

# Evaluation of General Criteria Applied for The Selection of Textiles used in Interior

Esra Avlanmaz Bilecen<sup>1</sup>

<sup>1</sup>(Interior Design/ Hasan Kalyoncu University, Turkey)

**ABSTRACT :** The contribution of textile materials to interior design has increased considerably from the existence of mankind to the present. Today, the word textile, which means weaving, is known as the art of surface creation, and these surfaces are often used as interior decoration and coating. Curtains, upholstery, wall and floor coverings limited as interior textile. While creating the concept of a space, it has become an important design element and has important effects in terms of performance and health as well as aesthetic effects. Textiles that make up the interior are examined and evaluated under four main selection criteria as aesthetics, performance, health-safety and cost. These criteria are subdivided and examined to see how they affect the user and their indoorsurfaces. Color-texture-pattern-brightness and touch affects aesthetic criteria, allowing the user to perceive textiles tactually and visually. In addition, properties such as strength, abrasion, pilling or static electrification of the fabric are the some of features that affect the performance criteria that will increase and decrease the comfort of the user and affects the lifetime of the fabric. Considering the environmental effects without disturbing the air quality of the interior, the selected textiles should not harm human health. Finally, by calculating the investment / usage period, the cost calculation has an important place among the selection criteria considering the service life, application cost, labor and auxiliary materials of the textile in line with the increasing demands. This study was carried out to provide designers access to sufficient information when choosing textiles for interior spaces and to create selection methods.

**KEYWORDS** -Aesthetic, Health-Safety, Interior, Selection Criteria, Textile

## I. INTRODUCTION

Throughout human history, both in places where there is a collective and singular life, although the basic elements of human-centered life are nutrition, shelter and clothing, the things main items that differentiate and shape life are the works of art and textiles.

When we search the word in the dictionaries, the word textile means “weaving” and it has been inherited from the word “texere” which means “weaving” in latin. Today, the term textile has become the general name of surfaces made from natural and / or artificial fibers, such as fabrics, covers or coverings created by a specific technique, and products derived from these surfaces.

Throughout history, textile material used in internal spaces have been used primarily for covering, protecting and warming the human body. It has become an important material that designers have discovered to design and dress surfaces. Nowadays, textile is not only for covering the surfaces, but also with other building materials, it is an element that provides aesthetics with its visual aspect, adds dimension to our surfaces with its tactile aspect, creates and integrates designs that create psychological effects with the selected colors and patterns.

Textile material have also shaped the cultures of societies with its colors, texture, sometimes with its touch and patterns. Because of this feature, textiles have become a material that separates societies from each other, but unifies a society.

The content of the textile varies widely as a product and contrary to what is known, it is not only clothing. It is used in a wide variety of places such as cleaning cloths used in the kitchen, coffee filters, medical clothes and surgical masks, air filters and diapers, furniture and curtains.

The existence of textiles have been known since the existence of mankind. It is not known exactly when and in what way the first humans discovered natural fibers and primitive fabric structures, but it is estimated that the first humans used the hides of animals they hunted for feeding or defense purposes to protect them from the cold. Later, people discovered vegetable and animal fibers, started to use them according to their areas of use, and made them popular as trade items.

As for the interior textile, apart from dressing and covering textile materials, interior spaces are used for decoration and coating both on furniture, carpets and curtains, and on wall surfaces. Many interior textiles have been encountered in various periods throughout the history.

After the primitive ages, interior textiles were first encountered in Egypt, the Silk Road, starting from China, passing over the Mediterranean and Anatolia, and reaching the European continent- a route used by trade caravans for centuries. This made it possible to transmit Eastern culture to Western civilizations, especially to Europe, and directly contributed to the development of interior textiles.

Especially in cotton and linen, India and Egypt led the way, while Anatolia was the vehicle for the transportation of silk and these raw materials to Europe.[1] During the excavations carried out in Gordion region in Anatolia, the first weaving samples thought to belong to the Phrygians were found. In Çatalhöyük excavations, the presence of weavings that are thought to belong to the Neolithic period shows the presence of weaving in Anatolia at that time.[2]

The presence of woolen fabrics in the tomb of Tutankhamen in Egypt in B.C. 1346 and in the tomb of Ramses two centuries after this date has not been a coincidence; on the contrary, it has been an indication that man has been using textile material since its existence.[3]

In this study, interior textiles; curtains are limited to upholstery, wall coverings and floor coverings. Other textiles used in interior spaces; bed sheets, pillow blankets, duvet covers, towels etc. such products are called home textiles are excluded.

The oldest textiles used in interior spaces are seen as tapestry woven wall covers, curtains, carpets and furniture covers. Tapestries are a kind of figured and illustrated weaving that occurs in Europe, without a shuttle, with hand or a bobbin, where weft threads are attached to warp threads.[4]

It can be seen in the medieval times that the textile gained importance and started to be used as curtains, bedspreads and tablecloths.[5] In the Middle Ages, interior spaces are colored with textile products. In addition to light and bright colors, wall coverings and tablecloths are frequently used in coffee tables.[6] The Byzantines became the center of silk fabrics, and they produced weaves with very flashy patterns and colors with tapestry techniques.[7]

With the establishment of the weavers union in London in the 14th century, wool, which is generally used in clothing production, entered the interior spaces after the establishment of the union.[8]

When it comes to the Renaissance period, demands and tastes of the users changed. As the importance attached to the interior spaces increases, the desire to cover the interior surfaces with textiles and the use of home textiles also increased. Large flamboyant damask patterns, in which fine linen is produced, where the fiber is twisted extremely fine, entered the living spaces.[9]

In the 16th century, while the oranges formed the colors of the short curtains with borders of coffees and dark green, the bedrooms became more ornate. It was a period when silk and velvet, flower-patterned mosquito nets were used and wall coverings and curtains were formed from the same fabrics.[10]

With the birth of the Baroque style in the 17th century, bedspreads and curtains that were still important, fabrics woven from gold and silver threads and bright silks were widely used.[11]

In the Victorian Period, the fabrics used in the interior gained more weight and almost all surfaces were covered with complex and colorful patterned fabrics. During this period, large weaving and printing factories were established. Gilding, embroidery, embroidery were embroidered on all fabrics. Whilst velvet coating, tassel and were used on almost all surfaces. With this period, the textile designs have shifted from simplicity to the magnificent fabrics dominated by red color.

It was the era of change and development in the 18th century textile arts. The wool, silk and linen industry affected a wide area of the world. With the development of the fabric industry, consumption of home textiles began to increase. Due to the great importance given to luxury and comfort in the 18th century, there have been significant changes in home textile products such as drapery and upholstery, and functionality has been brought to the fore in the designs.

Interior textiles have taken their present form with the developments in textile and art movements in the 19th century and revolutionary developments in 20th century textile technology.

In this study, it is aimed to research and evaluate the criteria to choose the appropriate textile for the interiors by examining the use of textiles in interior spaces from many aspects.

The purpose of this study is the determination and evaluation of the general selection criteria to be applied in the selection of textile, which is an important design element, in interior spaces. From this perspective, it is thought to contribute selection of designers who use textile in interior spaces. Textile material selection subject is important in many aspects such as designers, users, interiors, aesthetics / appearance, economics and psychology etc.

Physical, mechanical, chemical, acoustic, cost, environmental effects, user demands, psychological effects and similar criteria should be evaluated in order to choose from a wide range of textile alternatives during interior design and application. It is important to make a selection from different alternatives that meets expectations and demands according to each criterion in the decision making process. It is necessary to follow a systematic way in order to choose the most suitable product among the many textile alternatives and many criteria that are effective in selection.

## **II. MATERIAL AND METHOD**

This study is a descriptive research in terms of research design. The research basically sets out the general selection criteria for "choosing the right interior, choosing the right textile" and "What criteria can designers choose?" is looking for an answer to these questions. Within the scope of the research, it focuses on the selection of textile materials in the interior.

The main data source of the research is based on a detailed literature research on textile and interior textile use. Therefore, the research method is based on meta-analysis approach in quantitative methods. In other words, it deals with the research findings scattered in the literature in the context of textile use in the interior and examines them comparatively. Based on the comparisons and examinations, the factors and indicators that influence the textile selection are developed and classified.

### **III. RESEARCH FINDINGS**

Today, rapidly developing material technology in the textile industry, make sit easier to support the ever changing lifestyle of the consumer.

Along with the new materials discovered in our age, new textiles quickly brought convenience, originality, functionality and new aesthetic features from fashion to architecture. In the process, from the civilisation until today, textiles have been obtained and used in various ways.

Most of the daily use and indoor items consist of textile materials. Some textiles are produced or selected according to ambient conditions. For example, fabrics that can react to the ups and downs of hormone levels from the fabrics, which are colored according to the temperatures of the spaces, have not become a dream today and have become the materials that support the life comfort of human beings. Textile is an element that not only protects and covers, but also gives identity to designed spaces and facilitates the life of the user.

Everything in our environment consists of surfaces. The effects of the textile on the surfaces are very undeniable. Small to large, hard or soft, horizontal or vertical surfaces - designing all these surfaces that make up our interiors is the work of the designer. The designer create the textures, feelings, colors, adds to the space and make them feel to the user.

Each designed surface should be accepted both functionally and aesthetically and at the same time be distinguished from others. In the areas where textile surfaces are used, in terms of surface effects, the color, volume, brightness, or softness, hairiness or slipperyness of the properties offer one or more of the same surface.

Designers have to make choices about a large number of components that affect the aesthetics of a space in interior design. Textile products to be used such as furniture, upholstery and other accessories must be chosen in harmony with the size of the space and the surroundings of the space.

While choosing the textile in interior design, the cultural values of the user as well as the wishes and behaviors of the user should be taken into consideration.

It is known that the places we live or work in interact with the user. When a users' environment changes, it is often observed that their behavior unconsciously changes. Because of this, the designer chooses a textile by separating the needs of the space and the unconscious needs of the users.[12]

Selection of textile materials in interior design:

- 1- Aesthetic criteria
- 2- Performance criteria
- 3- Health and safety criteria

4- The cost criterion is divided into four main sections and while the textile selections are made in the interior design, the general criteria are examined from this perspective and the end textile products to be used in the interior are determined.

#### **3.1 AESTHETIC CRITERIA IN TEXTILE SELECTION**

Interior textiles are often created from colors and patterns that follow certain fashion trends. However, when choosing textile, it should be taken into consideration that these colors and patterns change the psychological and physical needs of the user.

The criteria that affect textile selection are to some extent subconscious. In other words, the user uses the perception of harmony and balance, which has been coded in his memory since the day he was born whilst designers consider the design elements and principles.

When choosing textile, we should consider that it is the user and his social environment that affects all these factors. Considering the social environment of the user and the cultural structures of the users living in this environment, their understanding of color, texture, pattern and form affect the aesthetic criteria.[13]

The need of the user is to perceive the space: he sees it with his eyes, touches it with his hands, and it is desired to reach a sense of peace with the colors and patterns used. Textile products in interior design emphasize the tactile and visual sense of the user.

Aesthetic; the appearance, texture and pattern of the textile, in other words, the visual properties and touch of the fabric, how the fabric carries these characteristics, is related to the raw material and production method of the fabric.

Factors such as color, texture, pattern, brightness and touch affect the aesthetic properties of the fabrics. The raw material of the selected fabric, yarn and the method of spinning, the production method and all this helps to determine the durability of the fabric's aesthetic properties.[14]

### **3.1.1 Color**

The objects absorb some of the light falling on them, and refract and reflect some of them. Meanwhile, the electrons on the object interact with this incoming light and separate and reflect the incoming radiation from other radiation. The light beam produced by this event is perceived as a color according to the wavelength of the light.[15]

Perception of colors; It is a variable condition depending on the light and other tones side by side in the interior. When the place where a colored textile is placed and the direction in which an individual looks at the color changes, the falling light and intensity can change the perception of the shadow. Colors in the interior can lead to psychological or emotional reactions. Some reactions are universal and are done unconsciously. For example, if the color we use reminds us of the shades of the sun; the feeling of warmth. Similarly, if a colour reflects the shades of the water it gives a feeling of coolness. Color is also a cultural structure and perceptions of meaning and color vary from culture to culture.

While the use of color in the interior offers us great design potential, textiles are one of the main tools for using color in the interior. Coloring some textiles is a difficult and technically complex process that can take months with dyes.

Color should not be affected or preserved by the intensity of the light sources. If we know for what reason the colors of the textile material deteriorate, we can make choices according to this information when choosing fabric. Color fading, friction and discoloration cause the textiles to change color. Fading in textile occurs when fabric fibers are affected by daylight or various atmospheric conditions. Textile dyes must be resistant to sunlight, strong light sources, air pollution or recommended cleaners. For example; transparencies dyed with disperse dyes (dyestuff that dyes dispers: polyester and acetate fibers) may be exposed to such fading unless they are treated for gas-smoke fading.[16]

Crocking by friction; friction of the excess dye from a fabric surface results from using too much paint. The interlocking of the dyes of two textiles adjacent to each other by friction distorts both materials and leads to different shading.

Color loss; If the manufacturer has processed the fabric with an improper dye or dyeing method, it may occur during the washing or dry cleaning process of the fabric. The textile should be cleaned in accordance with the cleaning instructions given by the manufacturer.

### **3.1.2 Texture**

A feeling of roughness is felt in every substance we touch with our hands and this feeling is called the texture.[17]The textures determine the characters of the interiors. As with all materials, it affects the senses of texture, vision and touch in textile material.

When we touch the materials with our hands, soft textures generally provide comfort and peace, and hard textures inspire vitality, anxiety and exciting, dynamic feelings. In other words, when choosing textiles for interior spaces where actions such as sitting, resting, sleeping are performed, softer textiles should be used intensely.[18]

Textile material exists with its texture in the interior and reflects its physical properties to the place with its texture.[19]

All materials have texture. Texture in textile material; It is the pattern of light and shadow falling on the fabric's various thicknesses and moving folds. Textile also texture; defined as smooth or rough, soft or hard, smooth or irregular, glossy or matte. All of this is determined by the content of the fiber and the way the textile is produced. The texture does not require a direct tactile connection to create an effect, visually it can give the user a nice look and feel.[20]

### **3.1.3 Pattern**

It is defined as all of the line drawings made to create a visual effect. It can also be defined as arrangements of special shapes and colors. A continuously repeating unit of the created patterns is called "motif". Motifs create pattern repetitions on textile material surfaces. Patterns, like colors, significantly affect the soul of the interior.

### **3.1.4 Brightness**

Brightness refers to the shine and is caused by light rays coming on the fabric surface and refracting or reflecting. Silk fibers, for example, are very shiny; the luster of cotton, linen and wool fibers is low. Depending on how the fiber produced is twisted and which finishing processes are applied, the grades of brightness also change. The structure and finishes of the fabric affect the luster of the fabric, for example, if desired, the silk fabric can look matte thanks to its knitting. On the contrary, wool; It may be tightly twisted and woven in a tight structure to create higher gloss.[21]

### **3.1.5 Touche**

The word "touche" means touch, touch work or form and contact. In textile, the touch is used to tell the feeling that we give when we touch the fabrics. A textile material; It can be described with different expressions such as slippery or hard touches. Touch expression in textile is generally used for artificial fibers. Because every artificial fiber is produced as an alternative to natural fibers and it compared to natural. Artificial fibers are produced in order to reduce the cost of natural and to obtain natural fibers artificially where natural is not enough. Softness finish can be applied to make the fabric softer.[22]

## **3.2 PERFORMANCE CRITERIA IN TEXTILE SELECTION**

Performance in textiles is to act in a planned way. General performance of the fabric; fiber selection determines and affects yarn, fabric structures and finishes.

The selected textile product must be suitable for maintenance and can be cleaned in a reasonable time and the general needs of the interior must be taken into account. For example, the special needs that we can increase such as sound insulation, thermal insulation, non-flammability, abrasion, low cost, bacterial control or minimum maintenance in the space should be determined and the choices should be made accordingly so that the performance of the selected textile increases.[23]

If the demands expected from the textiles to be used are determined in advance and the choices are made accordingly, the smooth behavior, performance and lifetime of the product increases.

### **3.2.1 Resistance**

Textiles to be applied to the interior must be strong against the strengths, i.e. the loads and forces to be exposed during use. The performance of these textiles will decrease as they will be exposed to many factors such as various cleaning processes, light and friction during use. Therefore, it is appropriate to target a certain degree of rupture, tear and burst strengths during selection and to choose the textile accordingly. The tensile strength of a fabric is affected in connection with the strength of individual threads and the weaving of that fabric.[24]

Very tightly woven fabrics are preferred in upholstery, where the number of users is high, as they prevent thread slippage. If a synthetic resin or a finishing is applied to the fabric, it increases the friction of the wires and reduces the risk of tearing. For example, yarns made from fibers that extend easily such as wool and nylon and fabrics made from them will not be torn and twisted by sharing the applied load to neighboring yarns. Also, since knitted fabrics are difficult to tear, it can be preferred for upholstery.[25]

The burst strength depends not only on the strength of the yarns, but also on the flexibility and structure (construction) of the fabric. Again, resin cured fabrics and brushed knitted fabrics are resistant to bursting strength.

### **3.2.2 Abrasion**

Abrasion can occur at the seams if there are folds on the surface or edges of the textile, and cracks may occur if the textile is subject to stretching on the same area. Beading forms on the fabric, it is abraded and gets an unwanted appearance. It is important here from which fiber the textile is produced. Some fabrics are wet while washing, while others may be exposed to heat, ironing or excessive light, and wear may occur. The abrasion resistance of resinous fabrics decreases.

For the fabric to have higher strength and less abrasion, the fineness of the fiber, yarns and frequencies, the weaving pattern and the thickness of the textile are important.

Fiber fineness: When comparing two identical textile materials, the fiber types are the same, only if the fiber thickness is different, the material made with thick fiber has a longer life and higher strength.

Pile yarns: When comparing two identical textile materials, if the same number is made of one ply yarn and the other ply yarn, the strength of the plied yarn is higher.

Yarn density: If the selected fabric is tightly woven, the abrasion resistance will be high and the fabric will be worn late.

Weaving Pattern: In plain weaving, the construction has an equal number of wefts and warps. Equal number of them will share the wear effect equally. On the other hand, twill, satin or satin-like woven patterns have weft or warp yarn dominance on the fabric surface. In these fabrics, abrasion occurs with the effect of friction on surfaces with fiber density.

Textile thickness: As the thickness of the textile increases, its life will be longer and its strength will be higher. In general, these textiles are for insulation-insulation purposes; They are preferred as wall, ceiling or floor covering.[26]

### **3.2.3 Pilling and Fluffing**

Hairiness is when the fibers break and come out of the fabric. It usually occurs as a result of friction and fabric fibers come out of the surface.

Beading is the fact that the fibers on the fabric surface roll into small balls and form an ugly appearance on the fabric surface.

When absorbent fibers such as wool fluff and bead, they are usually temporary and easy to remove. But when beading occurs in non-absorbent fibers, such as polyester, elimination becomes difficult and permanent.[27]

In the interiors where the number of users is high, i.e., in hotel rooms, a friction resistance finish can be applied to prevent the textile from being damaged by much use and friction.

Endurance finish is applied to textile surfaces to increase the resistance of the textile surface against friction. Textile provides easy maintenance feature. The surfaces are immersed in silicic acid and accumulated in the softened fiber to prevent damage from friction.[28]

### **3.2.4 Stain Repellency**

Textile staining refers to contamination from dirt or oils. When it comes to stain repellency, it should not easily absorb selected textile water or oily liquids. To achieve this, silicone finishing is applied to the surface of the fabrics. Thus, it is ensured that stains such as coffee, tea and ink, which are difficult to clean, run off without wetting the fabric surface.[29]

### **3.2.5 Water Repellency**

It is desired that textile materials have different properties according to their usage areas. Textiles which are desired to be hydrophobic (water repellent) are given water repellent feature in case of contact with water and other liquids in the space. These fabrics are selected as upholstery coverings and wall coverings. Liquids that come into contact with the fabric surface are absorbed and cause the fabric to become dirty. To prevent this, water repellent finish is applied. By preventing the liquid from penetrating, contamination is also prevented. In the water repellency finish, the film is formed not on the fabric surface, but on the surface of the fibers and threads that make up the fabric. Thus, since the pores will not close, the fabric passes air, for example, when used in upholstery, it does not sweat, it does not spoil our comfort. Water repellent finish can be applied to all fiber types. Generally, cotton, polyester-cotton, polyester-viscose and sometimes wool fabrics are applied.[30]

### **3.2.6 Flameproof**

The fireproof feature of textiles is called nonflammability. It is provided by the finishing method applied to the fabrics after production or by the non-flammability feature gained in the yarn during yarn production. The effect of flameproof finishing applications decreases with washing. Products whose thread is not fireproof are non-flammable during use and this more permanent form of fireproof is more costly than finish fireproof. [31]



### **3.2.7 Static Electrification**

Static electrification is the tendency to attract materials such as dust, yarn, hair, fur and feathers that stick to the fabric surface. It is more difficult to protect the fabric when using static-prone fabrics in places where such external influences are common. Dust, yarns, fabrics cling to external effects such as hair feathers, and it would be very difficult to clean. The desired physical comfort in the interior is affected by static electricity and undesirable situations occur. A static-prone fabric used as a upholstery causes the wearer's clothing to stick to the furniture surface; When the user leaves the seat, especially if it is made of hydrophobic (water-repellent) materials, the clothes will become electrified or stick to other layers of clothing. Such situations also impair the physical comfort of the interior.[32]

Static electrification causes fabrics or threads to attract dust and thus to quickly get dirty. To prevent this, anti-static finishing is made on textile fibers. If fibers that do not have anti-static finishing are used during yarn production, it is not possible to produce smooth yarn due to the winding of the fiber cluster to the rollers and taking unintentional shapes. For this reason, it is necessary to make an antistatic finish before proceeding to yarn production in synthetic fibers. Its application on textile materials in the form of antistatic finishing fabric is not common.[33]

## **3.3 HEALTH AND SAFETY CRITERIA IN TEXTILE SELECTION**

Health and safety properties of textile material are of great importance in selection criteria. When designing the spaces, the selected textile materials should not impair the air quality of the interior. The selected products should not contain antibacterial and other microorganisms. Since the fibers affected by the temperature and humidity in the environment cause allergic reactions in living things, the fiber content of the textiles should be known. It is known that high pile and soft textile coatings used on floors provide positive effects to our spine system. In addition, it is an undeniable fact that walking, sitting or lying on soft grounds psychologically relieves living things. Health and safety criteria; fire resistance, antibacterial properties and environmental factors.

### **3.3.1 Fire Resistance**

Among the textile products, the fastest burning and burning materials after garment fabrics are; furniture fillings and bedding materials, upholstery fabrics, tulle and curtains are the latest carpets.[34]

Fire resistance depends on fiber content and fabric structure. Depending on the fiber content, a loose fabric structure burns more easily and quickly than a tight fabric structure. In the tight fabric structure, the amount of oxygen is reduced so that the flame does not spread quickly. Fireproof textile coverings are generally preferred for upholstery and drapery indoors.[35]

In the production of upholstery fabrics, fibers that do not emit toxic gases when burnt and have a high ignition temperature are preferred. In furniture, instead of springs, narrow woven bands and dangerous foams that emit toxin gases, flame retardant, filling and lining fabrics are preferred.[36]

Although flammability prevents combustion, the product is comfortable, lack of toxins that will not restrict human movement, compact and lightweight, long lasting time on the product; must be resistant to washing, drying and dry cleaning, but also environmentally friendly.[37]

### **3.3.2 Antibacterial Property**

Some fibers are naturally resistant to mold, fungi and bacteria, while others are more vulnerable to such attacks by the influence of humidity and temperature in the environment. Since the formation of microorganisms

on the textiles and the growth of bacteria will accelerate the spread of diseases, the selection of textiles in all our interiors is especially important for our health.

Cellulosic and protein fibers are natural food sources for moths and carpet insects and must be created on a resistant surface applied to protect fabrics made with these fibers. To create these surfaces, anti-bacterial finishing processes are applied. The purpose of providing textiles with antibacterial properties is to protect both textile products and users of these products from harmful bacteria.

It is possible to impart antibacterial properties to textile materials in three ways.

- 1) The use of fibers with antibacterial properties in the structure of textile materials,
- 2) Gaining antibacterial properties to the fibers used in the production of textile materials during fiber drawing,
- 3) Application of antibacterial finishing processes to textile materials.

Thanks to the active silver ions added to the structure of the fabric, the use of fabrics gaining antibacterial properties is prevented from spreading the microbe in hospitals and places with high traffic. In hotel rooms, they are used extensively in carpets, upholstery and curtains.[38]

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### **3.3.3 Environmental Factors**

Popular sustainability in recent years has been a sought-after concept in textile materials. Environmentally sustainable textiles, for example, all natural fibers grown without pesticides or herbicides, or these textiles are produced from fibers where the production process is altered to reduce energy or water consumption during production.

In the produced textiles, the fibers can be recycled or made from recycled fibers. The effect of the selected textiles on the air quality in the space is an important criterion in textile selection. The use of less toxin adhesives or less chemically doped fabric can be considered environmentally sustainable. For other materials or textiles to be used indoors, designers who will choose these products need to be well informed and trained in the selection. In addition, the results of independent laboratories and textile testing facilities where special performance criteria of these materials are analyzed can be checked.[40]

## **4.COST CRITERIA IN TEXTILE SELECTION**

In the selection of the textile, the cost is very important because when choosing the material, the investment / usage time ratio is evaluated and how long the cost will compensate itself is calculated. Textile coatings compete with other interior coatings in price, but this does not mean that competition is more economical or more costly than other materials.

Textile, texture, color, pattern, performance, safety, durability, comfort and ease of maintenance can be provided when the right textile is chosen to meet the increasing demands in a wide range of applications.

Matching textiles to budget can be very difficult; A cost calculation per square meter or volume is not the only factor to consider when estimating the cost.

In making these calculations, besides the square meter or volume calculation, a special design (a special design fabric that increases the cost, handmade or imported fabrics) auxiliary materials, service life and maintenance cost should be taken into consideration.

The cost of textile is not always determined by quality. High cost does not always mean high quality. The cost of the produced fabrics is determined by the fiber content, the fineness of the yarn, the type of weaving, the color fastness and the pattern.

Fabrics with large pattern repeats need to be carefully costed for accurate cost calculation. Patterns must be matched with stitches to achieve a balanced look. Pattern matching sometimes requires a 25 percent increase in fabric length. There are also production and assembly costs. These include the costs of installing wall coverings, curtain materials, upholstered furniture or carpets. Where there are special jobs, costs often increase sharply.[41]

There are also auxiliary materials that increase the cost. These include parts such as rails, linings, mechanisms, pallets and other mounting mechanisms. Maintenance costs of textiles that are difficult to clean or need to be removed and cleaned elsewhere for cleaning are also high.

Textile, which should not be forgotten and determines the cost, has a durability and a useful life to be calculated.

When calculating the cost, it evaluates the service life of the materials or textiles, predicted installation costs, labor materials, auxiliary materials and maintenance costs (regular preventive maintenance and corrective maintenance throughout the life of the product) and these amounts are added to the actual cost of the products. This total is the estimated cost over the expected lifetime. By dividing this total by the service life estimated by the manufacturer of the product, an annual cost is obtained.

The service life describes the effective life of a product. Sometimes it is based on test results from the manufacturer and real experience of long-term use. The cost here depends on reliable information about the service life, and written warranties of the service life and detailed maintenance instructions should be obtained from the manufacturer. It is difficult to accurately estimate maintenance costs, and it is necessary to add a percentage for inflation in the cost estimate.

Finally, it is necessary to look at how the environment affects human performance. For example, it should be known that the number of users is important and effective in the selection of upholstery materials, carpets and curtains selected in hotel rooms used by many people.

#### IV. CONCLUSION

As a result of this research, which aims to explain the effective factors in the selection of textile materials used in interior spaces, it is concluded that 4 factors are mainly effective as aesthetics, performance and health-safety and cost (Table 1).

Table 1.

Factor	Indicator
Aesthetic	Color, Texture, Pattern, Brightness, Touche, Balance, Harmony and Scale
Performance	Strength, Abrasion, Pilling, Stain Repellency, Water Repellency, Non-flammability and Static Electrification
Health&Safety	Fire Resistance, Antibacterial Properties and Environmental Factors
Cost	Cost, Labor, Lifetime, Auxiliary Equipment And Maintenance-Repair

Aesthetic factors consist of color, texture, pattern, brightness, touche, balance, harmony and scale indicators. The performance factor consists of strength, abrasion, pilling, stain repellency, water repellency, non-flammability and static electrification indicators. Another factor, the health-safety topic, consists of fire resistance, antibacterial properties and other environmental factors. The indicators that make up the cost factor stand out as investment cost, labor, lifetime, auxiliary equipment and maintenance-repair.

These factors and indicators can vary depending on the use of textile in the interior, the function of the space, the number and features of the user, the sense of showing and splendor of the space, and the order of priority can be changed. For example, it is considered that while health-safety and cost factors play a major role in public buildings (such as health and education), aesthetics and performance factors in accommodation structures, and cost and aesthetic factors in food and beverage sector interiors to be prominent. On the other hand, it has been observed that interior design or textile selection varies depending on national and local cultural characteristics. It is thought that the study will contribute to designers by revealing the general selection criteria and by raising awareness about the criteria to be chosen for a textile.

#### Information:

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