

A Qualitative Study of Contemporary Fashion Inspired by Middle Eastern Carpet Patterns

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Abstract

Islamic art reflects artwork that combines earlier art perception in Muslim living areas with Islamic principles (Etikan, 2011). The main characteristic of this art is the ornament style seen in most Islamic artwork, and handwoven rugs are one of those artworks. Various types of calligraphy, geometric shapes, and organic motifs form the ornament elements in Islamic art. This research aimed to highlight a form of Islamic artwork, specifically the Islamic rugs, which is recognized as a cultural heritage of the Islamic countries in the Middle East. In addition, the study aimed to use Islamic ornament art in apparel design prototyping. In this study, organic motifs were applied to apparel to decorate them according to certain principles such as abstraction, symmetry, repetition, and bordering. While existing research provided valuable information about Islamic artwork, there needs to be more research that takes it to the design stage to develop and analyze actual garment prototypes explicitly created for female consumers in the Middle East. This step was essential to get closer to identifying valuable options for this consumer of the market.

Keywords

Islamic art, carpet, middle east, culture, prototype, apparel design.

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Introduction:

Islamic designs and patterns influenced carpet weaving designs in the Middle East. Symbolism affects Islamic art as applied art, showing that the Middle Eastern rug designers used symbolism in its best way. In the early Islamic period, they confirmed the importance of the carpet as a valued object. They promoted the art of carpet weaving in the Middle East for furnishing houses and mosques. The significant structural changes that occurred with the arrival of Islam are seen in carpet design. The first was the prohibition of human and animal figures, and the second was the encouragement for the designers to simplify their designs with geometric and organic motifs that are described as common Persian motifs in Arabic Manuscripts (Abouali et al., 2020).

Since then, most carpets produced in Islamic countries have been based upon Middle Eastern culture, specifically Turkey and Iran, but were influenced by Islamic beliefs that tended to show the unity in plurality and the plurality in unity (Abouali et al., 2020). Other symbolism related to the Islamic carpet conveys hospitality, generosity, wealth, power, and cultural identity.

The Middle East is recognized for the unique heritage embedded in its cultural and social identity (Long, 2005). Furthermore, the influence of cultural identity through apparel is denoted in the world's increasing garment adoptions. However, a limited amount of research has been directed toward the

applying Islamic artwork in apparel design, primarily because many of these artworks are made by textile artists who have acquired the talents from earlier generations, a trend that is used by the few weavers with the talent to ensure that the tradition maintains continuity (Ejeimi et al., 2018; Iskandarani, 2006; Tawfiq & Ogle, 2013; Tawfiq & Marchetti, 2017; Wang et al., 2017).

This type of Islamic carpet has been known internationally, although its design elements, forms, and figures have changed occasionally. It always kept its origin by adding a Middle Eastern taste to all design elements, from borrowed patterns to colors, sizes, motifs, and symbols. This brief overview is intended to glimpse some of the unique characteristics of Islamic carpets in the Middle East. Furthermore, while many of these characteristics are presently incorporated into current clothing designs, the outcomes often need to be updated to fulfill the needs of the new generations (Ejeimi et al., 2018; Iskandarani, 2006). While the cultural aspects of clothing design continue to be significant (Alotaibi & Starkey, 2018; Alotaibi, 2021), Middle Eastern women also want clothing options that are stylish, unique, and feminine. Adding the Islamic heritage into new garment designs is the first step, which adds originality to modern artistic works, and fashion design is one of them.

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Objectives:

The importance of this study is two-fold. First, as a Middle Eastern female, it was vital to shed light on the prominence and meanings of Islamic art through the motifs that decorate the Islamic rugs and use them to decorate apparel. Dress and textiles are mediums to which people assign meaning; therefore, they are instruments for an individual's expression of identity and to position and develop the self he or she desires to present to the world (Goffman, 1959; Stone, 1962). According to these shared meanings, individuals manipulate their appearance to convey their desired identities in social contexts (Goffman, 1959). That being said, meaning is also gained through identity as a handcraft producer, through the making of the product, and the wearer of those garments. Meaning is also established through the intended use of the product. Tangible benefits, such as quality, utility, and uniqueness, emerged as bringing meaning to the product to Middle Eastern females. Intangible benefits are also significant in enhancing home environments and defining interpersonal relationships through the finished garments. These objects are valued by their creators as well as the wearers as symbols of self, who feel the object is unique because it is not commercially obtained; it is made with love and is connected to the cultural heritage of those who belong to it (Johnson & Wilson, 2005).

Secondly, the design and creation of a garment that contains embroidered motifs inspired by the Islamic rugs as a significant design element added another layer to this study (which focuses on the identity of the Middle Eastern), as it is argued that embroidery is reflective of social values, personal style, and gender identity (Martinez, 2014). Moreover, designing a garment that complements the importance of this study served two purposes. First, reinterpret and apply design details from Islamic art to contemporary apparel design. Second, incorporate a unique embroidery technique into new garment designs to add historical and ethnic value. This garment was designed for a contemporary Middle Eastern woman who appreciates and respects historical and cultural values and expects these elements to be a part of her current clothing choices. It specifically translates the historical Middle Eastern identity in a new way while reinforcing the value of the ancient Islamic art of oriental rugs. This is manifested through the refined, loose-fitting outer garment and a well-fitted inner garment that accentuates the contours of a woman's body.

By exploring the intersection of multiple important, relevant topics, this research adds to literature related to women's studies, cultural heritage studies,

and textiles and apparel design. Scholars and designers interested in apparel design, ethnicity and identity, anthropology, consumer behavior, and marketing to these population segments should find this information beneficial.

Literature Review:

Islamic Art and Brief Symbolic Definition in Carpet Design

Islamic art is the art of civilization based on the Islamic religion, which results from the manifestation of unity upon the plane of multiplicity. Moreover, Islamic art is concerned with a combination of different civilizations and historical circumstances as painted with Islamic *weltanschauung*. The Arab culture has little art; even then, they developed Islamic art with spiritual symbolism. On the other hand, Turkish played an essential role in Islamic art and its messages. They ruled much of the Islamic world from the 10th to 19th century. Moreover, Persian art and literature emerged as the primary sources of the development of Muslim art of painting, architecture, and various forms of Islamic decorative arts (Kadoi, 2018).

The emergence of large carpets with a central medallion is associated with the flourishing of palace culture in large Muslim empires. Most carpets produced in Islamic countries were based upon Iranian culture but were influenced by Islamic beliefs that tended to show unity in plurality and the plurality in unity. Carpet designers worldwide have seen this aspect of Islamic belief from the perspective of Iranian culture, which led to Iranian designs inspiring other weavers. High-quality carpets were woven and exported to the countries of the Far East and Europe. During the Islamic era, these carpets, manufactured to cover the floor and walls, became favored by high-class families (Abouali et al., 2020).

Islamic carpets in Middle Eastern culture are more than an object due to their symbolic solid values and fundamental roles in their lives. Belk's (1988) concept of "extended self" can provide insight into how objects and possessions can become sources of personal identity. According to Belk (1988), the past can be felt through the nostalgia and memories attached to possessions; items such as family heirlooms and the traditions they represent become a part of people's presentation of their identities.

Islamic designs and patterns generally influenced carpet weaving designs in the Middle East, especially in Iran (Abouali et al., 2020). Symbolism influenced Iranian art before and after Islam, and as applied art, Persian rug shows that the Iranian rug designers used symbolism best (Abouali et al., 2020). The Persian rug was distinctive compared to the other nations during the Islamic era, based on

its decorative elements, designed purposefully, and used to express the sacred space symbolically (Rahnavard, 1999). Many books that survived that early Islamic period have spoken of excellent quality rugs, demonstrating the importance of carpet as a valued object, and promoting the art of carpet weaving in the Middle East for furnishing mosques and performing religious practices on them (Eva, 1998). In another example of overt symbolism, the Middle East's carpets and textiles were laid out in the hundreds, if not thousands, in the renowned "red carpet treatment" to convey hospitality, wealth, and power (Figure 1). Kings staged it for their glory and worthy dignitaries—moreover, political statements to symbolize the greater glory of the Islamic religion (Kadoi, 2018).



Figure 1: Imperial Moroccan Red-carpet Reception for President of Brazil, Morocco, Fez, the early 1980s. After National Geographic Magazine, March 1986.

Principles of Islamic Decorative Art:

The following principles represent this ornament style in Islamic decorative art.

The principle of abstraction: According to the essence of this principle, which is also described as an "escape from realism," objects in a work of art are not depicted as they look but are represented differently after being stylized. The fundamental belief in Islam is that there is God behind every being and that humans are helpless against its infinite power. For this reason, the Islamic artist refrained from using figures as he/she strongly desired to avoid claiming equality with God. Thus, he/she interpreted every object differently before transferring it to his work of art. As a result, with the obligation imposed by the belief, the principle of abstraction has entrenched itself in Islamic art (Etikan, 2011).

The principle of Symmetrical Repetition: Another decoration principle of Islamic art is symmetrical repetition. Repetition arrangements are primarily used in textiles, architecture, poetry, and painting.

In the works of art in which geometric motifs were used, symmetrical decoration is noticeable at first glance (Jenan, 2014). This decoration combines floral or organic motifs, geometric shapes, and written script (Etikan, 2011).

Principle of Recurrence and Rhythm: Ornament involves many regular shapes placed inside circular forms that are not marked with definite contours but can be recognized when looked at them; these shapes inside the circles then fluently turn into star-shaped polygons. As circles decorate the work of art with a rhythmical repetition, different arrangements formed at the connection points also create motifs with more circles and polygons (Jenan, 2014).

Islamic art's concentration on geometric patterns draws attention away from the symbolic world to one of the pure forms. Poised tensions and dynamic equilibrium give structural insight into the inner self's workings and their reflection in the universe. The starting point of Islamic art was in the purity of essential relationships that lie beneath our world's visual surface. The significance from the Islamic standpoint is that, in the effort to trace origins in creation, the direction is not backward but inward. Whereas the experienced world, the world of manifestation, is of necessity in the three dimensions of space, the paradisiac world, or the world of motivating intelligence, exists only two-dimensionally, the principle being that as archetypes are released from the limitations of existentialism so also is their confinement within the dimensions. In other words, as an individual's intuitive mind, or the soul, seeks sources and reasons for its existence, it is led inward and away from the three-dimensional world towards fewer and more comprehensive ideas and principles (Critchlow, 1989; Jenan, 2014).

Arabesque principle: In Arabesque, rhythmical continuity is essential. This decoration style involves many regular shapes placed inside circular forms that are not marked with definite contours but can be recognized when looked at them; these shapes inside the circles then fluently turn into star-shaped polygons. As circles decorate the work of art with a rhythmical repetition, different arrangements formed at the connection points also create motifs with more circles and polygons (Etikan, 2011; Jenan, 2014). There are two typical forms of the Arabesque; one is geometrical interlacing made up of many geometrical stars, the rays of which join into an intricate and endless pattern. It is a most striking symbol of that contemplative state of mind which conceives "unity in multiplicity and multiplicity in unity" (Burckhardt, 1967; (Jenan, 2014).

The principle of bordering (framing): In this principle, the surface of the work is first divided into various sizes and primarily symmetrical sections, and then each of these sections is decorated with separate ornamental elements (Etikan, 2011).

Apparel Design Research:

This research fits under the umbrella of apparel design research. Therefore, an essential portion of this study is to design contemporary garments that contain embroidered motifs inspired by Islamic rugs. The study looked at embroidery as a part of historical and modern dress through a critical lens. It is argued that embroidery reflects social values, personal style, ethnic identity, cultural traditions, and gender identity.

The participants were the designer's mentors, as she produced two outfits as a result of this study. This segment of participants are young, educated women who are married, come from different backgrounds, and live in Saudi Arabia for work purposes, which led to the actual design process (i.e., making the garments) that incorporated garment styles and qualities the middle eastern young women reported as a primary reference in this field upon consumer desirability. The actual creation of these modern, unique, and feminine ready-to-wear garments will tie the new generation to their ethnic heritage and spread awareness and appreciation of their cultural identity. It will also provide another way to determine what types of clothing a modern Middle Eastern woman wants by including feedback from the young women later in the study.

Customer Satisfaction by Using the FEA Model

Researchers and scholars have proved the FEA model to be of importance for customer satisfaction. The functional, expressive, and aesthetic requirements are crucial in almost equal measure (Akou, 2007). Lamb and Kallal (1992) provided some project examples that used this framework, such as costumes for ice skating, custodial uniforms, and customized garments for consumers with Spina Bifida. Many researchers have used these FEA needs to study their target customers and related design processes (Alotaibi, 2021; Alotaibi & Starkey, 2018; Bye & Hakala, 2005; Chae & Schofield-Tomschin, 2010; Ejeimi et al., 2018; LaBat & Sokolowski, 1999; Lee et al., 2012; Pitimaneeyakul et al., 2004; Regan et al., 1998).

The FEA model used in this study provided an appropriate framework for analyzing the culture of the Middle Eastern female as the intended consumer. It was used to contextualize the characteristics of Islamic ethnic rugs and to describe the characteristic aesthetic appearance of

Islamic carpets in the region. The study obtained the three categories of the FEA model when designing the two outfits, which were then embodied by the Middle Eastern cultural influence. Culture is the lens through which consumers evaluate the suitability of consumer behavior as it filters consumers' perceptions of what is considered appropriate behavior (Belk et al., 2005). It comprises a system of consequences after adopting a behavior against cultural norms. Religion is a fundamental element of cultural identity in the Middle East and significantly impacts individuals' attitudes and behavior (Belzen, 1999). Mokhlis (2006b) states that in its cultural context, religion is considered a unified system that pervades the society's values through the religious beliefs that formulate individuals' cognitive systems and the society's ideological identity.

The first category of the FEA model is functionality, which focuses on achieving two significant factors of a garment's functionality. These two factors are the right fit as well as comfort. Expressivity is the second category of the FEA model, which, in this study, considers two essential themes: self-image and the values as well as rules of Middle Eastern society. When all those elements are achieved, the modern Middle Eastern consumer will seek a higher level of self-esteem through the garment she wears. Generally, people find self-esteem through distinguished behavior that does not contradict the broader social context (Tian et al., 2001).

Establishing an individualized identity requires constructing a personalized style by consuming novel and unique material items (Kron, 1983). Since the Middle Eastern consumer often looks for uniqueness and loves to show her distinct personality through what she wears, adding embroidery inspired by motifs in Islamic carpet into new garment designs may fulfill her need for individuality.

The aesthetic is the third category of the FEA model. Aesthetic considerations in the study were centered first on art elements, such as embroidery. The next focus was design elements such as form, line, color/value, and texture. Third in aesthetic considerations were the principles of fashion design, such as proportion and scale, balance, unity, rhythm, and emphasis. The considerations reflected the overall outward appearance, visual appeal of the design, and the textiles used (Riikonen, 2019). The aesthetic considerations in this research were meant to fulfill the Middle Eastern consumer's need for attractiveness.

The FEA model represents the essential qualities of the Middle Eastern consumer, for they strictly adhere to their cultural beliefs and attributes. Figure 2 illustrates the interrelationship between the three considerations and the integration of Middle Eastern culture.

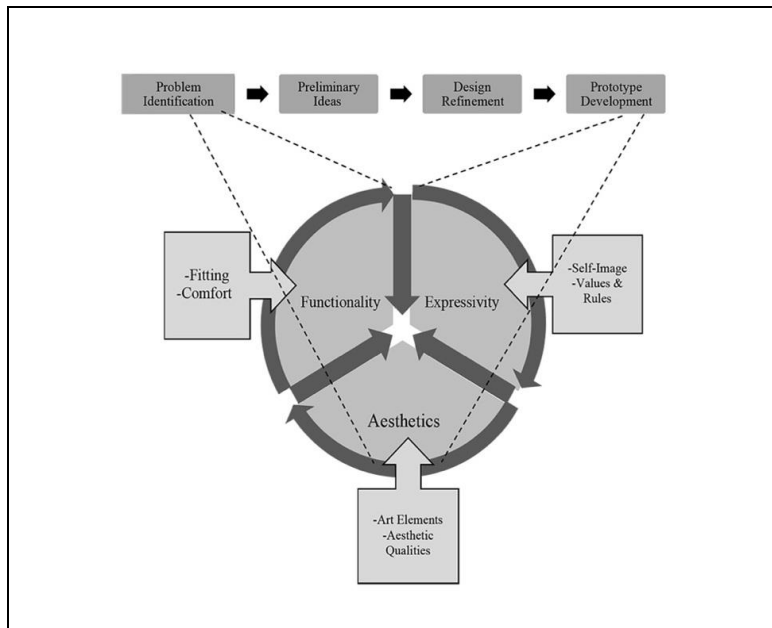


Figure 2: Apparel Design Framework

Method:

A qualitative approach was used for this study. Data were collected via in-depth, semi-structured interviews with eight Middle Eastern women from different nationalities, such as Saudi, Kuwaiti, Emirati, Syrian, Egyptian, Lebanese, Turkish, and Iranian. Those women live in Jeddah city in the Western region of Saudi Arabia and speak Arabic fluently. A purposive, snowball sampling strategy or "chain referral sampling" was used to recruit research participants and ensure the collection of relevant data. An initial list of potential participants was obtained from a critical Saudi informant. In this method, the participants refer the researcher to others who may be able to contribute or participate in the study. This method often helps researchers find and recruit participants who may otherwise be hard to reach (Creswell & Poth, 2018). Participants owned at least one Islamic rug in Saudi Arabia or back home.

Each interview lasted approximately three hours and was audio recorded. All interviews were conducted virtually via Zoom. This option allows audio and visual communication at a distance and is an appropriate alternative to the in-person interview (Creswell & Guetterman, 2019; Merriam & Tisdell, 2016; Salmons, 2014). Today, technology provides various webcam tools to extend the reach of studies and defy geographic boundaries (Merriam & Tisdell, 2016; Salmons, 2014).

All interviews were conducted in Arabic, translated into English, and reviewed by three readers fluent in Arabic and English. Extra attention was given to the cultural nuances of these personal conversations to make the translations as precise as possible. The participants were invited to talk about their clothing

preferences and the features of Islamic art in carpets and rugs. The research questions guided the participants to discuss topics relevant to the study. They were asked to respond to questions that discussed the following:

- 1- Characters of Islamic art in weaving in their countries.
- 2- The value of owning hand-woven rugs in their homes.
- 3- The connection between home style and dressing style.
- 4- Existing clothing in their countries qualifies the piece as desirable enough to buy.
- 5- Ideas and opinions of incorporating elements of Islamic art, specifically, found in carpet in a modern piece.
- 6- The value of adding historical elements into contemporary design.

Initially, data analysis was approached using Saldana's coding filters to help organize the data and provide the needed information based on the objectives of this study (2016). The three filters were descriptive, values, and narrative coding. First, descriptive coding aids in identifying the general topics being presented (Saldana, 2016). This type of coding is best used with a wide variety of data forms (e.g., interview transcripts, journals, diaries, and artifacts) (Saldana, 2016, p. 102). Second, values coding is the application of codes to qualitative data that reflects a participant's values, attitudes, and beliefs and represents her perspectives or worldview (Saldana, 2016, p. 131). Third, in keeping with a narrative inquiry, narrative coding is "exploratory," "speculative," and "interpretive," which is focused on the human experience, identity, and "presentation of self" (Saldana, 2016, p.154). Memos were created with

descriptive notes to define those codes and ensure consistent code application.

Two garments were designed and constructed based on the participants' preferences. The garments were designed to be worn interchangeably to meet the participants' needs. Most participants wanted to own fewer pieces as long as they were high quality and versatile. They suggested designing garment components that could interact in multiple ways, such as using clothes of solid -colors and letting the accessories complete the outfits. Moreover, the designer intended to design companion pieces with the consumer's wardrobe.

Research Work:

Apparel Design Process Using the FEA Framework
The apparel design process for this study followed the general guidelines presented by Lamb and Kallal's (1992) FEA Model and initiated by the intended user (Middle Eastern women). It sought a resolution to a specific apparel problem, summarized as the lack of modern apparel containing ethnic elements, specifically the Islamic motifs in Islamic carpets. The problem was what generated and fueled the design process from this point. The designer identified and defined the FEA criteria of the target user within the context of the ideation of the problem (Lamb & Kallal, 1992). Therefore, the garment created for this project resulted from incorporating both the FEA framework and apparel design practice.

Documentation of the process:

For this research, reflective analysis was used for sense-making throughout the different stages of the design process. Moreover, it allowed the designer to revisit her thinking and creative process for future practice relating to this study. Journaling, sketching, and digital photography were the methods used in this project to document and reflect upon the design process.

Journals

The first type of journal that was used to document the design process was a small notebook, the idea log. This notebook was used to write down new ideas, references, sources of inspiration, and trend information. A place to record and reflect upon ideas that came to mind, the idea log prevented these basic ideas from getting lost or discarded (Starkey & Parsons, 2019). The second type was the design process journal, a sketchbook containing reflections, inspirational photos, research notes, and notes about garment construction and materials used for the garment. Those notes or reflections can lead to better-informed design decisions during the process. In addition, these types of documentation can be used as valuable resources to generate ideas for future design prototypes.

Sketching

Sketches of designs were done using a tablet and occurred after gathering information. Two types of sketches were produced in this study: thinking and alternative. Thinking sketches represent an initial, unarticulated design idea based on only a few ideas. It was a crucial step for the designer to sort out the design ideas and determine the direction and themes of the designed garment collection. The second type, alternative sketching, represents a detailed and fully articulated design that could be used in the design (see Figure 3). These types of sketches identify the chosen colors as well as materials for the garment. The type of sketching represents the explicitness and completeness of the design ideas produced by the designer (Goel, 1995; Eisentraut & Gunther, 1997). In principle, working from thinking sketches to alternative help produce a sufficiently determined design so detailed scale drawings and work instructions can be produced (Seitamaa-Hakkarainen & Hakkarainen, 2002).



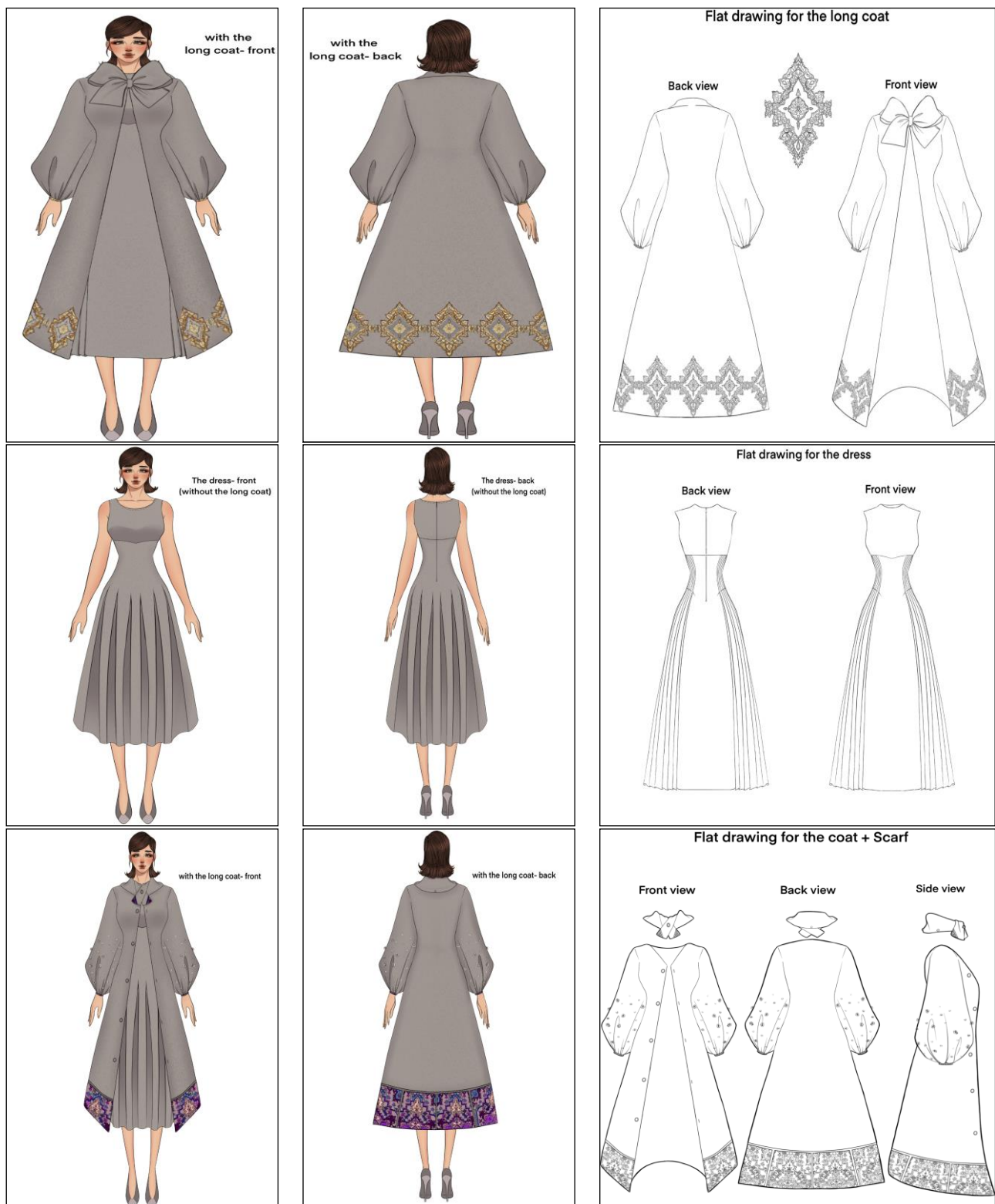


Figure 3: Variety of sketches featuring fashion illustrations and flat drawings for the two designs.

Digital images:

Documenting a design process using digital photography enables designers to accurately describe different stages of their process (Jarvis et al., 2012). Photographs were a natural documentation medium for this study. It communicated well with the design thinking and approach and was organically integrated into the design process. The designer used digital images to

record draping and patternmaking exercises, the different stages of garment construction, and the outcomes. In addition, a digital image file enabled the designer to determine the type of materials, colors, and embellishments used for each garment.

Garment Inspiration and Construction

Garment Inspiration:

Designers rarely start designing from scratch but instead transform, combine, or adapt elements of

existing designs (examples) in order to generate new ideas (Eckert et al., 2005; Eckert & Stacey, 2000). A data-based research endeavor could then implement those preferences into a product line by conducting a study investigating Middle Eastern women's preferences in contemporary garments influenced by the Islamic carpet. Therefore, it was essential to explore and gather information about the motifs of Islamic carpets that could inspire the garment's design. Generally, Islamic rugs are decorated with geometric and organic/floral motifs.

Those motifs were used to distinguish identity between different cultures in the Middle East and, therefore, used as a primary inspirational source for this study.

Most participants emphasized that they own authentic Persian rugs at their homes, and most of the patterns were similar to the Heriz rug (see Figure 4). The colors of this kind of rug are vibrant, and red was the most apparent color among the rest. Additionally, the Heriz rug pattern consists of geometric and organic motifs in different scales.



Figure 4: Persian Heriz rug, 7' 2" x 11' 0", J.H. Minassian gallery

The aesthetic value of the garment was a key concern during the design process. In order to achieve the aesthetic component of the piece, more inspiration was drawn from the Persian Heriz rug; this is a similar practice to other dressmakers. For example, the interviewed Middle Eastern women confirmed that using a motif inspired by authentic Islamic rugs to decorate the garment would be unique. Inspirations such as these were used to create a surface design with historical references onto the garment to enhance the piece's value and

add more historical textile crafts, such as embroidery. To achieve these needs, the designer of this study (primary researcher) divided the pattern of the Heriz rug horizontally and created a similar pattern to this rug but to the designer's taste (see Figure 5). She then embroidered one unit and used it repeatedly as a border in the hemline of the coat, around the cuff of the sleeves, and at the corner of the detached collar of in three different scales.

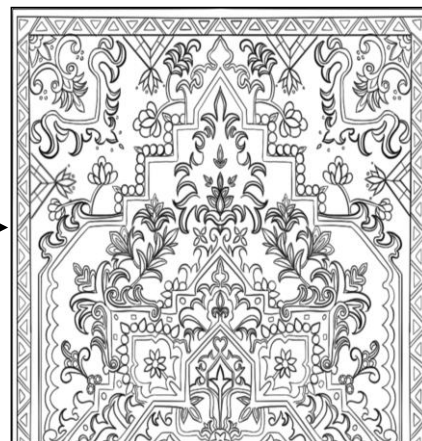
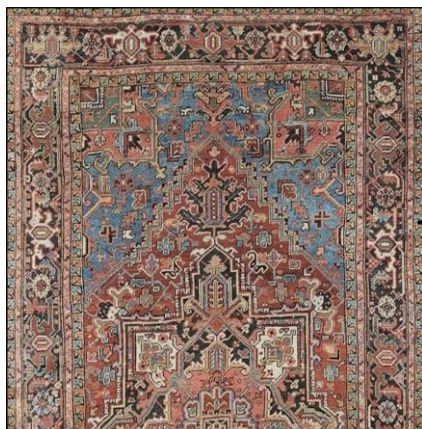


Figure 5: Creating a design inspired by the Persian Heriz rug

Furthermore, it was essential to maintain an awareness of fashion trends so that the garment was perceived to meet the user's needs and be up-to-date in current fashion. Additional garment information was derived from participants' ideas about current fashion trends and their existing clothing options. Examples included puffy long sleeves, flared and pleated dresses, and natural fabrics. Sketches were then developed in the prototype stage partly based on this information and the designer's vision.

Garment Construction:

The primary researcher of this study designed and developed the finished garment, so she witnessed the entire design process (ideation, design development, pattern drafting and draping, prototyping, and garment construction). The garment was made based on participants' preferences and followed current fashion trends that satisfy Middle Eastern consumers. Modifications of these trends were applied to designs for originality and to add longevity to the piece, making it more timeless yet still trendy. The garment was geared toward Fall- and winter wear, thus determining the type of garment designed (see Figure 6 & 7).



Figure 6: Photos of the first garment



Figure 7: Photos of the second garment

The Apparel Design Process:

The design process of this study consisted of four major stages: problem identification, preliminary ideas, design refinement, and prototype development. This study adapted Lamb and Kallal's framework and used it as the framework for this venture. The researchers acknowledged that the evaluation and implication phases were not used and intend to use them in future research following this study.

Problem Identification Phase:

This research focused on the problem of a lack of contemporary garments that contain historical elements inspired by the Islamic rug. As mentioned earlier, current garments that incorporate details reflecting the Middle Eastern heritage need to be

more modern, unique, and feminine clothing designs (Ejeimi et al., 2018; Iskandarani, 2006). Therefore, it was necessary to develop options to incorporate a unique traditional embroidery technique into new garment designs to fulfill this segment of women's needs. This is important because it enhances a sophisticated contemporary look while incorporating ancient art; this solution closes the gap between old-fashioned apparel and modern approaches to dressing.

This model's core was the target consumer, Middle Eastern women. The intent is to clarify these consumers' needs and wants regarding how the apparel is used. During this phase, the Middle Eastern consumers' needs were analyzed in order for the designer to develop a profile of the user

included (see Table 1).

Table 1. Background Information of Participants

Participant	Age	Nationality	Highest Level of Education	Occupation
P1	35	Saudi	B.S.	Banker
P2	33	Egyptian	Ph.D.	Professor at
P3	30	Syrian	M.D.	Physician
P4	29	Emeriti	M.A.	Entrepreneur
				Merchandiser at Red
P5	27	Lebanese	B.S.	Sea Mall
P6	27	Iranian	B.S.	Housewife
P7	26	Turkish	HS	Housewife
P8	25	Kuwaiti	B.S.	Entrepreneur

Note. B.S.= Bachelor of Science; M.D. = Medical degree; HS = High school diploma; Ph.D. = Doctor of Philosophy.

For this specific user, the FEA model was used to create apparel that met their needs. Lamb and Kallal's (1992) FEA model provides flexibility in meeting many users' needs in various cultural environments. Therefore, functionality, expressivity, and aesthetics were used as significant considerations of the FEA model. Furthermore, other characteristics participants desired were considered, such as uniqueness and authenticity, two concepts that were not part of Lamb and Kallal's model but were added to expressivity considerations by the researcher of this study. Orzada and Kallal (2019) suggested that the FEA criteria were meant to be modified relative to specific design problems or user needs and wants. It is the responsibility of the designer/researcher to investigate and specify the criteria essential to meeting the needs of their customer within that user's cultural context, whether that is an individual client or a targeted market group.

Preliminary Ideas Phase:

The idea phase aims to generate ideas to aid in achieving the goals. This most creative phase produces design solutions through sketching, brainstorming, research, and question-and-answer sessions (Lamb & Kallal, 1992). Through this stage, gathering opinions about fashion, style, materials, and garment preferences was the primary means to acquire a deeper understanding of Middle Eastern women's needs. In order to collect ideas and opinions about the users' needs, it was essential for the researchers to create a type of stockholder about the Middle Eastern consumers. This consisted of making a list of the people potentially involved with the product, which, for this study, included women from different nationalities between 25 and 35 years old who were interested in fashion and style.

The designer considered two major principles that guided this stage: differences in needs are ordinary, and detail is essential. In apparel design, it is important to note that needs are as unique as the

individual wearing the garment and that attention to detail aided the designer in better satisfying those needs (Starkey & Parsons, 2019). During this phase, creative ideas were documented using the idea log and design journal, as noted earlier (Starkey & Parson, 2019). The inspiration files and sketches listed earlier were instrumental to this activity and aided the brainstorming process (Starkey & Parson, 2019).

Design Refinement Phase:

This phase describes the part of the process in which preliminary ideas are subjected to scrutiny (Lamb & Kallal, 1992). In direct response to the preliminary ideas phase, the design refinement phase involves developing solutions to meet the identified needs (Lamb & Kallal, 1992). Some preliminary ideas have been modified or discarded, and others have been elected by the designer for the development phase. During this time, the designer/researcher begins to apply FEA criteria. According to Lamb and Kallal (1992), this phase should result in a few ideas that can be tested. Many ideas were stimulated in the previous stage that needed to be refined in this phase. Ideas that matched the consumers' styles and preferences were encouraged.

The information provided through the interview sessions provided a solid foundation to generate ideas that helped create design solutions for the consumers' needs. The FEA criteria were a direct outcome of the needs identified during this phase, specifically from the data analysis. These considerations were based on the needs and the general apparel product qualities that were regarded as the most important from the data. These were fit, adjustability, comfortability, protection, mobility, and ease of movement under the functional considerations. Expressive considerations include self-image, status, uniqueness, authenticity, values, and rules. Aesthetic considerations include aesthetic quality and art elements. The FEA considerations guided the apparel design process.

They evaluated the design refinement and prototype phases to ensure that the designs met the Middle Eastern women's needs. Design refinement informed the development of initial prototypes that offered possible solutions to different combinations of needs identified by young participants. Designs were developed from the themes discussed in chapter four.

Prototype Development Phase:

In this stage, ideas that hold the most promise are evaluated. These ideas result from data collected from the preliminary ideas and design refinement phases, which inform the design and development of the designed apparel prototype. The prototypes of this project were sample constructions in selected materials used to determine appropriate stitch selections, material handling, and construction requirements (Lamb & Kallal, 1992). In addition, patterns were developed before the actual garment was constructed. Reflection was crucial in all stages of design activity, taking place before, during, and after garment construction by the researcher. As mentioned, the design process has been documented using diaries, journaling, and photography techniques. Designing and constructing the garments was another way for the researchers to make sense of the data and detailed descriptions.

Results:

Emergent Themes:

Importance of Islamic Carpets in Shaping the Identity of The Middle Eastern Woman

The findings of this study revealed that Middle Eastern women use their apparel as a manifestation of their ethnic identity as well as the Middle Eastern female's ingenuity. Therefore, those women showed allegiance to their ethnic identity through symbols of Islamic carpet such as generosity, wealth, hospitality, authenticity, and ethnicity. According to the participants, decorating their houses with authentic Islamic rugs, considered a form of cultural identity.

Islamic carpets and Meaning-making:

Middle Eastern women's accounts of their ethnic heritage through furnishing and dressing reflected a significant gained meaning through this product. This meaning is constructed by social interaction between and among individuals and thus becomes shared meaning. Those women had strong feelings of attachment to their authentic carpets. Moreover, Middle Eastern women's symbolic consumption of the ethnic carpet reflected a solid adherence to their traditions connected to the transition to a new life by using those rugs to decorate their new homes. The Middle Eastern woman consumes and purchases ethnic pieces that signify her new social

role and assist her transition into the role of a married woman.

Aesthetic Characteristics of Islamic Carpets

According to ethnic identity, participants viewed the hand-woven Islamic rugs as the profound manifestation of the Middle Eastern culture through beautiful patterns and ancient production methods. For these women, ethnic rugs have great content and perfect form and are an accumulation of a wealth of historical and aesthetic implications. Participants compared the past and present aesthetics of the hand-woven ethnic rugs. They agreed that past hand-woven Islamic carpets have more outstanding quality and contain a wider variety of knots, colors, and motifs.

Contemporary Apparel Preferences and Garment Characteristics

The findings of this study demonstrated some garment characteristics to support consumers' demand for functional, expressive, and aesthetic apparel that integrates craft culture.

Functional Apparel

In line with functional considerations, young consumers were interested in purchasing garments that combine three significant considerations: comfortability, fit, and mobility. This segment mentioned a desire to wear garments that are soft to the touch and made of natural fibers to make them feel comfortable. Also, study participants confirmed that good fit was associated with comfort, saying the garment they need should fit a variety of body shapes and contain enough ease for quick and easy future alterations. Based on the findings of this study, participants valued the ease of donning and doffing garments.

Expressive Apparel

The results of this study demonstrate that the most prominent and supported expressive criteria for Middle Eastern women were communicative, symbolic aspects of a garment connected to self-image, status, values, versatility, uniqueness, and authenticity of the piece. Findings suggest that the garment communicates messages about the wearer and makes visual statements about their personality. Therefore, young female consumers choose dresses to show their style, reflect their individuality, create a positive body image, and present their authentic selves.

Aesthetic Apparel

Under aesthetic considerations, young consumers were interested in owning garments that meet the standards of product quality, which usually encompasses the material, sewing, and embellishments used to decorate the garment, as well as the finishing techniques' quality, comfortability, fit, and mobility. High-quality fabric made of natural fibers with certain features

such as softness, durability, and the ability to drape nicely were used to meet the participants' wants. The colors used in this garment were based on the participants' preferences. The participants appreciated their ethnic heritage and indicated an interest in owning contemporary apparel containing elements of their ethnic heritage. It was crucial to add unique luster and beauty inspired by the Islamic carpets to reflect the Middle Eastern cultural identity to keep up with evolution while preserving national identity and satisfying this segment of consumers.

Evaluation of the Functional, Expressive, and Aesthetic Framework for Apparel Design

The FEA consumer needs model developed by Lamb and Kallal (1992) was applied as a framework to guide the development of modern apparel with traditional details to meet Middle Eastern consumers' needs. Young participants' narratives and wardrobe interviews supported the use of functional, expressive, and aesthetic for the design criteria categories. The criteria were then translated into garment attributes and used to develop a prototype garment. The most significant design feature of the garment was the addition of embroidery that was inspired by Islamic carpets in an innovative way that added another layer to this study (which focuses on the identity of women in the Middle East).

In addition, this study fully documented and evaluated the FEA design framework, something that needed to be improved in most other studies - particularly those that focused on the cultural heritage of Saudi Arabia. In this study, the FEA model was modified to include two new aspects: uniqueness and authenticity to expressivity considerations. These two concepts were added to the consumers' needs and connected to the consumer's cultural context within the FEA Model. Adding these two concepts to the original FEA model enabled it to adapt to various specific user needs. In general, all three FEA criteria have been utilized in this study. Furthermore, the specific FEA four phases include problem identification, preliminary ideas, design refinement, prototype development, complementing, and overlap with other apparel design processes, including documentation, inspiration, information gathering, experimentation, exploration, and prototyping.

Problem Identification Phase

Results confirmed that Middle Eastern women used apparel to express themselves and construct a unique appearance that matches their personalities as well as meets their needs. Therefore, it was necessary to develop options to incorporate a unique embroidery technique into new garment designs inspired by the ethnic rugs, enhancing a

sophisticated contemporary look and incorporating ancient and traditional art. This solution closes the gap between old-fashioned apparel and modern approaches to dressing.

In this phase, the researchers generated ideas to achieve the goals; this phase centered around the question, how can the needs be met? Several activities were done in this phase, such as sketching, brainstorming, and research; ideas came from the question-and-answer sessions with the participants. The researcher focused on gathering opinions about fashion, style, materials, and garment preferences through this stage. It was the primary means to acquire a deeper understanding of Middle Eastern women's needs. Different media were used for documenting processes and brainstorming ideas, such as the idea log, design journal, and inspirational files and sketches.

Design Refinement Phase

This phase includes the final ideas that were chosen to move into the creation or prototype phase. Many ideas were modified in this stage, while the designer eliminated others. The decision to modify or discard some ideas was made on the FEA criteria guided by the participants' preferences or suggestions in the first two phases. In this stage, the designer developed a solution to meet the identified needs, which consisted of a few ideas that were applied cohesively to the overall collection.

Prototype Development Phase

How can the needs be met? This was a guiding question for this phase as well. The design process followed the basic guidelines for creating any garment. Patterns were developed before the actual garments were constructed. Then, a fashion fabric was used for the final garment prototype. Reflection was a key part of all stages of design activity, taking place before, during, and after garment construction by the researcher. The design process has been documented using the diaries mentioned above, journaling, and photography techniques. Designing and constructing the garments is another way for the researchers to make sense of the data and detailed descriptions. Since the prototype development is considered an ongoing process and does not stop with a single evaluation of the garments - it requires multiple evaluations. This kind of evaluation assists in developing different solutions to create prototypes that meet the users' needs.

Discussion:

This research adds to the existing literature and knowledge related to applying the FEA consumer model by Lamb and Kallal (1992) in apparel design and integrating traditional elements into modern apparel. The majority of apparel studies that applied the FEA model supported developing

garments for special needs connected to specific consumer groups, such as academia, athletes, the elderly, the disabled, and plus size (Bye & Hakala, 2005; Chae & Evenson, 2014; Romeo & Lee, 2014; Stannard & Payne, 2018; Stoke & Black, 2012). In addition, this study fully documented the FEA design framework, something that had been lacking in other studies, including ones that focused on the cultural heritage of the Middle East (Adelaja et al., 2016; Bye & Hakala, 2005; Chae & Evenson, 2014; Romeo & Lee, 2014; Ejeimi et al., 2018; Ramirez, 2014).

In addition, this study adds to the existing literature on the use of dress in relation to expression and identity construction (Johnson, Wilson, 2005; Tawfiq, 2019; Tawfiq & Marchetti, 2017; Tawfiq & Ogle, 2013).

Due to the vast size of the Middle East, the differences in Islamic ethnic rugs vary from one region to another and so vary between cultures; these, and the nature of the methods the researchers are using to gather data, cannot produce a generalized result applicable to all middle eastern women. The translation process from Arabic to English is another limitation of this study. Despite having multiple fluent readers who reviewed the translations, some of the richness and nuance of the data might be lost.

Conclusion:

This study served as a starting point for the researchers to utilize Lamb and Kallal's (1992) framework. Therefore, only some FEA phases (the evaluation and implications phases) were applied to this study. It would have been strengthened with a wear test of the collection on several Middle Eastern women to evaluate the design. Wear testing is an essential step in the design process that can guide the designer to cycle back through the process, making essential revisions based on the additional data. Moreover, this research is problem-based design research, which starts from a clearly defined problem derived from an identified need - in this study, that need is looking at ways to develop new apparel designs for women in the Middle East that bridge the gap between outdated, historical styles and modern, fashion-forward approaches to dressing. Another limitation of the study was the number of garments that were produced for this research.

The recommendations presented here will provide suggestions for the next stage of prototype development of apparel designed for Middle Eastern women and intended for apparel designers, researchers, and current and prospective students who are interested in apparel design and, specifically, who are going to use the FEA model for Arab women. In addition, this study

documented and reflected upon the apparel design process to capture design activity focused on problem-solving, which will add to the body of design scholarship in the field of textiles and apparel design.

Furthermore, future researchers could explore the significance of Islamic art in the architecture of other regions within the Middle East, such as Jordan, Iran, Turkey, Saudi Arabia, and Lebanon. Because of this art's significance and symbolic nature, it will be advantageous to incorporate these qualities into modern fashion designs, reflecting tribal and cultural pride. Furthermore, identity is performed and managed by deploying visual resources to meet specific discursive aims. Regarding Islamic art, fashion designers and researchers must understand its place in a society where it is important to consolidate a distinctive national identity and where young women live as a minority within a complex international population. Thus, they must connect to a broader flow of visual representations of traditional and modern fashion tastes.

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