

## Designing costumes for visually impaired young women

Prof. Dr. Nermin Abdel Rahman Abdel Basset<sup>1</sup> Dr. Ruaa Sohail Hassan Qadi<sup>2</sup>

<sup>1</sup> Professor of Fashion Design, Faculty of Home Economics, King Abdul-Aziz University, KSA

<sup>2</sup>Teacher at the Faculty of Arts and Design, King Abdul-Aziz University, KSA

[Nerm69@yahoo.com](mailto:Nerm69@yahoo.com)

**Abstract:** A well-dressed blind young woman helps to regain her self-confidence; therefore, this study helps blind girls to choose their clothes because of their effective desire to increasing their self-confidence, their interest in life, and their increased adaptation and social compatibility. By identifying their views in this field. In addition, propose some designs and methods that facilitate the process of choosing their clothes.

Through displaying some questions:

- What are the clothing needs of sightless young women which help in adapting to the self and society?
- What are the characteristics of the clothing of visually impaired girls that fit their clothing preferences?
- What is the possibility of designing costumes for visually impaired young women at the age of 18 to 25?
- What are the opinions of specialists in the proposed designs for girls with visual disabilities? The research narrows down to target:

narrows down to target:

- Determine the characteristics of the clothing of visually impaired girls.
- Design costumes suitable for visually impaired young women in the age group (18 to 25)
- Identify the views of specialists in the proposed designs for girls with visual disabilities.

To sum up the research's results:

- It should be noted that the answer to the second question, which states: "What are the characteristics of the clothing of visually impaired girls that fit their clothing preferences" has been mentioned in the second chapter of the research.

- It should be noted that the answer to the third question, which states that "the possibility of designing costumes for young adults with visual impairments at an age (18-25) has been mentioned in Chapter III practical experience through the work of (6) designs.

- Through the study, the researcher found that girls with visual disabilities should be available in their soft and comfortable soft clothes, and prefer front openings in clothes to facilitate the process of wearing and dressing.

- Through the study, the researcher found that most girls with visual disabilities do not prefer to multiply in the clipping because they need to coordinate between pieces.

[Nermin Abdel Rahman Abdel Basset and Ruaa Sohail Hassan Qadi. **Designing costumes for visually impaired young women.** *Life Sci J* 2017;14(8):111-119]. ISSN: 1097-8135 (Print) / ISSN: 2372-613X (Online). <http://www.lifesciencesite.com>. 16. doi:[10.7537/marslj140817.16](https://doi.org/10.7537/marslj140817.16).

**Keywords:** Design; costume; visually impaired; young; women

### Introduction:

God has deprived the blind of one of their senses, thus losing the ability to engage in daily life properly because most of them cannot perceive the objects in terms of color and form. They fail to mentally image most things in the surrounding society and spend their days searching for meanings to help them learn about life around them.

The blind is a group who lost their vision thus, its ability to perform normal roles in the society is reduced in contrast to its normal counterpart. Therefore, this group is in urgent need to understand that the senses of helplessness and isolation are caused by the disability and the social conditions around them. To meet their needs and to become more adaptive and interactive with others, clothing brands have a role in this area to make them feel confident by meeting their clothing needs and work to satisfy them

in a way that suits them, hence the importance of blind aid in the clothing field. The Help is based on a full understanding of the conditions imposed on them and the nature of the age (adolescence and youth), in this period of age the attention is on personal appearance and looks; therefore, the desire to wear bright clothes and bright colors and designs that go along with fashion increases. (Najwa Momen and Najwa Hijazi: 1997)

A well-dressed blind young woman helps to regain her self-confidence; therefore, this study helps blind girls to choose their clothes because of their effective desire to increasing their self-confidence, their interest in life, and their increased adaptation and social compatibility. By identifying their views in this field. In addition, propose some designs and methods that facilitate the process of choosing their clothes.

**The research problem lies in the following questions:**

1 - What are the clothing needs of sightless young women which help in adapting to the self and society?

2- What are the characteristics of the clothing of visually impaired girls that fit their clothing preferences?

3 - What is the possibility of designing costumes for visually impaired young women at the age of 18 to 25?

4- What are the opinions of specialists in the proposed designs for girls with visual disabilities?

The research aims to:

- Determine the characteristics of the clothing of visually impaired girls.

- Design costumes suitable for visually impaired young women in the age group (18 to 25).

- Identify the views of specialists in the proposed designs for girls with visual disabilities.

Research importance:

The research contributes to the following:

- The research is a specialized reference in the costumes of visually impaired girls to benefit researchers in the field of specialization.

- identifies the characteristics of clothing for visually impaired girls.

- sheds light on the importance of designing costumes suitable for visually impaired young women from 18 to 25 years.

**Theoretical framework:**

Concept of visual disability:

Many definitions have been made in the diagnosis of visual disability. One of these definitions is "a state of visual impairment that limits the ability of the individual to use his or her eyesight efficiently and effectively, which negatively affects his or her growth and performance. a lack of visual functions, namely the central and peripheral vision, is the result of anatomical deformity, or disease, or eye wounds.

**Causes of visual impairment:**

1. genetic factors and the mother's infection with some infectious diseases during labor.

2. errors during the process of delivery, namely hypoxia and obstetric delivery.

3. Postpartum causes, for example the increase in the percentage of oxygen given to the child and the premature birth and injuries resulting from accidents or diseases.

[Http://eyeofblind.7olm.org](http://eyeofblind.7olm.org)

**Visual disability and how to identify colors:**



Eye Music helps the blind to see colors through music (Picture 1)

The spatial perceptions and perception of shapes are acquired through vision and through the sense of touch. However, the perception of colors is a function of the retina, and there is no other sensory member can do. When the retina is damaged, or become senseless

of light, or the centers of vision in the brain are damaged. The perception of colors is non-existent.

Thus, the interaction of the blind person with the colors varies according to his/her age and The time of the disability. The visually blind or those who lose their sight early in life before the chromatography

phase. Have no visual memory or real ideas about color; Colors depend on language concepts without understanding them, or have any sensory equivalent in their minds. (Ansari: 2011).

In a new effort to make life easier for the blind and the visually impaired, a group of researchers has invented a new system to help them see through color conversion to music so that the blind can recognize what is around him (Picture 1). A team of researchers can develop a new system called Eye Music "To help the blind to see by turning colors into music.

The researchers programmed the device using a number of mathematical equations using different musical instruments to express 5 different colors so that the device produces musical sounds as soon as the camera on the device to the colors, according to the site "geeky-gadgets."

Although the idea is innovative but its content is very simple, the camera at the top of the glasses contains a sensor that recognizes the colors in the camera's front to turn the glasses into a musician by color. For example, if the color is red, it will hear a violin or a piano sound.

#### **Impact of disability in determining the needs of the blind:**

The biggest problem that a blind person has is how to choose his clothes. However, this problem may not be obvious in the early stages of life as the blind child depends on his mother. However, he grows and defines his concept of himself and the concept of others about him and connect it to its community.

Hence, the blind is always trying to develop the senses of touch and hearing. Because they are the most senses on which to depend on the identification of his clothes and surrounding it. By passing his/her fingers on different types of fabrics with their names once touched to recognize them and distinguish them. In terms of roughness, softness, dryness and humidity. It can distinguish the front of the back with some decorative drawings or additions, and know the design lines, and the used flops. All of this is easy for the blind to recognize with some training, but the process of compatibility and harmony in the selection of pieces and consistency between colors is an obstacle to the abilities of blind.

In addition to the methods of care for clothes, whether the type of washing suitable for the piece or the temperature of ironing used. In addition, the arrangement of the lockers, especially after the washing process of a large number of pieces and mixing them together. These are all problems that the blind needs to be available in the form of readable information.

Here is the importance of the guide card, which makes it easier for the blind to provide the necessary information to ensure his psychological stability and social independence. (Ansari: 2011)

#### **Storing clothes and identification methods:**

Each of us has a special style in arranging our clothing, and the blind are just like us. there are some useful instructions in this regard: 1. Arrange clothes according to their type, for example: shirts in place, socks in place, trousers or dresses elsewhere.

2. Arranging the clothes according to their use, for example, we put the clothes we use frequently in the front of the shelf.

3. Attach the dresses that are consistent with each other on one clothes hanger, for example, the shirt with trousers suitable with it in color, and the same in the case of skirt and blouse.

4. Arrange clothes according to their colors: Ex white shirts on the right... and so on (Picture2).

a blind person can recognize his clothing in several ways:

1. Touch the material from which the dresses were made.

2. Touch the designs and drawings on the clothes or feel the flaking needle.

3. Add certain signs to the dresses, such as sewing a knot on the inside of the collar or sewing a number of simple nodes to distinguish between the colors and types of dresses, for example the blue shirt one knot and the white two knots.

<https://kafifbook.wordpress.com/>

#### **Some methods used to help the blind to identify clothes and colors:**

1 - Use the guidance card to identify the colors and the type of measurement and measurement and the way of care of the piece of clothing (Picture 3).

2. Add a strip (fig. 4), or a metal piece, to the clothing to clarify the color of the garment (Figure 5). Braille and a certain symbol such as star or moon to identify the color of the dress image.

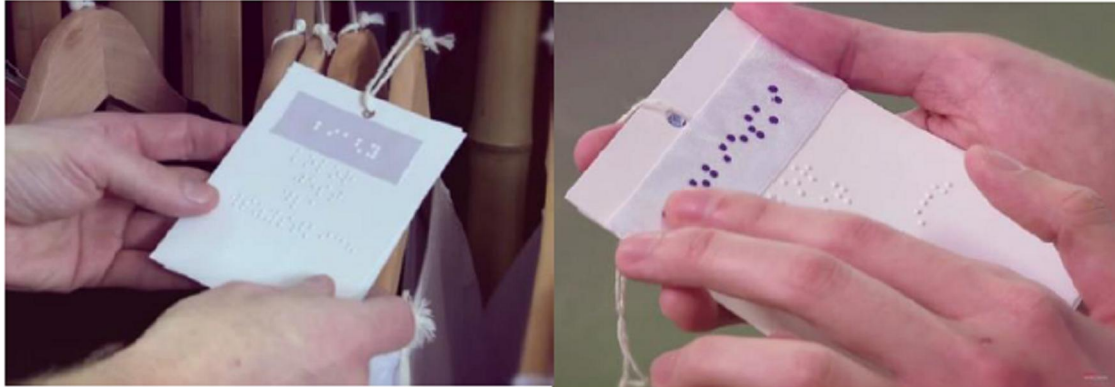
3) Use a braille hanger and some symbols (Fig. 6) and (Fig. 7).

The use of the "Blind Person Recognition System", which is an image camera that is installed in the glasses (fig. 8), can identify the colors and shape of the material (masters - zigzag - striped - wooded - cushion) Clothing, so as to make their lives easier.

<http://i.cs.hku.hk/~msd15058/wp>

5. It is possible to use the surface dressing device (Figure 10) with a camera to show the color and a scanner to show if wrinkles or patches of clothing.

<http://cargocollective.com/cansuturan/blind-project>



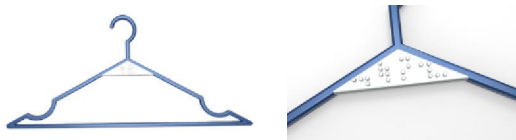
Using the Clothing Identification Card (Picture 3)



Tape showing the color of the garment (Picture 4)  
[Http://columbiametro.com](http://columbiametro.com)



Metal piece showing the color of the garment (Picture 5)  
[Http://columbiametro.com](http://columbiametro.com)



Using braille graffiti on a clothes stand to identify color (Picture 6)  
[Http://ifworlddesignguide.com/entry/190228-blind-hanger](http://ifworlddesignguide.com/entry/190228-blind-hanger)







The use of Braille writings and some symbols of the color of the clothing (Picture 7)  
[Http://ifworlddesignguide.com/entry/190228-blind-hanger](http://ifworlddesignguide.com/entry/190228-blind-hanger)



Camera installed in glasses that describe clothing (Picture 8)

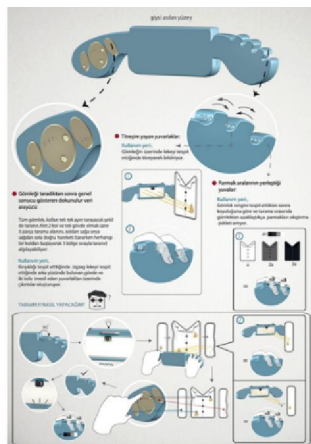
Table showing the quantitative reading of the shape of the material and the proportions of colors in the material (Figure 9)

TABLE I  
 CLOTHING PATTERNS AND DOMINANT COLORS

Image				
Pattern	plaid	striped	patternless	irregular
Color	yellow(49%) orange(36%) black(9%)	blue(75%) white(19%)	red(98%)	black(41%) red(26%) blue(6%) green(5%)

The complementary information provides more complete descriptions of clothing images.





Surface coating device (Picture 10)  
<Http://cargocollective.com/cansuturan/blind-project>



### Requirements for Visually Impaired Clothing: Fabrics:

Care for the type of fabrics appropriate for comfort that contribute to the ease of wear and take off, while identifying the type of activities daily.

(Durability and durability - porosity for absorption - flexibility and rubber - texture - smoothness - ease of care)

#### Comfort:

Comfort is the main requirement for clothing users in general, especially the visually impaired, as their disabilities have limitations, which increases their need for a sense of comfort during daily activities. Comfort is associated with objective perception and various sensations.

Comfort includes a number of elements of the human senses: sense of heat - warmth - cold - pin prick - itch - touch 'soft' thick - solid.

Includes objective perceptions in which all sensory perceptions are made to form a comprehensive assessment of the state of satisfaction.

- Reduce the number of units of clothing that is worn, preferably better than one piece, which helps to reduce the difficulty in wearing and taking off.

- Try to dispense with accessories or reduce them and resort to the simplest methods of ease.

- Trying to avoid abrasives, necklaces, caps, adhesive tapes, and composite zippers to suit the ability of the disabled to rely on himself to wear and take off clothes.

- It is best to be simple clothes with few details and openings, which ensures self-reliance and ease of wearing and dressing.

- Clothes should feel free and easy to move in.

- Wear clothes that are resistant to dirt and easy to care for.

- Take into account that the clothes gain the strength of personality, including its observance of the lines of fashion as well as suitability to the social status and add to the taste and harmony.

- Non-sighted people recognize their clothes by texture, so they cannot distinguish between colors.

- To help them to coordinate the colors of clipped pieces, people may use different means (separating shelves, threading, or beads) and may use reference cards.

From above, visually impaired people should be equipped with clothes that help them to rely on themselves and to be independent in wearing or taking off their clothes without any help, as well as to provide them with freedom and easy movement to ensure a comfortable life in terms of clothing.

#### Applied search results

##### Steps to build the questionnaire:

The researcher designed a questionnaire in order to identify the opinions of specialists in the field of fashion design, questionnaire of evaluation of the proposed designs (for specialists). The questionnaire may be of two axes.

The first axis, fit the proposed design with visually impaired visually: It consists of (8) paragraphs.

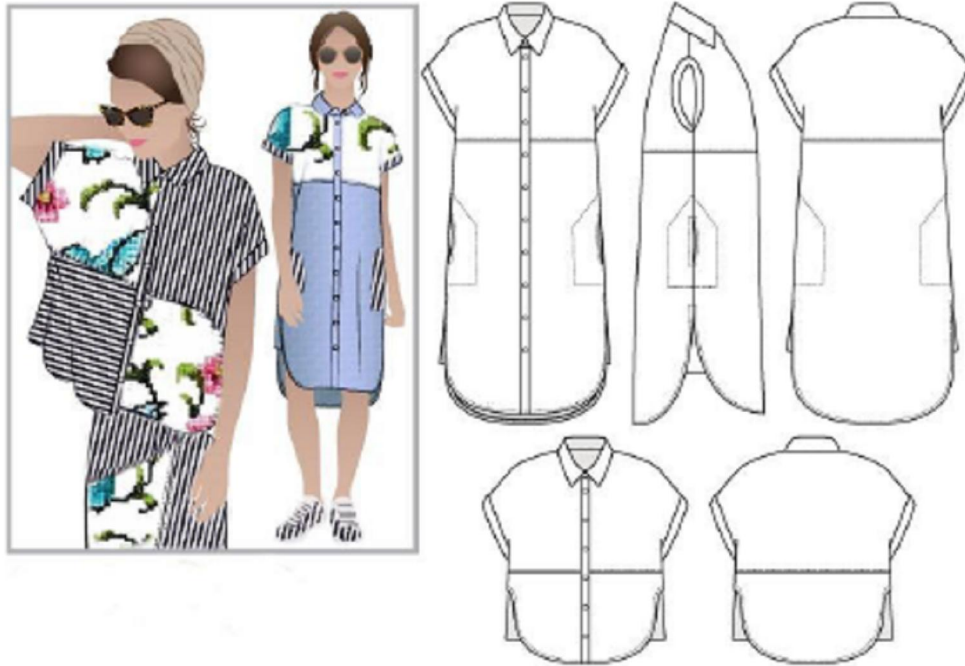
The second axis, the design proposed aesthetically: It consists of (4) paragraphs.

Where they are answered with one of the following options (OK - OK to a certain extent - not OK).

In order to verify the veracity of the questionnaire, the initial version of a group of arbitrators (6) members of the Faculty of Home Economics, Clothing and Textile Department, and College of Arts and Design, King Abdul Aziz

University in Jeddah, was sent to verify the veracity of the questionnaire content, until it is finalized.

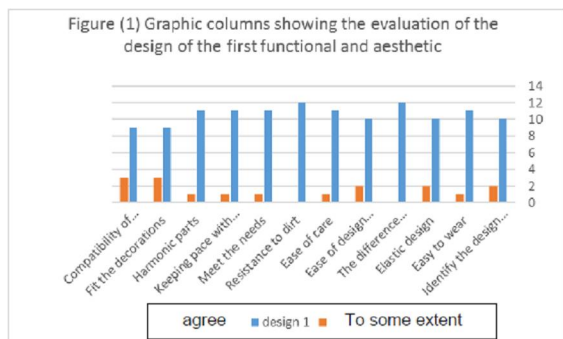
**Proposed designs**  
**The First Design:**



First Design (Picture 11)

**Design specification:**

Figure 11 shows a design for a dress, skirt, blouse, short sleeves up to half the arm. The design was made of soft cotton jeans, some of which were red, and the design was decorated with the stamped material using embroidery stitches, as well as stitching, thus helping the blind to identify the worn piece. The front aperture makes it easier to wear and undress. The researcher focused on the design of clothes comfortable and easy to identify and deal with.



The second design:

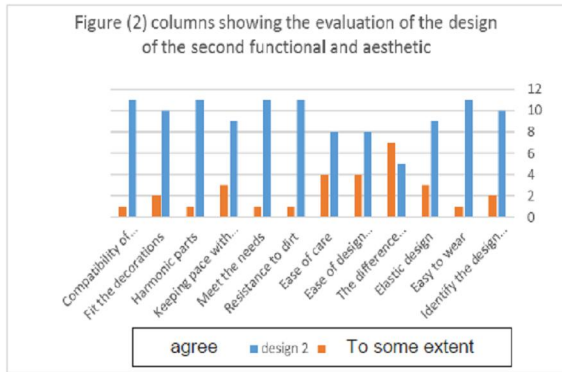


Second Design (Picture 12)

**Design specification:**

Figure 12 shows the design of an outlet in two ways, one of which is a long, mid-legged dress that extends from the sides longer than the midline, which is long-sleeved and has a wide neck opening that

reaches the edge of the shoulders. The dress shows cotton wool with multiple colors and cuts and falls widely on the body. This dress is comfortable in terms of design and material. The second design is a skirt and a blouse. The blouse descends on the length of the body to the buttocks with sleeves up to the length of the elbow. The neck is spread straight up to the edge of the shoulder. The skirt descends wide in a long closed wrap and has been embellished with the addition of the interior design and decoration. In recognition of the design with ease of touch. This design is characterized by a large cotton material that covers a large area of the body. providing comfort and protection.



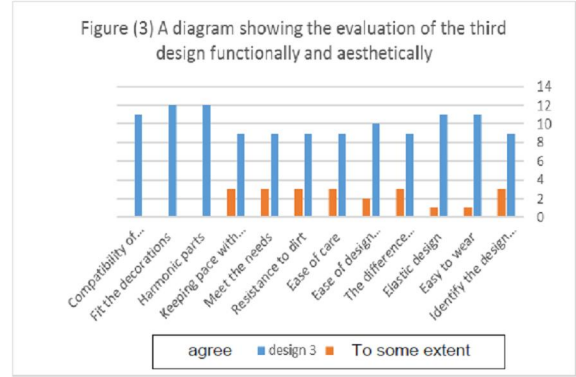
The third design



Third Design (Picture 13)

**Design specification:**

Figure 13 shows a full dress flowing smoothly down the body under the knee with short sleeves and a neck opening in the shape of v. Two front pockets are shown in the dress, one decorated with embossed cloth and the other embossed with embroidery stitches on the head of the horse. The design is made of linen in a beige color. The design is spacious and gives comfort. The presence of embroidery and the pocket helps the blind to recognize the clothing using touch and also to distinguish between the front and the back.

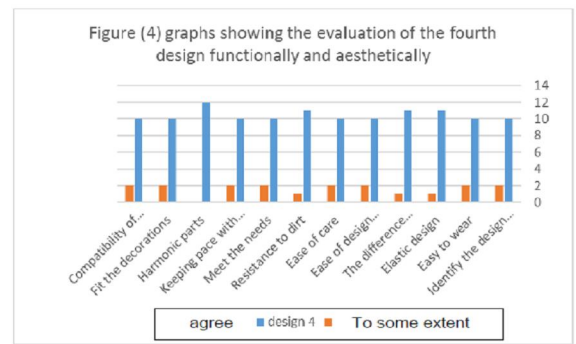


The Forth design:



Forth Design (Picture 14)

**Design specification:**



The picture (14) shows the design of a flowing dress on the body in the cotton cotton, including black. The length of the dress extends to the middle of the leg with long sleeves and a round neck opening with a closed front opening using the buttons. The design shows a decorative cloth from the front half and back. The two sides are tightly folded in folds. The design

covers a large part of the body with a soft material that is comfortable and comfortable.

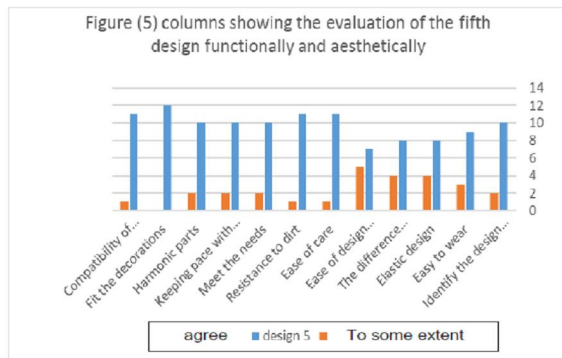
The fifth design



Fifth Design (Picture 15)

**Design specification:**

Figure 15 illustrates the design of a gray blouse of long-sleeved cotton under the buttocks and a round neck opening. The design shows a girl-shaped front and a large oblong pocket. The pants are long jeans in black. This design features the difference between front and back through the large pocket and also covers a large part of the body for protection.



The sixth design

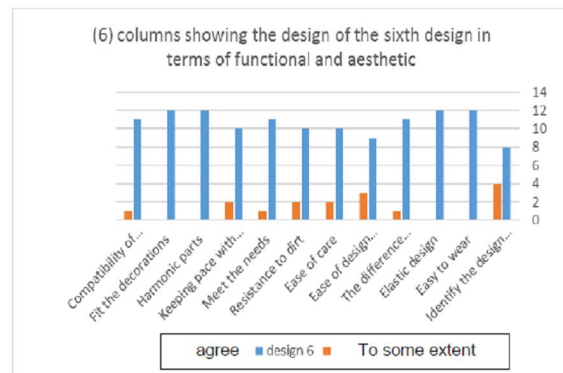
**Design specification:**

The picture (16) shows a design of a green blouse and brown trousers. The blouse is used in cotton and the motifs of roses and birds are embroidered with embroidery. They appear white in the center and the blouse is spread with wide sleeves reaching to the elbow and the opening of a circular neck that falls in the form of circular folds Around the neck and the length of the blouse under the buttocks is wide. The trousers are browned with cotton leggings at the end of pants. The design covers and protects a large part of the body and the presence of embroidery

on the blouse helps identify the clothing as well as distinguish the front from the back.



Sixth Design (Picture 16)



**Summary of results:**

- It should be noted that the answer to the first question, which states "What are the clothing needs of sightless young women which help in adapting to the self and society?" Has been mentioned in the second chapter of the research.

- It should be noted that the answer to the second question, which states: "What are the characteristics of the clothing of visually impaired girls that fit their clothing preferences" has been mentioned in the second chapter of the research.

- It should be noted that the answer to the third question, which states that "the possibility of designing costumes for young adults with visual impairments at an age (18-25) has been mentioned in Chapter III practical experience through the work of (6) designs.



• It should be noted that the answer to the fourth question, which states that "the opinions of the specialists in the proposed designs for girls with visual disabilities" have been referred to in Chapter III in the experimental research procedures

• Through the study, the researcher found that girls with visual disabilities should be available in their soft and comfortable soft clothes, and prefer front openings in clothes to facilitate the process of wearing and dressing.

• Through the study, the researcher found that most girls with visual disabilities do not prefer to multiply in the clipping because they need to coordinate between pieces.

• Most blind people prefer to wear long-sleeved clothing for warmth and protection.

• Most girls with visual disabilities depend on identifying their clothes on by memory and touch.

• Education and age play an important role in the extent to which the blind is aware of the means of assistive technology for blind people around them.

#### References

1. Al-Ansari, Mufeeda Abdul Rahman (2011): Effectiveness of a suggested guidance card in the development of cladding skills in the blind - Research Journal of Specific Education - Mansoura University (23) - October 2011 - Part II.
2. Abu El-Nasr, Medhat Mohamed (2004): Rehabilitation and care of disability-challenged. Relation of the disabled to the family from the perspective of prevention and treatment -Itrak for publication and distribution -Cairo.
3. Abu Fakher, Ghassan Abdel-Hayy (1992): Special Education for Children with Disabilities - Federation Press, Damascus.
4. Khatib, Gamal (1998): motor disability and cerebral palsy - the guide teachers and parents - the thought of printing, publishing and distribution - Jordan.
5. Al-Qariuti, Yousef, Abdulaziz Al-Sartawi, Jamil Al-Samadi (2001): Introduction to Special Education - Al-Qalam Publishing House- Dubai.
6. Al-Qamash, Mustafa Nouri Al-Qamsh, Khalil Abdel-Rahman Al-Maayta (2007): Psychology of Children with Special Needs Introduction to Special Education - Al-Masirah House for Printing, Publishing and Distribution, Amman, Jordan.
7. Kadhafi, Muhammad Ramadan (1998): The Psychology of Disability - The Arab Book House - The Jamahiriya.
8. Khatib, Jamal (2011): Introduction to Physical and Health Disabilities - Dar Al Shorouk - Jordan.
9. Avnikhar, Yahya (2000): Children with Special Needs - Dar Al-Elm Press – Damascus.
10. Avnikhar, Yahya (2002): Vocational Rehabilitation for People with Special Needs - Dar Al-alm - Damascus.
11. Ismail, Ashraf (1999): Rehabilitation of the Disabled - Modern University Office – Alexandria.
12. Salim, Kamal Salem (1997): Visually Impaired Persons - Characteristics and Methodology - TADAR - Lebanese Egyptian - Beirut.
13. Aqili, Samir Mohamed (2010): The impact of the use of meta-knowledge strategies in teaching science on achievement and skills of knowledge and the direction towards the material of blind students - Research publication - Journal of Science and Arts - No. 154.
14. Mousa Farouk Abdel Fattah. Psychological Growth in Childhood and Adolescence. Second Edition.
15. Maqlan, Samar Mahmoud (2012): Design and implementation of ready-made clothes suitable for functionally and aesthetically disabled people - PhD thesis - Umm Al-Qura University - Faculty of Arts and Interior Design - Makkah.

8/25/2017