

CHAPTER 4

PROCEDURE

The procedure of this research is the method by which the design criteria is collected. The ultimate goal of this research was to identify the ideal flight attendant uniform garment characteristics that would enhance the wearer in the activity and environment for which it was created. The idea for the research was a result of experience by the researcher as a flight attendant. The idea was developed through a series of steps. A visual search for problems was the first step. This step took place in the form of observations, interviews and personal experience of flight attendants in their working environment. The next step in the process was to develop and administer a wearer preference measure based on the idea development work. This section was organized as follows: 1) observations, 2) interviews (personal and telephone), 3) experience, 4) wearer, 5) instrument, 6) data collection, and 7) analysis of the data.

Observations

The first random observations were January 26, 1996 in the Charlotte International Airport, Charlotte, North Carolina. The airlines observed were USAir and Delta. The observations were made during a 4 hour time frame while waiting in the terminal near a USAir gate. Approximately 30 US Air flight attendants were observed standing, walking and sitting. There was no obvious sign of discomfort due to the uniform. On slender individuals the uniform presented a professional appearance. However, predominant sizing problems seem to be due to weight gain on some individuals showing some stress in areas through the shoulders, hips, and thighs. Male and female flight attendants were observed, and the majority of them were wearing slacks. Most of the individuals were wearing the double-breasted blazer buttoned.

The uniform blazer, skirt, and slacks were navy blue (almost black) in color, and the fabric appeared to be a polyester/wool gabardine. The blazer was double-breasted with welt hip pockets and a patch breast pocket. The back of the blazer had a straight cut with no hip pleat or shoulder action pleats. The length of the jacket body fell just below the hips. Sleeves were long, tapered to the wrist with a high armseye and decorative self fabric cuff at the sleeve hem.

Women's uniform slacks were slim cut, tapering to the ankle, while the men's slacks were straight without cuffs. Skirts were cut straight from the waist to the hem line just below the knee.

The shirts were the same for male and female. They were long-sleeved, button front, with banded button-down collars and button two-inch cuffs. Fabric appeared to be a cotton/polyester blend in black and white pin-stripe and solid colors of ivory and white. Accessories consisted of a navy sweater vest, black tie for males and black neck insert for females. All individuals wore a paisley hankie in the blazer breast pocket.

One Delta airlines female flight attendant was observed. That flight attendant wore a navy blue, double-breasted sheath dress with a notched collar, where a multi-colored scarf was worn. The dress was below the knee in length. The sleeves were long sleeve with a button cuff.

The dress was designed with ample ease, waistline darts and side seam pockets. There did not appear to be any stress or discomfort related to the garment. The fabric was undetermined.

Interviews

In Person

On February 17, 1996 during a flight on US Air to Memphis, Tennessee, one male and two female flight attendants were interviewed in casual conversation during the flight. One male flight attendant supervisor was interviewed on the same flight.

The flight attendants were asked to give the first answer that came to mind when asked the opinion/satisfaction of their current uniform. Their responses were as follows: frumpy, fabric too thin in all garment pieces, dissatisfaction with pockets on female slacks and blouses, skimpy, and no room for bodily expansion (swelling).

The flight attendants believed the uniforms were too similar to the uniforms of other airline employees and other airlines and believed the passengers found it difficult to identify one airline from another or flight attendants from other airline employees.

Their suggestions for solutions were: a sweater with the airline logo embroidered on the front or back, cotton knit fabrics that pack and travel well for shirts and other garments, and fewer garments to choose from. There were request for more pockets, short sleeve shirts, uniforms with more ease, and not so skimpy.

The flight attendant supervisor shared some of the expectations of management for flight attendant uniforms: fewer uniform pieces, immediate recognition of a flight attendant by the passenger at any time and professional appearance at all times. Comfort or function were never mentioned in the conversation.

Telephone

A uniform manufacturing company was interviewed via telephone April 20, 1995. The customer representative stated that the fabric used for their uniforms was a blend of 55% polyester and 45% wool, known as sharkskin. No other design details were disclosed.

During a telephone interview March 7, 1996, the Air South director of inflight services provided information about the flight attendant uniforms. Factors considered when selecting the flight attendant uniforms were recognition, a design complementary to the southern environment, comfort, tailored shape and flight attendant opinion of fit.

Required uniform items consisted of the following: two bottoms of choice, two shirts, and one blazer. Items available were slacks, shorts, skirt, dress, blazer, shirts, vest, scarf and overcoat. The uniform colors were khaki and navy blue to coordinate with the theme of the airline. Shorts, slacks, skirt and blazer were sharkskin, while the shirt was a cotton knit, with jewel neckline and optional long or short sleeves. These particular items were chosen because of the warm climates to which most of the flights travel.

Due to concerns with FAA regulations about the flight attendant uniforms, the flight attendant division of the FAA was contacted on October 11, 1996 to inquire about regulations. The representative stated there were no FAA regulations concerning flight attendant uniforms.

Regulations or restrictions concerning the flight attendant uniforms were determined by the individual airline.

Experience

As a flight attendant for a major airline, the researcher had personal knowledge of the uniform and duties of the flight attendant. The traditional suit style uniform and the complementing garments were worn per the airline regulations.

It was mandatory for the cockpit key to be worn in a concealed location on the person at all times while on duty. This created a problem because there was nowhere on the uniform that it could be worn concealed and yet remain easily accessible. The flight attendant was required to carry cash and change during the beverage service; however, there were few pockets on the serving garments, and between the napkins, swivel sticks, and can openers stuffed in the pockets, there was no convenient place to carry money.

The physical requirements of the job meant stooping, bending and stretching in a uniform that did not allow for freedom of movement or range of motion. Skirts and dresses were not a good choice due to the level of physical activity and coverage in the resultant hyperextended postures.

There was the expense of dry-cleaning for the slacks, skirts and jackets which were all of a wool/ polyester blend. The fabric was durable but not the most comfortable. Body swelling was a constant problem. Lacking flexibility, the waistbands became uncomfortable after several hours.

The observations, interviews and experiences were important in the development of the flight attendant wearer preference measure. They all revealed concerns that needed to be addressed.

Instrument

The instrument used for this study was a questionnaire. The objective of the questionnaire was to gather design criteria that represented the flight attendant preference for uniform clothing. The instrument evolved through a series of approximately five drafts. Previous experience by the researcher as a flight attendant and knowledge of clothing and textiles were useful in identifying questions relative to the flight attendant study. A literature search revealed similar studies performed in unique environments; Cleanroom workers (Brandt & Cory, 1989); meat cutters working clothing (Ilmarinen, Tammela, & Korhonen, 1990); and Boles' (1982) study of men's indoor exercise wear were significant in the development of version I of the questionnaire.

Part I, draft I, was developed as a three-page fill-in the blank questionnaire. The first page of the questionnaire had basic demographic questions. Other questions were based on the current flight attendant uniform. Questions related to the current number of uniform garments, garments most often worn, color, features liked and disliked, care/cleaning and recognition. Part II of draft I was written to address the preferences of management. The questionnaire was fill-in the blank, and the questions were the same as the flight attendant questions with the exception of image. After a review by clothing and textile experts, the management

questionnaire was dropped, and the format was changed to multiple choice. Draft II of the questionnaire reflected the reviewers' comments and additional studies.

Cunningham's (1995) use of human and garment silhouettes were adapted to the second draft of the questionnaire. All the garment pieces were listed and a series of questions were developed relating to style, length, color, design features, such as collars, pockets, waistbands, and care. The illustration of a human figure silhouette was used to indicate garment lengths. Some flat drawings of garments similar to the current uniform were included as a reference. After a review by non-textile and clothing persons, the researcher reworded some of the questions, using a more common vocabulary and adding more descriptive questions related to fabric characteristics. Questions were included that related to closings and their placement on the garments. The decision was made to eliminate the flat drawings of the uniform garment pieces as an attempt to avoid biasing the preferences of the flight attendants.

Draft III evolved with less illustration. The Vass (1989) use of questions related to closeness of fit were added to the third draft while multiple choice questions using current uniform garments as examples of design options continued to be a part of the questionnaire. Review of draft III by non-clothing and textiles persons, directed the researcher to take the approach described below and thus, draft IV of the questionnaire was created.

Draft IV questionnaire was divided into sections representing the different flight attendant duties/activities instead of individual garments. The multiple choice questions were eliminated and replaced with a human silhouette. To represent each set of duties, the flight attendants were asked to list the garments they would prefer to wear during the specific duties and then shade in areas on the human silhouette they wanted the garments to cover. The intent of this open-ended style was to draw out the preferences of the flight attendant without structurally biasing their thinking. Using exercise wear as examples, the intended response was illustrated. A table was developed as the answer sheet for the questions referring to cleaning, fabric characteristics, and colors. Reviews by textile and clothing as well as non-textile and clothing persons, led to the development of draft V, the final version of the instrument.

Draft V was primarily a change in format and therefore began with an explanation of the layout of the questionnaire, definition of terms and explanation of the illustration of a human figure silhouette with lines representing various lengths of clothing. The flight attendant was asked to list, in the corresponding column, the items of clothing they would prefer to wear as the flight attendant uniform considering the duties of the job. To organize the data for clarity and future analysis, the human figure, answer sheet and garment descriptions were divided into upper, lower, and full body. These terms and divisions were defined in the opening paragraph. The questionnaire was designed to fit on one page, front and back, of an eleven by seventeen sheet of paper. This draft returned to the multiple choice format. An answer sheet was designed as a table of columns with each column labeled to correspond with a question (see Figure 2 & 3, Appendix B). The questionnaire was divided into three sections. Section one included ten questions related to the human figure illustration. The questions related to preferred garment lengths, colors, neckline styles, pocket style and placement. A comment column was included with each section to allow the flight attendant to make notes or explain a selection other than one given as an option. Section two included ten questions related to interior structural design features, fabric characteristics and care, clothing shapes (which indicate closeness of fit) and a

multiple choice section related to demographic information. This arrangement eliminated flipping of the page back and forth. Section three included five questions concerned with satisfaction of the flight attendant with the current uniform and discussion of the ideal uniform. The questionnaire was folded in quarters making it smaller, easier to handle and conveniently mailed if necessary. An eleven by seventeen cover page included section three and a letter of introduction which explained the purpose of the research and introduced the researcher as a former colleague. The page was folded to secure the questionnaire and printed with the researchers name and address so it could be returned by mail if not completed in the crew lounge.

As a result of the pretest and observations by the researcher during administration, draft V of the questionnaire was refined to save time and simplify answers. In section one the divisions of the upper, lower and full body were removed from the answer sheet and the definition of terms eliminated from the introduction. The terms upper, lower and full body were reworded to tops, bottoms, and full length on the human figure illustration. The number of rows on the answer sheet were reduced from 24 to 12, and the extra white space at the bottom of the page was used for discussion. On the answer sheet in section two, the fabric characteristics column was simplified by removing the six individual columns within the single fabric characteristics column leaving an area large enough to record as many characteristics as wanted. The number of rows on the answer sheet were reduced from 24 to 12, and the extra white space at the bottom was used to include section three of the questionnaire. Section three included the demographic information and a current uniform satisfaction section. This allowed all the questions and answers to be recorded on one page. The cover page was used only if the flight attendant did not complete the questionnaire in person and instead returned it to the researcher by mail.

Data Collection

The manager of Inflight Services, US Airways, Charlotte, North Carolina approved the distribution of the questionnaire among the US Airways flight attendants. The survey was set up in the crew lounge from January 20, 1997 through February 13 1997. Approximately two weeks prior to that date, a flight attendant supervisor posted a notice of the research project, the dates and times of the survey and an invitation to participate in the research on a voluntary basis. The research was posted as independent of US Airways. During the survey the use of a bi-fold illustration board allowed a visual display of an enlarged questionnaire and illustrations of design details. The board was also used as an aid to introduce the research, the researcher and attract attention. The board was displayed on a 4 x 8 foot table with the questionnaires, pencils and a large basket of assorted chocolate candies as an incentive.

The researcher remained with the questionnaires to distribute them to participants and to answer questions about the research and questionnaire. There were a total of 375 questionnaires distributed. Three hundred questionnaires were completed and returned to the researcher. Of the 300 questionnaires, 5% were returned by mail. Eighty-two were completed by male flight attendants. The 82 questionnaires completed by male flight attendants were not used for this research. Therefore two hundred and eighteen questionnaires were deemed useful for the

research. The completed questionnaires were collected by the researcher and analyzed for results.

Data Analysis

For analysis of all data from the Flight Attendant Wearer Preference Measure, the Statistical Analysis System (SAS/JMP) (1996) was used to compute frequency counts, relative frequency distribution (percentages), crosstabs (two-way frequency tables) and Independent Chi-square test. Statistical methods for each hypothesis are presented below.

Hypothesis 1:

There is no relationship between flight attendant age and garment characteristics.

1A. There is no relationship between age and uniform silhouette.

1B. There is no relationship between age and interior design lines.

1C. There is no relationship between age and fabric.

Hypothesis 1 was rejected if Chi-square was significant at the .05 level for the majority of variables in two of the three sub-hypotheses. Sub-hypothesis 1A was rejected if Chi-square was significant at the .05 level for three of the four variables. Sub-hypothesis 1B was rejected if Chi-square was significant at the .05 level for four of the seven variables. Sub-hypothesis 1C was rejected if Chi-square was significant at the .05 level for five of the eight variables.

Hypothesis 1 investigated the possibility of a relationship between age and the three major garment characteristics: 1A) uniform silhouette, 1B) interior design lines, and 1C) fabric. A series of cross-tabulations was the method of analysis for this hypothesis. Chi-square was used to determine whether a significant relationship existed between two variables. Acceptance or rejection of the hypothesis was based on the chi-square and P-value at the .05 level of significance for the majority of variables in two of the three sub-hypotheses. If the P-value was higher than .05 the chi-square was deemed not significant for a relationship with the variable. If the P-value was .05 or below the Chi-square was deemed significant for a relationship with the variable. Therefore, if a relationship was significant for two of the three sub-hypotheses, hypothesis 1 was rejected.

Sub-hypothesis 1A examined four variables for a relationship with uniform silhouette: 1) clothing shape, 2) clothing length, 3) sleeve shape, and 4) sleeve length. Sub-hypothesis 1B examined seven variables for a relationship with interior design lines: 1) neckline, 2) collar, 3) pocket style, 4) pocket placement, 5) closing type, 6) closing location and 7) waist style. Sub-hypothesis 1C examined eight variables for a relationship with: 1) care, 2) color, 3) type, 4) stretch, 5) weight, 6) hand, 7) surface and 8) design. To report the findings tables were developed to illustrate the relationship between age and each of the variables in the three sub-hypotheses. (see Tables 1-3)

Numerous studies have been conducted using age as a way to segment the participants. In studies by Lumpkin, & McConkey, (1984) and Summers, Belleau, and Wozniak (1992) young respondents are referred to as 35 and under. Women in this age group are recognized as being more interested in image and fashion than older women (36 and over). Another distinction in

age emerged at 45 and women were defined as older shoppers in a study of shopping habits by Rothenberg (1989). Shim and Bickle (1994) found this older age group to be more practical and function-oriented in their choice of clothing. Therefore the segments for this research were set up as 35 and below, 36 to 45, and 46 and above.

Hypothesis 2:

There is no relationship between flight attendant years of service and garment characteristics.

2A. There is no relationship between years of service and uniform silhouette.

2B. There is no relationship between years of service and interior design lines.

2C. There is no relationship between years of service and fabric.

Hypothesis 2 was rejected if chi-square was significant at the .05 level for the majority of variables in 2 of the 3 sub-hypotheses. Sub-hypothesis 2A was rejected if chi-square was significant at the .05 level for three of the four variables. Sub-hypothesis 2B was rejected if chi-square was significant at the .05 level for four of the seven variables. Sub-hypothesis 2C was rejected if chi-square was significant at the .05 level for five of the eight variables.

Hypothesis 2 investigated the possibility of a relationship between years of service and three major garment characteristic variables; 2A) uniform silhouette, 2B) interior design lines and 2C) fabric. Again, a series of cross-tabulations were the method of analysis for this hypothesis. Chi-square was used to determine whether a significant relationship existed between two variables. Acceptance or rejection of the hypothesis were based on the chi-square and p value at the .05 level of significance for the majority of variables in two of the three sub-hypotheses. If the P-value was higher than .05 the chi-square was deemed not significant, therefore no relationship exist. If the P-value was .05 or below, the chi-square was deemed significant for a relationship with the variable. If a relationship was significant for two of the three sub-hypotheses, hypothesis 2 was rejected.

Sub-hypothesis 2A examined four variables for a relationship with uniform silhouette: 1) clothing shape, 2) clothing length, 3) sleeve shape, and 4) sleeve length. Sub-hypothesis 2B examined seven variables for a relationship with interior design lines: 1) neckline, 2) collar, 3) pocket style, 4) pocket placement, 5) closing type, 6) closing location and 7) waist style. Sub-hypothesis 2C examined eight variables for a relationship with fabric characteristics: 1) care, 2) color, 3) type, 4) stretch, 5) weight, 6) hand, 7) surface and 8) design. To report the findings tables 4 - 6 were developed to illustrate the relationship between years of service and each of the variables in the three sub-hypotheses.

Within the first five years of employment the flight attendant will be on call to fly almost every route on the airline system. The type of service offered on a flight depends on the length and destination of the flight, therefore within the first five years, the flight attendant will have experienced most of the services offered and performed all the related duties. It is assumed that

the flight attendant will continue to perform those same duties for the next 20 years and then retire. It is an exceptional flight attendant who continues to work after 25 years of service.

Volpe (1984) indicated that flight attendants experience passages during their employment. By the end of the fifth year, some of the flight attendants become disgruntled with their jobs and move into management positions or may decide to leave the airline and pursue other interest. If they chose to remain on the job, by the seventh year, they are most likely to make a commitment to their professional roles in the industry and stay until retirement. Based on these studies and researcher experience the segments for years of service were set up as 5 years of service or less, 6-24 years of service and 25 years of service or more.

Objective 1:

To confirm there were existing problems with the current flight attendant uniform.

Problems were identified through observation and interview of flight attendants in their working environment and through personal experience of the researcher. Section three of the questionnaire included seven questions related to perceived satisfaction with fit, style/design, comfort, fabric, function, clothing items, and overall satisfaction of the current flight attendant uniform. A 5 point Likert scale evaluated each question from 1 indicating dissatisfaction to 5 indicating satisfaction.

Objective 2:

Develop an instrument which would be used to gather flight attendant preferences for uniform clothing and design criteria.

Objective 2 refers to the instrument discussed previously in this chapter on page 29.

Objective 3:

Determine flight attendant preferences of uniform clothing and design criteria.

Frequency counts were used to determine the number of times the response for a particular item of clothing and preferred garment characteristics occurred from the 218 wearer preference measures. Cross tabulations were used to determine the preferred characteristics for each of the preferred items of clothing.

The wearer was not given a list of clothing items to choose from but was asked to write in the items of clothing they would prefer to wear for their uniform (e.g., shirt, slacks, skirt). Garment characteristics were listed, and the wearer selected a preference for the characteristic pertaining to each item of clothing. The characteristics consisted of a choice of four variables related to uniform silhouette: 1) clothing shape, 2) clothing length, 3) sleeve shape and 4) sleeve length; seven variables related to interior design lines: 1) neckline, 2) collar, 3) pocket style, 4) pocket placement, 5) closing type, 6) closing location and 7) waist style; and eight variables related to fabric: 1) care, 2) color, 3) type, 4) stretch, 5) weight, 6) hand, 7) surface, and 8) design. Cross tabulations were used to determine the preferred garment characteristic variables for each of the preferred items of clothing thus indicating preferred uniform clothing design criteria.