CHAPTER V

Results


The purpose of this study was to examine the store patronage of women, age 18 and over throughout the United States. A questionnaire was designed to investigate store patronage relative to importance and perception of selected environmental dimensions. Shopping orientation and demographic questions were used to profile respondents. All participants answered the orientation and demographic questions and responded to one of three shopping scenarios. Scenario A was, "You have decided to purchase a dress to wear to a formal social gathering". Scenario B was, " You have decided to purchase a dress to wear to a family gathering". Scenario C was, " You have decided to purchase a dress to wear to work or a community activity.

The premise for using shopping scenarios was that the type of store patronized differed based on product usage or occasion. Furthermore, the importance ratings for environmental dimensions were hypothesized to vary depending on the shopping scenario. According to Monroe and Guiltnan (1975), if an environmental dimension is important to the respondent and a store is perceived as offering the dimension, then the respondent's perception of that store is positive. On the other hand, the opposite is true if the environmental dimension is important and the respondent's perception of the store environment is negative. This chapter presents a profile of the respondents and results of the hypotheses testing.

A demographic profile of the respondents was obtained using the descriptive statistics. The statistical analyses conducted for this research included factor analysis, cluster analysis, MANOVA, and Chi-square. Factor analyses were performed to reduce the importance, perception and orientation scales into more manageable factors. Cronbach's alpha was used to test the reliability of these factors. Cluster analysis was used to group subjects into several categories based on their shopping orientations. MANOVA was then used to test for differences among the shopper categories and importance factors. In addition, MANOVA was used to test for differences in perception factors for each shopping orientation cluster. Chi-square analysis tested for differences in the distribution of attitude responses for first store choice. For all analyses, statistical significance was set at .05. Sample size varied for analyses because

respondents did not answer all questions. This chapter discusses the response rate from the mail survey, provides a general description of the sample, and reports the results of the hypotheses testing.

<u>Response Rate</u>

Nine hundred surveys were mailed to women throughout the United States. Of the 900 surveys mailed, 151 (16.7%) usable surveys were returned. Fifteen subjects returned an incomplete survey, therefore choosing not to participate in the study. The number of known undeliverable addresses was 47 (.05%). Given the total amount of surveys mailed minus the number of undeliverable addresses, the adjusted return rate of useable surveys was 17.7%.

The expected return rate was 33%, based on previous consumer studies from the early 1990s. Factors contributing to the low response rate may have been: time frame during which initial surveys were mailed (i.e., summer vacation), privacy issues, no interest in the study, and non-participation with no reason given for refusal. These factors were confirmed in the follow-up telephone calls described in the following paragraph.

In addition to surveys, respondents were mailed a postcard. Of the 900 postcards mailed, 84 were returned. Sixty-three respondents indicated they had returned the survey, 20 would not participate and did not want to receive additional mailings, and one postcard was returned incomplete.

Approximately two weeks after the follow-up postcards were mailed, subjects were telephoned to improve the response rate, and also to obtain a demographic profile of non-respondents or women that refused to participate in the study. Two clothing and textile graduate students from a major university located in the southeastern portion of the U.S. conducted the interviews. After calling 40-60 women, interviews were cancelled due to lack of participation. Of these women, only 1 subject answered the survey and 2 answered the demographic section. Interviewers listed several reasons for the unsuccessful phoning sessions. Student callers said subjects were verbally abusive. Subjects wanted to know how the researcher got their name and did not want to respond to any questions about themselves over the phone or on paper. Over half of the women reported they had received the questionnaire, but threw the survey in the trash, some said they never responded to solicitations, while others thought the two mailings and a phone call were very offensive.

Description of the Sample

The data were collected by a mail survey with women age 18 and over, throughout the United States. The final sample consisted of 151 subjects. The last section of the questionnaire requested demographic information from survey participants. To obtain a profile of the subjects, respondents were asked to complete questions regarding their age, level of education, employment status, ability to move about retail stores, and household income. Table 4 shows the frequency and percentage of responses. The following paragraphs discuss a demographic profile of the present sample and 1990 Census data of women in the United States (U.S. Department of Commerce, 1993; U.S. Census Bureau, 1990).

With regard to age, 27% of the women included in the survey sample were between the ages of 46-52, followed by the 60 or over group at 25%. The next largest age group was the 25-31 group at 13%. According to 1990 Census data, the median age of U.S. women was 35.2 (U.S. Department of Commerce, 1993).

Women involved in the present study indicated their highest level of education attained. The largest percentage of subjects, 32% indicated some college. Thirty-one percent had attained a college degree, while 15% earned a graduate degree. As a whole, women in the United States are increasing their level of education (U.S. Department of Commerce, 1993). In 1990, women attained 53% of the bachelor degrees awarded. Furthermore, in 1990, 1 out of 5 women were enrolled in school. During this time, 33.6% were between the ages of 20 to 24. Fourteen percent were 25 to 29 years of age and 10% were 30 to 39 years of age. Because of higher educational levels, women have become more qualified for jobs.

The employment question for this study revealed that 33% of the women were professionals, 18% were retired, and 17% were homemakers. In 1990, over half (53.7%) of the women in the U.S. held professional positions (U.S. Department of Commerce, 1993). In addition, of all women in the U.S., 42.2% held executive, administrative, and managerial positions. Although a large percentage of women have progressed by entering professional and managerial occupations, some women still have traditional female occupations, such as administrative support and service occupations. Unlike women in the present study, who were in

Table 4

Distribution of Respondents by Demographic Characteristics

| Demographic Characteristic | Frequency | Percentage |
|---|---|---|
| Age | | |
| 18-24 | 3 | 2.0 |
| 25-31 | 20 | 13.2 |
| 32-38 | 15 | 9.9 |
| 39-45 | 19 | 12.6 |
| 46-52 | 41 | 27.2 |
| 53-59 | 15 | 9.9 |
| 60 or over | 38 | 25.2 |
| Total | 151 | 100.0 |
| Education | | |
| Did not graduate | 5 | 3.3 |
| High school graduate | 30 | 19.9 |
| Some College | 48 | 31.8 |
| College Degree | 46 | 30.5 |
| Graduate Degree | 46 | 14.6 |
| Total | 151 | 100.0 |
| Employment | | |
| Professional | 49 | 32.5 |
| Management | 12 | 7.9 |
| Technical | 13 | 8.6 |
| Retired | 27 | 17.9 |
| Homemaker | 26 | 17.2 |
| Not currently employed | 2 | 1.3 |
| Other | 22 | 14.6 |

Table 4 (continued)

Distribution of Respondents by Demographic Characteristics

| Demographic Characteristic | Frequency | Percentage |
|---|---|---|
| Ambulatory | | |
| Need assistance | 4 | 2.7 |
| Some assistance | 2 | 1.3 |
| Neutral | 12 | 8.0 |
| Move about somewhat easily | 44 | 29.3 |
| Move about easily | 88 | 58.7 |
| Total | 150 | 100.0 |
| Household Income | | |
| < $20,000 | 13 | 9.9 |
| $20,001-29,999 | 10 | 6.6 |
| $30,000-39,999 | 19 | 14.5 |
| $40,000-49,999 | 21 | 16.0 |
| $50,000-59,999 | 13 | 9.9 |
| $60,000-69,999 | 13 | 9.9 |
| $70,000-79,999 | 9 | 6.9 |
| $80,000 or above | 33 | 25.2 |
| Total | 131 | 100.0 |

professional positions, more than half (77.3%) of U.S. working women in 1990 held administrative support and clerical positions.

A question related to ambulatory ability within retail stores was also included in the questionnaire. More than half of the respondents, 59% indicated they could move about easily in retail stores and 29% could move about somewhat easily. Few respondents had ambulatory problems that might influence their shopping activities.

The income frequency count showed that 25% of the respondents had a total household income of $80,000 or above before taxes. Sixteen percent reported $40,000-49,999, while 15% reported $30,000-39,999. According to the U.S. Census Bureau, the median household income for all households in the United States was $35,172 in 1996 (U.S. Census Bureau, 1999). This income set indicates an uneven distribution of income between low, middle and upper income ranges but tends to replicate the sample distribution of the Shim and Kotsiopulos study (1993).

In summary, the women included in this sample were older, reported a higher household income, and a smaller percentage had attained college degrees as compared to all women in the United States. Furthermore, the percentage of professional women in this sample was less than that for all women. When compared to the general female population, the women in this study tended to have higher incomes, slightly lower education and employment levels.

<u>Results of Hypotheses Testing</u>

**1-$H_O$.** ***There is no difference in the importance ratings of selected environmental dimensions for each shopping scenario.***

<u>Factor Analysis for Importance Ratings of Environmental Dimension Variables</u>

Factor analysis is used to reduce a large number of variables into smaller more manageable factors and to identify relationships for a large number of variables (Hair et al., 1998). In this study, factor analysis was used to reduce 12 environmental dimension variables into fewer factors and to identify similarities among these variables. Dimensions were selected from previous related research and from textbook discussions on the topic (Baker et al., 1988; Bitner, 1992; Engel et al., 1995; Lewison, 1994).

Before the results were analyzed, assumptions for factor analysis were tested. Correlations and anti-image correlations were visually inspected. In addition, the Kaiser-Meyer-

Olkin (KMO) Measure of Sampling Adequacy and Bartlett's Test of Sphericity were performed to determine if the analysis was appropriate for these variables.

Hair et al. (1998) state that a substantial number of correlations should be greater than .30 and anti-image correlations should be small. Matrices for the present study showed that correlations ranged from .30 to .81, and anti-image correlations were relatively small. According to Hair et al., KMO scores should be above .50. Scores of .80 or above are meritorious, those .70 or above are middling, those .60 or above are mediocre, scores of .50 or above are miserable, and those below .50 are unacceptable. In addition, Hair et al. state the Bartlett's test should be significant. Significance indicates the presence of correlations among variables. For this study, the KMO measure was .916 and the Bartlett test was significant ($X^2$=1088.520, $p$ = .000), indicating that factor analysis was appropriate for the environmental variables.

Variables were factored using component analysis. Component or principal components analysis accounts for the total variance within variables and is used to summarize the original information into factors for prediction (Hair, et al., 1998). Factors were rotated using varimax rotation. This rotation method attempts to simplify the columns of the factor matrix. The goal is to attain only 1s and 0s in a column (Hair, et al., 1998). The rotated component matrix for this study revealed factor loadings (i.e., correlation between original variables and factors) ranging from .54 to .88. As stated by Hair et al., loadings greater than ± .30 are minimal, those ± .40 are more important, and those ± .50 or greater are practically significant.

Results indicated that 65% of the total variance was explained by two factors. The latent root criterion was used to determine the number of factors to extract. Only factors with latent roots or eigenvalues greater than 1 were significant. The scree plot in Figure 2 shows a graphical representation of the factors that emerged from the analysis. Based on this information, two factors were retained for further study.

For Factor 1, *temperature* had the highest loading at .88 and *layout* had the lowest loading at .58. *Air quality*, *lighting*, *scent*, and *noise level* loaded between the two extremes. The highest and lowest loadings on Factor 2 were *background music* (.79) and *fixtures/racks* (.54), respectively. Also included in Factor 2 were *flooring*, *style of décor*, *aisle placement/width*, and *signs* (See Table 5).

Of the variables included in the study, *aisle placement/width*, *signs*, and *fixtures/racks*
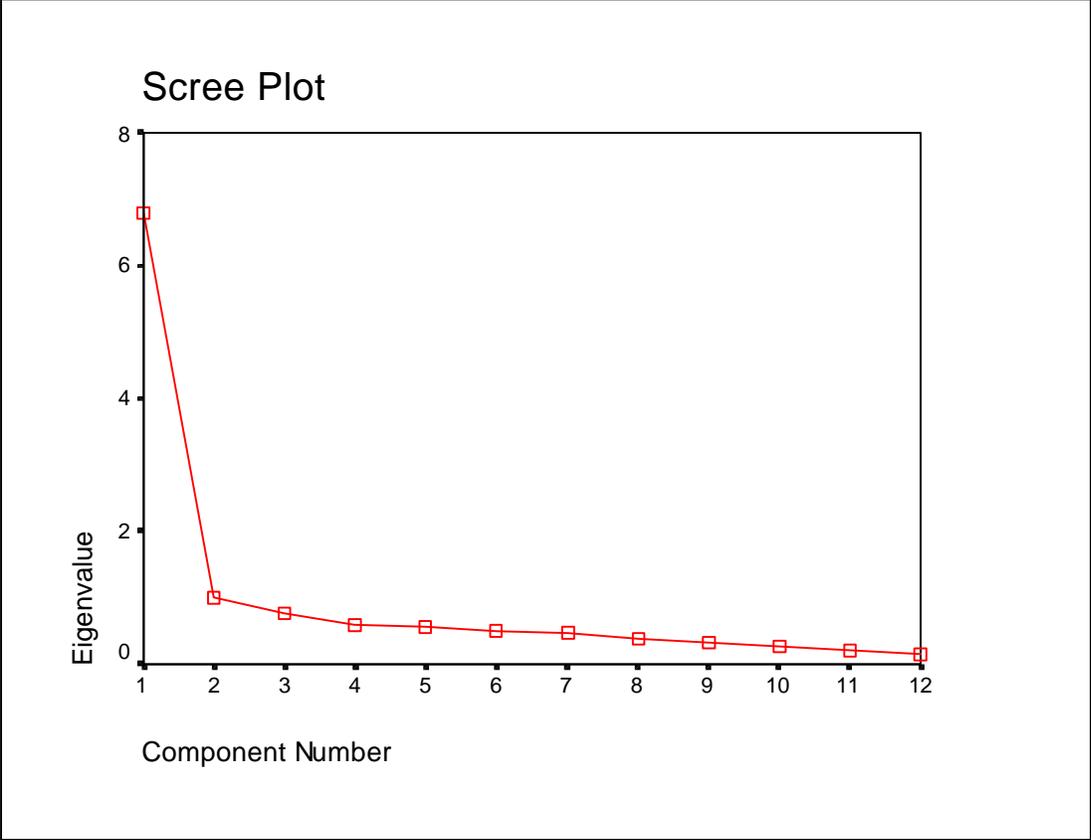
Figure 2.    <u>Scree Plot of Factor Analysis on Importance of Environmental</u>
             <u>Dimension Variables</u>

Table 5

Factor Analysis For Importance Ratings of Environmental Dimension Variables

| Environmental Dimensions | Loading | Eigenvalue | % of Variance | Cronbach's Alpha |
|---|---|---|---|---|
| Factor 1 Sensory/Layout Dimension | | 4.41 | 36.78 | .89 |
| Temperature | .88 | | | |
| Air quality | .84 | | | |
| Lighting | .75 | | | |
| Scent | .74 | | | |
| Noise Level | .60 | | | |
| Layout | .58 | | | |
| Factor 2 Music/Aesthetics Dimension | | 3.38 | 28.16 | .85 |
| Background Music | .79 | | | |
| Flooring | .76 | | | |
| Style of décor | .70 | | | |
| Aisle placement/width | .57 | | | |
| Signs | .55 | | | |
| Fixtures/Racks | .54 | | | |

loaded on both factors, but these variables loaded highest on Factor 2. For Factor 2, *aisle placement/width* loaded at .57, *signs* at .55, and *fixtures/racks* loaded at .54. Because these variables had communalities greater than .50 or shared a substantial amount of total variance with other variables included in the analysis, they were retained and used in further analyses. This inclusion criterion was recommended by Hair, et al. 1998.

After the factor analysis was complete, the importance of environmental dimension factors were named. Usually factors are named according to variables that load the highest. For Factor 1, *temperature* (.88) had the highest loading. Also in this factor were the variables of

*lighting*, *air quality*, *scent* and *noise*, which are all related to one or more of the five senses, as well as the variable, *layout*. Factor 1 was named the *Sensory/Layout* environmental dimension. With the exception of *layout*, the variables in Factor 1 grouped according to ambient factors identified by Baker et al. (1988). The factors were also similar to those identified by Bitner in 1992. Her ambient factor included temperature, air quality, noise, music, and odor. Factor 2 consisted of *background music* (.79) with the highest loading, *flooring*, *décor*, *aisle placement/width*, *signs*, and *fixtures/racks*. This factor was named the *Music/Aesthetics* environmental dimension. *Music/Aesthetics* Factor (Factor 2) from this research was similar to the design/aesthetics factor discussed by Baker et al. Variables in the previous work included architecture, color, scale, materials, texture, pattern, shape, style, and accessories. Bitner's space/function factor and the signs, symbols, and artifacts factor were also similar to the *Music/Aesthetics* Factor of the present study. Layout, equipment and furnishings were included in the space/function factor, while signage, personal artifacts, and style of décor were in the signs, symbols, and artifacts factor (Bitner).

Finally, reliability of the factors was included in the analysis. Reliability is used to determine the degree of consistency of a scale. Cronbach's alpha is the most widely used measure of reliability. It measures the consistency of an entire scale. Generally, .70 is an acceptable lower limit, with .60 being acceptable for exploratory research (Hair et al., 1998). Reliability measures for both factors found in this research were well above the acceptable lower limit. The *Sensory/Layout* environmental dimension had a reliability score of .89 and the *Music/Aesthetics* environmental dimension had a score of .85. Table 5 shows the factor loadings, eigenvalues, percent of variance and the Cronbach's alpha coefficient for each factor.

 MANOVA

Multivariate Analysis of Variance (MANOVA) tests for statistical differences in two or more metric variables on a set of non-metric independent variables (Hair et al., 1998). In this study, the independent variable was scenario. This hypothesis tested for differences in three apparel shopping scenarios. Scenario A was, "You have decided to purchase a dress to wear to a formal social gathering. Scenario B was, "You have decided to purchase a dress to wear to a family gathering". Scenario C was, "You have decided to purchase a dress to wear to work or a

community activity". The importance of environmental dimension factors, *Sensory/Layout* and *Music/Aesthetics,* identified in Step 1 of the analysis were the dependent variables.

The assumptions of MANOVA include independence of observations, equality of variance-covariance matrices for the independent variables, and normality of the dependent variables (Hair, et al., 1998). These assumptions were tested before analyzing the results. Box's Test of Equality was examined to test the null hypothesis that the covariance matrices for the dependent variables were equal across groups. Results revealed that observed covariance matrices were not equal across scenarios ($F$=16.375, $p = .014$) However, violation of this assumption is minimal if the groups are approximately equal. According to Hair et al., groups are approximately equal if the largest group divided by the smallest group is less than 1.5 (Hair, et al.). For this data, groups were approximately equal at 1.1 (i.e., scenario A, n = 47; scenario B, n = 46; scenario C, n = 52).

Data were also tested for normality using the Kolmogorov-Smirnov test. Table 6 shows the results of this test for each shopping scenario. Results revealed that the distribution for the *Sensory/Layout* environmental dimension was normal for scenario A and not normal for scenarios B and C. For the *Music/Aesthetics* environmental dimension, the distribution was not normal across all scenarios. Therefore, the results of this hypothesis should be cautiously generalized to other populations because the results may not be valid.

Significance of the environmental dimension factors for the groups (i.e., scenarios) was tested using Pillai's criterion in SPSS-PC version 7.5. In SPSS, four tests are used to determine significance. They are Roy's Largest Root, Wilks' Lambda, Hotelling's Trace, and Pillai's Trace. Pillai's criterion was used to test for significance because of violation of assumptions. Hair et al. (1998) states that Pillai's criterion is more powerful and should be used if sample size decreases, unequal cell sizes appear, or if the homogeneity of covariance assumption is violated. Pillai's criterion indicated the results were not significant ($F$= 2.102, $p$=.081); thus, the null hypothesis was not rejected at .05 level of significance. There was no statistical difference in the importance ratings of selected environmental dimensions for each shopping scenario.

This research failed to support research conducted by Bloch and Richins (1983) on product importance perceptions. The researchers proposed that product importance was linked to specific situations. The lack of support for the proposed hypothesis may have resulted for several

Table 6

Kolmogorov-Smirnov Test of Normality for Environmental Dimensions Factors Across
Scenarios

|  | $F$ | df | $p$ |
|---|---|---|---|
| Factor 1 **Sensory/Layout for:** |  |  |  |
| Scenario A | .12 | 47 | .09 |
| Scenario B | .13 | 46 | .04** |
| Scenario C | .15 | 52 | .01** |
| Factor 2 **Music/Aesthetics** |  |  |  |
| Scenario A | .10 | 47 | .20 |
| Scenario B | .10 | 46 | .20 |
| Scenario C | .10 | 52 | .20 |

Note. ** $p \leq .05$, n = 47 for Scenario A, n = 46 for Scenario B, n = 52 for Scenario C

reasons. Perhaps more product-oriented variables, such as price or quality were more
important in the purchase of a dress relative to a shopping scenario than the environmental
dimensions included in this study. These other factors for consideration when clothing shopping
were mentioned in the written comments. For example, respondents said: "good quality of
merchandise/fair price, pleasant, knowledgeable, supportive sales staff, well organized store,
good selection, safe parking (convenient and free)" were more important than the items listed in
the questionnaire. Respondents may have experienced difficulty in responding to questions
related to environmental dimensions without physically being in a store with a particular
scenario in mind. In addition, written comments from respondents suggest that environmental
dimensions were not as noticeable when shopping unless they created a negative shopping
experience. A respondent commented, "I never really considered factors such as air quality,
scent, and good flooring as determining factors of a place and why I to shop there before now. I
guess if those things were extremely negative or noticeable then chances are I wouldn't shop

there again."

Perhaps the criteria from previous research and textbooks are now minimal criteria that all retailers must meet. Retailing evolves over time (Lewison, 1994), and retailers must change to stay current. Updated criteria lists should be considered. For example, air conditioning used to be on criteria lists because it was optional and now it is considered by shoppers to be an expected necessity. Table 7 shows the mean importance scores of environmental dimension factors for respondents in this study across each shopping scenario. Overall, the women in this study rated the variables included in the *Sensory/Layout* environmental dimension (Factor 1) higher in

Table 7

Mean Scores of Environmental Dimension Factors for Each Shopping Scenario

|  | **Mean** | **Std. Deviation** |
|---|---|---|
| Factor 1 **Sensory/Layout for:** |  |  |
| Scenario A | 5.69 | .84 |
| Scenario B | 5.27 | 1.32 |
| Scenario C | 5.59 | 1.08 |
| Total | 5.52 | 1.10 |
| Factor 2 **Music/Aesthetics for:** |  |  |
| Scenario A | 4.99 | .89 |
| Scenario B | 4.90 | 1.26 |
| Scenario C | 4.87 | 1.06 |
| Total | 4.92 | 1.07 |

Note. Scenario A, n= 47; Scenario B, n= 46; Scenario C, n= 52

importance than the variables in the *Music/Aesthetics* environmental dimension (Factor 2). For this sample, store environmental characteristics of most importance included: temperature, air quality, lighting, scent, noise level, and layout.

***2-H<sub>O</sub>.*** ***There is no difference in importance ratings of selected environmental dimensions for***
***each shopping orientation.***

This hypothesis was analyzed using a three-step process. First, the 19 shopping
orientation statements were reduced to smaller groupings using factor analysis. The importance
ratings of the environmental dimension factors identified in Hypothesis 1 were also used in this
analysis. In addition, shopping orientation factors were used in cluster analysis to group
respondents. Then, environmental dimension factors and shopping orientation clusters were used
in MANOVA to test for differences in importance ratings of the environmental dimension
factors across the clusters

Factor Analysis of Shopping Orientation Statements

Environmental dimension factors identified in Hypothesis 1 were used in this analysis.
Factor 1 was named the *Sensory/Layout* environmental dimension factor. This factor included
the variables, *lighting*, *temperature*, *air quality*, *scent*, *noise*, and *layout*. The second factor,
*Music/Aesthetics* environmental factor, consisted of the variables *background music*, *flooring*,
*décor*, *aisle placement/width*, *signs*, and *fixture/racks*. Tests of factor analysis assumptions and
discussion of factor loadings, eigenvalues, percent of variance and reliability measures were
explained in Hypothesis 1. The same type of factor analysis, as applied to the importance ratings
of the environmental dimension variables, was performed on the shopping orientation
statements.

Factor analysis assumptions were tested before performing the analysis. According to
Hair et al. (1998), anti-image correlations should be relatively small and a substantial number of
correlations should be greater than .30. A visual inspection revealed that anti-image correlations
were small and a majority of correlations were greater than .30. Two statistical tests, the KMO
measure of sampling adequacy and Bartlett's Test of Sphericity were used to determine the
appropriateness of factor analysis. The KMO should be above .50, while Bartlett's Test should
be significant (Hair et al.). For this analysis, the KMO measure was .72 and Bartlett's Test was
significant, both results indicating that factor analysis was appropriate for these variables.

Principal components analysis was used to factor the variables. Component analysis
explains total variance within variables. Factors with eigenvalues or latent roots greater than
were retained. Factors were rotated using varimax rotation. Rotated loadings ranged from .38 to

74

.883. Hair et al. (1998) state that loadings .50 or greater are practically significant. Additionally, variables with loadings less than ± .40 and communalities less than .50 should be evaluated for deletion. After further examination of the rotated component matrix and communalities, two variables were deleted from further analysis. The *attention to clothing prices* variable had a factor loading of .38 and a communality measure of .48. The *time planning shopping* variable had a loading of .40 and a communality measure of .39. The communality measure indicated that both variables did not contribute significantly to the overall percent of variance score; therefore, the variables were deleted from further analyses.

Results of the factor analysis indicated that 65% of variance was explained by six shopping orientation factors (See Table 8). Figure 3 shows the scree plot of factors that emerged from this analysis. For Factor 1, the *confident in ability to shop* variable had the highest loading (.88). Also included in this factor were the variables: *right clothes for myself*, *good clothing shopper*, *up-to-date wardrobe*, and *attention to clothing prices*. The variable loading the highest on Factor 2 was *well-known brands* (.75) and the lowest loading variable was *no attention to brand names* (.58). The variables *of certain brands/stores*, *well-known brand means quality*, and *find a brand-stick with it* were also in Factor 2. For Factor 3, three variables loaded. They were *reputation*, *dressing well*, and *time planning shopping*. Of the three variables, *reputation* had the highest loading at .84. Only two variables loaded on Factor 4. *Most convenient store* had a loading of .79 and *saves me time* had a loading of .75. Factor 5 consisted of the variables, *reads ads*, *shop around for bargains*, and *well groomed*. Finally, only one variable was included in Factor 6. This variable, *buy without hesitation*, had a factor loading of .75.

After the factor analysis was complete, factors were named based on variables that loaded the highest on each factor. The *confident in ability to shop* variable loaded highest on Factor 1, followed by the variables: *right clothes for myself*, *good clothing shopper*, and *up-to-date wardrobe*. This shopping orientation factor was named the *Confident Apparel Shopper*. Tatzel (1982) discussed independent shoppers that were similar to the *Confident Apparel Shoppers* found in this study. Independent shoppers were capable of shopping and choosing clothing for themselves and were self-confident. Unlike the *Confident Apparel Shoppers*, Tatzel's anxious shopper was fearful of dressing incorrectly, as well as needed reassurance and guidance from

Table 8

Factor Analysis of Shopping Orientation Variables

| Shopping Orientation Factors | Loading | Eigenvalue | % of Variance | Cronbach's Alpha |
|---|---|---|---|---|
| Factor 1 **Confident Apparel Shopper** | | 3.04 | 15.98 | .81 |
| Confident-ability to shop | .88 | | | |
| Right clothes-myself | .84 | | | |
| Good clothing shopper | .84 | | | |
| Wardrobe-up-to-date | .47 | | | |
| Factor 2 **Brand Conscious Shopper** | | 2.75 | 14.48 | .43 |
| Well-known brands | .75 | | | |
| Certain brands/stores | .74 | | | |
| Well-known brand-quality | .73 | | | |
| Brand-stick with it | .68 | | | |
| No attention to brand names | .58 | | | |
| Factor 3 **Appearance Conscious** | | 1.83 | 9.63 | .66 |
| Reputation | .84 | | | |
| Dressing well | .61 | | | |

Table 8 (Continued)

Factor Analysis of Shopping Orientation Variables

| Shopping Orientation Factors | Loading | Eigenvalue | % of Variance | Cronbach's Alpha |
|---|---|---|---|---|
| Factor 4 **Convenience/Time Shopper** | | 1.68 | 8.85 | .53 |
| Most convenient store | .79 | | | |
| Saves me time | .75 | | | |
| Factor 5 **Bargain Apparel Shopper** | | 1.66 | 8.75 | .42 |
| Read ads | .72 | | | |
| Shop around for bargains | .60 | | | |
| Well-groomed | .54 | | | |
| Factor 6 **Decisive Apparel Shopper** | | 1.40 | 7.36 | N/A |
| Buy without hesitation | .75 | | | |
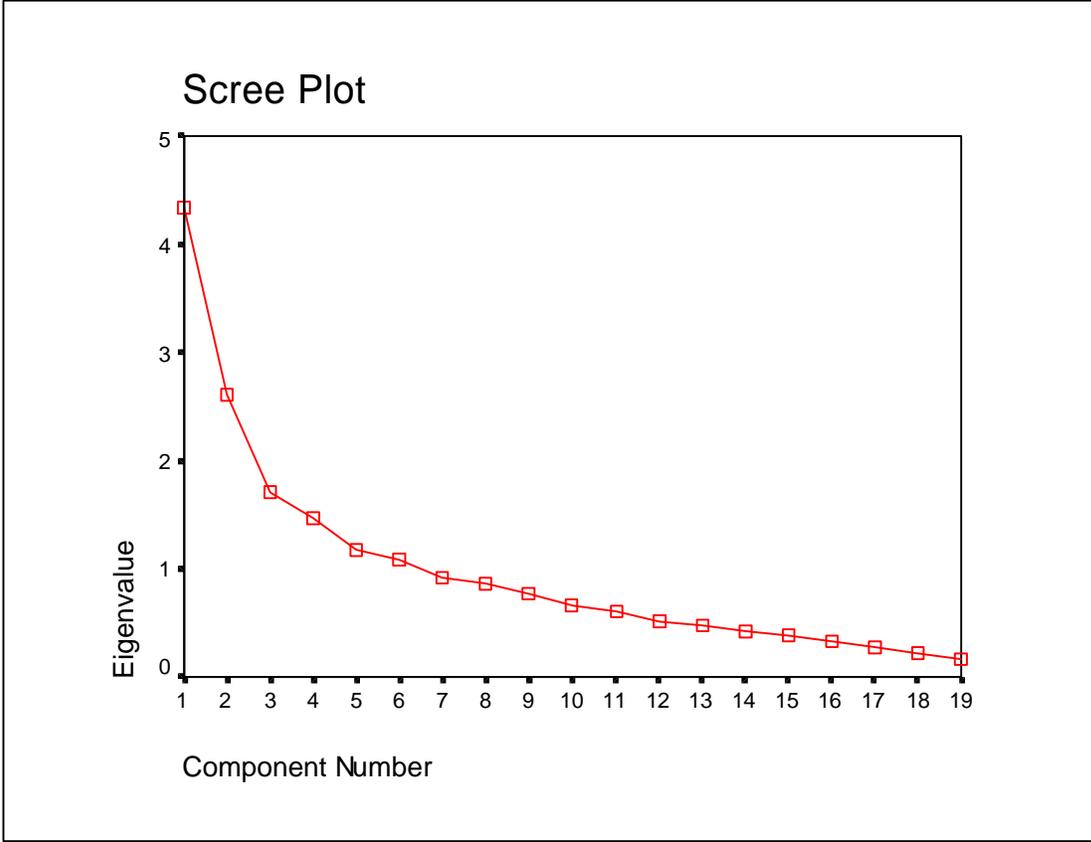
Figure 3.    Scree Plot of Factor Analysis on Shopping Orientation Variables

others when shopping for clothing.

Factor 2 consisted of *well-known brands*, *certain brands/stores*, *well-known brands mean quality*, *find a brand-stick with it*, and *no attention to brand names*, therefore; this factor was named *Brand Conscious Apparel Shopper*. This shopping orientation factor was identical to the brand-conscious loyal shopper discussed by Shim and Kotsiopulos (1993).

Factor 3 was named the *Appearance Conscious Apparel Shopper* and included the variables: *reputation*, *dressing well*, and *time planning shopping*. This shopping orientation factor similar the highly involved apparel shopper identified by Shim and Kotsiopulos in 1993. Highly involved shoppers were described by Shim and Kotsiopulos as being concerned with appearance, liked to be considered well groomed, believed that dressing well was an important part of their lives, and kept their wardrobe up-to-date with fashion trends. Similar to Shim and Kotsiopulos' shopper, the *Appearance Conscious Apparel Shopper* also believed that dressing well was an important part of their life and felt that a person's reputation was affected by how she dresses

The variables included in Factor 4 were *most convenient store* and *save me time*. This shopping orientation factor was named the *Convenience/Time Apparel Shopper*. With the omission of the *time planning my clothing shopping* variable, this factor was the same as Shim and Kotsiopulos' convenience/time-conscious shopper.

Factor 5 was named the *Bargain Apparel Shopper*. The variables included in this factor were *reads ads*, *shops around for bargains*, and *well groomed*. This shopper is described as having two of the same shopping characteristics as the economic/price conscious shopper identified by Shim and Kotsiopulos (1993). Both the *Bargain Apparel Shopper* and the economic/price conscious shopper shopped around for bargains and read advertisements for the announcement of sales. In addition to shopping around for bargains, the *Bargain Apparel Shopper* liked to be considered well groomed. The previous work by Shim and Kotsiopulos also described their shopper as paying more attention to clothing prices now than before.

Finally, only one variable, *buy without hesitation*, loaded on Factor 6. This shopping orientation factor was named the *Decisive Apparel Shopper*. A point of comparison for this shopper was not identified in the previous research conducted by Shim and Kotsiopulos.

However, in the earlier work, the *buy without hesitation* variable loaded with Shim and Kotsiopulos' confident/appearance, fashion conscious shopper.

The last step in the factor analysis involved reliability testing. Cronbach's alpha was used to test the factors. Generally, a score of .70 is acceptable; however, for exploratory research .60 is acceptable (Hair et al., 1998). Reliability measures for the shopping orientation factors ranged from .81 to .42. Reliability was not calculated for Factor 6 because this factor consisted of only one variable. All factors were retained for further analysis because each factor contributed to the 65% of the combined variance. In addition, reliability scores are linked to the number of variables included in the factor. Factors with fewer variables loading on a particular factor are expected to have lower reliability scores than factors with a larger number of variables (Hair et al.). For this analysis, two of the three factors with reliability scores less than .60 loaded with 3 (Factor 5) or less than 3 (Factor 4) variables in the factor. Table 8 shows the factor loadings, eigenvalues, percent of variance and the Cronbach's alpha coefficient for each factor.

In conclusion, as a result of the factor analysis, six shopper orientations were identified. Factor 1 was named the Confident Apparel Shoppers and included the variables of *confident in ability to shop, right clothes for myself, good clothing shopper, and up-to-date wardrobe*. Factor 2, the Brand Conscious Apparel shopper, consisted of the variables *well-known brands, certain brands/stores, well-known brands mean quality, find a bran-stick with it, and no attention to brand names*. Factor 3 was named the Appearance Conscious Apparel Shopper. The variables included in this factor were *reputation, dressing well, and time planning shopping*. Of the six factors, Factor 4 included the variables of *most convenient store* and *saves me time*. This shopping orientation factor was named Convenience/Time Apparel Shopper. Factor 5 was named the Bargain Apparel Shopper and included the variables of *reads ads, shops around for bargains, and well groomed*. Finally, Factor 6 was named the Decisive Apparel Shopper and included only one variable, *buy without hesitation.*

Cluster Analysis

Step 2 of this hypothesis involved cluster analysis. Shopping orientation factors identified in Step 1 were used in cluster analysis to group respondents based on their shopping orientations. The objective of this analysis was to segment respondents with similar perceptions of shopping.

Before the analysis was performed, the following assumptions were tested. Data were examined for outliers and multicollinearity. Minimum and maximum values of descriptive statistics revealed no outliers were present. Pearson correlations were examined to determine if multicollinearity was present. Correlations showed that variables were not highly correlated. Pearson correlations ranged from .01 to .34, with no correlations above .70. Representativeness of the sample should also be considered; however, this assumption was not statistically tested. The demographic characteristics of the sample included in this research were compared with that of the United States population and to the sample from Shim and Kotsiopulos (1993). Women included in this study were older, less educated, and reported a higher level of household income than all women in the United States. The respondents are similar to the Shim and Kotsiopulos respondents but vary some from the average U.S. population. This variance may further limit generalizability of the study. Results should be interpreted with caution. Data were not further standardized because all variables were measured on the same 7-point scale.

The shopping orientation factors were clustered using a two-step process. Step 1 of the cluster analysis was hierarchical clustering. This clustering technique was used to determine the appropriate number of clusters. Factors were clustered by Ward's method, and distance was calculated using squared Euclidean distance. According to Hair et al. (1998), Ward's method is often used with a small number of observations. Furthermore, squared Euclidean distance is the recommended distance measure for Ward's and centroid clustering.

This analysis was performed using SPSS-PC version 7.5. Because cluster analysis is such a subjective process, a combination of methods was used to determine the appropriate number of clusters. These methods included examination of the agglomeration schedule, icicle plot, dendrogram, and cluster membership, which can be saved using a range of solutions or a single solution. For this analysis, a range of two to four clusters was considered manageable given the number of factors that emerged in Step 1 (hierarchical) of the cluster analysis. Initially, the analysis was performed using the range of clusters, but after evaluating the range of solutions, cluster analysis was repeated using a single solution of four clusters. The four-cluster solution was selected based on examining the dendogram, cluster membership, and changes in the agglomeration schedule. Small changes in the agglomeration coefficient were characteristic of

homogeneous clusters being combined and large changes resulted in very different clusters combining (Hair et al., 1998).

Step 2 of the cluster analysis involved using the four-cluster solution identified in Step 1 of cluster analysis in nonhierarchical clustering or K-means cluster analysis. The ANOVA table revealed significant differences for all factors, therefore indicating that all factors were helpful in clustering the respondents into the four-cluster solution. Significance of the factors supports the use of a four-cluster solution for this analysis. Results of the ANOVA table for the shopping orientation factors are shown in Table 9.

Table 9

ANOVA Table of Shopping Orientation Factors

| | Cluster Mean Square | Cluster df | Error Mean Square | Error df | *F* | *p* |
|---|---|---|---|---|---|---|
| Factor 1 Confident | 15.60 | 3 | .65 | 137 | 24.00 | .000*** |
| Factor 2 Brand | 5.98 | 3 | .55 | 137 | 10.83 | .000*** |
| Factor 3 Appearance | 8.85 | 3 | .53 | 137 | 16.68 | .000*** |
| Factor 4 Convenience | 43.58 | 3 | .85 | 137 | 51.29 | .000*** |
| Factor 5 Bargain | 7.13 | 3 | .83 | 137 | 8.56 | .000*** |
| Factor 6 Decisive | 71.64 | 3 | .63 | 137 | 113.61 | .000*** |

Note: *** $p \leq .001$

Description of Each Apparel Shopping Orientation Cluster

        After determining that all shopping orientation factors were helpful in developing the four-cluster solution, the final cluster centers (means) were used to name the clusters and determine what types of shopping characteristics each cluster exhibited. Clusters were named or identified by examining the largest cluster center or mean score on each shopping orientation factor for each cluster. An interesting finding, although not surprising, was that women identified with more than one shopping orientation factor, which was similar to the findings from previous studies (Shim & Kotsiopulos, 1993). Because the women in this study identified with more than one shopping orientation factor and had mean scores of 6 on more than one shopping orientation factor, naming the clusters was not only subjective, but difficult. Four of the six shopping orientation factors were used to name the shopper clusters. These shopping orientation factors were: *Decisive, Confident, Bargain, and Appearance Conscious* (See Table 10). Since Cluster 1 and Cluster 3 had a mean score of 6 on only one shopping orientation factor, these clusters were named, *Decisive Apparel Shoppers* and *Bargain Apparel Shoppers*. Because Cluster 2 and Cluster 4 had mean scores of 6 on more than one shopping orientation factor, the clusters were compared to determine which shopping orientation factor was present in only one of the clusters. Cluster 4 identified with the *Appearance Conscious* shopping orientation factor; therefore, this cluster was named the *Appearance Conscious Apparel Shoppers*. Finally, through a process of elimination, Cluster 2 was named the *Confident Apparel Shoppers*. After the shopping orientation clusters were named, they were described by examining the largest mean score for each shopping orientation factor, and then by examining the mean scores that occurred most often.

        Shopping orientation statements were measured on a 7-point scale with 7 equal to strongly agree and 1 equal to strongly disagree. The *Decisive Apparel Shoppers* strongly agreed with the statement, "When I find what I like I usually buy it without hesitation". Cluster 1 had a mean score of 6 for the *Decisive* shopping orientation factor. Therefore, this cluster was named the *Decisive Apparel Shoppers*. This cluster also had a mean score of 5 for the *Appearance Conscious, Convenience/Time*, and *Bargain* shopping orientation factors. Respondents included in the *Decisive* cluster were concerned about their reputation and dressed well to maintain a good reputation, shopped at the most convenient store to save time, shopped around for bargains and

Table 10

Final Cluster Centers (Means) by Shopping Orientation Factor

| Shopping Orientation Factors | Cluster 1 Decisive | Cluster 2 Confident | Cluster 3 Bargain | Cluster 4 Appearance |
|---|---|---|---|---|
| Factor 1 Confident | 4 | **6** | 5 | 6 |
| Factor 2 Brand Conscious | 4 | 4 | 4 | 5 |
| Factor 3 Appearance Conscious | 5 | 5 | 5 | **6** |
| Factor 4 Convenience/Time | 5 | 3 | 4 | 5 |
| Factor 5 Bargain | 5 | 6 | **6** | 6 |
| Factor 6 Decisive | **6** | 6 | 3 | 6 |

Note. Shopping orientation factors were measured on a 7-point scale ( 7 = strongly agree, 1 = strongly disagree). Bold numbers represent the largest mean score for each cluster and the scores that determined cluster names.

often used advertisements to determine where to shop. Respondents in this cluster also liked to be considered well groomed. Cluster 3 had a mean score of 6 on the *Bargain* shopping orientation factor, and was named the *Bargain Apparel Shoppers*. These shoppers were described as those that usually read advertisements for announcements of sales, those that shop around for bargains to save money, as well as, those that like to be considered well groomed. This cluster also had characteristics of the *Confident* factor and the *Appearance Conscious* factor. These shoppers perceived that they had the ability to choose the right clothing for themselves, they were very confident in shopping for themselves, they wore up-to-date clothing, they kept up with fashion trends, and they dressed well to maintain a good reputation.

Cluster 2 and Cluster 4 had mean scores of 6 on the *Confident*, *Bargain*, and *Decisive* shopping orientation factors. Cluster 4 differed from Cluster 2 with a mean score of 6 on the *Appearance Conscious* shopping orientation factor; therefore, Cluster 4 was named the *Appearance Conscious Apparel Shopper*. These shoppers strongly agreed with the statements, "A person's reputation is affected by how she dresses" and "Dressing well is an important part of my life." In addition, these shoppers were confident about apparel shopping, had the ability to choose the right clothing for themselves, buy without hesitation; yet, they shop around for bargains, and read sale advertisements to determine where to shop.

Respondents in Cluster 2 identified with the *Confident* shopping orientation factor, and therefore were named the *Confident Apparel Shoppers*. Female shoppers in Cluster 2 were described as being good clothing shoppers, confident in their ability to choose the right clothing for themselves, has an up-to-date wardrobe, yet they bargain shop for this wardrobe, and usually buys clothing they like without hesitation. In addition, these shoppers were less convenience and/or time spent shopping.

Three of the four shopping orientation clusters found in the present study can be compared to Shim and Kotsiopulos' (1993) highly involved shopper. These shoppers included the *Confident Apparel Shoppers*, *Bargain Apparel Shoppers*, and the *Appearance Conscious Apparel Shoppers*. A comparison of the shoppers in this study with those studied in previous research further validates the use of shopping orientations to describe consumers. In addition, Shim and Kotsiopulos (1993) supported the use of several shopping orientations to describe a particular group or cluster of consumers. Shim and Kotsiopulos' highly involved shopper was described as a highly confident apparel shopper. Just as the *Confident Apparel Shoppers* in this study, the highly involved shopper felt they were good clothing shoppers and had the ability to choose the right clothes for themselves. The highly involved shopper, who was concerned about appearance, was well groomed, and believed that dressing was an important part of their lives could also be compared with the *Appearance Conscious Apparel Shopper* in this study. The *Appearance Conscious Apparel Shopper* kept up with fashion trends and believed that dressing well helped to maintain a good reputation. The highly involved shopper tried to keep up-to-date wardrobes, identified with fashion trends and favored certain brand names. Highly involved shoppers were also described as economic or price conscious, and were similar to the *Bargain*

*Apparel Shoppers* in this study who read advertisements for announcements of sales and shopped around to save money.

MANOVA

MANOVA was used to test for statistical differences in the importance ratings of environmental dimension factors for each shopping orientation cluster. For this analysis, the environmental dimension factors of *Sensory/Layout* and *Music/Aesthetics* were the dependent variables. The shopping orientation clusters named *Decisive Apparel Shoppers, Confident Apparel Shoppers, Bargain Apparel Shoppers, and Appearance Conscious Apparel Shoppers* were the independent variables.

The following assumptions were tested before analyzing the results: independence of observations, equality of variance-covariance matrices for the independent variables, and normality of the dependent variables (Hair, et al., 1998). The observations were independent of each other. Box's Test of Equality was examined to test the null hypothesis that the covariance matrices for the dependent variables were equal across groups. Results revealed that observed covariance matrices were not equal across clusters $F(9, 82144)= 2.914$, $p= .002$). Violation of this assumption is minimal if the groups are approximately equal. Equality results if the largest group divided by the smallest group is less than 1.5 (Hair, et al.). For this data, groups were not equal at 2.24 (i.e., *Decisive*, n= 56; *Confident*, n= 25; *Bargain*, n= 27; *Appearance*, n= 28); therefore, the equality assumption was violated, and results should not be generalized without further study. In addition, data were tested for normality using the Kolmogorov-Smirnov test. Table 11 shows the results of this test for each shopping orientation cluster. Results revealed that the distribution for the *Sensory/Layout* environmental factor (Factor 1), was normal for the *Decisive Apparel Shopper* (Cluster 1), the *Bargain Apparel Shopper* (Cluster 3), and the *Appearance Conscious Apparel Shopper* (Cluster 4), but not normal for the *Confident Apparel Shopper* (Cluster 2). The results of this analysis may not be valid because the shopper types were not normally distributed. For the *Music/Aesthetics* environmental factor (Factor 2), with the exception of Cluster 1, the distribution was normal. Because the distribution for some, but not all of the shopping orientation factors was normal, the results of this hypothesis should be cautiously applied to similar research studies.

Table 11

Kolmogorov-Smirnov Test of Normality for Environmental Importance Factors Across
Shopping Orientation Clusters

| | *F* | df | *p* |
|---|---|---|---|
| Factor 1 **Sensory/Layout for:** | | | |
| Cluster 1 **Decisive** | .11 | 56 | .093 |
| Cluster 2 **Confident** | .18 | 25 | .033* |
| Cluster 3 **Bargain** | .13 | 27 | .200 |
| Cluster 4 **Appearance** | 14 | 28 | .198 |
| Factor 2 **Music/Aesthetics for:** | | | |
| Cluster 1 **Decisive** | .12 | 56 | .032* |
| Cluster 2 **Confident** | .17 | 25 | .077 |
| Cluster 3 **Bargain** | .10 | 27 | .200 |
| Cluster 4 **Appearance** | .11 | 28 | .200 |

Note. * $p \leq .05$, *Decisive*, n= 56; *Confident*, n= 25; *Bargain*, n= 27; *Appearance*, n= 28

For this data, Pillai's criterion was used to test for significance because assumptions were violated. Hair et al. (1998) suggested that Pillai's criterion is more powerful and should be used when one or more of the MANOVA assumptions are violated. Multivariate tests revealed that results were significant $F(6, 264)=2.714$, $p=.014$). The null hypothesis was rejected in favor of the alternative hypothesis. Therefore, there was a difference in importance ratings of the environmental dimension factors across shopping orientation clusters.

Post hoc tests were run to determine where the differences occurred. For the Sensory/Layout environmental factor, statistical differences were found between the Decisive and Bargain Apparel Shoppers ($p=.037$), the Confident and Bargain Apparel Shoppers ($p=.024$), and the Appearance Conscious and Bargain Apparel Shoppers ($p=.007$). Bargain Apparel Shoppers had a higher mean importance score on the Sensory/Layout environmental dimension than the Decisive Apparel Shoppers, the Confident Apparel Shoppers, and the Appearance Conscious Apparel Shoppers (See Table 12). The Sensory/Layout environmental dimension (Factor 1) with characteristics such as lighting, noise, and layout was more important to the Bargain Apparel Shopper than to the other shopping types. Statistical differences were also found between the Bargain and Appearance Conscious Apparel Shoppers ($p=.008$) for the Music/Aesthetics dimension (Factor 2). As shown in Table 12, the Bargain Apparel Shoppers had a mean importance score of 5.50 and the Appearance Conscious Apparel Shoppers had a mean score of 4.51. Again the Bargain Apparel Shopper gave the environmental dimensions of Music/Aesthetics a higher importance rating than the ratings given by the other shoppers. Store environmental characteristics such as flooring, style of décor, aisle placement/width, signs, and fixtures/racks were rated significantly higher by the Bargain Apparel Shopper than by the other shoppers. The Bargain Apparel Shopper rated both factors higher than the other shoppers rated the factors. This shopper desires everything, that is, an easy to follow layout, an attractive décor and low prices. The Bargain Apparel Shopper appears to desire retail stores with environmental variables included in the Sensory/Layout dimension and the Music/Aesthetics dimension and wants to purchase merchandise at reduced prices, which will make this shopper very difficult to please. Results of this research support previous work conducted on shopping orientations among female consumers. Shim and Kotsiopulos (1993) found differences among three shopping orientation clusters on the importance of store attributes. Group differences were found for the

Table 12

Mean Scores of Environmental Dimension Factors for Each Shopping Orientation Cluster

|  | **Mean** | **Std. Deviation** |
|---|---|---|
| Factor 1 **Sensory/Layout for:** |  |  |
| Cluster 1 **Decisive** | 5.43 | .85 |
| Cluster 2 **Confident** | 5.25 | 1.37 |
| Cluster 3 **Bargain** | 6.17 | .68 |
| Cluster 4 **Appearance** | 5.15 | 1.39 |
| Total | 5.49 | 1.11 |
| Factor 2 **Music/Aesthetics for**: |  |  |
| Cluster 1 **Decisive** | 4.82 | .89 |
| Cluster 2 **Confident** | 4.77 | 1.26 |
| Cluster 3 **Bargain** | 5.50 | .73 |
| Cluster 4 **Appearance** | 4.51 | 1.32 |
| Total | 4.88 | 1.08 |

Note.  *Decisive*, n = 56; *Confident*, n = 25; *Bargain*, n = 27; *Appearance*, n = 28

attributes of store personnel, visual image of store, customer service, price, easy access, and brand/fashion.

Demographic Profile of the Clusters

Clusters were also profiled according to demographic characteristics. Age, education, employment, ambulatory abilities, and household income were included in the demographics section of the questionnaire (See Tables 13-17). Crosstabs were used to determine the demographic profile of the respondents for each cluster. Pearsons Chi-square test was examined for significance. Of the five demographic characteristics, household income was the only variable with significant differences for the clusters ($X^2$ (df =21) =34.407, $p$=.033). Household income had 24 cells (75%) with expected frequencies less than 5; therefore, this finding should be cautiously generalized to other samples. Percentages were reported for each cluster in terms of percent within the cluster.

With regard to age, the 25-31 (26.3%) category was the largest group for the *Decisive Apparel Shoppers* (Cluster 1), followed by the 46-52 group. For the *Confident Apparel Shoppers*, (Cluster 2) the largest age group was 46-52 (32.0%). The second age group for this cluster was the 60 or over group. The *Bargain Apparel Shoppers* (Cluster 3) consisted of the 46-52 (31.0%) age group, followed by the 60 or over group, and the 53-59 age group, respectively. The 46-52 group and the 60 or over group were equal for the *Appearance Conscious Apparel Shoppers* (Cluster 4). These groups represented 26.7% of this cluster (See Table 13).

A large percentage of the respondents in all clusters had attained some college or a college degree. Among the respondents in the *Decisive Apparel Shopper* cluster (Cluster 1), 33.3% had attained some college. Forty-eight percent of the *Confident Apparel Shoppers* (Cluster 2) had some college and 34.5% of the *Bargain Apparel Shoppers* (Cluster 3) had attained some college. With respect to a college degree, 33.3% of the respondents were represented in the *Appearance Conscious Apparel Shopper* cluster (Cluster 4). In addition, 17.5% of the respondents in the *Decisive Apparel Shopper* cluster (Cluster 1) had a graduate degree (See Table 14).

As shown in Table 15, the employment tabulations revealed that a majority (45.6%) of respondents in the *Decisive Apparel Shopper* cluster (Cluster 1) identified themselves as professionals. Professionals included in Cluster 2, *Confident Apparel Shoppers*, represented

Table 13

Crosstabs of Age Categories and Shopping Orientation Clusters

| Age | | Cluster 1 Decisive | Cluster 2 Confident | Cluster 3 Bargain | Cluster 4 Appearance | Total |
|---|---|---|---|---|---|---|
| **18-24** | Count | 0 | 1 | 1 | 1 | 3 |
| | % within Cluster | .0% | 4.0% | 3.4% | 3.3% | 2.1% |
| | % of Total | .0% | .7% | .7% | .7% | 2.1% |
| **25-31** | Count | 12 | 4 | 2 | 1 | 19 |
| | % within Cluster | 21.1%% | 16.0% | 6.9% | 3.3% | 13.5% |
| | % of Total | 8.5% | 2.8% | 1.4% | .7% | 13.5% |
| **32-38** | Count | 9 | 3 | 2 | 1 | 15 |
| | % within Cluster | 15.8% | 12.0% | 6.9% | 3.3% | 10.6% |
| | % of Total | 6.4% | 2.1% | 1.4% | .7% | 10.6% |
| **39-45** | Count | 9 | 1 | 3 | 6 | 19 |
| | % within Cluster | 15.8% | 4.0% | 10.3% | 20.0% | 13.5% |
| | % of Total | 6.4% | .7% | 2.1% | 4.3% | 13.5% |
| **46-52** | Count | 15 | 8 | 9 | 8 | 40 |
| | % within Cluster | 26.3% | 32.0% | 31.0% | 26.7% | 28.4% |
| | % of Total | 10.6% | 5.7% | 6.4% | 5.7% | 28.4% |
| **53-59** | Count | 3 | 2 | 5 | 5 | 15 |
| | % within Cluster | 5.3% | 8.0% | 17.2% | 16.7% | 10.6% |
| | % of Total | 2.1% | 1.4% | 3.5% | 3.5% | 10.6% |
| **60 or over** | Count | 9 | 6 | 7 | 8 | 30 |
| | % within Cluster | 15.8% | 24.0% | 24.1% | 26.7% | 21.3% |
| | % of Total | 6.4% | 4.3% | 5.0% | 5.7% | 21.3% |
| **Total** | Count | 57 | 25 | 29 | 30 | 141 |
| | % within Cluster | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | % of Total | 40.4% | 17.7% | 20.6% | 21.3% | 100.0% |

Table 14

Crosstabs of Education and Shopping Orientation Clusters

| Education | | Cluster 1 Decisive | Cluster 2 Confident | Cluster 3 Bargain | Cluster 4 Appearance | Total |
|---|---|---|---|---|---|---|
| Less than high school | Count | 1 | 0 | 1 | 1 | 3 |
| | % within Cluster | 1.8% | .0% | 3.4% | 3.3% | 2.1% |
| | % of Total | .7% | .0% | .7% | .7% | 2.1% |
| High School Graduate | Count | 11 | 1 | 8 | 6 | 26 |
| | % within Cluster | 19.3% | 4.0% | 27.6% | 20.0% | 18.4% |
| | % of Total | 7.8% | .7% | 5.7% | 4.3% | 18.4% |
| Some College | Count | 16 | 12 | 10 | 8 | 46 |
| | % within Cluster | 28.1% | 48.0% | 34.5% | 26.7% | 32.6% |
| | % of Total | 11.3% | 8.5% | 7.1% | 5.7% | 32.6% |
| College Degree | Count | 19 | 10 | 5 | 10 | 44 |
| | % within Cluster | 33.3% | 40.0% | 17.2% | 33.3% | 31.2% |
| | % of Total | 13.5% | 7.1% | 3.5% | 7.1% | 31.2% |
| Graduate Degree | Count | 10 | 2 | 5 | 5 | 22 |
| | % within Cluster | 17.5% | 8.0% | 17.2% | 16.7% | 15.6% |
| | % of Total | 7.1% | 1.4% | 3.5% | 3.5% | 15.6% |
| Total | Count | 57 | 25 | 29 | 30 | 141 |
| | % within Cluster | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | % of Total | 40.4% | 17.7% | 20.6% | 21.3% | 100.0% |

Table 15

Crosstabs of Employment and Shopping Orientation Clusters

| Employment | | Cluster 1 Decisive | Cluster 2 Confident | Cluster 3 Bargain | Cluster 4 Appearance | Total |
|---|---|---|---|---|---|---|
| **Professional** | Count | 26 | 7 | 6 | 8 | 47 |
| | % within Cluster | 45.6% | 28.0% | 20.7% | 26.7% | 33.3% |
| | % of Total | 18.4% | 5.0% | 4.3% | 5.7% | 33.3% |
| **Management** | Count | 5 | 1 | 3 | 3 | 12 |
| | % within Cluster | 8.8% | 4.0% | 10.3% | 10.0% | 8.5% |
| | % of Total | 3.5% | .7% | 2.1% | 2.1% | 8.5% |
| **Technical** | Count | 4 | 4 | 2 | 2 | 12 |
| | % within Cluster | 7.0% | 16.0% | 6.9% | 6.7% | 8.5% |
| | % of Total | 2.8% | 2.8% | 1.4% | 1.4% | 8.5% |
| **Retired** | Count | 7 | 4 | 7 | 6 | 24 |
| | % within Cluster | 12.3% | 16.0% | 24.1% | 20.0% | 17.0% |
| | % of Total | 5.0% | 2.8% | 5.0% | 4.3% | 17.0% |
| **Homemaker** | Count | 7 | 7 | 4 | 5 | 23 |
| | % within Cluster | 12.3% | 28.0% | 13.8% | 16.7% | 16.3% |
| | % of Total | 5.0% | 5.0% | 2.8% | 3.5% | 16.3% |
| **Not Currently Employed** | Count | 0 | 0 | 2 | 0 | 2 |
| | % within Cluster | .0% | .0% | 6.9% | .0% | 1.4% |
| | % of Total | .0% | .0% | 1.4% | .0% | 1.4% |
| **Other** | Count | 8 | 2 | 5 | 6 | 21 |
| | % within Cluster | 14.0% | 8.0% | 17.2% | 20.0% | 14.9% |
| | % of Total | 5.7% | 1.4% | 3.5% | 4.3% | 14.9% |
| **Total** | Count | 57 | 25 | 29 | 30 | 141 |
| | % within Cluster | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | % of Total | 40.4% | 17.7% | 20.6% | 21.3% | 100.0% |

28.0%, followed by 26.7% for Cluster 4, *Apparel Conscious Shoppers*, and 20.7% for Cluster 3, *Bargain Apparel Shoppers*.

With regard to ambulatory ability, 50.9% of respondents in the *Decisive Apparel Shopper* (Cluster 1) indicated they could move about easily in retail stores and 42.1% could move about somewhat easily. Sixty-four percent of the *Confident Apparel Shoppers* (Cluster 2) stated they could move about easily in retail stores and 69.0% and 60.0% of those in Cluster 3 and Cluster 4 (*Bargain Apparel Shoppers* and *Appearance Conscious Apparel Shoppers*) indicated they could move about easily (See Table 16).

Finally, clusters were profiled according to their household income. The highest income category for the *Decisive Apparel Shoppers* and *Bargain Apparel Shoppers* (Clusters 1 and 3) was the $40,000-49,999 category. Nineteen percent of those included in the *Decisive Apparel Shopper* cluster (Cluster 1), and 28.6% of the *Bargain Apparel Shoppers* (Cluster 3) reported this income category. For clusters 2 (35.0%) and 4 (40.7%) (*Confident Apparel Shoppers* and *Appearance Conscious Apparel Shoppers*), respondents reported a household income of $80,000 (See Table 17).

Table 16

Crosstabs of Ambulatory Abilities and Shopping Orientation Clusters

| Ambulatory | | Cluster 1 Decisive | Cluster 2 Confident | Cluster 3 Bargain | Cluster 4 Appearance | Total |
|---|---|---|---|---|---|---|
| Need Assistance | Count | 1 | 1 | 1 | 1 | 4 |
| | % within Cluster | 1.8% | 4.0% | 3.4% | 3.3% | 2.8% |
| | % of Total | .7% | .7% | .7% | .7% | 2.8% |
| Some Assistance | Count | 1 | 0 | 0 | 0 | 1 |
| | % within Cluster | 1.8% | .0% | .0% | .0% | .7% |
| | % of Total | .7% | .0% | .0% | .0% | .7% |
| Neutral | Count | 2 | 2 | 1 | 5 | 10 |
| | % within Cluster | 3.5% | 8.0% | 3.4% | 16.7% | 7.1% |
| | % of Total | 1.4% | 1.4% | .7% | 3.5% | 7.1% |
| Somewhat Move About | Count | 24 | 6 | 7 | 6 | 43 |
| | % within Cluster | 42.1% | 24.0% | 24.1% | 20.0% | 30.5% |
| | % of Total | 17.0% | 4.3% | 5.0% | 4.3% | 30.5% |
| Move About Easily | Count | 29 | 16 | 20 | 18 | 83 |
| | % within Cluster | 50.9% | 64.0% | 69.0% | 60.0% | 58.9% |
| | % of Total | 20.6% | 11.3% | 14.2% | 12.8% | 58.9% |
| Total | Count | 57 | 25 | 29 | 30 | 141 |
| | % within Cluster | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | % of Total | 40.4% | 17.7% | 20.6% | 21.3% | 100.0% |

Table 17

Crosstabs of Household Income and Shopping Orientation Clusters

| Household Income | | Cluster 1 Decisive | Cluster 2 Confident | Cluster 3 Bargain | Cluster 4 Appearance | Total |
|---|---|---|---|---|---|---|
| **Below $20,000** | Count | 2 | 1 | 5 | 3 | 11 |
| | % within Cluster | 4.3% | 5.0% | 17.9% | 11.1% | 9.0% |
| | % of Total | 1.6% | .8% | 4.1% | 2.5% | 9.0% |
| **20,001-29,999** | Count | 1 | 0 | 4 | 3 | 8 |
| | % within Cluster | 2.1% | .0% | 14.3% | 11.1% | 6.6% |
| | % of Total | .8% | .0% | 3.3% | 2.5% | 6.6% |
| **30,000-39,999** | Count | 6 | 3 | 1 | 5 | 15 |
| | % within Cluster | 12.8% | 15.0% | 3.6% | 18.5% | 12.3% |
| | % of Total | 4.9% | 2.5% | .8% | 4.1% | 12.3% |
| **40,000-49,999** | Count | 9 | 3 | 8 | 0 | 20 |
| | % within Cluster | 19.1% | 15.0% | 28.6% | .0% | 16.4% |
| | % of Total | 7.4% | 2.5% | 6.6% | .0% | 16.4% |
| **50,000-59,999** | Count | 8 | 3 | 1 | 1 | 13 |
| | % within Cluster | 17.0% | 15.0% | 3.6% | 3.7% | 10.7% |
| | % of Total | 6.6% | 2.5% | .8% | .8% | 10.7% |
| **60,000-69,999** | Count | 7 | 2 | 2 | 2 | 13 |
| | % within Cluster | 14.9% | 10.0% | 7.1% | 7.4% | 10.7% |
| | % of Total | 5.7% | 1.6% | 1.6% | 1.6% | 10.7% |

Table 17 (Continued)

Crosstabs of Household Income and Shopping Orientation Clusters

| Household Income | | Cluster 1 Decisive | Cluster 2 Confident | Cluster 3 Bargain | Cluster 4 Appearance | Total |
|---|---|---|---|---|---|---|
| **70,000-79,999** | Count | 6 | 1 | 0 | 2 | 9 |
| | % within Cluster | 12.8% | 5.0% | .0% | 7.4% | 7.4% |
| | % of Total | 4.9% | .8% | .0% | 1.6% | 7.4% |
| **80,000 or above** | Count | 8 | 7 | 7 | 11 | 33 |
| | % within Cluster | 17.0% | 35.0% | 25.0% | 40.7% | 27.0% |
| | % of Total | 6.6% | 5.7% | 5.7% | 9.0% | 27.0% |
| **Total** | Count | 47 | 20 | 28 | 27 | 122 |
| | % within Cluster | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | % of Total | 38.5% | 16.4% | 23.0% | 22.1% | 100.0% |

Summary of the Shopping Orientation Clusters

Four shopping orientation clusters were identified in this study. They were named: *Decisive Apparel Shoppers*, *Confident Apparel Shoppers*, *Bargain Apparel Shoppers*, and *Appearance Conscious Apparel Shoppers*. The *Decisive Apparel Shoppers* represented women that usually buy without hesitation when they like a particular apparel item. These shoppers were also concerned about their reputation, dressed well to maintain a good reputation, shopped at the most convenient store to save time, shopped around for bargains, and used advertisements to determine where to shop. Female shoppers named the *Confident Apparel Shoppers* were described as good clothing shoppers, they were confident in their ability to choose the right clothing, and had an up-to-date wardrobe. The *Bargain Apparel Shoppers* read advertisements for announcements of sales, shopped around for bargains to save money, and liked to be considered well groomed. Women in identified as the *Appearance Conscious Apparel Shoppers* believed that a person's reputation was affected by how she dresses and that dressing well was an important part of their lives. These women were also confident in their ability to choose the right clothing for themselves.

Overall the respondents in each shopping orientation cluster placed more importance on the *Sensory/Layout* environmental factor, which included the variables of *temperature*, *air quality*, *lighting*, *scent*, *noise level*, and *layout*. The *Bargain Apparel Shopper* had the highest mean scores for importance ratings on both environmental dimension factors. This finding indicates that the environment of the store was more important to these shoppers than the environment was to the other shopper clusters.

With respect to demographic characteristics, three of the four shopping orientation clusters (Clusters 2, 3, 4) had a higher percentage of women in the 46-52 age category. For the *Decisive Apparel Shopper* cluster (Cluster 1), more women were in the 25-31 age category. Women in all shopping orientation clusters had attended some college, with 33% that attained a college degree in Cluster 4, *Appearance Conscious Apparel Shoppers*, and 18% that attained a graduate degree in Cluster 1, *Decisive Apparel Shoppers*. Furthermore, more than 20% of women in each cluster identified themselves as professionals. The question regarding ambulatory ability revealed that most women indicated they could move about easily in retail stores. Finally, the *Decisive Apparel Shoppers* and the *Bargain Apparel Shoppers* (Cluster 1 and Cluster 3) had a household income of $40,000-49,999 and women in Cluster 2 and Cluster 4 (*Confident Apparel Shoppers* and *Appearance Conscious Apparel Shoppers* reported a household income of $80,000 or over.

**3-$H_O$. There is no difference in perception of environmental dimensions for first store choice for each shopping orientation.**

The objective of this hypothesis was to test for differences in perception of environmental dimensions for first store choice across the shopping orientation clusters. Perception of first store choice was measured using bipolar adjectives and selected environmental dimensions on a semantic differential scale. A two-step process was used to analyze this hypothesis. First, the perception variables were factor analyzed, and then MANOVA was used to test for differences in perceptions of first store choice for each shopping orientation cluster. Shopping orientation clusters developed in Hypothesis 2 were used for this analysis.

Factor Analysis of Perception Variables

Factor analysis was run on the perception variables measured by bipolar adjectives of environmental dimensions using the same type of analysis as Hypothesis 1. Assumptions were

tested based on measures set forth by Hair et al. (1998). For the present study, KMO's Measure of Sampling Adequacy (.895) and Bartlett's Test of Sphericity $X^2$ (df =66) = 1044.286, $p$=.000) revealed that factor analysis was appropriate for the perception variables. As stated by Hair et al, the KMO measure of sampling adequacy should be above .50, and Bartlett's Test should be significant (Hair et al.). In addition, correlations and anti-image correlations were examined. A visual inspection of matrices revealed that anti-image correlations were small and a majority of correlations were greater than .30.

Principal components analysis was used to factor the 12 perception of environment variables. Factors with eigenvalues greater than 1 were retained. Factors were rotated using varimax rotation. Rotated loadings ranged from .68 to .95. Hair et al. (1998) states that loadings .50 or greater are practically significant. Based on this criterion, all variables were retained for further analysis (See Table 18).

Results indicated that 64% of the variance was explained by two factors. Figure 4 shows a scree plot of the factors that emerged from the factor analysis. Factor 1 included the following variables: *temperature, air quality, scent, layout, fixtures/racks, noise, lighting, flooring, music, aisle space, and décor. Air quality* had the highest loading (.87), followed by *temperature* (.84), *fixtures/racks* (.83), and *décor* (.80). Preference in naming the factors was given to variables that loaded the highest. The air quality variable loaded highest on Factor 1, followed by temperature, fixtures/racks, and décor. Factor 1 was named the *Ventilation/Sensory* perception factor. *Signage* was the only variable included in Factor 2, with a loading of .95. This factor was named the *Signs* perception factor.

Finally, the factors were tested for reliability using Cronbach's alpha. According to Hair et al (1998), a reliability score of .70 is acceptable. Factor 1 had a reliability score of .93. Reliability was not calculated for Factor 2 because this factor consisted of only one variable. Table 18 shows the factor loadings, eigenvalues, percent of variance and the Cronbach's alpha coefficient for each perception variable.

Table 18

Factor Analysis for Perception of Environment Variables

| Perception Factor | Loading | Eigenvalue | % of Variance | Cronbach's Alpha |
|---|---|---|---|---|
| Factor 1 **Ventilation/Sensory** | | 6.67 | 55.54 | .93 |
| Air quality | .87 | | | |
| Temperature | .84 | | | |
| Fixtures/racks | .83 | | | |
| Décor | .80 | | | |
| Noise | .80 | | | |
| Lighting | .79 | | | |
| Layout | .78 | | | |
| Scent | .73 | | | |
| Flooring | .72 | | | |
| Music | .70 | | | |
| Aisle Space | .68 | | | |
| Factor 2 **Signs** | | 1.06 | 8.87 | N/A |
| Signs | .96 | | | |
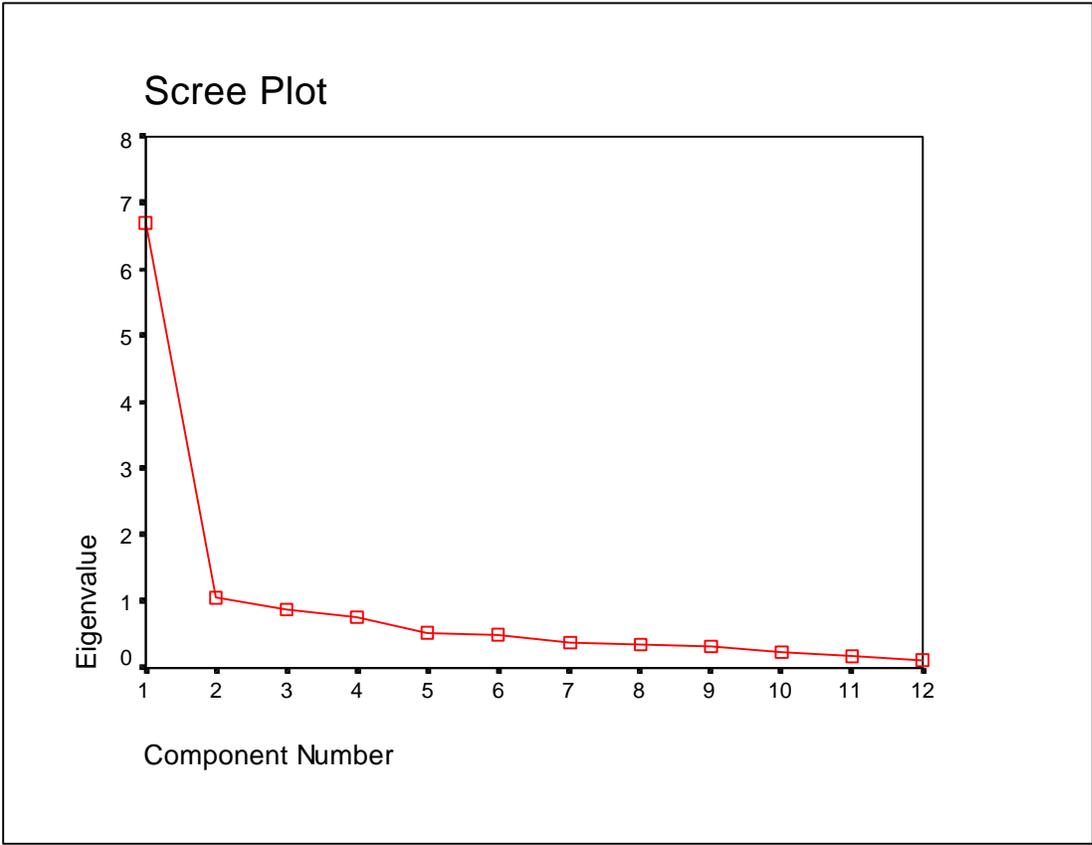
Figure 4. Scree Plot of Factor Analysis on Perception Variables

MANOVA

This hypothesis tested for differences in perceptions of environment for first store choice across the four shopping orientation clusters identified in Hypothesis 2. These clusters included the *Decisive Apparel Shoppers*, the *Confident Apparel Shoppers*, the *Bargain Apparel Shoppers*, and the *Appearance Conscious Apparel Shoppers*. The perception factors, *Ventilation/Sensory* and *Signs* identified in the factor analysis portion of this hypothesis were also used. This analysis was conducted in the same manner as Hypotheses 1 and 2. The assumptions were tested, the MANOVA analysis was run, and Pillai's criterion was used for significance testing.

Before evaluating the results, the assumptions of independence of observations, equality of variance-covariance matrices for all independent variables, and normality of the dependent measures were tested. Observations were independent. Results of Box's Test of Equality were not significant, $F(9, 66017)= 1.811, p= .061$); therefore, covariance matrices for the perception factors were assumed to be equal across the shopping orientation clusters. Additionally, normality was tested using the Kolmogorov-Smirnov test of normality. For the *Ventilation/Sensory* perception factor (Factor 1), with the exception of Cluster 4 results revealed that all other clusters were not normal. Clusters were not normal for the *Signs* perception factor (Factor 2). Table 19 shows the results of the normality tests.

Pillai's criterion was used to determine if multivariate tests were significant. This criterion was used because assumptions were violated. Results were significant, $F(6, 244) =3.203, p= .005$). Therefore, the null hypothesis was rejected in favor of the alternative hypothesis. Differences in perception of the environment for first store choice were found across the shopping orientation clusters. Next, *post hoc* tests were run to determine where the differences occurred. Tests revealed no differences in the *Ventilation/Sensory* perception factor for each cluster, however; differences were found in the *Signs* perception factor, which consisted of only one variable, signage. Cluster 1 and Cluster 3 (*Decisive Apparel Shoppers and Bargain Apparel Shoppers*), (*p*=.011) differed with respect to the *Signs* perception factor (Factor 2) and Cluster 3 and Cluster 4 (*Bargain Apparel Shoppers* and *Appearance Conscious Apparel Shoppers* (*p*= .034) also differed. The *Decisive Apparel Shoppers* (Cluster 1) had a higher

Table 19

Kolmogorov-Smirnov Test of Normality for Perception Factors Across Shopping Orientation
Clusters

|  | $F$ | df | $p$ |
|---|---|---|---|
| Factor 1 **Ventilation/Sensory for:** |  |  |  |
| Cluster 1 **Decisive** | .13 | 52 | .043* |
| Cluster 2 **Confident** | .21 | 22 | .013* |
| Cluster 3 **Bargain** | .17 | 27 | .047* |
| Cluster 4 **Appearance** | 14 | 25 | .194 |
| Factor 2 **Signs for:** |  |  |  |
| Cluster 1 **Decisive** | .18 | 52 | .000*** |
| Cluster 2 **Confident** | .19 | 22 | .047* |
| Cluster 3 **Bargain** | .21 | 27 | .003** |
| Cluster 4 **Appearance** | .19 | 25 | .023* |

Note. * = $p < .05$, ** $p < .01$, *** $p < .001$

perception score than the Bar*gain Apparel Shoppers* (Cluster 3) for the *Signs* perception factor (Factor 2) and the *Appearance Conscious Apparel Shoppers* (Cluster 4) had a higher perception score than the *Bargain Apparel Shoppers* (Cluster 3) (See Table 20). As shown in Table 20, the *Appearance Conscious Apparel Shoppers* had a mean perception score of 3.20, followed by 3.17 for the *Decisive Apparel Shoppers*, 2.59 for the *Confident Apparel Shoppers*, and 2.11 for the *Bargain Apparel Shoppers*. The *Signs* perception factor, consisted of the variable, signage, which was perceived as more difficult to read for the *Bargain Apparel Shoppers* than for the other shoppers. Although the perception rating for *Signs* was on the negative side of the 7-point semantic differential scale, the *Appearance Conscious Apparel Shoppers* gave the perception factor, *Signs*, a higher perception rating than the other shoppers. This finding was not surprising because one of the main characteristics of the *Appearance Conscious Apparel Shoppers* was maintaining a good reputation through dress. For retailers, the *Appearance Apparel Shopper* would equate the use of attractive, easy to read signs as one of the ways stores could improve their environment.

First Store Choice Profile of Shopping Orientation Clusters

The four-cluster solution obtained in Hypothesis 2 was used in the present hypothesis to profile respondents. Shopping orientation clusters were profiled based on their first store choice. Crosstabs of first store choice and the shopping orientation clusters are shown in Table 21. Percentages are discussed in terms of percent within the shopping orientation cluster.

The department store was chosen most often as first store choice for all shopping orientation clusters. Of the respondents included in the *Decisive Apparel Shopper* (Cluster 1), 67.9% selected department store as their first choice, followed by 45.8% in the *Confident Apparel Shopper* Cluster (Cluster 2), 69.0% in the *Bargain Apparel Shopper* Cluster (Cluster 3), and 43.3% in the *Appearance Conscious Apparel Shopper* Cluster (Cluster 4).

The next stores chosen most often as first choice were discount stores (21.4%) for the *Decisive Apparel Shopper* (Cluster 1), specialty stores (29.2%) for the *Confident Apparel Shopper* (Cluster 2), discount store (20.7%) for the *Bargain Apparel Shopper* (Cluster 3), and other retailer (26.7%) for the *Appearance Conscious Apparel Shopper* (Cluster 4) (See Table 21).

Table 20

Mean Scores of Perception Factors for Each Shopping Orientation Cluster

| | Mean | Std. Deviation |
|---|---|---|
| Factor 1 **Ventilation/Sensory for:** | | |
| Cluster 1 **Decisive** | 5.48 | .91 |
| Cluster 2 **Confident** | 5.93 | .72 |
| Cluster 3 **Bargain** | 5.65 | .90 |
| Cluster 4 **Appearance** | 5.81 | .88 |
| Total | 5.66 | .88 |
| Factor 2 **Signs for:** | | |
| Cluster 1 **Decisive** | 3.17 | 1.32 |
| Cluster 2 **Confident** | 2.59 | 1.14 |
| Cluster 3 **Bargain** | 2.11 | 1.01 |
| Cluster 4 **Appearance** | 3.20 | 1.66 |
| Total | 2.85 | 1.37 |

Table 21

Crosstabs of First Store Choice and Shopping Orientation Clusters

| First Store Choice | | Cluster 1 Decisive | Cluster 2 Confident | Cluster 3 Bargain | Cluster 4 Appearance | Total |
|---|---|---|---|---|---|---|
| **Department** | Count | 38 | 11 | 20 | 13 | 82 |
| | % within Cluster | 67.9% | 45.8% | 69.0% | 43.3% | 59.0% |
| | % of Total | 27.3% | 7.9% | 14.4% | 9.4% | 59.0% |
| **Discount** | Count | 12 | 1 | 6 | 5 | 24 |
| | % within Cluster | 21.4% | 4.2% | 20.7% | 16.7% | 17.3% |
| | % of Total | 8.6% | .7% | 4.3% | 3.6% | 17.3% |
| **Specialty** | Count | 2 | 7 | 2 | 4 | 15 |
| | % within Cluster | 3.6% | 29.2% | 6.9% | 13.3% | 10.8% |
| | % of Total | 1.4% | 5.0% | 1.4% | 2.9% | 10.8% |
| **Other** | Count | 4 | 5 | 1 | 8 | 18 |
| | % within Cluster | 7.1% | 20.8% | 3.4% | 26.7% | 12.9% |
| | % of Total | 2.9% | 3.6% | .7% | 5.8% | 12.9% |
| **Total** | Count | 56 | 24 | 29 | 30 | 139 |
| | % within Cluster | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | % of Total | 40.3% | 17.3% | 20.9% | 21.6% | 100.0% |

***4-H<sub>O</sub>.*** ***There is no difference in attitude toward first store choice for each store type.***

Chi-square analysis was used to test for significant differences in the distribution of attitude responses toward first store choice. The attitude variable was a composite of the importance of environmental dimension variables and the perception of the environment variables for first store choice. Attitude was formed by multiplying the importance and perception variables, then summing the products of the two variables, and dividing the entire equation by 100 to convert the scores to the original 7-point scale used in the questionnaire.

Respondents were asked to choose one of four store types as their first store choice. The store types included in the study were department stores, discount stores, specialty stores, and other retailers. Respondents that selected other retailers as their first store choice listed this retailer in the space provided on the questionnaire.

The only assumption of Chi-square is of expected frequencies. Chi-square should not be used if more than 20% of the cells have expected frequencies less than 5 or if the minimum expected frequency is less than 1. Violation of this assumption is critical because the observed significance level based on the Chi-square test may not be correct (Norusis, 1998). For this analysis, 15 cells or 62.5% of the cells had expected frequency counts less than 5. The minimum expected count was 33%. The original calculated attitude scores ranged from 1 to 7; however, no respondent had a score of 7 so the actual range was 1 to 6. To increase the expected frequency count, the attitude scores were recoded. Scores ranging from 1 to 3 were combined, and scores ranging from 5 to 7 were combined. For the recoded data, 3 cells or 25% had an expected frequency count of less than 5 and the minimum expected count was 2.30.

The Chi-square test revealed that results were not significant $(C^2$ (df = 6)= 4.145, $p=$ .657). There were no statistical differences found in attitude toward first store for each store type. For the present study, results revealed that 43.8% of the respondents had relatively unfavorable attitudes (i.e., attitude score of 1-3 on 7-point scale) toward their first store of choice. Of the total, 22.7% of the respondents expressed unfavorable attitudes toward department stores, followed by 9.4% with unfavorable attitudes toward discount stores, 4.7% for specialty stores, and 7.0% for other retailers (See Table 22). As shown in Table 22, 39.8% of the respondents expressed neither favorable nor unfavorable attitudes (i.e., attitude score of 4 on 7-point scale) about their first store choice. Approximately 16% of the respondents expressed favorable

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Table 22

Crosstabs of Attitude Toward First Store Choice

| Attitude | | Department | Discount | Specialty | Other | Total |
|---|---|---|---|---|---|---|
| 1-3 | Count | 29 | 12 | 6 | 9 | 56 |
| Unfavorable | % within 1$^{st}$ choice | 37.7% | 57.1% | 42.9% | 56.3% | 43.8% |
| | % of total | 22.7% | 9.4% | 4.7% | 7.0% | 43.8% |
| 4 | Count | 34 | 7 | 5 | 5 | 51 |
| Neither | % within 1$^{st}$ choice | 44.2% | 33.3% | 35.7% | 31.3% | 39.8% |
| | % of total | 26.6% | 5.5% | 3.9% | 3.9% | 39.8% |
| 5-7 | Count | 14 | 2 | 3 | 2 | 21 |
| Favorable | % within 1$^{st}$ choice | 18.2% | 9.5% | 21.4% | 12.5% | 16.4% |
| | % of total | 10.9% | 1.6% | 2.3% | 1.6% | 16.4% |
| Total | Count | 77 | 21 | 14 | 16 | 128 |
| | % within 1$^{st}$ choice | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| | % of total | 60.2% | 16.4% | 10.9% | 12.5% | 100.0% |

Note. Sample size n = 128, 3 cells (25.0%) have an expected count of less than 5.

Attitude was calculated using the following equation: A= (Σ [I x P])/100 where
A= Attitude Toward First Store Choice
I = Importance of the 12 Environmental Dimensions
P= Perception of first store choice measured by Bipolar Adjectives and 12 Environmental Dimensions
Attitude scores ranging from 1-3 were unfavorable, 4 were neither unfavorable nor favorable, and 5-7 were favorable.

attitudes (i.e., attitude score of 5-6 on 7-point scale) toward their first store of choice.

In addition to this analysis, crosstabs were run to determine the likelihood of respondents revisiting their store of first choice relative to attitude (See Table 23). Likelihood scores were measured on semantic differential scale. The 7-point scale was recoded, with scores ranging from 1 to 3 representing unlikely to visit again and scores ranging from 5 to 7 representing likely to visit again.

Of the respondents included in the analysis (n = 130), 16% of those with a favorable attitude toward their store of first choice indicated they would likely visit their store of first choice again (i.e., likely visit = 5-7 on 7-point scale). However, 37.7% of respondents, who expressed an unfavorable attitude, indicated they were likely to visit their first choice again. This finding suggests that dimensions/attributes other than or in addition to those included in this study may contribute to repeat patronage (See Table 23). Another explanation of the finding is that the respondents had no other better store choice available for shopping.

Overall, the findings of this hypothesis suggest that there was no difference in attitude toward first store choice. Attitude toward first store choice did not differ for respondents in this study regardless of store type. With respect to importance and perception of first store choice relative to environmental dimensions as a composite measure (i.e., attitude) respondents in this study perceived no differences in retail stores. This finding may have occurred because environmental dimensions were not perceived as being a determining factor in attitude toward first store choice or because respondents used dimensions other than those presented in this study to form an attitude or opinion about retail stores.

Table 23

Crosstabs of Attitude and Future Store Patronage

| Attitude | | Unlikely to Visit 1-3 | Unlikely Nor Likely 4 | Likely to Visit 5-7 | Total |
|---|---|---|---|---|---|
| 1-3 Unfavorable | Count | 5 | 3 | 49 | 57 |
| | % within visit | 100.0% | 75.0% | 40.5% | 43.8% |
| | % of total | 3.8% | 2.3% | 37.7% | 43.8% |
| 4 Neither | Count | 0 | 1 | 51 | 52 |
| | % within visit | .0% | 25.0% | 42.1% | 40.0% |
| | % of total | .0% | .8% | 39.2% | 40.0% |
| 5-7 Favorable | Count | 0 | 0 | 21 | 21 |
| | % within visit | .0% | .0% | 17.4% | 16.2% |
| | % of total | .0% | .0% | 16.2% | 16.2% |
| Total | Count | 5 | 4 | 121 | 130 |
| | % within 1st | 100.0% | 100.0% | 100.0% | 100.0% |
| | choice | 3.8% | 3.1% | 93.1% | 100.0% |
| | % of total | | | | |

Note. n = 130, 6 cells (66.7%) have an expected count of less than 5.

Attitude was calculated using the following equation: A= ($\Sigma$ [I x P])/100 where
A= Attitude Toward First Store Choice
I = Importance of the Store Environment represented by12 Environmental Dimensions
P= Perception of the Store Environment represented by Bipolar Adjectives and 12
Environmental Dimensions
Attitude score ranging from 1-3 is unfavorable, 4 is neither unfavorable nor favorable, 5-7 is
favorable attitude

CHAPTER VI

Discussion, Summary, Implications, and Recommendations


The decision to patronize a particular store usually starts with a set of characteristics or attributes that consumers consider important. Consumers then use these attributes to make decisions regarding what store or stores can cater to their particular needs. Past retail and marketing studies have identified several consumer-oriented store attributes such as price, quality, variety, discounts, store reputation and their relationship to store patronage, but these studies overlooked how the physical environment affects retail store patronage. In addition, very few studies have addressed the issue of shopping scenarios and how they affect store patronage. The purpose of this study was to examine the influence of selected environmental dimensions on store patronage using specific apparel shopping scenarios. A total of 151 women throughout the United States participated in the mail survey. The expected response rate was 30%, but approximately 18% of the returned surveys were usable. This chapter provides a summary of the results, implications of the findings, and recommendations for further research.

Discussion

Four hypotheses were developed to investigate the objectives of this research. A conceptual framework adapted from previous research was used to display several relationships. This research examined differences in (a) importance ratings of environmental dimensions for three shopping scenarios, (b) importance ratings of environmental dimensions for each shopping orientation, (c) perceptions of first store choice for each shopping orientation and (d) attitude toward first store choice for each store type.

**1-$H_O$. There is no difference in the importance ratings of selected environmental dimensions for each shopping scenario.**

Importance of Environmental Dimensions and Shopping Scenarios. Hypothesis 1 tested for differences in the importance of selected environmental dimensions for each shopping scenario. Factor analysis was performed on the importance ratings of 12 environmental dimensions selected from previous research and consumer behavior textbooks. The resulting two environmental dimension factors, *Sensory/Layout* and *Music/Aesthetics*, accounted for 65% of the total variance. Both factors had reliability scores above .70, and tests of assumptions revealed

the factor analysis was appropriate for the variables. In addition, the factors were consistent with findings from previous research (Baker et al., 1988; Bitner, 1992). After the factors were developed, MANOVA was used to test the hypothesis. Results indicated no statistical differences in the importance of selected environmental dimensions across shopping scenario; however, previous research suggested that differences should have occurred. Bloch and Richins (1983) found that customers become more involved with the purchase of a product if a particular situation is perceived as important. In this research, the shopping scenario was used as the situation and the importance of selected environmental dimensions was dependent on scenario. Perhaps no significant differences were found in the present study because the sample size was relatively small. Less than 100 subjects were included in each shopping scenario. Given the three shopping scenarios and the two environmental dimension factors, the sample size for each scenario (i.e., $n = 47$, $n = 46$, $n = 52$) which created multiple empty or statistically small cells in the tests. Adequate testing of the hypothesis was not possible. In addition, some but not all assumptions of MANOVA were violated. Violation of assumptions reduces the validity and generalizability of the results; therefore, further research with a larger sample size is needed to test this hypothesis.

**2-$H_O$.** *There is no difference in importance ratings of selected environmental dimensions for each shopping orientation.*

Importance of Environmental Dimensions and Shopping Orientations. The second hypothesis tested for differences in selected environmental dimensions for each shopping orientation using a three-step process. Shopping orientation variables were factor analyzed. Next, shopping orientation factors were cluster analyzed to group respondents according to their shopping characteristics. Then, the environmental dimension factors and shopping orientation clusters were used in MANOVA. The *Sensory/Layout* environmental dimension factor and the *Music/Aesthetics* environmental dimension factor identified in Hypothesis 1 were used in this analysis. Nineteen shopping orientation statements were combined with factor analysis to form six shopping orientation factors. Tests of assumptions revealed the analysis was appropriate; however, two variables (i.e., *attention to clothing prices*, *time planning shopping*) were not used in the MANOVA analysis because of factor loadings ≤ .40 and communalities less than .50 for the two items. The shopping orientation factors were named based on variables with the highest

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loadings: *Confident Apparel Shopper, Brand Conscious Apparel Shopper*, *Appearance Conscious Apparel Shopper*, *Convenience/Time Apparel Shopper*, *Bargain Apparel Shopper*, and the last factor consisted of only one variable, buy without hesitation. This shopping orientation factor was named the *Decisive Apparel Shopper*.

Women that identified with the *Confident* shopping orientation (Factor 1) were confident in their ability to shop for clothing. This shopper was similar to Tatzel's independent shopper. For example, the independent shopper was capable of shopping alone, could choose the right clothing, and was very self-confident. On the other hand, the *Confident Apparel Shopper* in this study was the opposite of Tatzel's anxious shopper (1982). The anxious shopper was fearful of dressing incorrectly, and needed reassurance and guidance from others when shopping for clothing.

With regard to the *Brand Conscious* shopping orientation (Factor 2), this factor was identical to the brand conscious shopper identified by Shim and Kotsiopulos (1993). She preferred well-known brands, certain brands/stores, and high level of quality.

For this study, the *Appearance Conscious* shopping orientation (Factor 3) and *Convenience/Time* shopping orientation factor (Factor 4) were similar to the highly involved shopper and the convenience/time conscious shopper identified by Shim and Kotsiopulos (1993). A woman who identified with the *Appearance Conscious* (Factor 3) factor believed that dressing well was an important part of her life and that her reputation was affected by how she dressed. In addition to dressing well, Shim and Kotsiopulos' highly involved shopper was concerned with appearance and kept her wardrobe up-to-date with fashion trends.

As the convenience/time shoppers discussed by Shim and Kotsiopulos (1993), women in this study who identified with the *Convenience/Time* (Factor 4) shopping orientation factor, shopped at the most convenient store and at stores that saved time. Unlike Shim and Kotsiopulos' shopper, the *Convenience/Time* shopper also spent time planning her clothing shopping.

The *Bargain Apparel Shopper* (Factor 5) was the same as the economic/price conscious shopper discussed by Shim and Kotsiopulos (1993). Women with a *Bargain* shopping orientation and the economic/price conscious shoppers were described as those that read sale advertisements and shopped around for bargains.

The last shopping orientation factor, the *Decisive Apparel Shopper* (Factor 6) had no comparable type in previous research. This shopper only identified with one variable, the buy without hesitation variable, which loaded with Shim and Kotsiopulos' confident/appearance, fashion conscious shopper.

The six shopping orientation factors were used in cluster analysis. Shopping orientation factors were clustered using hierarchical clustering and K-means. Ward's method and squared Euclidean distance was selected because of the relatively small sample size (n = 141). Four clusters were selected from hierarchical cluster by examining the agglomeration schedule, icicle plot, dendrogram, and cluster membership. The four-cluster solution was then used in K-means cluster. The ANOVA table revealed significant differences for all factors, which indicated that each factor was helpful in clustering respondents. Respondents included in this study identified with four of the six shopping orientation factors. The four clusters were named the *Decisive Apparel Shoppers, Confident Apparel Shoppers, Bargain Apparel Shoppers*, and *Appearance Conscious Apparel Shoppers*. Clusters were profiled using demographic variables and environmental dimensions.

MANOVA was used to test for differences in the importance rating scores of environmental dimension factors for each shopping orientation cluster. Tests of assumptions revealed that the observed covariance matrices were not equal across the clusters. In addition, Clusters 1, 3, and 4 (*Decisive Apparel Shopper, Bargain Apparel Shopper, and Appearance Conscious Apparel Shopper*) had a normal distribution for the *Sensory/Layout* environmental dimension (Factor 1). With the exception of the *Decisive Apparel Shopper* (Cluster 1), the distribution of clusters was normal for the *Music/Aesthetics* environmental dimension (Factor 2). Multivariate tests revealed that results were significant, therefore indicating differences in the environmental dimension factors across the shopping orientation clusters. *Post hoc* tests revealed statistical differences between the *Decisive Apparel Shoppers* (Cluster 1) and the *Bargain Apparel Shoppers* (Cluster 3), the *Confident Apparel Shoppers* (Cluster 2) and the *Bargain Apparel Shoppers* (Cluster 3), as well as the *Appearance Conscious Apparel Shoppers* (Cluster 4) and the *Bargain Apparel Shoppers* (Cluster 3) for the *Sensory/Layout* environmental dimension (Factor 1). In addition, statistical differences were found between the *Bargain Apparel Shoppers* (Cluster 3) and the *Appearance Conscious Apparel Shopper* (Cluster 4) for the

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*Music/Aesthetics* factor (Factor 2). This study confirms previous research conducted by Shim and Kotsiopulos (1993) on shopping orientations. These researchers found differences in three shopping orientation clusters for the attributes of store personnel, visual image of store, customer service, price, easy access, and brand/fashion.

All shopping orientation clusters placed more importance on the variables included in the *Sensory/Layout* environmental dimension. These variables included *temperature, air quality, lighting, scent, noise level*, and *layout*. Women in Cluster 1, the *Decisive Apparel Shoppers* usually bought apparel items they liked without hesitation. Some other characteristics of these women included: concern about their reputation, maintaining a good reputation, and shopping at the most convenient store. Most of the women in this cluster were in the 25-31 age category, had attended some college, although some had graduate degrees, they were professionals, could move about easily in retail stores, and had a household income of $40,000-49,999.

*Confident Apparel Shoppers* were represented by Cluster 2. These women described themselves as good clothing shoppers, they were confident in their ability to choose clothing, and maintained an up-to-date wardrobe. A higher percentage of these women indicated they were 46-52 years of age, indicated they attained some college, were professional, experienced no trouble moving about in retail stores, and reported a household income of $80,000 or above.

Women in Cluster 3 were named the *Bargain Apparel Shoppers*. These Bargain Apparel Shoppers read advertisements for announcements of sales, shopped around for bargains to save money, and liked to be considered well groomed. With the exception of household income, these women had the same demographic characteristics as the *Confident Apparel Shoppers*. Most of the *Bargain Apparel Shoppers* were in the 46-52 age category, they attended some college, and were professionals. Unlike the *Confident Apparel Shoppers*, the *Bargain Apparel Shoppers* had a lower household income of $40,000-49,999.

The last cluster of shoppers was the *Appearance Conscious Apparel Shoppers*. These shoppers believed that a woman's reputation was affected by how she dressed and that dressing was an important part of her life. Women in this cluster were also confident in their ability to choose clothing for themselves. They were among the 46-52 age category, some women had attended college, while others had attained a college degree, they were professionals, could move about easily in retail stores, and reported a household income of $80,000 or over.

***3-H<sub>O</sub>. There is no difference in perception of first store choice by selected environmental***

        ***dimensions for each shopping orientation.***

Perception of First Store Choice and Shopping Orientations. Hypothesis 3 used a three-step process similar to that of Hypothesis 2. This hypothesis tested for differences in perception of first store choice for each shopping orientation. Perception variables were factor analyzed, shopping orientation clusters were profiled, and then MANOVA was used to test for differences in perception of first store choice for each shopping orientation cluster. Clusters identified in Hypothesis 2 were used in this analysis.

For Hypothesis 3, perception of first store choice variables were factored using the same technique used on the importance ratings for environmental dimension variables in Hypothesis 1and compared to the shopping orientation variables in Hypothesis 2. Tests of assumptions for the perception of first choice variables revealed that analysis was appropriate. The KMO measure was .895 and Bartlett's test was significant. Two factors emerged as a result of the analysis. Only one variable, *signage*, loaded on Factor 2, and all other variables loaded on Factor 1. Factor 1 was named *Ventilation/Sensory* environmental dimension. Cronbach's alpha was .93, well above the acceptable limit of .70 for Factor 1; therefore, the factor was considered to be reliable, and was used in further analysis. Cronbach's alpha was not calculated for Factor 2 because this factor consisted of only one variable.

MANOVA tested for differences in perception of first store choice for each shopping orientation cluster identified in Hypothesis 2. This analysis was run in the same manner as Hypothesis 1 and Hypothesis 2. Assumptions were tested, MANOVA was run, and Pillai's criterion was examined for significance. Tests of assumptions revealed equal covariance matrices for perception factors across the shopping orientation clusters. With the exception of the *Appearance Conscious Apparel Shoppers* (Cluster 4) for Factor 1, *Ventilation/Sensory*, results were not normal. Clusters were not normal for Factor 2, *Signs*. Results of the MANOVA tests were significant; therefore, differences in perception of first store choice did exist across the shopping orientation clusters. *Post hoc* test revealed no difference in Factor 1, *Ventilation/Sensory* for each cluster, but differences were found between the *Decisive Apparel Shoppers* (Cluster 1) and the *Bargain Apparel Shoppers* (Cluster 3) for Factor 2, *Signs*.

Differences were also found between the *Bargain Apparel Shoppers* and the *Appearance Conscious Apparel Shoppers* (Cluster 4) for Factor 2.

Shopping orientation clusters from Hypothesis 2 were profiled based on respondent's first store choice. Across all clusters, department stores were chosen as first store choice. Of the *Decisive Apparel Shoppers*, 68% selected the department store as their first choice. Forty-six percent of the *Confident Apparel Shoppers* chose the department store, followed by 69% of the *Bargain Apparel Shoppers*, and 43% of the *Appearance Conscious Apparel Shoppers*. Next, discount stores were chosen most often as first choice for the *Decisive Apparel Shopper*, followed by specialty stores for the *Confident Apparel Shoppers*, discount stores for the *Bargain Apparel Shoppers*, and other retailers for *Appearance Conscious Apparel Shoppers*.

Although significant differences were found for this hypothesis, further research is needed to confirm the findings presented by this hypothesis. No empirical studies to date have examined differences in perception of the environmental dimensions for first store choice across shopping orientation clusters. Furthermore, violation of assumptions and the relatively small sample size warrant further research in this area.

**4-$H_O$. There is no difference in attitude toward first store choice for each store type.**

<u>Attitude of First Store Choice</u>. Monroe and Guiltinan (1975) suggested that attitude was a function of importance and perceptions of store attributes. Hypothesis 4 combined the importance and perception environmental dimension variables to form a new variable, attitude toward stores, based on the premise from this earlier work. This formula simulates the comparison process made by shoppers.

The attitude formula was adapted from previous research by James, Dreves, and Durand (1976). Attitude was calculated by multiplying importance and perception, then summing the variables, and dividing the entire equation by 100 to convert the scores to the original 7-point scale.

The comparison process discussed by Engel et al. (1995) and Monroe and Guiltnan (1975) proposed that consumers compare the importance of store attributes and their perceptions of these attributes. If the two variables match, Monroe and Guiltnan state that the consumer chooses the store. Engel et al. (1995) proposed that consumers compare the importance of store attributes with their overall perception of the store to determine acceptable and unacceptable

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stores. Furthermore, if an environmental dimension is important and if the store is perceived as offering a particular dimension, then the respondent will select or patronize that store. However, if the environmental dimension is important and the respondent's perception is negative, the respondent would avoid or not shop in the store.

Chi-square was used to test for differences in the distribution of attitude responses for first store choice. Results revealed the expected frequency assumption was violated; therefore, the results of this hypothesis may not be valid. There were no statistical differences found in attitude for first store choice.

Overall, respondents in this study had relatively unfavorable attitudes (i.e., attitude scores ranged from 1-3 on 7-point scale) toward their store of first choice. This finding suggests that to some degree, respondents perceived their first store choice as not providing adequate facilities. Perhaps the first store choice is providing a pleasant environment, but the environmental dimensions of interest to the retailer may not necessarily be important to the female customers that responded to the survey. Approximately 27% expressed neither favorable nor unfavorable attitudes (i.e., attitude score of 4 on a 7-point scale) toward their store of first choice. Perhaps this finding indicates that women in this study did not perceive environmental dimensions as important in choosing their first store choice. Maybe these women used other non-environmental criteria such as good value, quality of merchandise, and prices or a combination of environmental and non-environmental dimensions to make patronage decisions. Only a small percentage of respondents (17.2%) expressed favorable attitudes (i.e., attitude score ranged from 5-6 on 7-point scale) toward their store of first choice, which suggests that the store is adequately providing environmental dimensions that are important to the women in this study.

An interesting finding to note was that of future patronage. A higher percentage of respondents with unfavorable attitudes toward their first store of choice indicated they would return to the store than those with favorable attitudes toward their first store of choice. Thirty-eight percent of those with unfavorable attitudes indicated they would likely visit their first choice again. This finding suggested that dimensions/attributes other than or in addition to those included in this research might have contributed to repeat patronage. However, only 16% of respondents with a favorable attitude toward their store of first choice indicated they would likely visit their store of first choice again.

Two of the four hypotheses included in the study were supported. A revised conceptual framework is presented in Figure 5 to reflect the findings of this research. Bold lines with arrows represent hypotheses that were supported by this research and solid lines represent hypotheses not supported by this research.

<u>Summary</u>

For this data, scenario did not affect the importance of environmental dimension factors. There were no differences in importance ratings of environmental dimension factors for subjects that responded to Scenario A (formal social gathering), Scenario B (family gathering), or Scenario C (work or community activity). Further study is needed to test the results of this hypothesis because the distribution of data were not normal for Scenarios B and C, and there was 50 or less subjects in each scenario, for a total sample size of 151. In addition to studying the affect of scenario on importance ratings environmental dimension factors across scenarios, this research examined differences in importance ratings of environmental dimension factors across shopping orientation clusters.

As stated by Shim and Kotsiopulos (1993), shopping orientations reflect categories of shopper styles and represent consumer needs for products and services. Nineteen statements from previous research were factor analyzed to form six shopping orientation factors: *Confident Apparel Shopper, Brand Conscious Shopper, Appearance Conscious Apparel Shopper, Convenience/Time Shopper, Bargain Apparel Shopper*, and *Decisive Apparel Shopper*. Cluster analysis was then used to group respondents with similar shopping characteristics based on the six shopping orientation factors. As a result of the cluster analysis, four shopping orientation clusters were developed. These shopping orientation clusters were labeled the *Decisive Apparel Shoppers*, *Confident Apparel Shoppers*, *Bargain Apparel Shoppers*, and *Appearance Conscious Apparel Shoppers*. Preference in labeling the shopping orientation clusters was given to the shopping orientation factor with the highest mean score on a 7-point scale. After the shopping orientation clusters were labeled, they were described by examining the largest mean score for each shopping orientation factor, and then by examining the mean scores that occurred most often.
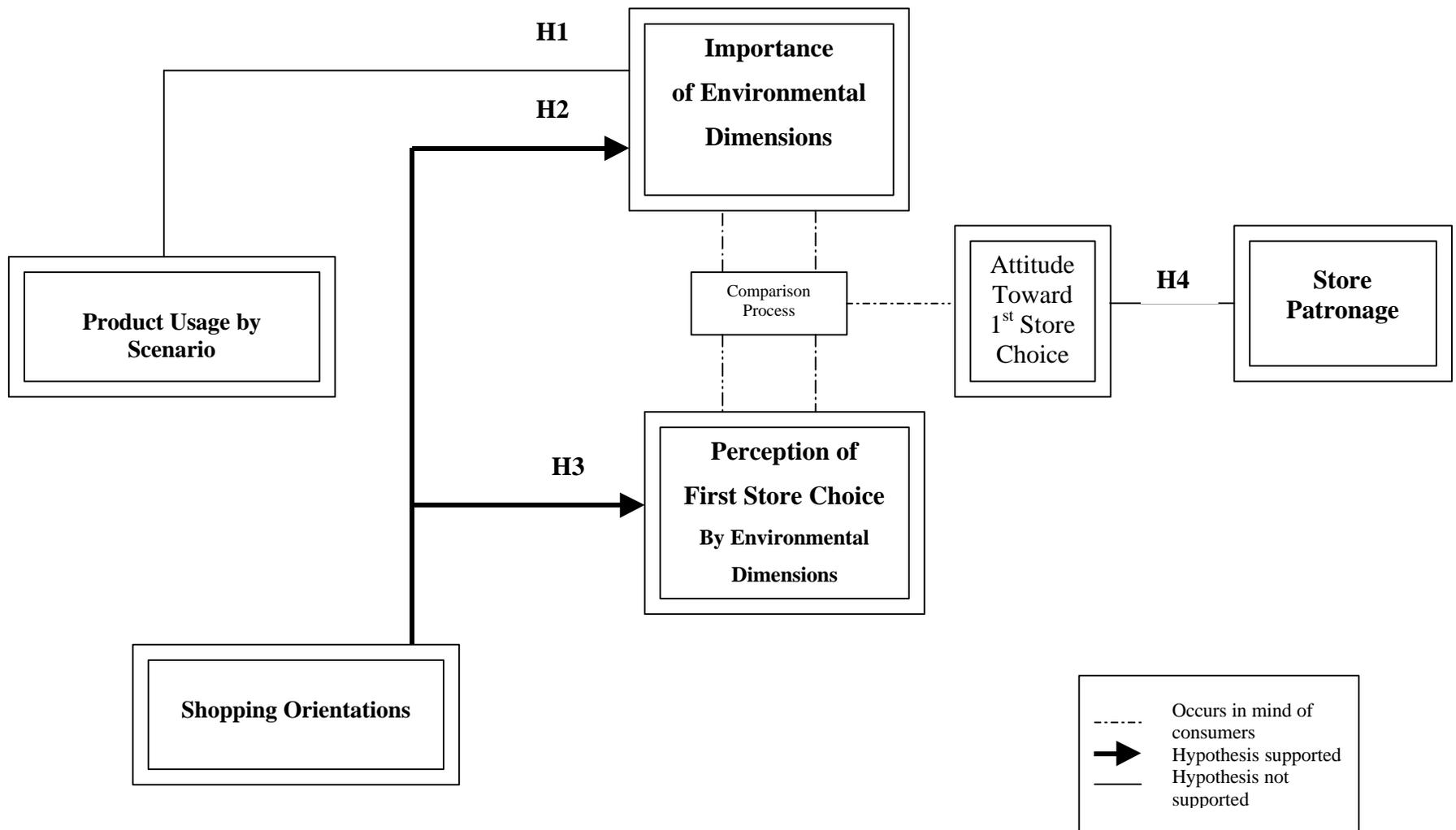
Figure 5.  A revised model of consumer patronage adapted from Bitner (1992); Engel, Blackwell, & Miniard (1995); Monroe & Guiltinan (1975); Shim & Kotsiopulos (1992)

The *Decisive Apparel Shoppers* (Cluster 1) strongly agreed with the statement, "When I find what I like I usually buy it without hesitation". This cluster had a mean score of 6 for this shopping orientation statement. These women also had a mean score of 5 for the Appearance Conscious, Convenience/Time, and Bargain shopping orientation factors. Women included in the Decisive cluster were concerned about their reputation and dressing well to maintain a good reputation. These women also shopped at the most convenient store to save time, shopped around for bargains and used advertisements to determine where to shop.

With regard to age, the 25-31 category was the largest group for the *Decisive Apparel Shoppers*. Among the women in this cluster, 33.3% had attained some college, while 17.5% of had a graduate degree. Furthermore, a majority of these women were professionals, indicated they could move about in retail stores, and had a household income of $40,000-49,999.

The *Confident Apparel Shopper* (Cluster 2) had mean scores of 6 on the Confident, Bargain, and Decisive shopping orientation factors. Women in the Confident cluster described themselves as confident in their ability to shop. They perceived that they had the ability to choose the right clothing for themselves, were good clothing shoppers, and had an up-to-date wardrobe. In addition, these women read advertisement for the announcement of sales, shopped around for bargains, liked to be considered well groomed, and bought apparel items they liked without hesitation.

The demographic characteristics of this cluster consisted of those primarily in the 46-52 age group. Approximately 48% had some college, and 28% identified themselves as professionals. These women had no problems moving about in retail stores, and they reported a household income of $80,000 or over.

The *Bargain Apparel Shoppers* (Cluster 3) had a mean score of 6 on the Bargain shopping orientation factor. These shoppers were described as those that usually read advertisements for announcements of sales, those that shop around for bargains to save money, as well as, those that like to be considered well groomed. This cluster also had characteristics of the Confid*ent Apparel Shoppers* and the *Appearance Conscious Apparel Shoppers*. These shoppers reported that they have the ability to choose the right clothing for themselves, they are very confident in shopping for themselves, they wear up-to-date clothing, keep up with fashion trends, and they dress well to maintain a good reputation.

Thirty-one percent of the women in this cluster were in the 46-52 age category, approximately 35% had some college education, 20% categorized themselves as professionals, and reported a household income of $40,000-49,999.

The *Appearance Conscious Apparel Shopper* (Cluster 4) had mean scores of 6 on the Appearance Confident, Bargain, and Decisive shopping orientation factors. These shoppers strongly agreed with the statements, "A person's reputation is affected by how she dresses" and "Dressing well is an important part of my life". In addition, these shoppers were confident about apparel shopping, had the ability to choose the right clothing for themselves, and bought apparel items they liked without hesitation. They shopped around for bargains, and read sale advertisements to determine where to shop.

Approximately 27% of the women represented in this cluster were in the 46-52 age category and the 60 or over age category. Thirty-three percent of these women had attained a college degree, 27% considered themselves professionals, and had a household income of $80,000 or over.

Differences in the importance of environmental dimension factors for each shopping orientation cluster were tested. Results revealed differences in the importance of environmental dimension factors across the shopping orientation clusters. For the *Sensory/Layout* environmental dimension factor (Factor 1), statistical differences were found between the *Decisive* and *Bargain Apparel Shoppers*, the *Confident* and *Bargain Apparel Shoppers* and the *Appearance Conscious* and *Bargain Apparel Shoppers*.

The *Bargain Apparel Shoppers* had a higher mean importance score on the *Sensory/Layout* environmental dimension than the *Decisive Apparel Shoppers*, the *Confident Apparel Shoppers*, and the *Appearance Conscious Apparel Shoppers*. Variables in the *Sensory/Layout* environmental factor included *temperature*, *air quality*, *lighting*, *scent*, *noise level*, and *layout*.

For the *Music/Aesthetics* environmental dimension factor (Factor 2), statistical differences were also found between the *Bargain* and *Appearance Conscious Apparel Shoppers*. The *Bargain Apparel Shoppers* had a mean importance score higher than the *Appearance Conscious Apparel Shoppers*, who had the lowest score, while the *Decisive* and *Confident Apparel Shoppers* had mean scores in between the two extremes in the range. The

*Music/Aesthetics* environmental factor included the variables of *background music*, *flooring*, *style of décor*, *aisle placement/width*, *signs*, and *fixtures/racks*.

Differences were also tested in perception of first store choice across the shopping orientation clusters. With respect to store choice, the department store was selected most often as the first store choice for all clusters. Of the respondents included in the *Decisive* cluster (Cluster 1), 67.9% selected department store as their first choice, followed by 45.8% in the *Confident* cluster (Cluster 2), 69.0% in the *Bargain* cluster (Cluster 3), and 43.3% in the *Appearance Conscious* cluster (Cluster 4). After selecting a first store choice (i.e., department, discount, specialty, other), respondents were asked to rate this store on 12 perception variables. Then, factor analysis was used to reduce the 12 perception into two factors. The perception factors were named the *Ventilation/Sensory* (Factor 1) and the *Signs* (Factor 2).

Statistical tests revealed differences in the *Signs* perception factor for the shopping orientation clusters. However, no differences were found in the *Ventilation/Sensory* perception factor across the clusters. The *Appearance Conscious Apparel Shopper* (Cluster 4) had a higher mean perception score (3.20) on the *Signs* perception factor than the *Decisive Apparel Shopper* (3.17), the *Confident Apparel Shopper* (2.59), and the Bargain Apparel Shopper (2.11).

In addition to measuring perception of first store choice, respondent's attitude toward first store choice was examined. The attitude variable was calculated by multiplying the importance and perception variables, summing the two products, and dividing the equation by 100 to convert the scores to the original 7-point scale. Differences in attitude toward first store choice were tested for the following store types: department, discount, specialty, and other retailers. Results revealed that more respondents expressed relatively unfavorable attitudes than favorable attitudes toward their store of first choice. In addition, some respondents expressed neither unfavorable nor favorable attitudes.

Implications

Twelve environmental dimension variables were selected for the present study. From the 12 variables, the environmental dimension factors of *Sensory/Layout* and *Music/Aesthetics* were created. The *Sensory/Layout* dimension consisted of *temperature, air quality, lighting, scent, noise level,* and *layout*. The *Music/Aesthetics* dimension included the variables of *background music, flooring, style of décor, aisle placement/width, signs*, and *fixtures/racks*. Results revealed

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no differences in importance ratings of environmental dimension factors across three apparel shopping scenarios. Therefore, scenario did not affect the importance of environmental dimensions for this set of respondents.

For retailers with customers who are similar to these respondents, this finding indicates that the importance of variables such as lighting, or style of décor or a composite of these variables (i.e., environmental dimension factors) these did not differ across scenario. Therefore, whether women in this study were purchasing a dress for a formal gathering, for a family gathering, or for work or a community activity, importance of the store environment, as represented by two environmental dimension factors, *Sensory/Layout* and *Music/Aesthetics* did not change. Although this study did not support the use of shopping scenarios for the importance of environmental dimensions, respondent's comments suggest that perhaps examining non-environmental dimensions such as quality of merchandise, fair price, good selection, stylish and/or attractive clothing, and good value relative to shopping scenarios would be beneficial.

Next, differences in importance ratings of environmental dimension factors were tested across shopping orientation clusters. All shopping orientation clusters placed more importance on the *Sensory/Layout* environmental dimension than the *Music/Aesthetics* environmental dimension. Therefore, retailers attempting to target store customers who are similar to participants of this study should focus on creating a pleasant shopping environment or shopping experience by using the variables of temperature, air quality, lighting, scent, noise level, and layout. In addition, these environmental criteria may have become an expected feature no matter what type of situation or scenario was given to women included in this study.

Of the four shopping orientation clusters, the *Bargain Apparel Shoppers* had a higher mean score than the other clusters for the *Sensory/Layout* and *Music/Aesthetics* environmental dimensions. The *Bargain Apparel Shoppers* are perceived as being the most difficult to please because they desire all environmental dimensions factors, in addition to merchandise at reduced prices. Retailers that want to target and retain the *Bargain Apparel Shoppers* as represented in this study should create a store environment that includes the most attractive mix of pleasant temperature, good air quality, adequate lighting, pleasant scent, a low degree of noise, and an easy to follow layout. Furthermore, responses to the shopping orientation statements revealed that women in this cluster could be attracted to the store through sales advertisements. The

*Bargain Apparel Shopper* likes to shop around for bargains, so advertisements should focus on low pricing, coupon sales, and additional percentages off on sale and clearance merchandise. This shopping situation may be difficult for retailers because bargain pricing may require smaller gross margins that prohibit the expenditures on the physical plant for the business.

In addition to creating a pleasing environment with the variables included in the *Sensory/Layout* environmental dimension, retailers targeting the *Decisive Apparel Shopper* should provide clothing that appeals to this shopper. Although the Decisive Apparel Shopper can exhibit characteristics of a Bargain Apparel Shopper, given the right merchandise, she will buy without hesitation if she likes an apparel item. Determining what this shopper type desires in apparel is important for retailers to know that seek to target similar customers.

The *Confident Apparel Shopper* is confident is her ability to shop, chooses the right clothes for herself, describes herself as a good clothing shopper, and has an up-to-date wardrobe. This customer will require very little assistance in a retail store; therefore; pushy sales associates will not appeal to the Confident Apparel Shopper. Women in Confident cluster can shop independently, they like fashion, and the latest trends will appeal to this customer.

The *Appearance Conscious Apparel Shopper* believes that a person's reputation is affected by how she dresses and that dressing well is an important part of her life. Appearance is a priority for this shopper; therefore, in order to appeal to this customer retail sale personnel should be well dressed. Perhaps sales personnel or specialist for a particular area (e.g., Ralph Lauren Polo) should wear store merchandise to work.

After examining the shopping clusters relative to importance of environmental dimensions, differences in perception of first store choice was also tested. For all shopping orientation clusters, the department store was selected most often as first store choice. Differences were tested in perception of first store choice for two perception factors, *Ventilation/Sensory* and *Signs*. Statistical differences were found for the Signs perception factor across shopping orientation clusters. Of the four clusters, the *Appearance Conscious Apparel Shopper* had the highest mean score for the Signs perception factor. Women in this cluster perceived signs as being somewhat hard to read in their first store choice. Department stores attempting to target these women should focus on creating 'readable' signs for fixtures/racks displaying merchandise, as well as readable service area (e.g., fitting rooms, checkout) signs,

directional signs, and promotional signs. Finally, the importance and perception variables were combined to create the variable, attitude toward first store choice.

Attitude was calculated by multiplying the importance and perception variables, summing the two products, and dividing the equation by 100 to convert the scores to the original 7-point scale. Results revealed no differences in attitude responses for the following stores: department, discount, specialty, and other retailer. More respondents expressed relatively unfavorable attitudes than favorable attitudes toward their store of first choice. In addition, some respondents expressed neither unfavorable nor favorable attitudes.

With regard to future store patronage, a higher percentage of women with unfavorable attitudes than favorable attitudes toward their store of first choice indicated they would return to the store. This finding suggested that dimensions other than the environmental dimensions or in addition to the dimensions included in this study might have contributed to repeat store patronage. Although not tested in the present study, those non-environmental dimensions (e.g., good value, attractive, stylish clothing) mentioned in the comments section of the questionnaire may have contributed to repeat patronage. A thorough understanding of the store customer is important for a retailer to develop an appropriate store environment.

Future Research

As a result this study, several suggestions for further research have been considered. Very few studies have investigated the use of apparel shopping scenarios and their affect on store patronage. For the present research, the use of shopping scenarios was not supported; however, with the limited amount of previous research and the theoretical indications that product and situation is important, and future research with this variable is recommended. Research studies in the future should expand this research by including a larger sample size of women or other populations, such as college students to obtain more respondents for each shopping scenario. This research was based on the respondents' past experiences with retail stores and relied on the memory of the survey respondents. An in-store environmental analysis providing participants with specific shopping scenarios before entering a retail store would enable future researchers to measure the actual retail shopping experience and how, or if the environment influences store patronage.

The response rate for this study was relatively low; however, it was sufficient for the purposes of this research. Future survey researchers should plan to aggressively collect data for several weeks, with the use of multiple mailings and methods of data collection to obtain a larger, random sample of women, men or age-specific groups. In an effort to increase the response of mail surveys, future researchers should consider contacting respondents a few weeks before the study begins via telephone or postcard. In addition to survey mailings, some other methods of data collection to consider are: email or a website created for the purposes of research, personal interviews, telephone interviews, focus groups or any combination of techniques. Researchers should make every effort not to schedule their data collection during the summer months when most people take vacations. Additional research could be done with focus groups or interviews to expand or alter the listing of environmental variables. Indications from respondents' comments were that additional variables might be important to store choice.

This study only used one apparel item, a dress. Perhaps the examination of multiple products (e.g., dress, suit, sweater) and/or multiple product categories (e.g., sportswear, activewear, knitwear/sweaters) would be of interest to future researchers. This variable would allow researchers to make comparisons across apparel items.

Factor analysis was used to group the environmental and perception variables and cluster analysis was used to group respondents with similar shopping characteristics. Repeat analysis is needed on the variables included in this study to determine if the factors and clusters will group the same for other samples.

The attitude variable was adapted from previous research. Studies in the future should attempt to study attitude using a composite of importance and perception variables to further test and validate the equation used in this research.