

# A Design for Flight Attendant

Yeo-Sook Kim

Dept. of Clothing & Textiles, Changwon National Univ.

## 승무원을 위한 의복디자인

김 여 숙

창원대학교 의류학과

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### 요 약

본 연구는 항공승무원의 유니폼에서 고려되어야 할 특징적인 기준을 분석하여 유니폼 제작 시의 디자인 방향을 제시코자 한다.

그 기준은 착용중의 안락함, 승무원의 움직임을 고려하여, 항공사의 특성을 살리는 이미지 창출, 고객에게 신뢰감을 주는 전문적인 복장, 적합한 섬유소재 등이다.

## I. Introduction

Flight attendants must possess the skills of a public relations executive, a nurse, and a maitre d' (Reiss, 1994). They are seen by passengers in a service capacity, yet their primary role on the aircraft is to perform a safety function in the event of an emergency (Committee on Government Operations, 1991). They must administer to all the needs of the passengers, no matter what they may be. On both domestic and international levels, customer service, as in many marketing fields, is the top priority. Caudron (1992) stated that United Airlines was changing because of the competition brought about by the International customers. International customers are expecting a higher level of service because the flights are longer and more expensive.

Flight attendants' images are slowly changing as the airline industry evolves into a highly competitive, mass marketing oriented industry. They are required to present

a corporate image, even though flight attendants make much less than a corporate salary, starting at around \$16,000, a third of most pilots' salaries (Johnson, 1993). They have fought for equal rights more openly in recent times. The Civil Rights Act of 1964 initiated problems by broadening the scope of people becoming flight attendants. They were once thought of as sex objects and they soon began to include wives, mothers, men, and many middle-aged and older people (Suh, 1989).

Regulations used to dictate that women had to retire when they were 35, or when they got married, and if they were pregnant. The regulations have since changed, but other discriminations such as weight and height rules, and equality in salary, and work hours, have come to the forefront.

Many of these ideas apply to the justification for updating the designs for a flight attendants working wardrobe. Their changing status, along with the other demands on their clothing, such as the fact that they are forced to live out of a suitcase for days at a time, means that the typical flight attendant uniform has become outdated and for some, uncomfortable. This research addresses some of the problems that flight attendants face in their typical duties, and updates the uniform, while still accommodating the general needs and desires of the airline and its employees.

Our exploration of the design situation began with research into flight attendants duties so that we could have a set of design criteria or characteristics that when taken together could accommodate those daily needs. We compared early flight attendant clothing to newer versions. Since these flight attendants are representing the airline, they must project the best image possible. We also looked into the importance of supporting the corporate identity and improving marketing by using logo building, and finding a new market niche.

Also, flight attendants are required to carry out such a diverse range of tasks that many different disciplines had to be explored such as aviation and airline regulations, textile science, marketing, psychology, and clothing design.

Due to the higher percentage of females in the occupation, we have chosen to design for female flight attendants who work for a new, "up-and-coming" airline. We see that airline as wanting their flight attendants to fit into a new marketing niche where they more clearly represent the airline's image to the public. They also want to give their flight attendants a more feminine yet professional image that is fitting to the times and less restrictive than its previous efforts to copy the "man's" business suit. This uniform must still provide the attendant with the highest level of safety and comfort possible.

## **II. Descriptions**

Our design criteria provided us with a few characteristics that would need to be

altered to satisfy other needs. Our first desired characteristic was comfort. This, it would be found, affected the fiber and fabric choices that would be made according to our requirements of soil release, durability, and safety. Other characteristics will be easily designed for and adapted to our requirements, such as movement, style, coordination, aesthetic image, and cost.

Comfort was chosen as the number one criteria for our design, because our research revealed that as of 1991, there was no limit on how many hours a flight attendant could work. Many attendants sometimes work 20 to 30 hours in a row without the opportunity to have a day off (CGO, 1991). If their primary responsibility is to provide services in an emergency, passenger survival may depend on whether the flight attendants can operate at their peak performance. Although subjective judgments of comfort are dependent on many factors including age, sex, weight, work length, type of work, and environment, comfort for a flight attendant may depend heavily on the interrelationship of those factors with their clothing.

Duration and intensity of work are the major contributing factors to the need for comfort in clothing. Whereas many people think that flight attendants work one or two legs of a flight and "then hit the nearest hot spot", they often work four flights, sometimes from one coast to the other (Ballard, 1982). Another issue that was discovered was the lack of flight attendants on a single flight. While surplus attendants on a trip was once the norm, the minimum number is now all that are assigned, and an extra will be called in if the booking increases (Hirsch, 1993). Alone these problems may not wear down the attendant. But, the surrounding conditions, such as movement and temperature change, make the job an uncomfortable one. These problems, coupled with the mental stress caused by their own anxiety, and weary, sometimes fearful passengers, contribute to the attendant's ability to react decisively in a given situation.

Designing for comfort means considering many other factors as well, but directly, an absorbent fiber, in a fabric that will allow for easy movement, is one that will be considered in analyzing the other characteristics. As for style, comfort is addressed in a new style of shirt, now to become a bodysuit, which is addressed by the movement characteristic. Also, we felt that they should continue to use pants in the ensemble. One flight attendant, who chooses pantsuits even outside of work was quoted as saying, "you can be dressy and comfortable in them at the same time" (Smart, 1987).

Movement was chosen as the second characteristic. In their daily duties, flight attendants are like waitresses, cheerleaders, and salespeople; they must reach, "bend, bob and twist" (Rudnick, 1989, p. 239). For this reason, the idea of including a fiber and fabric with stretch in the base garment was applied, such as a cotton/lycra blend knit. This also feminizes the now popular male-tailored, button down and collared shirt worn at almost every airline. We would choose a fuller cut for the infrequently worn, but

necessary jacket, and a shorter style more conducive to reaching and bending.

An interesting exception to most airlines' current uniforms was found to go to the other extreme. There is a Singapore airline where the stewardesses (as they are still referred to there) wear a variation on traditional Malay costume, or rather a figure-hugging batik sarong (Shenon, 1992). Their uniforms are custom-tailored for each girl, and the garment is so tight around the armholes that the blouses have literally been known to split when reaching too quickly for the overhead bin.

Pants are a welcome addition to the wardrobe for this characteristic because they facilitate easy movement, without the stress of worrying who might be eyeing your skirt when you sit or bend incorrectly.

Our third characteristic, and a very important one, is that the uniform still promotes a professional image, both for the woman and for the airline itself. This means that a suit style is still desirable, but with other characteristics that will set this airline apart from the other airlines. These characteristics could include a more modern cut, a feminine, yet movement oriented design, and the incorporation of a stylish and more visually captive company logo. The image characteristic includes sending visual messages to passengers. Flight attendants must present this image, because customers make decisions based on the messenger as well as the message (Peak, 1994). Although flight attendant requirements have changed, being well groomed and having the corporate look is still a viable part of the job description. Companies are undergoing corporate makeovers, and need new image campaigns. The visual identity must differentiate a company substantially from other corporations. Consultants working for corporate identity companies believe changes must help a company stand out from the competition. Image changes should be done to make potential customers think about the company behind the identity (Golaski, 1994).

In recent years in order to stay competitive the airlines have tried various forms of marketing. The airline image is highly dependent upon the look of the flight attendant, since this is who the customer sees while in flight. Recognizing how image is at the crux of their operation, some airlines have invested up to \$150 million to enhance their image and stay competitive.

Airline corporation's that recognize the importance of the flight attendant in their marketing mix are sending flight attendants to quality service training, where they are taught to dress with a service attitude (Power & Ivy, 1989). Airlines are also spending upwards of \$30 million on advertising campaigns to reinforce their image and logo awareness. Many times attendants are used in these ads to give the impression of a family type atmosphere and high quality.

Corporation designing is so important that many companies hire experts to do a uniform design that translates corporate identity into clothing. Initial trials typically in-

volve producing 25 garments by computer simulation (Hancock, 1992). Most corporations believe that when known designers are hired the designs are more universally accepted. Vickers (1993) believed intensive research is required before changing a corporate image. The image can be translated through a new logo that represents their philosophy, and ambitions, through every facet of the company.

Since employees are such an integral part of the corporate identity they are the most logical place to begin a new logo campaign. Airlines are always looking for ways to find a market niche for their company, through this new perception a consumer must believe that the company cares about their business and also provides distinction from any other competitor (Croft, 1989).

Our fourth characteristic is that the style be generally accommodating to different sizes and styles of bodies, as well as an ever increasing age range. No two bodies are alike, and many professions, including those in the airline industry, ignore this aspect of design. It has even been noted that women who work the security checkpoints wear the same pants and shirts as the men (Bombeck, 1994). For flight attendants, size wasn't always an issue, but in recent court battles, the weight limits have been contested, and the airlines were unable to win. Not only is there the civil rights perspective, but along with it comes the changing body ideal. 'Twiggy' is a woman of the past, and slowly, a more well-rounded woman has gained popularity. In 1991 the American Airline's manual still stated, "A firm, trim silhouette, free of bulges, rolls, or paunches, is necessary for an alert, efficient image." (Seligman, 1991, p. 155). Requirements like these are being altered to change with the times, and the design needs to change with them. The outdated requirements cause attendants to develop a wide range of health problems. Everything from bulimia, anorexia, and diet-pill addiction, to liposuction and therapy for anxiety and paranoia (Suh, 1989).

Proposed designs would try to encourage an availability of a wider range of styles. Many stewardesses are offered only a couple styles of blouses, and one style of pant, one skirt, one jacket, and one jumper. Each attendant should be allowed to choose an appropriate design for themselves. The fabric, cut, company insignia, and color of the wardrobe would be their unifying factors.

Our fifth, sixth, and seventh characteristics all relate to fiber and fabric choices. The garments should have some soil hiding and soil release abilities, they should be durable and wrinkle resistant, and should provide some amount of safety for the attendants such as the static hazard and the dangers of a fire. Their wide range of duties during the course of a flight, means that a fiber blend will need to be utilized to meet all of these needs.

Flammability within the airline cabin has been greatly reduced by improved standards for cabin interior materials, fire blocking techniques used in making seats, elimination

of smoking on domestic flights and highly regulated smoke detectors in the lavatories. While these regulations have corrected some problems precautions must still be taken to assure safety (Committee on Commerce, Science, and Transportation, 1994).

Although no research or regulations on specific apparel for flight attendants was found, it is only logical to assume that some airplane regulations could apply to these uniforms. Only fibers that are self-extinguishing such as wool, nylon, and polyester could be used. Nylon and polyester do melt, which could be dangerous, and the cotton and spandex in the inner garment, possibly bodysuit, do not have safe characteristics. These could be better counter-acted by the use of a currently being developed inherently flame-retardant cotton. The outer garments include wool, which is very slow burning, curls away from flame and is self-extinguishing. Blending it with the polyester or nylon reduces their dangers. Safety features must also be incorporated into the lining. Possibilities include the new polyester and rayon which are now produced in flame retardant varieties (Tortora, 1993).

These precautions may seem unnecessary, however the flight attendant is only trained for four to six weeks with major airlines, and this is to prepare them for as many as eight different planes. Refresher courses include only 35 minutes of hands-on testing of emergency equipment, 25 minutes of emergency evacuation procedures, and only 10 minutes concerning smoke and fire procedures (Cushman, 1992).

As a testimony for the necessity of flame retardant clothing, many articles in the research spoke to how most crashes involve fire and flight attendants were sometimes the last people on the plane (Lewis, 1986). Since these flight attendants are the critical component in safe airplane evacuation, all of the characteristics that relate to fiber, fabric, safety and comfort should be addressed in the design of their uniform.

The need for a soil releasing fabric comes from the fact that flight attendants, due to the projected image previously discussed, must look fresh from one leg of a flight to the next. If a spill happens, they need to be able to dab or wash the spot quickly. Although the color of the garment will assist in hiding the soil, there are products that could be considered that have these desirable qualities. The soil release characteristic and durability, can best be met with an outer garment fabric that has a high warp count, and fine yarns for resiliency (Tortora, 1993).

Aesthetically these garments coordinate and meets the matrix characteristic. As mentioned earlier in the need for an updated image, flight attendants should have a choice of styles which could be coordinated by the color, fabrics, and logo. According to Black (1991) the career apparel industry must have apparel that incorporates fashion, durable and soil release fabrics such as Visa R, and newer finishes such as Milliguard by Milliken, to resist bacterial infections. If flight attendants are expected to meet the service needs of their passengers, in a medical or social capacity, their risk of infection

is great (Reiss, 1994).

If a special finish fabric is not desired, we would propose a blend of polyester or nylon, because they are easily cared for, both are washable and dry cleanable, and also have low absorbency rates so the stain might be repelled. The characteristic of durability is very important because their uniforms must endure excessive wear and many cleanings.

As was mentioned earlier, flight attendants are forced to live out of a suitcase, sometimes for days at a time. Again we chose nylon and polyester because the duties of the attendant include much bending and sitting, and these resilient fibers will spring back after crushing and creasing. Another fiber the research would suggest for outerwear is wool. Many flight attendant uniforms now include wool, because it has excellent resiliency. Wool also addresses the seventh matrix characteristic of needing to reduce problems with static and flame. Wool has one of the highest absorbency rates, and absorbency is directly related to static buildup (Kadolph, Langford, Hollen, & Saddler, 1993). Nylon, combined with wool has a comparatively low absorbency rate and the highest moisture regain of the synthetic fibers. Wool will add those desirable qualities of comfort from a natural fiber and static reduction from its moisture absorption rate.

These qualities relate back to the comfort factor, and this is why a polyester/cotton blouse fabric is suggested to take advantage of polyester's excellent wicking abilities. This combined with the absorption of cotton, and again the excellent resiliency of polyester, would provide comfort during the longer working hours (Tortora, 1992).

A knit body suit was added to the flight attendant wardrobe in order to give our new uniform an updated and different appearance. The body suit would also work within our design characteristics. A small amount of spandex or lycra can be added to assist in proper fit and easy movement. This body suit would provide a comfortable and unique feminine alternative to the tailored blouse.

Coordination of the wardrobe pieces has been a part of the flight attendant's uniform since they began as nurse "air hostesses". The beginning of women pilot uniforms began before World War I. The uniform for "air hostesses" were taken from the WRNS, Women's Royal Navy Service, military uniform. The uniform for the officer was a navy suit, with white shirt blouses and worn with collar and black tie. All ranks had to wear opaque black stockings, laced shoes and a sailor's cap.

Uniforms began a transformation when they were changed from surplus WRNS to fashion house of Dior designs. Several national dress styles have been adopted for publicity and to market the air lines. This marketing strategy was derived for the purpose of recognition for the company. In the 1970's fashion designers were hired to design a separates wardrobe for the air hostess to be suitably clad for all occasions and climates (Ewing, 1975).

We chose to go with a smaller airline for our design, because of the necessity for a new image to help fill this marketing niche. New businesses are sometimes born with the correct marketing design and many uniform companies are now employing designers, so they can quickly respond to smaller companies (Riverside Mfg. Co., personal communication, October, 1994). The airline should then make the final decision that will affect their image. These research ideas were done to design a wardrobe for a new airline, as mentioned earlier, designing a less strict, more modern style, in which color, fabrics, and designs were the major consideration (Francis & Davis, 1990). The matrix characteristic encouraged us to add a short or cropped jacket, high waist pants for flattering feminine lines, and the addition of a not-so-strict skirt style for an updated, non-military look. This will help create the new corporate as well as personal image to present the best possible look to the consumer.

Our designs could easily be mass produced by U. S. apparel manufacturing firms, thereby solving matrix item. Even though this is a speciality design these uniforms could prove to be a profitable item. All airlines are seeking a cooperate image that best represents their company. Choosing U. S. manufacturers could assure the quality and quick response that would be necessary for the airline industry. The initial cost of making this uniform for a newer company can be recouped by the amount of sales that will be generated by the name and logo recognition.

As mentioned in the exploration for this design, research stated that market niches were important in today's global economy. Airlines are finding they have more international customers and they are looking for the best service and price available. Singapore Airlines reacted to the international competition by creating a marketing image which they refer to as the Singapore girl whose trademark uniform was designed by a French couturier. These flight attendants have become so popular that trainees are employed from all of Asia (Shenon, 1992).

Discovering the new market niche or putting extraordinary thinking into new approaches to ordinary businesses is a way to succeed in a competitive environment. Finding the correct edge and focusing on customer service is essential for a corporation's growth. A company must make the customer so satisfied with their service that they continue to come back and tell others about their flying experience (Murphy, 1993).

Amtran is an example of how finding the correct market niche and offering extraordinary service allows a company to expand into newer markets. This company started with a pilot who, with one airplane and financed with a second home mortgage, would take passengers to the airport in an old school bus, load their bags, and fly them to their destination. Upon arrival the pilot would check his passengers into the hotel and act as a tour guide. Today Amtran is the largest air charter service in the U. S. In order to make this air charter service continue to grow, \$7 million a year is spent on



advertising (Hayes, 1994).

The use of millions of advertising dollars, once regulated by legislation, is now considered necessary to reduce obstacles in making a financially strong and competitive airline (Kahn, 1993). Creating this new market niche of a newly designed flight attendant uniform will require the use of advertising and logo building. Some forward thinking airlines are redesigning their planes for fewer passengers and luxury service, some are even thinking of commercializing space travel which will provide even more opportunities for clothing designers to have a space uniform for passengers as well as airline personnel. While some airlines are trying gimmicks to get passengers to return, research indicates that to be successful in this competitive billion dollar industry, logo recognition and service are some of the major considerations for choosing a particular airline.

Therefore our newly created designs would be important to help the airline with this problem.

### **III. Conclusion**

The wardrobe that we created meets all elements of our matrix with few conflicts. These garments are comfortable, easy-to-move-in, have a professional style, fit many body types and ages, and can be mass produced. The soil hiding characteristics, durability, and safety, work well with coordinating pieces that can be interchanged when necessary.

As a results of our researches, for flight attendants, designing a less strict, more modern style, in which color, fabrics, and designs were considered to be short or cropped jacket, high waist pants for flattering feminine lines, and the addition of a not-so-strict skirt style for an updated, nonmilitary look.

In case of fabric, we chose nylon and polyester as a suitcase, and also did nylon in combination with wool as an outerwear. Next we suggested to choose polyester /cotton as a blouse. Further, we thought a small amount of spandex or lycra could be added to a body suit.

In conclusion, it was determined there were no major conflicts. Comfort would be difficult with durable, soil release and non-static fibers. Image was important for each part of the design, because of the finishes and occupation. In addition, the garments would need to be dry-cleaned.

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