroverted and unstable personality for clothing color. It can be seen from the picture that bright blue is the most preferred color for this group, followed by bright purple, and dark purple is their most repellent color. In addition, this group has similar appraisal of clothing of other hues and tones. As with the two personality groups mentioned above, extroverted and unstable college students prefer light colors. The difference is that for red, muted colors are the most repulsive colors, while for yellow-green, saturated colors are the most excluded color.

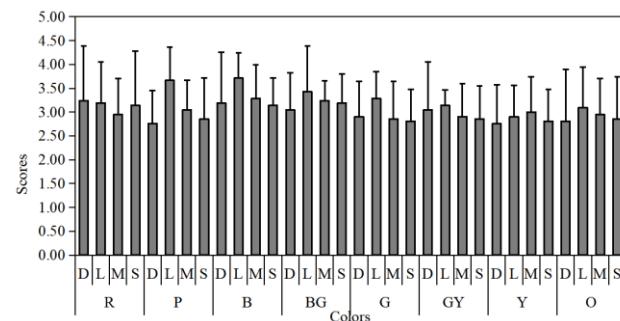


Fig. 4. Evaluation of preference for clothing color of the introverted stable personality group

Figure 5 shows the preference of college students with extroverted and stable personality for clothing color. According to the figure, we can see that this group dislikes saturated yellow most, followed by dark orange. However, they preferred light blue most. In general, college students with the extroverted stable personality have a higher acceptance of all kinds of colors, and in the same way, they prefer light colors. In addition, this group is less fond of yellow than other colors.

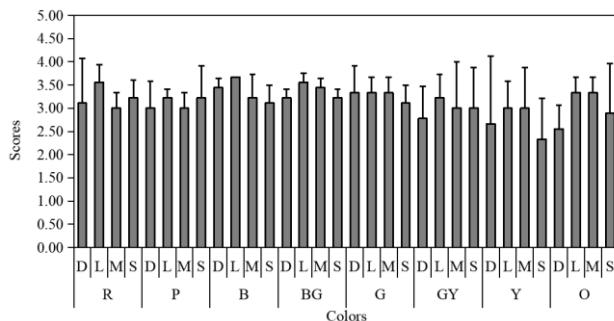


Fig. 5. Evaluation of preference for clothing color of the extroverted stable personality group

In summary, light blue clothing is generally preferred by college students at present. In general, light-toned clothing is loved by all kinds of personality college students. ANOVA of clothing color preference by college students with different personalities is carried out. From Table 1, the color preference of college students with different personalities are very significant ( $F=7.272$ ,  $p<0.000$ ). Based on multiple comparisons and t-tests (Table 2), the results show that there are significant differences in the preference of college students with different personality types for clothing color.

TABLE I. A SIGNIFICANT ANALYSIS OF CLOTHING COLOR PREFERENCES AMONG STUDENTS OF DIFFERENT PERSONALITY TYPES

	Sum of Squares	df	Mean Square	F	P
Between Groups	2.156	3	0.719	7.272	0.000
Within Groups	12.255	124	0.099		
Total	14.412	127			

TABLE II. COMPARISON OF COLOR PREFERENCES FOR CLOTHING AMONG COLLEGE STUDENTS OF DIFFERENT PERSONALITY TYPES

Source of Variation	P	95% confidence Interval	
		Lower Bound	Upper Bound
Introverted Unstable $\times$ Introverted Stability	0.004	-0.386	-0.075
Introverted Unstable $\times$ Extroverted Instability	0.001	-0.430	-0.118
Introverted Unstable $\times$ Extroverted Stability	0.000	-0.503	-0.192
Introverted Stability $\times$ Extroverted Instability	0.580	-0.199	0.112
Introverted Stability $\times$ Extroverted Stability	0.139	-0.273	0.039
Extroverted Instability $\times$ Extroverted Stability	0.352	-0.229	0.082

### III. CONCLUSIONS

Experimental results show that there are great differences in the preference of different personality types for college students in clothing color.

(1) There was a significant difference in clothing color preference between college students with introverted unstable personality and introverted stable personality. Introverted unstable college students have a lower preference for clothing color, and they prefer light-colored clothing.

(2) Introverted unstable personality and extroverted unstable personality of college students in clothing color preference were significantly different. In contrast, groups with an extroverted unstable personality prefer clothing of all hues and tones. College students with introverted unstable personality reject dark blue-green clothing most, while those with extroverted unstable reject dark purple clothing most.

(3) The color preference of clothing was also significantly different between college students with introverted unstable personality and extroverted stable personality. College students with introverted unstable personality dislike dark blue-green clothing most, while college students with extroverted and stable personality dislike pure yellow clothing most. College students with introverted and unstable personality fluctuate greatly in their preferences for clothing of various hues and tones, while college students with extroverted and stable personality have similar preferences for clothing of various hues and tones.

(4) There is no obvious difference of color preferences between the students with introverted stability personality and extroverted instability personality, introverted stability and extroverted stability, extroverted instability and extroverted stability.

### REFERENCES

- [1] L. Bojia, "On the influence of clothing color application on clothing sales", China Business & Trade, vol. 36, pp. 17-18, December 2012.
- [2] Eiaki Fujisawa, "Color Psychology", Beijing, Science and Technology Literature Press, [1989].
- [3] L. Shaoying, G. Liezhong, and Z. Yao, "A research of color preference of children aged 4 to 6", Journal of Psychological Science, vol. 27(3), pp.669-670, May 2004.
- [4] G. Liezhong, L. Shaoying, and X. Weidan, "A research of color preference", Journal of Psychological Science, vol. 28(4), pp. 849-851, July 2005.
- [5] C.B. Holmes and J.A. Buchanan, "Color preference as a function of the object described", Bulletin of the Psychonomic Society, vol. 22(5), pp. 423-425, November 1984.
- [6] Mundell and Helen, "How the color mafia chooses your clothes", American Demographics, vol. 15, pp. 21, [1993].
- [7] H. Weixin and X. Weigou, "Interior Color Preference Investigation Using Interactive Genetic Algorithm", Journal of Asian Architecture & Building Engineering, vol. 8, pp. 439-445, [2009].
- [8] L.M. Walsh, R.B. Toma, R.V. Tuveson, and L. Sondhi, "Color preference and food choice among children", The journal of psychology, vol.124, pp. 645-653, [1990].
- [9] C. Hanbiao and Z. Xiangeng, "Student Color Hobby Survey", Education and Vocation, vol.7, pp. 437-447, [1934].
- [10] X. Yinhua and L. Yijun, "Preference and emotional experience of woman volleyball players on sportswear color in China", China Sport Science and Technology, vol.44(1), pp.112-116, January 2008.
- [11] G. Matthews, "The Cambridge Handbook of Personality Psychology", Cambridge University Press, [2009].
- [12] L.Yaoming, C. Jingui, and X. Longzeng, "Personalities and differences of partialities for colors", Journal of Nanjing Military Medical College, vol. 4, pp. 265-266, November 1995.

---

- [13] A. Choungourian, "Extraversion, neuroticism, and color preferences", *Perceptual and Motor Skills*, vol. 34(3), pp. 724, June 1972.
- [14] L. Pingping, C. Xiaodi, C. Guopeng, and X. Difeng, "Abstract color preference and its relationship with personality characteristics among female college students", *Psychological Research*, vol. 5(6), pp. 74-80, December 2012.
- [15] S.B. Schloss and S.E. Palmer, "Aesthetic response to color combinations: preference, harmony, and similarity", *Attention Perception & Psychophysics*, vol. 73(2), pp.551-571, February 2011