

## Design of Decorative Fabrics in the Living Space of the Elderly

ZHENG Ling<sup>[a],\*</sup>; JIN Ke<sup>[b]</sup>

<sup>[a]</sup>Graduate Student, College of Textile and Garment, Southwest University, Chongqing, China.

<sup>[b]</sup>Associate Professor, College of Textile and Garment, Southwest University, Chongqing, China.

\*Corresponding author.

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### Abstract

Space design for the elderly has been paid more and more attention under the reality of aging population, but there is relatively few researches on interior decorative fabrics design that affects elderly living directly. Taking interior decorative fabrics design for the elderly as core and analyzing decorative fabrics' color, texture and pattern's design, this paper specially researches physical and psychological features of the elderly, puts forward the important role of perfect decorative fabrics' design in the living space of the elderly, and provides references for the design of decorative fabrics in the living space of the elderly in China.

**Key words:** The elderly; Living space; Fabrics; Decorative design

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### INTRODUCTION

Rapidly aging of the world population has become an irreversible trend according to the recent population statistics, the old-age problem will become a social problem that we have to face to. As a result of degradation

of physiological function and loneliness increasing with age, interior environment as the main living areas of the elderly plays an important role that can not be ignored in elderly people's physical and mental health. As an effective means of regulating the indoor living atmosphere and perfecting function, decorative fabrics' color collocation, texture application and pattern design particularly important in the elderly living space. At present, the interior design for the elderly people in China is still generally staying on the functional design such as barrier-free design etc., and seldom taking the old people's perception into consideration from the angle of decorative fabrics design. Meanwhile, researches on the methods of fabrics decoration design of the elderly people's living space are rather lacking, and the fabrics decoration design in the living space of the elderly needs optimization. I think that researching on the fabrics decoration design in the living space of the elderly should include the following three parts, namely, color design of fabrics for decoration, design of functional textile and patterns design of fabrics for decoration.

### 1. FABRICS DECORATION COLOR AND THE ELDERLY PSYCHOLOGICAL CHARACTERISTICS

Fabrics decoration accounted for the vast majority of indoor soft adornment design, and the choice of its color controls the main hue of interior space design, which affects people's physiology and mental activity in a direct or an indirect way. The elderly people's physiological function is degenerating to a greater or less extent with age, but the right fabrics decoration color benefits to the physical and mental health of old people.

From the experimental analysis, we can get that different color of light irradiation can cause different reactions of people's muscle function and blood

circulation (Sun, Zhang, & Fang, 2005). And produce different psychological feelings of cold and warm, color can be divided into the cool colors (cyan, blue), warm colors (red, orange, yellow) and a neutral colors (purple, green, gray) according to the psychological feeling that we have known. Psychologists had done many tests of different colors and found that they brought different physiological and psychological feelings for human (Table 1) (Li, 2012). Therefore, we should fully consider that the color has an influence on the elderly people's psychology and physiology in the elderly living space decorative fabric design.

Entering the aging stage, people's physiological function gradually declines and the process of metabolism begins to malfunction, the proportion of hypertension,

high blood lipid diseases increases as well. Thus we should especially pay attention to the effects of color on the elderly people's physiological and psychological when choosing the fabrics' color for the elderly living space decoration.

From Table 1, we can get that blue, green, purple are able to eliminate the tension, so these colors help the elderly get peace of mind. In other words, colors that biased cool and the color line are good for mental health of the elderly. Therefore, colors that biased cool and the color line can be used for curtains, carpets, sofa and other furniture accessories in the design of fabric decoration of the living room, which is able to create a more comfortable, healthy living environment for the elderly.

**Table 1**  
**Psychological Effect and Physiological Influence of Some Colors**

Color	Psychological effect	Physiological influence
Red	Excited, joyous, nervous passion, enthusias, endeavour	Stimulation of the heart and excitement of the nervous system, augment of the epinephrine secretion, promote strength and endurance
Orange	Happy, passion, active, vitality, sweet, active	Stimulation of the laparoscopic, immune system, pancreas of lungs, promotion of the appetite, Meanwhile, better promote food digestion of human body
Yellow	Bright, lucid, cheerful, hope, dynamic, happiness	Stimulation of the brain and nervous system, improvement of the mental alertness, activity of the muscle nerve, aid for relaxing and treating certain internal diseases such as colds, allergies and liver diseases
Blue	Cool, calm, quiet, open, sense, sentimental	Influence of the pharynx and thyroid, abate of blood sugar, pulse. Indigo light has the effect of purification, sterilization and sedation. Also it can restrain hunger.
Purple	Noble, miss, gentle, mysterious, sorrow, femininity	Have a calming effect on eyes, ears and nervous system, large use of these colors will suppress emotion of people, especially for anger
Green	Comfortable, peaceful, tranquil, gentle, fresh, young	Elimination of nervous, improvement of heart function, alleviation of eye fatigue, have the curative effect on diseases of the nervous system, fever, flu, etc.

With the growth of age, the loneliness of the elderly is also enhanced, so they even more hope to get care in psychology. Therefore, the fabrics design of the elderly people's bedroom should mainly adopt warm colors that saturation level is not high, but not use too many fabrics with cool colors. Red with long wavelength, orange and yellow ray have a warm feeling in themselves, which can bring psychological warmth for the elderly. Meanwhile, visual system of the elderly should not be irritated by a strong stimulus, their pursuit of quiet and comfortable living environment in psychology. So the colors of bedroom fabrics are not suitable for choosing bright warm colors, but usually choose soft neutral warm colors such as shallow brown, beige, pale orange as its dominant hue. Then we can match parts of jumpy colors for the small decorative fabrics according to preferences of the old man itself, for example, matching bright red, yellow, orange color for pillow, tablecloth, cushion etc. in terms of the main hue of indoor. Neutral warm colors of large area and clash with colors of small size are not only making the elderly feel warm, but also bringing vitality to their rooms.

## 2. FUNCTIONAL TEXTILE MATERIALS APPLIED IN RESIDENTIAL SPACE OF THE ELDERLY

The elderly have higher demand for interior shading, moisture-proof and keep warm, and using functional textile to satisfy living demand of the elderly in the elderly living space decorative fabric design. Interior decorative fabrics design adopts different functional textiles according to the difference of use function to satisfy physiological and psychological needs have become a trend of the elderly living fabric design nowadays. Therefore, we should focus more on its perfect use function except for considering decorative in the elderly living fabric design. Curtain fabric can use flocking cotton textiles as its materials, as heavy flocking and cotton curtain are able to reduce the external noise in a better way, which creates a quiet living environment, helps to improve sleep quality for the elderly and also good for keeping warm and protecting from light. Bedding fabric can choose good functional materials with moisture absorption and permeability.

The fruit from research and development of functional fabric decoration materials has been popularized and applied massively with the development of science and technology. Fabrics with function of heat insulation, anti-bacterial, deodorizing and anti-mite can bring living convenience for the elderly. The Research and development of textile products with the function of regulating temperature intelligently have already acquired many research achievements early in the end of the twentieth Century. And the applications of these research achievements are mostly used for the garment industry or bedding in 1990s, but relatively seldom used in the elderly living space decorative fabric design.

The blood circulation ability of the elderly decreasing with age, their ability of cold resistance is far lower than that of young people and it becomes dull for their skin to feel the change of temperature, thus the elderly have higher demand for cold-resistance. Intelligent thermoregulation textiles can absorb and release heat according to the changes of environmental warm and cold, which have the effects of bidirectional temperature regulation. The bed functional textiles keep temperature and humidity in the ideal range, so that the elderly can enjoy a good sleep. Mature markets have already been formed in Europe, America etc.. At present, China has made some breakthrough in the research of technology of warm fabric. For example, “coffee carbon fiber/tussah tarlatan/ fibbers gauze warm fabrics with multi component” was jointly undertaking by Technology Service Center of Textile Art Design in Nantong City and Tussah Silk Research Institute in Liaoning in 2014, which realized its warmth retention rate is twice of that common bedding cushion (Jin, 2014). Efficient warm functional textile achieved the possibility for the application of the elderly living space fabric design.

Since the motion ability of the elderly weakens, it is inconvenient for them to clean the household textiles regularly. Besides, bacteria in the air find it easy to rest on the general fabrics, and those that are often in contact with human skin are more vulnerable to humans' sweat and sebum, which could easily produce stench. Therefore, faced with various kinds of dry goods, we should choose the ones that are antimicrobial and can effectively inhibit the breeding and accumulation of bacteria, thus preventing the stench, guaranteeing good health, and extending the period of usage. At the same time, the labor burden on the elderly could be reduced. The anti-bacterial fabrics in China were first used in the medical field. But up until now, its function covers not only guaranteeing health but also giving comfort. It is even used in the household textiles and apparel products (He & Guo, 2003). For example, the use of such anti-bacterial fabrics in the food sector could wipe out the bacteria and is harmless. It can also improve the immunity of the elderly, thus effectively protecting their health. In the design of modern living

spaces for the elderly, people attach importance to the beauty and practical features of the decorated fabrics, and they show more care to the positive function of the fabrics to people's health. With a variety of decorated fabrics in line with national standards used in the design of living spaces, people have a deeper knowledge of the fabrics. And it becomes a major trend to use the textiles that have many functions to decorate the living spaces of the elderly, so as to create a more favorable living environment for the old people.

### 3. USING THE PATTERNS MADE OF FABRICS TO DECORATE THE LIVING SPACES OF THE ELDERLY

The modern old people's demand for living space is not only to meet the usual function, but has higher request for creating the atmosphere of space culture. As an important part of visual communication, Fabric decoration pattern creates indoor culture atmosphere through the theme, content, form etc. that are expressed by patterns. The elderly living space fabric decorative patterns need to consider the psychological and physiological demands of the elderly. They are seeking for psychological needs of auspicious, healthy and nostalgic, so using the local and traditional auspicious patterns in the design can cause the elderly psychological resonance.

In the design of the fabrics to decorate the living spaces for the elderly, the theme of the patterns is consistent with the spiritual pursuit of the elderly. “Happiness, affluence, longevity, joy and wealth” are the core of China's traditional auspicious culture, in which the culture of “longevity” that values showing respect and love to the elderly is fully in line with the emotional needs of the elderly. To showcase the “longevity” culture, people mainly use plants, animals and immortals in the patterns as a symbol of health and longevity. A combination of harmonic tone, implied meaning, self-explanatory characters and pictograph is also adopted. Through the use of such patterns as “pine trees and cranes”, “eight immortals to celebrate the birthday”, and “five bats to show blessing” in the decorative fabrics, the decorations in the living spaces of the elderly have been enriched. Take the “five bats to show blessing” as an example, “bat” (蝠) is a homophone to “happiness” (福) in China, which is thus understood by the Chinese people to associate “bat” with “auspiciousness and happiness”. Besides, in the pattern, five bats are flying around the Chinese character “longevity” (寿), which suggests that longevity should be attached the highest importance (as showed in the Figure 1). This pattern is produced by way of many techniques such as dyeing, embroidery, and ironing. Many patterns containing the connotation of longevity and auspiciousness have been embedded in curtains, bedding, pillows and other fabrics. In this way, the basic function

of fabrics not only has been put into play, but also the “longevity” culture has permeated into the fabrics, thus meeting the psychological needs of the elderly for longevity and peacefulness.



**Figure 1**  
**Longevity (寿)**

Currently, nature, longevity and harmony have become the main content of the decorated fabrics for living spaces. In today's cities, we can see that the range of activity of the elderly has mainly changed from society to family after their retirement. Moreover, an increasing number of the old people begin to live separated from their married children. So the communication between the old and their children, between the old and the society has become less and less. It is no doubt that the old people's sense of solitude and loneliness doubles. The elderly look forward to seeing that their children and grandchildren pervading the hall and uniting together to have a meal, but the reality is the opposite. If we use the decorative fabrics, patterns, pictures or decorative paintings that can express such psychology, these decorations will surely add vitality and energy to the living spaces of the elderly, and showcase the old people's needs of being around with their children and grandchildren. Besides, this will help the elderly adjust their mental state, and show humane care to them.

Considering the fact that people in the old age tend to have weak eyesight, it is not easy for them to discern small things. Therefore, when designing the organizational form of the pattern of decorative fabrics, we should take into account the characteristics of their visual system, and should not use complicated patterns and organizational form. To this end, we can simplify the traditional patterns by means of refining, induction and other techniques, and make the traditional patterns in line with the modern concept of designing. Besides, we can use simple geometric line, such as fretwork and alignment lines, in the design of curtains, carpets, wall coverings and other fabrics. Through different arrangement of patterns, we can ensure that the part and the whole of the fabric design

could be united. As far as the “Longevity” pattern is concerned, as one of China's traditional patterns, it has the meaning of lasting longevity, expressing Chinese people's love to life. After thousands of years of sedimentation, such pattern has been simplified into different geometric patterns based on the modern aesthetics. So different geometric patterns could be used in the fabrics that have the same theme. It has many advantages. For example, the diversified patterns could make the decorated fabrics less tedious, ease people's sense of strangeness in such a rigid building, and it is closer to the psychological needs of the elderly.

## CONCLUSION

Fabrics, as one of the indispensable element to adjust the ambience of the living space, have many advantages in the decoration design of the old people's living spaces. With its unique materials, colors and diverse patterns, fabric decorations affect the design of the old people's living space in terms of the style, color and comfort. Through the use of convergence, transition, contrast and other design techniques, the colors, materials, and patterns of the fabrics could be in line with the psychological needs of the elderly to pursue longevity, calmness, and the reunion of the family. Furthermore, such fabrics could make the elderly feel warm, agreeable, relaxed from the visual and sensory perspectives. With the improvement of people's level of knowledge and the development of the society, the elderly have more sophisticated requirements for the design of the interior decorations, and their needs and taste for the decorations will surely change and go up.

The elderly living space fabric decoration design is the system design in soft decoration, which needs to achieve harmony and unity of color, material and pattern. The color and pattern of fabric decoration determine the construction style and cultural connotation of the elderly living space, and functional fabric decoration materials optimize elderly people's way of life. We also need to consider the physiological and psychological characteristics of elderly people when design for decorative fabrics in the living space of the elderly.

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