



TEKSTİL VE MÜHENDİS
(Journal of Textiles and Engineer)



<http://www.tekstilvemuhendis.org.tr>

Dress Preferences of Working Women According to Body Shapes

Vücut Şekillerine Göre Çalışan Kadınların Elbise Tercihleri

Emine ERYAZICI, Esen ÇORUH
Gazi University, Faculty of Art and Design, Department of Fashion Design, Ankara, Turkey

Online Erişime Açıldığı Tarih (Available online): 26 Haziran 2015 (26 June 2015)

Bu makaleye atıf yapmak için (To cite this article):

Emine ERYAZICI, Esen ÇORUH (2015): Dress Preferences of Working Women According to Body Shapes, Tekstil ve Mühendis, 22: 98, 42-55.

For online version of the article: <http://dx.doi.org/10.7216/130075992015229805>



DRESS PREFERENCES OF WORKING WOMEN ACCORDING TO BODY SHAPES

Emine ERYAZICI
Esen ÇORUH*

Gazi University, Faculty of Art and Design, Department of Fashion Design, Ankara, Turkey

Gönderilme Tarihi / Received: 20.11.2014

Kabul Tarihi / Accepted: 14.04.2015

ABSTRACT: The purpose of this survey is to examine the dress preferences of working women according to body shapes. In the survey through the questionnaire, the data have been collected from 385 working women with bachelor's degree and between the ages of 25 and 40 who are living in Ankara, the capital of Turkey. As a result; 39.5% of the surveyed women have been determined to have hourglass, 13.2% boned triangle, 11.9% triangle, 9.6% boned hourglass, 8.3% rectangle, 6.2% round hourglass, 4.9% round triangle, 3.1% inverted triangle and 3.1% diamond body shapes. In addition; 39.0% of the women have been observed to prefer classical cut, 27.8% round collar, 45.2% set-in sleeves, 33.2% maxi length, 43.9% black colour and 63.4% without-motif fabric. In sum, the dress styles of the surveyed working women have been detected not to show difference in accordance with their body shapes. Furthermore, some recommendations have been given to the working women in the survey with respect to the dress styles in accordance with their body shapes.

Keywords: Working woman, body shape, dress preference, dress recommendation

VÜCUT ŞEKİLLERİNE GÖRE ÇALIŞAN KADINLARIN ELBİSE TERCİHLERİ

ÖZET: Bu araştırmanın amacı, vücut şekillerine göre çalışan kadınların elbise tarzlarını incelemektir. Araştırmada veriler; 25-40 yaş arasında olan, üniversite bitiren, Türkiye'nin başkenti Ankara'da yaşayan 385 çalışan kadından anket formu yardımıyla toplanmıştır. Sonuç olarak; araştırmaya katılan çalışan kadınların %39.5'inin kum saati, %13.2'sinin kemikli üçgen, %11.9'unun üçgen, %9.6'sının kemikli kum saati, %8.3'ünün dikdörtgen, %6.2'sinin yuvarlak kum saati, %4.9'unun kavisli üçgen, %3.1'inin ters üçgen ve %3.1'inin elmas vücut şekline sahip oldukları saptanmıştır. Ayrıca kadınların; % 39.0'unun klasik kesim, % 27.8'inin yuvarlak yaka, % 45.2'sinin takma kol, % 33.2'sinin maksı boy, % 43.9'unun siyah renk ve % 63.4'ünün desensiz kumaşları tercih ettikleri görülmüştür. Özetle, araştırmaya katılan çalışan kadınların elbise tarzlarının vücut şekillerine göre farklılık göstermediği tespit edilmiştir. Buna ek olarak araştırmada, çalışan kadınların vücut şekillerine göre doğru elbise tarzlarının seçimi için bazı öneriler verilmiştir.

Anahtar Kelimeler: Çalışan kadın, vücut şekli, elbise tercihi, elbise önerisi

* Sorumlu Yazar/Corresponding Author: esencoruh@hotmail.com

DOI: 10.7216/130075992015229805, www.tekstilvemuhendis.org.tr

1. INTRODUCTION

The increase in the levels of education around the world has changed the position of women in the community. Women have undertaken a role of working women as well as the roles of mother, spouse and housewife. Therefore, it is important to look beautiful on their physical appearance as well as professional qualifications. In addition to these, clothes have been a significant means for working women to show their authority and self-assurance.

The participation of women in labour force is one of the most influential factors to ensure the development with respect to both social and economic perspectives. In general, since World War II, the participation rate of women in labour force has increased. In the developed economies, that the women's participation in labour force has a consistent increasing trend over the course of years has been considered as a result of the equalitarian policies. The legal actions aimed at ensuring the equality between women and men has taken place since 1995 and subsequent years [1].

The body sizes, types, shapes, and proportions of each are different. Body size is related to measurement on body. Body types differ between races [2]. Body shape is closely connected with to body silhouettes. And body proportion is related to anthropometric comparisons of the population.

Anthropometric surveys are connected with the body proportions of the population, using the conventional measuring method [3]. However, modern methods, described computer-based 3D body models, for anthropometric surveys have been developed. These methods have especially been used for apparel industry.

Creating convincing 3D models of humans is a difficult task. So, a method for estimating body shape and biometric measurements from coarse, noisy, incomplete 3D data is desirable [4]. Despite these modern methods, body shape can be identified taking into account the appearance of shoulder, waist and hip.

Traditional garment pattern construction relies on circumferential and arc body measurements. Therefore, body shape categorization with comparisons of widths

and depths from the view plane are not as directly related to pattern making as categorization based on body circumferences [5].

Body shape is an important factor to affect the physical appearance of women. Additionally, dress is women's clothing comprised of various colour, motifs and designs, covering the upper and lower of the body. It is likely that combining correctly the body shape with the dress style may a more elegant and more impressive appearance.

Body shapes are generally identified by subjective comparisons of body silhouettes or by calculating ratios of girths [5]. It is especially required to analyse the theoretical underpinning for the development of apparel sizing [6]. Furthermore, body shape is the major factor that has an influence on fit and satisfaction with clothing. It is very important to find the characteristics of each body shapes among races or countries [2].

One of the most important problems of Turkish apparel industry is that there has not been enough research into the definition of body shapes in Turkish women [7]. In this survey performed for examining the dress preferences of the working women with their body shapes; a) determination of body shapes, b) identification of dress preferences, c) putting the dress preferences according to body shapes and d) making recommendations with respect to the proper dress styles, have been aimed. In addition, this survey is of significance in terms of that women can understand whether or not they choose the right dress, how they emphasize their beautiful parts of their bodies, that they know the good or bad aspects of their bodies, what kinds of dresses they should wear to look stylish.

2. LITERATURE REVIEW

The survey is focused on the distribution of women body shape and the examination of the dress preference in the business environment. Both international and national researches about body shapes of women are given below.

In a study by Lee et al., 2007, body shapes between USA and Korean women were to compare by

analysing the distribution and proportion of body shapes of two countries. The study finds that the largest shape category was the rectangle shape in both countries [2]. In another study by Çileroğlu, 2010, body shapes of Turkish women were to identify in terms of the ready-to-wear industry. The distribution of body shape of Turkish women participating in the study was designated as 37% hourglass [7].

In a study by Song and Ashdown, 2011, it was to develop a reliable and objective categorization method for the lower body shapes of women using principal component analysis and cluster analysis. In order to provide a simple and intuitive application method for defining a new person's body shape group, it was developed two discriminant functions using raw measurements. Body shape can be classified within this system from body measurements by calculating function scores and comparing them with a bivariate plot of function scores of the body shape groups [5]. In another study by Vuruşkan and Bulgun, 2013, with relation to the lower body shapes of women, the body fitting analysis was to perform between the standard size and customized trousers, and the customized trousers were to find to be more suitable for body [8]. The result of these studies clearly demonstrates that the studies intended at the lower body shape of women have been conducted. Also in many studies, the lower body of women has been observed to be the most problematical part.

In a study by Hasler et al., 2009, it was to present a method to estimate the detailed 3D body shape of a person even if heavy or loose clothing was worn. The approach was based on a space of human shapes, learned from a large database of registered body scans. The method was therefore allowed to compute the most likely shape and pose of the subject, even if it was heavily occluded or body parts were not visible [4]. In another study by Ujevic et al., 2012, one of computer-based 3D body models were to develop according to defined shapes of female body contribute to the visualization of body shape and in this context they made a contribution to the processes of designing

garment collections appropriate to body shape [3]. According to another study by Connel et al., 2003, researchers proposed portions of body scales but no analytical scale existed in the public domain to allow product developers to compare their target market to a standard shape as a basis for understanding pattern production and grading. Image capture through body scan technology was allowed researchers to look at the body in very different ways relative to pattern development for apparel production. Some body scanning centers were to develop shape analysis tools for use in pattern development [6]. In another study by Connell et al., 2006, body shape assessment scale was to develop a set of assess female body shapes as visualized in body scans. The body shape scale incorporated for hourglass, pear, rectangle, and inverted triangle shapes [9]. These studies undoubtedly reveal that the body scanning systems have been developed for the determination of the body shapes of women.

According to a study by Tama and Öndoğan, 2014, basic skirt patterns were to create using the Computer Aided Design system according to Contec, Metric, Müller, and Basic Blocks Pattern Making Systems in order to evaluate fit. These patterns were also to dress up on virtual mannequins. Besides virtual mannequins' body shapes were to select as hourglass, triangle, and rectangle. Consequently results were different for each pattern making systems and these systems were not to suitable for each body shape [10].

In a study by Allen et al., 2003, understanding and characterizing the range of human body shape variation were applications ranging from better ergonomic design of human spaces to easier modelling of realistic human characters for computer animation. The shortcomings of high level characterizations and sparse anthropometric measurements, particularly for body modelling, was that they did not capture the detailed shape variations needed for realism [11]. Therefore, conducting the studies towards the determination of the body shapes has caused the ergonomic clothing designs to be made.

In a study by Bauser et al., 2011, differences between perception of human faces and body shapes were to investigate whether human body forms- like human faces- undergo holistic processing. Faces and body shapes appeared to share some initial processing mechanisms, but later stages might at least in part be based on differential information processing [12]. This study puts forth a different point of view in the direction of the body shapes.

According to a study by Olaru et al., 2011, using the anthropometric database, statistical processing was to develop regarding the differences between the main body circumferences to highlight the classification of female subjects in different conformational categories, in this case geometric shapes. For each shape category were to present graphics proposals of outfits according to the fashion trends [13].

As seen in the literature review, even though there are a great number of researches at international level about body shapes, at national level this number is relatively low. With regard to the clothing preferences of women according to their body shapes, there are small numbers of researches both at international and national level. Different from other researches, in this survey, it is aimed to raise the awareness of women about choosing the right clothing for their body shapes.

3. METHOD

Having performed for the purpose of determination of the body shapes of the working women and examination of the dress preferences with their body shapes, this research is a survey research. Survey research has generally three features;

- In order to describe the opinions or characteristics of a vast community, a part of the community consisting of the people who can represent the community is selected.
- The process in which the data required for the survey are collected, which is based on questions directed at the data resources.

- Data are not collected from each individual in the community but from a part representing the community, namely from the sample [14].

2.1. Sampling and Data Collection

The universe of this survey is comprised of the women with bachelor's, graduate and postgraduate degree between the ages of 25 and 40 who are working in public or private institutions and living in Ankara, the capital of Turkey. The sample of the survey is the randomly-selected 385 women who have participated voluntarily in the survey.

2.2. Survey Instrument

A questionnaire was used for data collection. The survey began by looking back at previous researches related to the issue. The characteristics and results of the previous researches were examined, some clues were gathered and some information and data which would help the methodology and the course of this survey were collected. Prior to beginning the questionnaire, the dresses of the women were observed, their body shapes about the dresses were noted and the shapes of body were recorded. Following this survey, some academics were asked to express their ideas about the findings, and the questionnaire was finally created. Afterwards, a pilot study was conducted by applying this questionnaire to 50 women.

The questionnaire was divided into three sections. **In the first section,** women answered questions related to demographics such as age, weight, height, and education level. **In the second section,** working women identified their body shapes as hourglass, boned hourglass, round hourglass, triangle, boned triangle, round triangle, inverted triangle, rectangle and, diamond. **In the third section,** women focussed on their dress preferences such as cut, collar, sleeve, length, colour, and fabric.

The survey covered working women in Ankara. A total of 385 working women completed the questionnaire. Their ages ranged from 25 to 40, their weights ranged from 50 kg to 90 kg, their heights ranged from 155 cm to 175 cm, and their education level ranged from graduated university to graduated PhD.

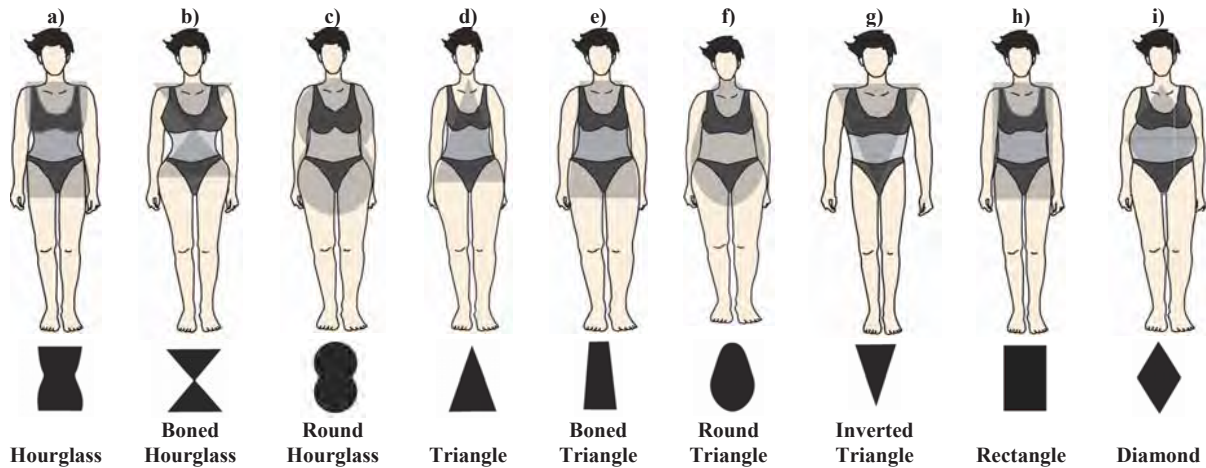


Figure 1. Body Shapes [15, 16]

The description regarding the body shapes discussed in the survey are as follows:

- a) **Hourglass**: Shoulder and hip width equal or nearly equal with very small waist indentation. The person with this shape has the overall appearance of extremely small waist relative to shoulder and hip [6].
- b) **Boned Hourglass**: Bust and hip width are close to each other. Waist line is notably slim. The person with this shape has an athletic structure. The difference from hourglass body shape is to have a boned structure.
- c) **Round Hourglass**: Shoulder line is soft, notable waist line, curved hip, notable top and bottom of body but not too large, and curved. A subcategory of hourglass body shape.
- d) **Triangle**: The person with a triangle shape has the appearance of being larger in the hips than the bust without having a defined waistline [17].
- e) **Boned Triangle**: Narrow shoulders but they will still be straight, not sloping. The person with this shape has the overall appearance of narrow shoulder and broad on hip relative to straight and flat [13].
- f) **Round Triangle**: Much wider at hip than shoulder with waist indented. The person with round triangle shape has the overall appearance of extremely heavy hip area relative to waist and shoulder [6].
- g) **Inverted Triangle**: Much wider at shoulder than hip with waist indented. The person with this shape has the overall appearance of extremely broad shoulder relative to waist and hip [6].
- h) **Rectangle**: Approximately equal visual balance between shoulder and hip with waist slightly indented. The person with a rectangle shape has the overall appearance of average figure with little waist definition [6].
- i) **Diamond**: The person with this shape is characterized by having several large rolls of flesh in the midsection of the body that protrude away from the body at the waist area. They appear to have a very large midsection in comparison to the rest of their body, almost having a tube-like apparatus wrapped around their waist [17].

With relation to the dress preference of the working women involved in the survey; the explanation regarding the cut, collar, sleeve, length, colour and fabric are as follows:

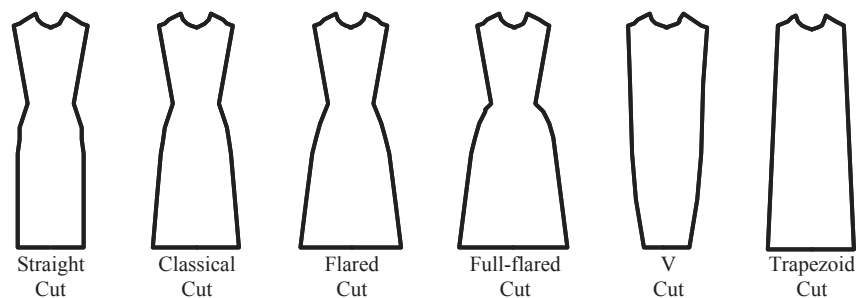


Figure 2. Cut Characteristics

- Cut characteristics; have been defined as straight, classical, flared, full-flared, V and trapezoid cut.

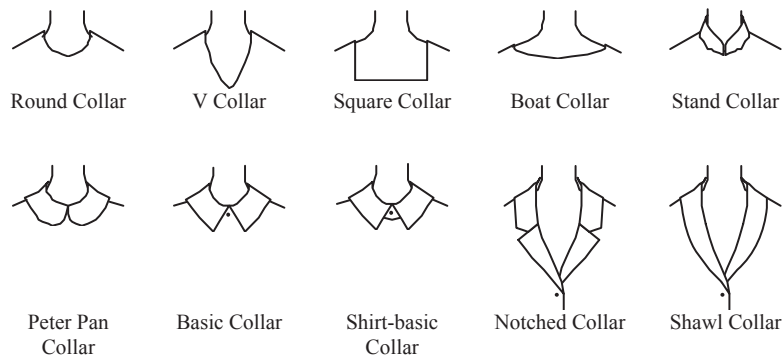


Figure 3. Collar Characteristics [18]

- Collar characteristics; have been given above as round, V, square, boat, stand, Peter Pan, basic, shirt-basic, notched and shawl collar.

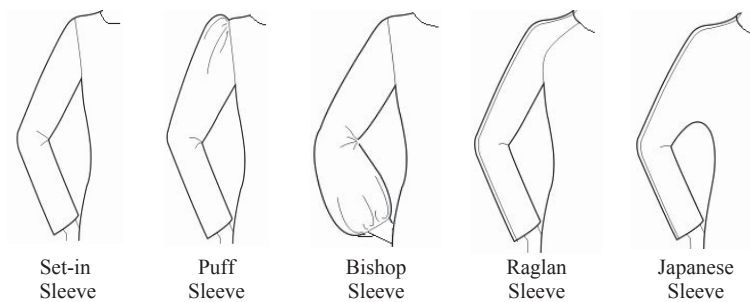


Figure 4. Sleeve Characteristics [18]

- Sleeve characteristics; have been defined as set-in, puff, bishop, raglan and Japanese sleeve and the technical drawings are shown above.

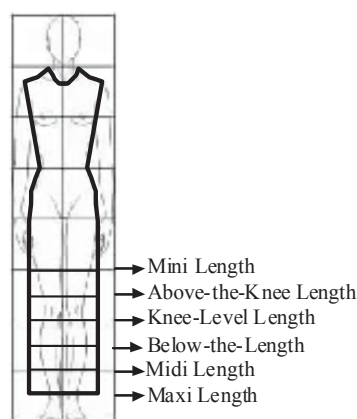


Figure 5. Length Characteristics [16]

- Length characteristics; have been defined as mini, above-the-knee, knee-level, below-the-knee, midi and maxi length.

- Colour characteristics; have been comprised of the options of black, navy blue, blue, brown, grey, red, claret red, purple, pink, green and cream-white.

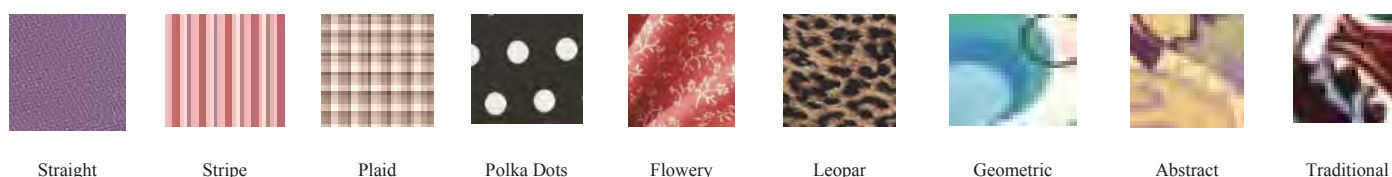


Figure 6. Fabric Characteristics [16]

- ***Fabric characteristics***; have been defined as without-motif, stripe, plaid, polka dots, flowery, leopard, geometric, abstract and traditional motif, and the examples belonging to these motifs are shown above.

2.3. Analysis of Data

In the survey, basic statistical values were used. Data were obtained from 385 working women who were asked to indicate how they feel their body shapes. In data analysis, data frequency and their percentage were used.

4. RESULTS AND DISCUSSIONS

The results obtained in the survey with relation to the dress preferences of the working women distribution by the body shapes are presented below.

Table 1. Distributions According to Women's Body Shapes (n=385)

BODY SHAPES	TOTAL f (%)
Hourglass	152 (39.5)
Boned Hourglass	37 (9.6)
Rounded Hourglass	24 (6.2)
Triangle	46 (11.9)
Boned Triangle	51 (13.2)
Round Triangle	19 (4.9)
Inverted Triangle	12 (3.1)
Rectangle	32 (8.3)
Diamond	12 (3.1)
TOTAL	385 (100)

When looking at Table 1, the distribution of the working women by their body shapes; 39.5% hourglass, 13.2% boned triangle, 11.9% triangle, 9.6% boned

hourglass, 8.3% rectangle, 6.2% round hourglass, 4.9% round triangle, and 3.1% inverted triangle and 3.1% diamond body shapes have been determined.

As seen on Table 1, most Turkish women have been found to have hourglass body shape. Though the result of this survey has similarities with the study of Çileroğlu [7], it has differences from the study of Lee et al. [2].

The hourglass body shape has also been accepted as the ideal body shape in ready-to-wear industry, and clothes are usually manufactured in line with this body shape. In Table 1, most of the working women have been found to have hourglass body shape, which has been accepted as ideal. This result can be interpreted as that the working women pay attention to their bodies and can utilize ready-to-wear comfortably.

Looking at Table 2, it is observed that 39% of the women who participated in the surveyed women prefer classical, 21% of them prefer flared, 17.4% prefer trapezoid and 17.2% prefer straight cut dress. Also, it is determined that 18.4% of the women with hourglass body shape, 4.7% of the women with triangle body shape and 4.7% of the women with boned triangle body shape wear classical cut dress.

When looking at Table 3, it is determined that 27.8% of the working women wear round collar, 23.1% wear boat collar and 16.6% wear V collar. Moreover, it is seen that 10.1% of women with hourglass body shape prefer round collar, 9.9% of them prefer boat collar and 7.8% prefer V collar dress.

Table 2. Findings about Dress Cut Styles (n=385)

BODY SHAPES	CUT STYLES						TOTAL f (%)
	Straight f (%)	Classical f (%)	Flared f (%)	Full-flared f (%)	V f (%)	Trapezoid f (%)	
Hourglass	25 (6.5)	71 (18.4)	22 (5.7)	6 (1.6)	3 (0.8)	25 (6.5)	152 (39.5)
Boned Hourglass	4 (1.0)	14 (3.6)	9 (2.3)	2 (0.5)	2 (0.5)	6 (1.6)	37 (9.6)
Rounded Hourglass	6 (1.6)	11 (2.9)	4 (1)	-	-	3 (0.8)	24 (6.2)
Triangle	5 (1.3)	18 (4.7)	15 (3.9)	-	2 (0.5)	6 (1.6)	46 (11.9)
Boned Triangle	9 (2.4)	18 (4.7)	14 (3.6)	1 (0.3)	1 (0.3)	8 (2.1)	51 (13.2)
Round Triangle	3 (0.8)	6 (1.6)	8 (2.1)	-	-	2 (0.5)	19 (4.9)
Inverted Triangle	2 (0.5)	4 (1)	1 (0.3)	1 (0.3)	1 (0.3)	3 (0.8)	12 (3.1)
Rectangle	8 (2.1)	6 (1.6)	6 (1.6)	-	1 (0.3)	11 (2.9)	32 (8.3)
Diamond	4 (1.0)	2 (0.5)	2 (0.5)	-	1 (0.3)	3 (0.8)	12 (3.1)
TOTAL	66 (17.2)	150 (39)	81 (21)	10 (2.6)	11 (2.9)	67 (17.4)	385 (100)

Table 3. Distributions about Dress Collar Styles (n=385)

BODY SHAPES	COLLAR STYLES										TOTAL f (%)
	Round f (%)	V f (%)	Square f (%)	Boat f (%)	Stand f (%)	Peter Pan f (%)	Basic f (%)	Shirt- basic f (%)	Notched f (%)	Shawl f (%)	
Hourglass	39 (10.1)	30 (7.8)	9 (2.3)	38 (9.9)	6 (1.6)	19 (4.9)	4 (1)	1 (0.3)	1 (0.3)	5 (1.3)	152 (39.5)
Boned Hourglass	10 (2.6)	5 (1.3)	2 (0.5)	10 (2.6)	4 (1)	3 (0.8)	-	-	2 (0.5)	1 (0.3)	37 (9.6)
Rounded Hourglass	4 (1)	5 (1.3)	2 (0.5)	5 (1.3)	2 (0.5)	2 (0.5)	1 (0.3)	-	-	3 (0.8)	24 (6.2)
Triangle	9 (2.3)	8 (2.1)	2 (0.5)	11 (2.9)	5 (1.3)	5 (1.3)	-	2 (0.5)	-	4 (1)	46 (11.9)
Boned Triangle	18 (4.7)	4 (1)	5 (1.3)	10 (2.6)	4 (1)	7 (1.8)	2 (0.5)	-	1 (0.3)	-	51 (13.2)
Round Triangle	12 (3.1)	2 (0.5)	1 (0.3)	2 (0.5)	1 (0.3)	1 (0.3)	-	-	-	-	19 (4.9)
Inverted Triangle	2 (0.5)	3 (0.8)	1 (0.3)	2 (0.5)	2 (0.5)	1 (0.3)	-	1 (0.3)	-	-	12 (3.1)
Rectangle	10 (2.6)	5 (1.3)	-	10 (2.6)	3 (0.8)	1 (0.3)	1 (0.3)	1 (0.3)	-	1 (0.3)	32 (8.3)
Diamond	3 (0.8)	2 (0.5)	-	1 (0.3)	-	3 (0.8)	-	-	1 (0.3)	2 (0.5)	12 (3.1)
TOTAL	107 (27.8)	64 (16.6)	22 (5.7)	89 (23.1)	27 (7)	42 (10.9)	8 (2.1)	5 (1.3)	5 (1.3)	16 (4.2)	385 (100)

Table 4. Evaluations about Dress Sleeve Styles (n=385)

BODY SHAPES	SLEEVE STYLES					TOTAL f (%)
	Set-in f (%)	Puff f (%)	Bishop f (%)	Raglan f (%)	Japanese f (%)	
Hourglass	65 (16.9)	38 (9.9)	21 (5.5)	20 (5.2)	8 (2.1)	152 (39.5)
Boned Hourglass	20 (5.2)	4 (1)	7 (1.8)	6 (1.6)	-	37 (9.6)
Rounded Hourglass	15 (4.0)	3 (0.8)	2 (0.5)	4 (1)	1 (0.3)	24 (6.2)
Triangle	17 (4.5)	8 (2.1)	9 (2.3)	11 (2.9)	1 (0.3)	46 (11.9)
Boned Triangle	23 (6.0)	10 (2.6)	8 (2.1)	7 (1.8)	3 (0.8)	51 (13.2)
Round Triangle	12 (3.1)	3 (0.8)	1 (0.3)	2 (0.5)	1 (0.3)	19 (4.9)
Inverted Triangle	4 (1)	1 (0.3)	4 (1)	3 (0.8)	-	12 (3.1)
Rectangle	18 (4.7)	7 (1.8)	7 (1.8)	6 (1.6)	-	32 (8.3)
Diamond	7 (1.9)	3 (0.8)	-	2 (0.5)	-	12 (3.1)
TOTAL	174 (45.2)	77 (20)	59 (15.3)	61 (15.8)	14 (3.6)	385 (100)

According to the results in Table 4 about the sleeve styles of the working women, it is found that 45.2% of them prefer set-in sleeve, 20% prefer puff-sleeve, 15.8% prefer raglan sleeve and 15.3% prefer bishop sleeve. This result shows that approximately half of the women wear set-in sleeve dress.

Analysing Table 5, it is seen that 33.2% of the women who participated in the survey wear maxi length dress, 21.8% of them wear above-the-knee length and 17.1% wear knee-level length dress.

There were arguments with increasing tendencies in Turkey towards more conservatism especially after the Justice and Development Party's rise to power

[19]. The results supported the arguments that the working women preferred maxi length dress and also had a tendency to wear more conservatively in the business environment.

Looking at Table 6, it is seen that the working women choose most the black colour with the ratio of 43.9% and secondly navy blue with the ratio of 12.5%. As a result, it is observed that the women participating in the survey wear mostly black dress at work. Besides, when the distributions according to the body shapes are analysed, it is concluded that the colour black weigh much.

Table 5. Findings about Dress Length Styles (n=385)

BODY SHAPES	LENGHT STYLES						TOTAL f (%)
	Mini f (%)	Above-the- Knee f (%)	Knee-Level f (%)	Below-the- Knee f (%)	Midi f (%)	Maxi f (%)	
Hourglass	9 (2.3)	46 (11.9)	27 (7)	13 (3.4)	17 (4.4)	40 (10.4)	152 (39.5)
Boned Hourglass	2 (0.5)	7 (1.8)	8 (2.1)	6 (1.6)	3 (0.8)	11 (2.9)	37 (9.6)
Rounded Hourglass	1 (0.3)	4 (1)	5 (1.3)	4 (1)	1 (0.3)	9 (2.3)	24 (6.2)
Triangle	2 (0.5)	7 (1.8)	8 (2.1)	4 (1)	5 (1.3)	20 (5.2)	46 (11.9)
Boned Triangle	2 (0.5)	10 (2.6)	8 (2.1)	7 (1.8)	6 (1.6)	18 (4.7)	51 (13.2)
Round Triangle	-	2 (0.5)	3 (0.8)	3 (0.8)	3 (0.8)	8 (2.1)	19 (4.9)
Inverted Triangle	-	2 (0.5)	1 (0.3)	1 (0.3)	1 (0.3)	7 (1.8)	12 (3.1)
Rectangle	1 (0.3)	3 (0.8)	4 (1)	8 (2.1)	4 (1)	12 (3.1)	32 (8.3)
Diamond	1 (0.3)	3 (0.8)	2 (0.5)	1 (0.3)	2 (0.5)	3 (0.8)	12 (3.1)
TOTAL	18 (4.7)	84 (21.8)	66 (17.1)	47 (12.2)	42 (10.9)	128 (33.2)	385 (100)

Table 6. Distributions about Dress Colour Styles (n=385)

BODY SHAPES	COLOUR STYLES											TOTAL f (%)
	Black f (%)	Navy Blue f (%)	Blue f (%)	Brown f (%)	Grey f (%)	Red f (%)	Claret Red f (%)	Purple f (%)	Pink f (%)	Green f (%)	Cream- White f (%)	
Hourglass	69 (17.9)	17 (4.4)	6 (1.6)	13 (3.4)	8 (2.1)	12 (3.1)	8 (2.1)	4 (1)	4 (1)	7 (1.8)	4 (1.1)	152 (39.5)
Boned Hourglass	17 (4.4)	3 (0.8)	3 (0.8)	3 (0.8)	-	3 (0.8)	2 (0.5)	1 (0.3)	2 (0.5)	2 (0.5)	1 (0.3)	37 (9.6)
Rounded Hourglass	11 (2.9)	5 (1.3)	1 (0.3)	3 (0.8)	-	1 (0.3)	-	1 (0.3)	-	1 (0.3)	1 (0.3)	24 (6.2)
Triangle	18 (4.7)	5 (1.3)	4 (1)	3 (0.8)	3 (0.8)	2 (0.5)	4 (1)	2 (0.5)	-	3 (0.8)	2 (0.5)	46 (11.9)
Boned Triangle	25 (6.5)	7 (1.8)	1 (0.3)	2 (0.5)	8 (2.1)	2 (0.5)	1 (0.3)	-	2 (0.5)	2 (0.5)	1 (0.3)	51 (13.2)
Round Triangle	9 (2.3)	2 (0.5)	-	1 (0.3)	2 (0.5)	1 (0.3)	-	1 (0.3)	2 (0.5)	1 (0.3)	-	19 (4.9)
Inverted Triangle	4 (1)	1 (0.3)	1 (0.3)	2 (0.5)	1 (0.3)	1 (0.3)	1 (0.3)	1 (0.3)	-	-	-	12 (3.1)
Rectangle	11 (2.9)	6 (1.6)	3 (0.8)	2 (0.5)	3 (0.8)	1 (0.3)	3 (0.8)	1 (0.3)	-	1 (0.3)	1 (0.3)	32 (8.3)
Diamond	5 (1.3)	2 (0.5)	-	-	1 (0.3)	2 (0.5)	1 (0.3)	-	-	1 (0.3)	-	12 (3.1)
TOTAL	169 (43.9)	48 (12.5)	19 (4.9)	29 (7.5)	26 (6.8)	25 (6.5)	20 (5.2)	11 (2.9)	10 (2.6)	18 (4.7)	10 (2.6)	385 (100)

It was to determine that the women preferred black colour in the business environment with a rate of 50% in Kılınçarslan's study [20]. Yet, it was to observe that 71% of the women wear pink and 61% blue in Koca and Koç's study [21]. As seen on Table 6, that the working women prefer black colour is the most draws parallel to the results of Kılınçarslan's study [20]; however, the results of Koca and Koç's study [21] shows indifferences.

It is determined when Table 7 is observed that the women participated in the survey wear dresses made by without-motif fabric with the ratio of 63.4%.

As a result, when looking at the above tables, 39% of the surveyed women have been found to prefer classical, 21% flared, 17.4% trapezoid and 17.2% straight cut dresses. These women have chosen round collar dresses with a rate of 27.8%, and boat collar with 23.1%. When sleeve characteristics are considered in dresses, 45.2% of these women have preferred set-in sleeve and 20% puff sleeve. In addition to these, 33.2% of the surveyed women have been found to wear maxi length and 21.8% above-the-knee length dresses. As the colour preference for dresses, 43.9% of the working women have been determined to choose black colour. Furthermore, the

working women have preferred without-motif dresses with a rate of 63.4%.

5. CONCLUSIONS

Considering the results given on Table 8, a conclusion table has been formed and presented below with relation to the body shapes of the surveyed women and their dress preferences.


























In conclusion, when examining the results on Table 8 in relation to the dress preferences and body shapes of the surveyed working women; most of them have been determined to prefer classical cut, round collar, set-in sleeve, maxi length, black colour and without-motif fabric dresses. Eventually, the results of the survey has put obviously forth for consideration that the dress preferences of the working women do not show differences according to their body shapes.

Today, the education levels of women at professional life have increased. In spite of this, it is observed that working women do not care much about their dress styles and almost all working women wear just one style of dress. This situation may result from their being at the same time a mother, spouse and housewife and not being able to spare enough time for themselves.

Table 7. Evaluations about Dress Fabric Styles (n=385)

BODY SHAPES	FABRIC STYLES									TOTAL f (%)
	Without- motif f (%)	Stripe f (%)	Plaid f (%)	Polka Dots f (%)	Flowery f (%)	Leopar f (%)	Geometric f (%)	Abstract f (%)	Traditional f (%)	
Hourglass	91 (23.6)	4 (1)	8 (2.1)	7 (1.8)	17 (4.4)	4 (1)	8 (2.1)	7 (1.8)	6 (1.6)	152 (39.5)
Boned Hourglass	26 (6.8)	-	2 (0.5)	2 (0.6)	2 (0.5)	-	1 (0.3)	-	4 (1)	37 (9.6)
Rounded Hourglass	17 (4.4)	-	1 (0.3)	-	1 (0.3)	1 (0.3)	1 (0.3)	1 (0.3)	2 (0.5)	24 (6.2)
Triangle	24 (6.2)	-	3 (0.8)	5 (1.3)	5 (1.3)	5 (1.3)	2 (0.5)	2 (0.5)	-	46 (11.9)
Boned Triangle	37 (9.6)	1 (0.3)	-	4 (1.1)	1 (0.3)	1 (0.3)	3 (0.8)	2 (0.5)	2 (0.5)	51 (13.2)
Round Triangle	14 (3.6)	-	-	2 (0.5)	1 (0.3)	-	2 (0.5)	-	-	19 (4.9)
Inverted Triangle	7 (1.8)	1 (0.3)	-	-	1 (0.3)	1 (0.3)	-	1 (0.3)	1 (0.3)	12 (3.1)
Rectangle	18 (4.7)	1 (0.3)	1 (0.3)	3 (0.8)	4 (1)	-	1 (0.3)	-	4 (1)	32 (8.3)
Diamond	10 (2.6)	-	1 (0.3)	1 (0.3)	-	-	-	-	-	12 (3.1)
TOTAL	244 (63.4)	7 (1.8)	16 (4.2)	24 (6.2)	32 (8.3)	12 (3.1)	18 (4.7)	13 (3.4)	19 (4.9)	385 (100)

Table 8. Conclusions of Dress Preferences of the Working Women According to the Body Shapes

BODY SHAPES		DRESS PREFERENCES					
Hourglass  (39.5%)	Cut	Classical (18.4%)					
	Collar	Round (10.1%)					
	Sleeve	Set-in (16.9%)					
	Length	Above-the-knee (11.9%)					
	Colour	Black (17.9%)					
	Fabric	Without-motif (23.6%)					
Boned Hourglass  (9.6%)	Cut	Classical (3.6%)		 			
	Collar	Round (2.6%) and boat (2.6%)					
	Sleeve	Set-in (5.2%)					
	Length	Maxi (2.9%)					
	Colour	Black (4.4%)					
	Fabric	Without-motif (6.8%)					
Rounded Hourglass  (6.2%)	Cut	Classical (2.9%)		 			
	Collar	V (1.3%) and boat (1.3%)					
	Sleeve	Set-in (4%)					
	Length	Maxi (2.3%)					
	Colour	Black (2.9%)					
	Fabric	Without-motif (4.4%)					
Triangle  (11.9%)	Cut	Classical (4.7%)					
	Collar	Boat (2.9%)					
	Sleeve	Set-in (4.5%)					
	Length	Maxi (5.2%)					
	Colour	Black (4.7%)					
	Fabric	Without-motif (6.2%)					
Boned Triangle  (13.2%)	Cut	Classical (4.7%)					
	Collar	Round (4.7%)					
	Sleeve	Set-in (6%)					
	Length	Maxi (4.7%)					
	Colour	Black (6.5%)					
	Fabric	Without-motif (9.6%)					
Round Triangle  (4.9%)	Cut	Flared (2.1%)					
	Collar	Round (3.1%)					
	Sleeve	Set-in (3.1%)					
	Length	Maxi (2.1%)					
	Colour	Black (2.3%)					
	Fabric	Without-motif (3.6%)					
Inverted Triangle  (3.1%)	Cut	Classical (1.0%)		 			
	Collar	V (0.8%)					
	Sleeve	Set-in (1%) and bishop (1%)					
	Length	Maxi (1.8%)					
	Colour	Black (1%)					
	Fabric	Without-motif (1.8%)					
Rectangle  (8.3%)	Cut	Trapezoid (2.9%)		 			
	Collar	Round (2.6%) and boat (2.6%)					
	Sleeve	Set-in (4.7%)					
	Length	Maxi (3.1%)					
	Colour	Black (2.9%)					
	Fabric	Without-motif (4.7%)					
Diamond  (3.1%)	Cut	Straight (1%)		   			
	Collar	Round (0.8%) and Peter Pan (0.8%)					
	Sleeve	Set-in (1.9%)					
	Length	Above-the-knee (0.8%) and maxi (0.8%)					
	Colour	Black (1.3%)					
	Fabric	Without-motif (2.6%)					

6. RECOMMENDATIONS






The working women need to know their body shapes and determine their dress styles according to their body shapes. And in this section, dress recommendations are given about how women should wear according to their body shapes.

Setting off with the similarity of nine body shapes discussed in this survey, it is possible to gather these under five groups. This grouping can be dealt with according shape similarities;

1. Group: Hourglass, boned hourglass and round hourglass body shapes
2. Group: Triangle, boned triangle and round triangle body shapes
3. Group: Inverted triangle body shapes
4. Group: Rectangle body shapes
5. Group: Diamond body shapes

Taking into account this grouping, some recommendations are given below according to the body shapes of the working women:

Table 9. Dress Recommendations of the Working Women According to the Body Shapes

GROUPS		DRESS RECOMMENDATIONS	
1.Group 	Cut	Straight, classical and flared cuts	
	Collar	Deep U, V and shawl collars	
	Sleeve	Set-in and raglan sleeves	
	Length	Above-the-knee, knee-level and below-the-knee length	
	Colour	Any kind of colour	
	Fabric	Without-motif or small flower, polka dots, abstract and shawl motifs	
2.Group 	Cut	Classical and flared cuts	
	Collar	Boat, large-size Peter Pan, basic and shirt-basic collars	
	Sleeve	Puff and Japanese sleeves	
	Length	Below-the-knee and midi length	
	Colour	Dark colours on the lower of the body, light colours on the upper of the body [13]	
	Fabric	Vertical stripes on the lower body and horizontal stripes on the upper body [13]	
3.Group 	Cut	Flared and full-flared cuts	
	Collar	V, notched and shawl collars	
	Sleeve	Set-in and bishop sleeves	
	Length	Mini, above-the-knee and knee-level length	
	Colour	Light colours on the lower of the body, dark colours on the upper of the body [13]	
	Fabric	Horizontal stripes on the lower body and vertical stripes on the upper body [13]	
4.Group 	Cut	Straight, classical and flared cuts	
	Collar	Round and V collars	
	Sleeve	Set-in sleeve	
	Length	Mini, above-the-knee, knee-level and below-the-knee length	
	Colour	Any kind of colour	
	Fabric	Medium-size motifs	
5.Group 	Cut	Trapezoid cut	
	Collar	Boat collar	
	Sleeve	Puff and Japanese sleeves	
	Length	Below-the-knee and midi length	
	Colour	Light colours on the lower and upper body, dark colours on the waist	
	Fabric	Without-motif and small-size motifs	

Women contained in 1st Group; may have a stylish appearance through straight, classical and flared cut dresses; deep U, V and shawl collars; set-in or raglan sleeves; above-the-knee, knee-level and below-the-knee length dresses; without-motif or small flowery, polka dots, abstract and shawl motifs in colour of all kinds. In addition, the women contained in this group can emphasize their waist line with belts.

Women contained in 2nd Group; may be attractive with classical and flared cut dresses; boat, large-size Peter Pan, basic and shirt-basic collars; puff and Japanese sleeves; below-the-knee and midi length; dark colours on the lower of the body and light colours, without-motif or small-size motifs on the upper of the body. In addition, the women contained in this group can emphasize their shoulders by using shoulder pad.

Women contained in 3rd Group; may be eye-catching with flared and full-flared cut dresses; V, notched and shawl collars, set-in and bishop sleeves; mini, above-the-knee and knee-level length; light colours or horizontal striped fabrics on the lower of the body and dark colours or vertical striped fabrics on the upper of the body. The dress details may be on the lower of the body in order to take the attention to this part.

Women contained in 4th Group; may use straight, classical and flared cuts; round or V collars; set-in sleeve; mini, above-the-knee, knee-level and below-the-knee length; medium-size motifs in colour of all kinds in their preferences.

Women contained in 5th Group; may have an attractive appearance with trapezoid cut dresses; boat collar; puff and Japanese sleeves; below-the-knee and midi length; light colours on the lower and upper of the body, dark colours and without-motifs on the waist. In addition, the women contained in this group may have a good appearance with various collars by taking attention to their necks.

The results of this survey, the suggestions have been given for other researches to be conducted in the future:

- The researches can be performed in the examination of the body shapes and dress styles of the working women across Turkey.
- The researches can be performed in the preference of the clothing like skirt, trousers, jacket and etc. of the working women with their body shapes.
- The standards and formulae can be developed in the determination of the body shapes of the working women by measuring their body sizes.

As a result in this survey; the body shapes of the working women have been determined, their preferences for dress styles have been examined and the recommendations have been given towards the suitable dresses according their body shapes.

REFERENCES

1. Kılıç, D., Öztürk, S., (2014), *Türkiye’de Kadınların İşgücüne Katılımı Önündeki Engeller ve Çözüm Yolları: Bir Ampirik Uygulama*, Amme İdaresi Dergisi, 47(1), 107-130.
2. Lee, J.Y., Istook, C.L., Nam, Y.J., Park, S.M., (2007), *Comparison of Body Shape Between USA and Korean Women*, International Journal of Clothing Science and Technology, 19(5), 374-391.
3. Ujević, D., Petrak, S., Hrastinski, M., Mahnić, M., (2012), *Development of The Garment Size System and Computer-Based Body Models*, Tekstil ve Mühendis, 19(85), 35-40.
4. Hasler, N., Stoll, C., Rosenhahn, B., Thormahlen, T., Seidel, H.P., (2009), *Estimating Body Shape of Dressed Humans*, Computers & Graphics, 33 (3), 211-216.
5. Song, H.K., Ashdown, S.P., (2011), *Categorization of Lower Body Shapes for Adult Females Based on Multiple View Analysis*, Textile Research Journal, 81(9), 914-931.
6. Connell, L.J., Ulrich, P., Knox, A., Hutton, G., Bruner, D., Ashdown, S., (2003), *Body Scan Analysis for Fit Models Based on Body Shape and Posture Analysis*, National Textile Center Annual Report: November, 1-10.
7. Çileroğlu, B., (2010), *Body Shapes of Turkish Women: In Terms of The Ready-to-Wear Industry*, Journal of Textile and Apparel, 2, 130-136.
8. Vuruşkan, A., Bulgun, E., (2013), *Kişiyeye Özel Giysiler İçin Vücuda Uygunluk Analizi*, Tekstil ve Mühendis, 20(90), 42-53
9. Connell, L.J., Ulrich, P.V., Brannon, E.L., Alexander, M., Presley, A.B., (2006), *Body Shape Assessment Scale: Instrument Development for Analyzing Female Figures*, Clothing and Textile Research Journal, 24(2), 81-95.
10. Tama, D., Öndoğan, Z., (2014), *Fitting Evaluation of Pattern Making Systems According to Female Body Shapes*, Fibres & Textiles in Eastern Europe, 4(106), 107-111.

11. Allen, B., Curless, B., Popovic, Z., (2003), *The Space of Human Body Shapes: Reconstruction and Parameterization From Range Scans*, The World's Largest Marketplace of Computer Graphics and Interactive Techniques Conference, 27-31 July, 587-594.
12. Bauser, D.A.S., Suchan, B., Daum, I., (2011), *Differences Between Perception of Human Faces and Body Shapes: Evidence From The Composite Illusion*, Vision Research, 51, 195-202.
13. Olaru, S., Niculescu, C., Mocenco, A., Salistean, A., Teodorescu, M., (2011), *Shape Categories for The Romanian Female Population and Specific Clothing Recommendations*, Industria Textila, 62(3), 155-160.
14. Büyüköztürk, Ş., Kılıç Çakmak, E., Akgün, Ö. E., Karadeniz, Ş., Demirel, F., (2013), *Bilimsel Araştırma Yöntemleri*, Pegem Akademi, Ankara.
15. Spillane, M., (1991), *The Complete Style Guide*, Piatkus, UK.
16. Eryazıcı, E., (2014), *Çalışan Kadınların Vücut Şekillerine Göre Giysi Tercihlerinin Belirlenmesi*, Gazi Üniversitesi Eğitim Bilimleri Enstitüsü Giyim Endüstrisi ve Giyim Sanatları Eğitimi Anabilim Dalı Yüksek Lisans Tezi, Ankara.
17. Simmons, K., Istook, C.L., Devarajan, P., (2004), *Female Figure Identification Technique (FFIT) for Apparel Part I: Describing Female Shapes*, Journal of Textile and Apparel, Technology and Management, 4(1), 1-16.
18. Mesleki Eğitim ve Öğretim Sisteminin Güçlendirilmesi Projesi- MEGEP, (2007), *Giyim Üretim Teknolojisi- Giysi Teknik Çizimleri II*, TC Milli Eğitim Bakanlığı, Ankara.
19. Göksel, İ., (2013), *Female Labor Force Participation in Turkey: The Role of Conservatism*, Women's Studies International Forum, 41, 45-54.
20. Kılınçarslan, S., (2011), *İş Hayatındaki Kadının Giysi Seçiminde Renk Tercihi: Giresun Üniversitesi Örneği*, Yayınlanmış Yüksek Lisans Tezi, Selçuk Üniversitesi Sosyal Bilimleri Enstitüsü, Konya.
21. Koca, E., Koç, F., (2008), *Çalışan Kadınların Giysi Seçimleri ve Renk Tercihleri*, Elektronik Sosyal Bilimleri Dergisi, 7(24), 171-200.