CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY FOR THE FIRST PHASE OF THE STUDY

3.1 INTRODUCTION

The purpose of research is to explore, describe or explain phenomena that generate valid results (Neuman, 2000: 21). To solve the research problem the researcher uses a plan or structured framework (the research design) to guide the research. Research methodology refers to the methods, techniques and procedures used to implement the research design (Babbie & Mouton, 2001: xxvi; 74-75). A well-planned research design enables the researcher to anticipate research decisions, which in turn minimise research mistakes and maximise the validity of the results (Mouton, 1996: 107)

To ensure valid results, the methods, techniques and procedures must be carefully chosen. The selection of these "tools" always depends on the research problem, the research objectives, the underlying theory and the expectations of the researcher (Babbie & Mouton, 2001: xxv).

From the review of literature it is evident that:

- The Internet as new shopping environment has exciting possibilities for both modern-day retailers and consumers
- It is, however, evident that the Internet consumer of apparel probably experiences specific problems regarding the quality assessment of textiles
- South African Internet apparel consumers could benefit from basic and more specific textile information to facilitate their decision-making
- By developing an online quality assessment guide for textiles, consumers could be empowered to make more educated decisions,

this in turn could increase satisfaction regarding the product. This could lead to repeat visits (which would also be beneficial to the retailer)

- The modern technology of interactivity can enhance the shopping experience and lead to better decision-making, enjoyment and satisfaction
- Consumers possibly use physical features of textiles (fibres, fabric and finishes) as cues when evaluating the quality of apparel for formal and casual daywear.
- Consumers possibly use performance features of textiles (durability, comfort, maintenance and end-use serviceability) as cues when evaluating the quality of apparel for formal and casual daywear, most probably only when they start wearing the garment.
- Consumers possibly use some aspects relating to aesthetics (i.e. comfort – the hand of the fabric and fit) as cues to assess quality

All these aspects had implications for the choice of research strategy, data-collecting methods and other techniques used in the study.

In this chapter the plan and approach for addressing the research questions for maximum valid results, is discussed.
The following aspects will be explained in this chapter:

- The chosen conceptual framework and research questions that are stated as sub-objectives and specific aims for this study
- The research strategy and research style that will be used in the study
- The different phases of the study
- The samples chosen for the first phase of the study
- The choice, description and application of data-collecting methods for phases one
- Data analysis of the first phase of the study
- The quality of the data

3.2 THE CHOSEN CONCEPTUAL FRAMEWORK, RESEARCH PHASES AND OBJECTIVES

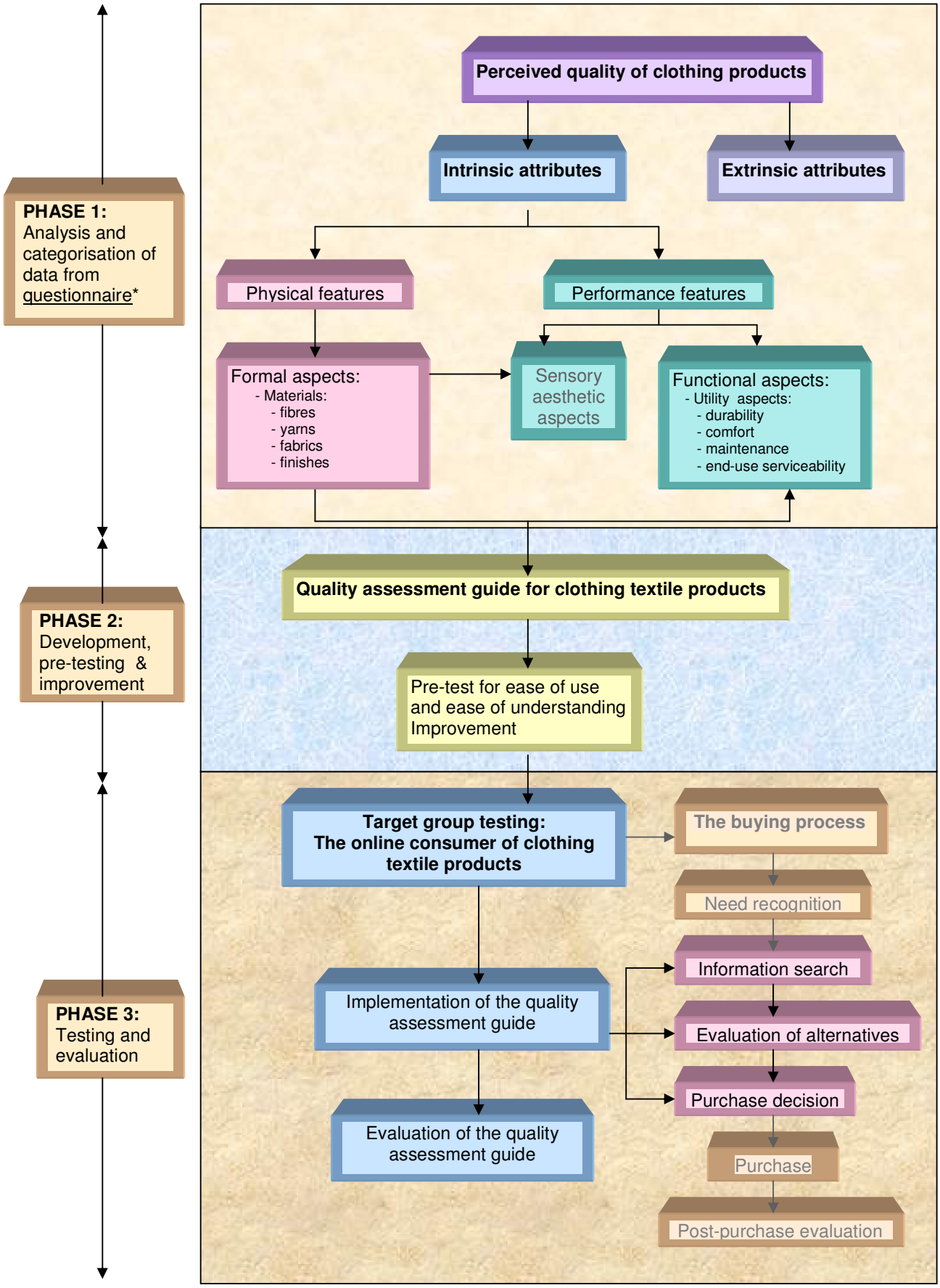

FIGURE 4: CONCEPTUAL FRAMEWORK AND RESEARCH PHASES FOR THIS STUDY

From the combined schematic conceptual framework and research phases (Fig.4, previous page), the following reasoning directs the sub-objectives and specific aims stated for the study:

With regard to the problem statement of the study, "*Which textile related attributes should be incorporated in a quality assessment guide to facilitate the online decision-making process of adult career women when purchasing outer garments for formal and casual daywear?"* the following objectives and sub-objectives were formulated:

3.2.1 Objective 1: To obtain specific information about intrinsic textile related aspects that career women use in their decision-making when assessing the quality of apparel products

- **Sub-objective 1:** Do adult career women use formal, physical features of textiles (i.e. fibre, yarn, fabric structure and finish) in their perception and assessment of the quality of apparel textiles?

- **Sub-objective 1.1:** Do adult career women relate the formal, physical features of textiles to the functional performance aspects when assessing quality during the decision making process?
  - **Sub-objective 1.1.1:** Do career women relate the formal features of textiles to the functional performance aspect of durability?
  - **Sub-objective 1.1.2:** Do career women relate the formal features of textiles to the functional performance aspect of comfort (including sensual appeal)?
  - **Sub-objective 1.1.3:** Do career women relate the formal features of textiles to the functional performance aspect of maintenance?
  - **Sub-objective 1.1.4:** Do career women relate the formal features of textiles to the functional performance aspect of end-use serviceability?

- **Sub-objective 1.2:** How important is label information in apparel purchase decision-making?

- **Sub-objective 1.2.1:** Do career women use label information to assist them when making purchase decisions?
- **Sub-objective 1.2.2:** Do career women use a specific type of label information to assist them in their decision-making?

3.2.2 Objective 2: To develop a guide for assessing quality using the data obtained in the first phase of the study.

3.2.3 Objective 3: To test the guide to determine if it facilitates decisions concerning the quality of fabrics when purchasing apparel products online.

3.3 RESEARCH STRATEGY AND RESEARCH STYLE CHOSEN FOR THIS STUDY

This research strategy is descriptive as an attempt is made to describe and understand behaviour, tendencies, and situations. According to Mouton (1996:101) the research objective gives a broad indication of what the researcher wishes to achieve with the research. For practical purposes, the research was divided into three phases. In the first part of the study, the aim was to determine which textile related cues career women use as quality indicators when purchasing apparel for formal and for casual daywear. The goal was to use these cues in the second phase of the study when developing the online quality assessment guide for textiles.

The study is also exploratory in nature. According to Babbie and Mouton (2001:79), exploratory research is undertaken when the researcher wants to obtain insight in a new area of interest or when something relatively new is being studied. This study is exploratory as it aims to obtain insight into a relatively new area of study, namely the online consumer of textile products.

The last phase of the study can be seen as applied evaluation research as

the testing of the effectiveness of the quality assessment guide is the ultimate goal of the research.

A quantitative research style was used for this study. Quantitative research primarily follows a deductive route. The research starts with an abstract idea, followed by a measurement procedure, and ends with empirical data (precise numerical information) that represent the abstract ideas. The measurement techniques are precise and link concepts and data, define what the data will be and are used as directions for collecting the data (Neuman, 2000: 158).

The study can be classified as an empirical study. In the first phase data was gathered by using a structured questionnaire. In the second phase this data was used to develop an online textile quality assessment guide together with a mock website for testing the guide. In the third phase the respondents used the mock website linked to the online guide as well as existing South African apparel retail websites (without the guide). Once again a structured questionnaire was used to gather data on the usability and success of the online guide.

The study is also cross-sectional, which implies that it was undertaken at a specific point in time and not over a long period (Neuman, 2000: 30).

3.4 CHOICE OF THE RESEARCH SAMPLE FOR PHASE ONE

3.4.1 The units of analysis for the first phase of the study

The units of analysis for this study were adult career women between the age of 25 and 40 who work in Pretoria, the administrative capital city of South Africa.

The target population for the first phase of the study was adult career women (in the middle to high income bracket) who work in Pretoria and who might purchase outer garments, intended for office and casual wear, online. It was

decided to target career women between the ages of 25 and 40, as more than half of South Africa's web users fall in this age group (Webchek: Press Room, 2006). The study included career women working at the University of Pretoria, teachers at various schools in Pretoria and women working for various companies in Pretoria**.**

For the purpose of the study, it was decided to use only textile products used for apparel, specifically for formal and casual daywear of adult career women between the ages of 25 and 40. According to Louw (1990:475-6), early adulthood refers to people between the ages of 25 and 40, and is the stage in life where people are physically mature, independent, responsible, and established in a profession. Career women are probably the women who would use the Internet as a convenient time saving method of purchasing apparel. Furthermore female Internet users between the ages of 25 and 34 have bought more online than any other age groups (Webcheck: Archive – Online shopping trends, 2006). As this was determined by a survey done in 2000, it was decided to include career women up to the age of 40, to include the possible "older" group of female Internet users of 2000. Both formal daywear and casual daywear were chosen as different aspects govern the choice of these two types of clothing (Kaiser, 1998:354; Lubbe, 2003: 141; Marshall *et al*., 2004).

3.4.2 Sample selection for the first phase of the study

For this part of the study, the sample was not restricted to online consumers. Here the object was to determine which cues, related to textiles, are used by career women, between the ages of 25 and 40, to assess the quality of apparel offered in retail stores, in catalogues, or on the Internet. The number of respondents recommended by the statistician was a minimum of between 100 and 120. A further recommendation was that, if possible, roughly 60 respondents should be academics and the other 60 from other large, non-academic companies/ firms. A total number of 116 questionnaires were returned; 36 from staff-members of the University of Pretoria and 80 from career women working as schoolteachers or in the business sector.

For the respondents to be included in the first part of the study, they had to comply with the following criteria:

Criterion	Justification
Respondents must be female	Female buyers form a large part of the spending power in the apparel market.
Between the ages of 25 and 40	This group already has established preferences and an idea of what they see as quality in apparel
Be employed in a full time or part time career	Involvement in activities that save time is greater for a career woman than woman who are not employed
Have a post-school education (certificate, diploma or degree)	"Distance" buyers are often seen as risk takers associated with a higher level of education (Jasper & Ouellete, 1994:25).

A non-probability sampling technique was used. Purposive or judgemental sampling was recommended, as members of a specialised population were used in this study (Neuman, 2000:198). Due to the low response from University of Pretoria employees, the snowball sampling technique was used to locate career women employed elsewhere. Because this method of sampling could result in questionable representativeness, it is used primarily for exploratory studies (Babbie & Mouton, 2001: 167).

3.5 THE CHOICE, DESCRIPTION AND APPLICATION OF THE DATA COLLECTING TECHNIQUE

For this study a structured questionnaire was used for the first phase of the study. This was judged an appropriate method, as the sub-objectives and specific aims could be addressed in this way, and as other researchers have successfully used structured questionnaires to measure consumer perceptions of apparel quality and decision-making in fashion retailing (Abraham-Murali & Littrell, 1995b; Birtwistle *et al.*, 1998).

3.5.1 Structured questionnaire (first phase of the study)

In the first phase of the study a structured questionnaire was used to gather

data (Addendum 1). The questionnaire was compiled after studying literature on apparel quality; the way consumers perceive quality when purchasing garments and factors that affect decision-making. Dimensions that influence quality of textile products were identified as well as aspects that influence consumers' expectations concerning apparel quality and satisfaction with the purchased garment.

Second, third and fourth year students in the Clothing Retail Management programme at the University of Pretoria were also asked to identify their perception of quality. They were asked how they judged durability, comfort, ease-of-care and end-use serviceability when purchasing garments for formal and casual daywear. This information was also used in the compilation of the questionnaire. It was also decided to include a section where the respondent had the opportunity to handle and see fabric samples before making quality judgements. Before deciding which fabrics to include, a variety of stores were visited to determine which fabrics were used for ready-to-wear garments that represented both formal daywear and casual wear (Addendum 1). Fabrics exclusively suitable for only one season were not included. The next step was to visit fabric stores to determine if similar fabrics were available for the home sewer. The sales ladies were also asked to identify which were the more popular fabrics for jackets, skirts/pants and tops. Once again fabrics exclusively suitable for one season were not considered. It was also decided to use fabrics in neutral colours. This proved to be more difficult than anticipated – as most fabric types were available in shades of blue or white and off-white, all fabrics included in the questionnaire were either in shades of blue or white. Woven fabrics (which according to the sales ladies were more popular than knits at the time of the survey) were chosen from two weight classes – sturdier, medium weight fabrics (a balanced plain weave, a similar weight twill weave and a fabric made from yarns of uneven sizes) as well as light weight fabrics (sheer balanced plain weave, and two slightly heavier plain weaves both with crinkle finishes, the one more pronounced than the other). The third group of fabrics were all knits and included a medium weight double knit, a lightweight single jersey knit and a medium weight lacy knit.

After compiling the questionnaire, it was judged by colleagues (peer evaluation), the study-leader and two statisticians. To determine the clarity, and whether the intended meaning was clear, twenty adult female consumers tested it. Their suggestions and comments were used to adapt and revise the questionnaire.

The questionnaire was developed to question respondents on a variety of aspects related to the stated objectives, namely the cues they use to determine garment durability, comfort and ease of maintenance, the use of label information, and their perception of end-use serviceability of fabrics for formal and casual daywear. They were also asked whether they do or are willing to do "distance" shopping (catalogue, Internet), and what textile information they thought would be helpful when shopping online. The questionnaire was divided into different sections, using different indicators for the assessment of quality.

TABLE I: THE STUCTURE OF THE QUESTIONNAIRE (First phase)

SECTION	ASPECTS MEASURED	QUESTIONS NUMBER
A (16 questions)	Factors used as quality cues	
	Intrinsic and extrinsic factors	Question A 1
	Utility factors used as quality cues (formal wear)	Question A 2a
	Utility factors used as quality cues (casual wear)	Question A 2b
	Use of information on labels	Questions A 3, 3.1, 3.2, 3.3, 3.4 & 3.5
	Durability features	Questions A 4.1 – 4.2
	Comfort features	Questions A 5.1 – 5.2
	Easy-care features	Questions A 6.1 – 6.2
	Other aspects (open-end)	Question A 7
B (8 questions)	Use of distance shopping (catalogues) and willingness to purchase garments online	Q B 1 – B 7
	Type of information helpful to make decisions when doing distance shopping	Q B 8
C (4 questions)	Demographics	Q C 1-4
D (17 questions)	End-use serviceability: Durability assessment (medium weight fabrics: light weight fabrics and knits)	Q D 1.1 – D 1.4
	Comfort assessment (medium weight fabrics: light weight fabrics and knits)	Q D 2.1 – 2.4
	Easy-care assessment (medium weight fabrics: light weight fabrics and knits)	Q D 3.1 – 3.4
	Preferred fabric (jacket, skirt/pants; blouse, shirt/ top) for formal daywear	Q D 4.1 – 4.2
	Preferred fabric (skirt/pants; blouse, shirt/ top; jacket) for casual wear	Q D 4.3 – 4.5

The questionnaire contained 45 questions, which were grouped together with clear instructions for easy completion. Most of the questions were closed questions that were coded in advance. In most cases Likert-type scales were used where the respondents had to rank the options along an ordinal scale; some answers had to be ranked in order of preference.

The questionnaire was divided into four sections; sections A, B C and D (see Addendum 1). In section A the cues used by consumers to judge quality, were identified, as well as the importance of the functional aspects of performance when making quality judgements, and consumers' use of textile label information. Most of the questions were closed (structured or fixed response) questions, but open-ended (free-response) questions were also included to ensure that all aspects considered by consumers when assessing quality, were covered. As the objective was to determine which aspects are used to assess quality, the closed questions were more appropriate. Closed questions were predominant in the first phase of the study because they are easier and quicker for the respondents to answer, it is easier to compare the answers of different respondents, the answers are easier to code and analyse statistically, the response choices can clarify the meaning of the question for the respondents, and replication is easier (Neuman, 2000: 260-261).

In Section B the respondents were asked to indicate whether they had already purchased garments from a catalogue or the Internet, and if not, if they intended doing so in future, and also if they used different criteria to assess quality of garments offered in a catalogue compared to garments bought in stores (Yes/No questions). They were then asked to indicate what they did differently and what problems they had encountered with distance shopping (open-ended). They were also asked to indicate what type of textile information would be helpful for making purchase decisions (Likert-type scale).

Section C was used to gather demographic information (age and qualification level). Two other questions were also included in this part of the

questionnaire. The respondents were asked what price they were willing to pay for jackets; skirts/pants and tops for both formal and casual daywear. Although the extrinsic aspects such as price did not form part of the study, this information was used to determine if price played a role in consumers' quality assessment.

In Section D the respondents' idea of end-use serviceability was tested. This information was used to verify their knowledge of textiles and their ability to apply this knowledge when confronted with actual textile samples. This also helped to give an indication of what to include in a textile assessment guide.

3.5.2 Data collecting procedures for phase one

Before finalising the questionnaire for phase one of the study the questionnaire was evaluated by a research consultant, a statistician, peers and the study leader. Both content and measures used to obtain data were evaluated. The research consultant and statistician helped to determine if the questions would supply the required information. They made suggestions regarding the type of questions, number of choices for the Likert-type scales and other technical aspects as well as the layout of the questionnaire and coding column. These and other suggestions were attended to and the questionnaire adapted accordingly, in both English and Afrikaans.

As all the related dimensions and indicators of quality were obtained through a thorough literature review and the questionnaire evaluated by colleagues with textile knowledge, it was expected to produce reliable results. The questionnaire was also pre-tested as an added measure for reliability. According to the statistician, the suggested sample size (between 100 and 120 respondents) would also contribute to reliability.

After pre-testing the questionnaire for clarity and to determine how long it would take to complete, a few adjustments were made, and the questionnaires were printed and distributed. Those sent to female staff

members of the University of Pretoria were distributed by internal mail. One hundred questionnaires were distributed, and although the initial response was reasonable, very few questionnaires were returned (only 36 %). Various contact people (trained fieldworkers) were responsible for the distribution of questionnaires to respondents not employed by the University of Pretoria. Each contact person first made sure that the respondents fit the profile, distributed the questionnaires by hand and collected them again.
This method resulted in a far higher response rate. One hundred and four questionnaires were distributed in this way and 80 (77 %) were returned. The total amount of questionnaires distributed was 204 of which 116 (57%) were returned. All the questionnaires could be used.

The researcher coded all the responses by hand and the data was then electronically entered and captured at the University of Pretoria.

3.6 DATA ANALYSIS

3.6.1 Coding and capturing the data obtained in phase one

The closed questions were pre-coded and the individual questionnaires were coded accordingly. The open-ended questions were coded after all questionnaires had been returned so that all responses could be written down and placed in categories as determined by the conceptual frame work. New categories were created for responses that could not fit in the existing categories.
As mentioned previously, all questionnaires were usable; some had missing data, but in general most respondents completed the questionnaire carefully.

The information was captured by the data-capturing division of the University of Pretoria, and compared with every completed questionnaire to ensure that the information of each questionnaire was correctly captured; the mistakes were indicated and the research consultant had them corrected. The importance of meticulous checking, labelling and bookkeeping is emphasised

by Neuman (2000: 251 & 314) – sloppiness at this stage could cause the researcher to lose valuable data and effort.
The next step was to have the data statistically analysed. Both the coordinator of the statistical processes and the statistician suggested which statistical methods should be used. A computer program was used to do the statistical analysis. Descriptive statistics were used to describe basic patterns in the data as well as the relationship among variables. According to Babbie and Mouton (2001: 641) descriptive statistics are used to summarise and organise a set of sample observations so that they are easier to comprehend.

Frequency distributions were determined to see how many respondents use the different cues for assessing quality. The mean scores of all the responses to the different cues were calculated to determine which cues are most often used for assessing quality. Two-way frequencies were used to determine to what extent the formal fabric properties are used to assess the quality in terms of durability, comfort, maintenance, and end-use applicability. The same method was used to determine if age and qualification (possibly experience) have an influence on the use of certain quality cues.

3.6.2 Operationalisation

The central concepts were expressed in the research problem and the framework for the research process. Theoretical definitions for the concepts concerning quality as well as the applicable concepts related to the buying process were given in Chapter 2. Theoretical definitions and descriptions of relevant concepts facilitate the development of measures or activities that allow the researcher to observe the constructs empirically (Mouton, 1996: 125; Neuman, 2000; 160; Babbie & Mouton, 2001: 128).

To be able to determine which aspects and textile properties to include in a quality assessment guide for textiles, it was important to determine how many respondents use specific aspects related to quality when making a purchase decision. This implies the testing of a statistical hypothesis, where the null

hypothesis (H_o) is that 50 % or fewer respondents 'always' or 'sometimes' choose a specific option or always see a specific option as 'very important' or 'important' when making a purchase decision. The alternative hypothesis (H_a) is that more than 50 % (the majority) of the respondents 'always' or 'sometimes' choose a specific option or see a specific option as 'very important' or 'important' when making a purchase decision. Acceptance of the alternative hypothesis would indicate that the majority of respondents use the specific aspects when making quality judgements, and would therefore look for these aspects in a quality assessment guide to help them with their decision-making.

In this study the hypotheses were tested on a 5 % level of significance (π = 0.5) and Z-values were determined (the normal distribution). The critical Z-value was determined to be 1.645; if the Z-value exceeded 1.645 (was > 1.645) the null hypothesis (H_0) was rejected.
The following formula was used to determine the Z-value of each variable where applicable:

$$Z = \frac{P - \pi_0}{\sqrt{\frac{\pi_0(1-\pi_0)}{n}}}$$

where $P = \frac{X}{n}$

and X = the number of respondents who chose 'always' and 'sometimes' or 'very important' and 'important'

n = total number of respondents (in most cases 116 respondents)

(where information on respondents' use of labels was tested, only respondents who always or usually consult labels were asked to complete a set of questions; in which case n = 90 respondents).

On a 5 % level of significance X ≥ 66.86, which means that if 67 or more respondents (n=116) 'always' or 'sometimes' chose an option or viewed the option as 'very important' or 'important', the null hypothesis (H_0: $\pi_0 = 0.5$) was rejected. This also indicated that the majority of the respondents used these

aspects as indicators of quality, and would therefore look for them in a quality assessment guide to help with decision-making.

To determine which indicators respondents used to assess the performance features of durability, comfort and ease-of-care, the null hypothesis would be rejected if more than 67 respondents 'always' or 'sometimes' chose a specific indicator to assess these performance features. Here the rejection of the null hypothesis would indicate that the majority of the respondents do relate the physical aspects of textiles to the performance features of durability, comfort and ease-of-care.

The use of label information was also calculated according to these criteria. [In this case $X \geq 52.80$, which means that if 53 (n=90) or more respondents always chose an option or viewed the option as 'very important' or 'important', the null hypothesis (H_0: $\pi_0 = 0.5$) was rejected].

To determine the reasons for the most preferred fabrics for specific end-uses, two-way frequencies were used and the results were expressed as averages (%).

Very few respondents answered the open-ended questions – here an indication of how many respondents chose certain options is given (as well as the % of responses). (Because of the poor response, only aspects relating to the stated objectives were included in the guide).

Two-way frequencies were also done to determine if age and level of education influenced choices. These results were referred to when creating the website to ensure that a variety of price-ranges and styles were included to satisfy all age groups included in the study. Although the different styles chosen for the mock website were representative of different price-ranges it was decided not to add the price to the mock website. After analysing the results, it appeared that many consumers often use price (an extrinsic cue, and not part of this study) as quality indicator (See Figure 4: Chapter 4).

Adding price could therefore cause a bias and affect the responses of the participants.

To determine which type of product information respondents would find helpful, the responses to 'extremely helpful' or 'helpful' were grouped together. Only 62 respondents answered this question. The null hypothesis (H_0: $\pi_0 = 0.5$) was rejected if 38 (n= 62) or more respondents thought that the product information would be 'very helpful' or 'helpful'. The alternative hypothesis (H_a: $\pi_0 > 0.5$) was accepted if more than 38 respondents (n=62) thought that the product information would be 'extremely helpful' or 'helpful'. Once again the hypotheses were tested on a 5 % level of significance.

The following table indicates which questions were used to test the different concepts for the first phase of the study. The specific questions related to the different sub-problems are indicated as well as the types of statistical measures used for the analysis of the results.

TABLE II: OPERATIONALISATION: OBJECTIVES AND SUB-OBJECTIVES, RELATIVE QUESTIONS, AND STATISTICAL METHODS

Objectives & Sub-objective	Relative question	Statistical methods used
Sub-objective 1 Do adult female consumers use formal, physical features of textiles (i.e. fibre, yarn, fabric structure and finish) in their assessment of the quality of apparel textiles for formal day and casual wear?	Section A: Question 1 (V3,4,6,7,9& 10 – intrinsic aspects) (V2,5 & 8 – extrinsic)	Frequencies & mean scores Hypotheses testing on a 5% level of significance; $H_0 = 0.5$ $H_a > 0.5$ Critical Z-value ≥ 1.645
Sub-objective 1.1 Do consumers relate formal textile features to functional performance aspects?	Section A: Question 2a & b (V13 – V16 + V17 – V20)	Frequencies & mean scores
1.1.1 Do consumers relate formal features of textiles to durability?	Section A: Question 4.1-4.2 (V38-43; V44-45; V46-51;V52)	Frequencies & means Hypotheses testing on a 5% level of significance; $H_0 = 0.5$ $H_a > 0.5$ Critical Z-value ≥ 1.645 Cronbach's Alpha coefficient
1.1.2 Do consumers relate formal features of textiles to comfort (including sensory appeal)?	Section A: Question 5.1-5.2 (V53-V59; V60-V66)	
1.1.3 Do consumers relate formal features of textiles to maintenance?	Section A: Question 6.1-6.2 (V67-77; V78-88)	
1.1.4 Do consumers relate formal features of textiles to end-use serviceability?	Section A: Question 7 (V89-92) Section D: Question 1(V119-131) Question 2(V132-144) Question 3(V145-157) Question 4(V158-176)	Frequencies, mean scores & two way frequencies

Sub-objective 1.2: Do consumers use label information to assist them when making purchase decisions?	Section A: Question 3.1 – 3.5 (V21; V22-27; V28-33; V34; V35; V36-37)	Frequencies & mean scores Hypotheses testing on a 5% level of significance; $H_0 = 0.5$ $H_a > 0.5$ Critical Z-value ≥ 1.645
Objective 2: To use the above analysed data to develop a guide for the online assessment of quality	Section A: Question 1-4 Section B: Question 1-8 Section C: Question 1-4 Section D: Question 1-4	Frequencies, mean scores and two way frequencies were used to determine the content of the guide Hypotheses testing on a 5% level of significance (Q.8)

3.7 QUALITY OF THE DATA

3.7.1 Validity

This refers to the extent to which a measure accurately reflects the concept it intends to measure (measurement validity). If the measures used actually measure what they claim to, and if there are no logical errors are made when drawing conclusions from the data, the study is valid. The validity of a measure can be determined by using standard yardsticks, which all have to do with threats and biases which could undermine meaningful results. (Mouton, 1996: 111; De Vos & Fouché, 1998:84-5; Neuman, 2000: 167-170; Babbie & Mouton, 2001: 122-123; Trochim, 2005: 51; Statistics Solutions, 2007).

- **Construct validity**

Construct validity refers to the logic of the items which comprise the measures of the concepts. A good construct has a theoretical basis, indicated ('translated') by clear operational definitions that involve measurable instruments (Delport, 2002:12; Trochim, 2005: 50; Statistics Solutions, 2007).

➢ **Criterion-related validity**

Convergent validity is assessed by the correlation among items which make up the instrument used to measure a construct (internal consistency).

In this study Cronbach's alpha was used to establish internal consistency. This method is both valid and reliable. An alpha-value of 0.70 is considered adequate, and a value of 0.80 is considered good for confirmatory purposes (Trochim, 2005: 51).

- **Translation validity**

Face validity has to do with items seeming to measure what they claim to. This does therefore not refer to what an instrument actually measures, but what it appears to measure (Neuman, 2000: 168; Babbie & Mouton, 2001: 123; Delport, 2002; 12). The measure therefore appears relevant to those who will complete it. In the case of the questionnaire, the questions all relate to the functional and performance aspects of textiles used for apparel. One set of questions relates to the use of in-home shopping (catalogue or Internet) as method of shopping.

Content validity is concerned with adequacy and representativeness. To ensure theoretical validity in this study, a thorough review of literature was done. The relevant concepts were defined, and a conceptual framework was developed to indicate the relationship between the different dimensions of quality to obtain a detailed description of the content domain (Trochim, 2005: 51).

A **pre-test** was also done to test the measuring instrument.

3.7.2 Reliability

Reliability is an indicator of dependability or consistency (Neuman, 2000: 164). It indicates the likelihood that a given measurement technique will repeatedly yield the same description of a given phenomenon (Mouton, 1996: 144). The numerical results that are produced by the indicator do not vary because of the measurement instrument itself. In the case of this study, the

type of measurement used, for instance Likert-type scales, ranking, standard statistical coding methods, as well as the use of a pre-test ensure reliability (Neuman, 2000: 165; Babbie & Mouton, 2001: 120; 646). Reliability was ensured in this study by applying the following strategies:

- The questions used in the first questionnaire were predominantly closed questions
- The questionnaire was pre-tested
- The questionnaire could be completed in a relatively short time, was easy to understand and relevant
- A cover letter explaining the objective of the study accompanied the first questionnaire
- Likert-type scales and ranking are well-established methods of data collection. Standard statistical coding methods were also used.
- Cronbach's Alpha coefficient[3] was used to measure the internal consistency of the responses to the Likert-type scales used for assessing durability, comfort and ease-of care, as well as the scales used to assess the type of information (related to performance properties) consumers would find helpful when making decisions.

3.7.3 Representative sampling

According to Mouton (1996: 136), the key concept in sampling is that the sample should be representative of the chosen population. Only then can generalisations concerning the whole population be made. The sampling frame must be representative of the target population to prevent bias.

The sampling method used for the first part of the study was purposive (judgemental sampling). This is an acceptable sampling method when the researcher wants to select a wide variety of respondents to test the broad application of the questions (Neuman, 2000: 198; Babbie & Mouton, 2001: 166). As the first phase of this study can be seen as the preliminary phase to

[3] The alpha coefficient is the expression of an instrument's reliability and ranges from -1.00 to +1.00. There is a general agreement on a minimum standard for alpha ≥ 0.6, but some experts recommend the use of a 0.7 or higher standard. The higher the alpha coefficient, the stronger is the coherence of items (Watson & Klassen, 2004).

obtain enough information to develop a usable instrument (the textile quality assessment guide) this method is acceptable.

As this sampling technique results in samples of questionable representativeness, they are primarily used for exploratory studies, as is the case with this study.

3.8 DATA PRESENTATION

The data obtained through the questionnaire were statistically analysed. The data conversion is available in hard copy (researcher's files) as well as an electronic copy at the Department of Statistics of the University of Pretoria.

The results and statistical findings of the first phase of the study are presented, discussed and interpreted in Chapter 4. The methodology for the second and third phases of the study will be discussed in Chapter 5 and results and statistical findings of the last phase of the study are presented, discussed and interpreted in Chapter 6.

CHAPTER 4

RESULTS, DISCUSSION AND INTERPRETATION OF PHASE ONE OF THE STUDY

4.1 DEMOGRAPHIC INFORMATION

TABLE III: AGES OF RESPONDENTS

Age of respondents	Number of respondents (n=116)	% Respondents
25 – 29 years old	38	32.76
30 – 34 years old	40	34.48
35 – 40 years old	38	32.76

From Table III it is evident that the three age ranges were more or less equally represented.

TABLE IV: EDUCATION LEVEL OF RESPONDENTS

Highest qualification	Number of respondents (n=116)	% Respondents
Post school certificate/ diploma	24	20.87
National diploma/ Higher diploma	22	19.13
Degree or equivalent	69	60.00

From Table IV one can see that 60 % of the respondents had a degree or equivalent qualification.

4.2 RESULTS RELATING TO SUB-OBJECTIVES

4.2.1 Formal physical features that adult career women use in their assessment of apparel textile quality when purchasing formal and casual daywear (Sub-objective 1)

The importance of both intrinsic and extrinsic factors that consumers use as quality indicators was measured with question 1. The respondents were asked to indicate the importance of each of the given aspects on a four-point Likert-type scale by indicating if that specific aspect was very important,

important, slightly important or not important. The respondents also had the opportunity to list two other aspects (not appearing in the list) that they use to assess quality. The results, as represented in Table V and Figure 4, indicate the intrinsic or extrinsic cues, the frequency (number of responses, expressed as a percentage of all respondents) and the average of all the responses (in the table the average indicates the importance of each cue as indicated by all respondents).

TABLE V: INTRINSIC AND EXTRINSIC QUALITY CUES USED WHEN PURCHASING GARMENTS

	Very important (n=116)	Important (n=116)	Slightly Important (n=116)	Not Important (n=116)	Mean score	SD	Over-all impor-tance of the cue	H_0 rejected on 5% level of significance
Price	48	59	7	2	3.32	0.667	1	✓
Fibre type	21	70	18	6	2.90	0.739	7	✓
Fabric texture	26	69	16	5	3.00	0.734	5	✓
Brand	7	23	47	39	2.40	0.884	9	x
Fabric structure	16	47	45	7	2.63	0.800	8	x
Care procedure	40	52	18	6	3.09	0.840	3	✓
Attention to detail	30	53	33	0	2.97	0.740	6	✓
Fabric suitable to end-use	44	52	16	4	3.17	0.794	2	✓
Type of finish on fabric	34	57	22	3	3.05	0.767	4	✓

The overall importance of the cue (based on the calculated mean scores; see Figure 5) indicates that price (an extrinsic attribute) was the main indicator of quality for the respondents. This was followed by suitability of the fabric for end-use and care procedure, fabric finish, and fabric texture. Attention to detail and fabric structure are used slightly less as quality cues, while respondents do not seem to relate fibre content to quality. Brand name was not an important quality cue for this sample of respondents.

To determine which aspects should be included in the quality assessment guide, a statistical hypothesis was tested. In all cases 50 % or more respondents rated the aspects as ‘very important’ or ‘important’. As discussed in Chapter 3, this means that more than 67 respondents (58 %) always thought the aspects to be ‘very important’ or ‘important’ (Table V and

Figure 5). The null hypothesis was therefore rejected (on a 5 % level of significance). This also means that all the aspects should be included in the guide as they would be the aspects consumers would look for in a textile assessment guide to help them with decision-making. (For this study only the intrinsic attributes were included, but the results for the variables testing extrinsic aspects were also considered when the website was created).

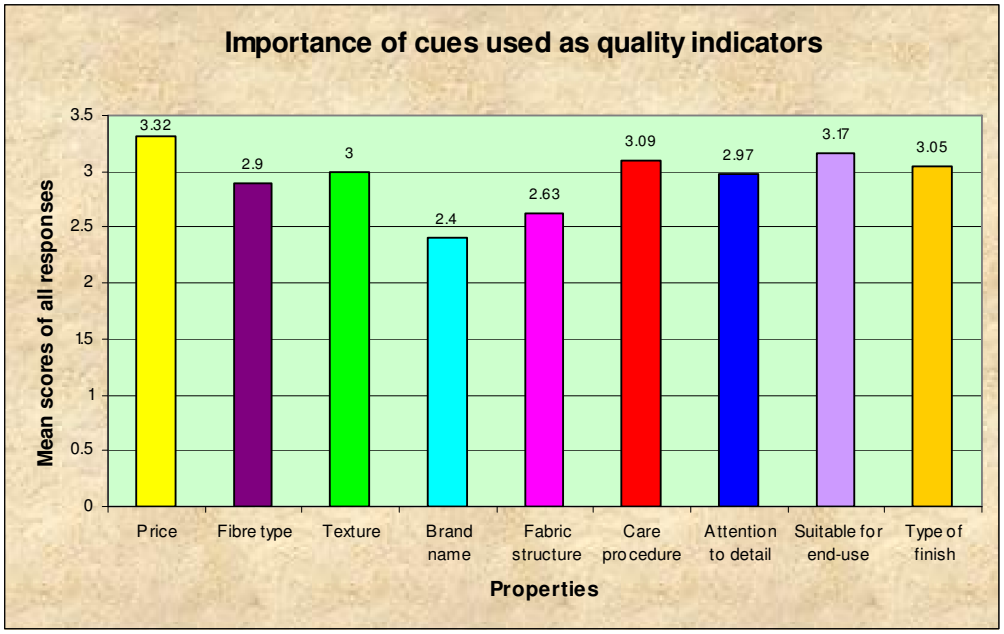

FIGURE 5: IMPORTANCE OF CUES USED AS QUALITY INDICATORS

Only 53 responses (by 41 respondents; 35 %) were registered for the open-ended question at the end of question 1. In addition to the above, 15 respondents (28 %) used appearance as an indicator of quality, 11 (21 %) used garment construction as quality measure, while another 10 (19 %) mentioned comfort as quality cue. The other quality indicators that were listed were related to performance aspects (durability, pilling, shape retention, type of care procedure and flexibility). Two of the 53 respondents (4 %) used the retailer as quality cue. This could indicate positive prior experiences and quality products. As there were so few responses, only aspects related to performance properties were included in the guide.

4.2.1.1 Relatedness of formal, physical features of textiles and performance aspects when assessing quality during the purchasing process (Sub-objective 1.1)

The respondents were asked to rate the importance (from most important to least important) they attach to comfort, easy-care, durability and appearance when purchasing garments for formal day or office wear, and were asked to do the same for casual daywear (Table VI a and Figure 6). Here 114 responses were received for comfort, easy-care and appearance, while durability received 115 responses.

TABLE VI a: THE IMPORTANCE OF PERFORMANCE FEATURES WHEN PURCHASING FORMAL DAY OR OFFICE WEAR

Feature	Most important	2nd most important	3rd most important	Least important	Mean scores - all responses	Standard deviation	Overall importance of feature
Comfort (n=114)	27	57	19	11	2.88	0.884	2
Easy- care (n=114)	2	7	39	66	1.52	0.694	4
Durability (n=115)	20	19	46	30	2.52	1.033	3
Appearance (n=114)	66	31	10	7	3.37	0.885	1

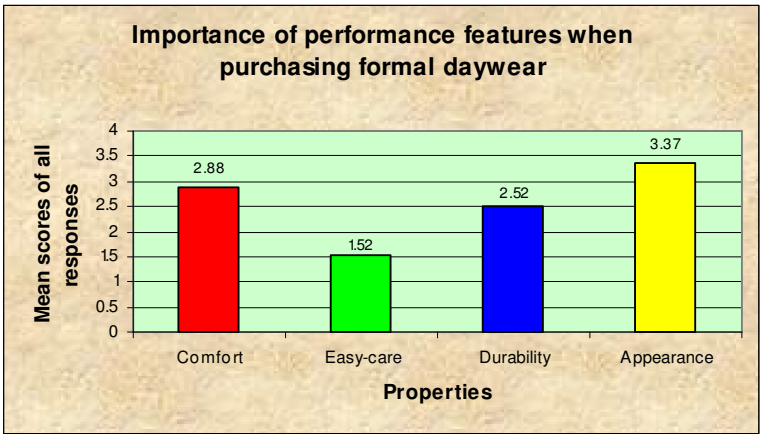

FIGURE 6: IMPORTANCE OF PERFORMANCE FEATURES WHEN PURCHASING FORMAL DAYWEAR

From the mean scores of all the responses (Table VI a and Figure 6) it seems that appearance is rated as the most important factor when purchasing formal daywear. Comfort was the next most important factor,

followed by durability. The consumers did not seem to mind if formal daywear did not have easy-care properties. (Here no hypotheses were tested; only frequencies and mean scores were used to rank the properties).

TABLE VI b: THE IMPORTANCE OF PERFORMANCE FEATURES WHEN PURCHASING CASUAL WEAR

Feature	Most important	2nd most important	3rd most important	Least important	Mean scores - all responses	Standard deviation	Overall importance of feature
Comfort (n=114)	63	45	4	2	3.48	0.655	1
Easy- care (n=114)	3	21	49	41	1.88	0.800	3
Durability (n=115)	3	10	46	56	1.65	0.750	4
Appearance (n=114)	46	38	15	15	3.01	1.035	2

In the case of casual wear, the picture is slightly different. Here comfort is rated as the most important factor, followed by appearance. In this case easy-care was seen as more important than durability (Table VI b and Figure 7). (Once again there were 114 responses for comfort, easy-care and appearance and 115 for durability).

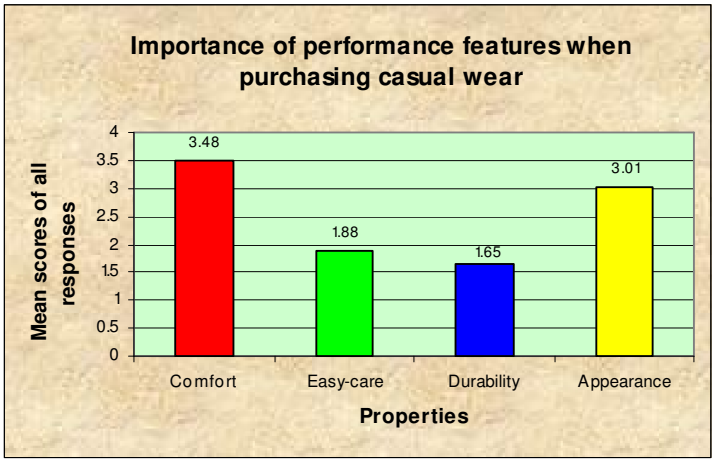

FIGURE 7: THE IMPORTANCE OF PERFORMANCE FEATURES WHEN PURCHASING CASUAL DAYWEAR

- **Rating of durability features of textiles (Sub-objective 1.1.1)**

The respondents were asked to indicate which features they usually use as indicators of durability when purchasing formal daywear or casual daywear. They were asked to indicate if they always, sometimes, seldom or never use

the specified durability indicators. The total number of responses for all properties was 114 (Table VII a). Cronbach's alpha coefficient was used to assess the degree of internal consistency of the responses for durability. An alpha value of 0.75 was obtained (an alpha value of $P \geq 0.70$ is an acceptable measure of consistency) (Gliem & Gliem, 2003; Watson & Klassen, 2004).

TABLE VII a: INDICATORS OF DURABILITY WHEN BUYING FORMAL DAY OR OFFICE WEAR

Feature	Always (n=114)	Some-times (n=114)	Seldom (n=114)	Never (n=114)	Mean scores	Std. Devia-tion	Overall importance	H_0 rejected on 5% level of significance
Abrasion resistance	64	41	4	5	3.44	0.765	2	✓
Closeness of weave / knit	21	68	22	3	2.94	0.695	4	✓
Elastic recovery	58	45	10	1	3.40	0.688	3	✓
Snagging resistance	74	28	11	1	3.54	0.706	1	✓
Fabric fineness	15	52	40	7	2.66	0.785	5	✓
Yarn thickness	12	37	35	30	2.27	0.971	6	x

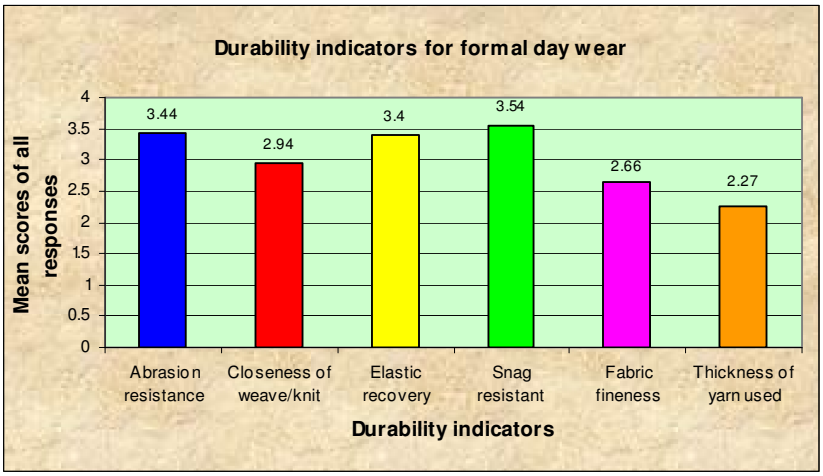

FIGURE 8: DURABILITY INDICATORS USED WHEN PURCHASING FORMAL DAYWEAR

The property that was judged the best indicator of durability by using the mean scores of all responses was snagging resistance (3.54), followed by abrasion resistance (3.44) and elastic recovery (3.4). The closeness of weave or knit (2.94), fabric fineness (2.66) and yarn thickness (2.27) were not as important when assessing durability of formal daywear (Figure 8).

To determine the statistical significance of these results (on a 5 % level of significance) the statistical hypotheses (H_0 and H_a) were tested. [As explained

in Chapter 3, if >67 respondents always chose the indicator, the null hypothesis (H_0) would be rejected].

In the case of the durability indicators, only yarn thickness was not 'always' or 'sometimes' used by more than 67 (58%) respondents. In all cases except one (yarn thickness) the null hypothesis (H_0) was therefore rejected (on a 5 % level of significance) (Table VII a).

Other durability indicators mentioned in an open-ended question included fibre content, colourfastness, workmanship (garment), and price. Only 17 (15 %) respondents used these additional indicators.

TABLE VII b: INDICATORS OF DURABILITY WHEN BUYING CASUAL WEAR

Feature	Always	Some-times	Seldom	Never	Mean scores	Std. Deviation	Overall impor-tance	H_0 rejected on 5% level of significance
Abrasion resistance	57	46	7	5	3.35	0.784	3	✓
Closeness of weave / knit	21	67	25	2	2.93	0.685	4	✓
Elastic recovery	60	43	8	4	3.38	0.768	2	✓
Snagging resistance	66	42	6	1	3.50	0.640	1	✓
Fabric fineness	15	49	37	13	2.58	0.861	5	x
Yarn thickness	10	35	36	33	2.19	0.958	6	x

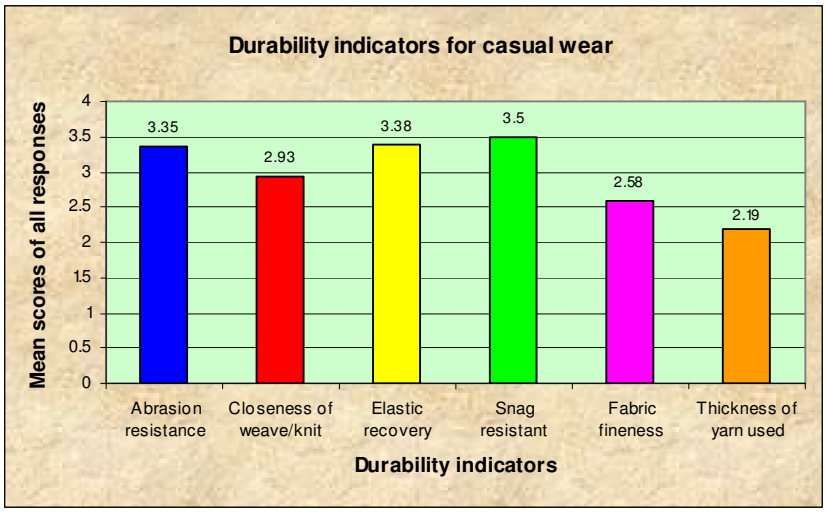

FIGURE 9: DURABILITY INDICATORS USED WHEN PURCHASING CASUAL DAYWEAR

For casual wear, the results were slightly different (Table VII b and Figure 9). In total 115 responses were received for abrasion resistance, closeness of

weave/knit, elastic recovery and snagging resistance. The other two properties each received 114 responses. Once again the mean scores for all the responses were determined. Snagging resistance was still the most important indicator of durability (3.35), followed by elastic recovery (3.38) and then abrasion resistance (3.35). Once again, the closeness of weave or knit (2.93), fabric fineness (2.58) and yarn thickness (2.19) were not as important when assessing durability of casual wear.

In the case of casual daywear the null hypothesis could not be rejected (on a 5 % level of significance) in the case of fabric fineness and yarn thickness – meaning that less than 67 respondents 'always' or 'sometimes' used these specific durability indicators when purchasing casual daywear. The null hypothesis was rejected in the case of snagging resistance, elastic recovery, abrasion resistance and closeness of weave or knit. Other durability indicators (open-ended questions) included colour-fastness, fibre content, workmanship (garment), and price. Only 15 (13 %) respondents used these additional indicators. Snagging resistance, elastic recovery, abrasion resistance and closeness of weave would be the aspects looked for in a textile guide. By including the other two durability properties as well, the consumers could be helped to realise how these aspects also impact on durability, which could eventually assist with decision-making.

Once again Cronbach's alpha coefficient was used to assess the degree of internal consistency of the responses for durability. An alpha value of 0.75 was obtained, which indicates an acceptable measure of consistency.

- **Rating of comfort features of textiles (Sub-objective 1.1.2)**

The mean scores indicate that for most respondents the coolness of the fabric on the skin is indicative of comfort and the property that is most commonly used when assessing comfort of formal day or office wear (4.28)(Table VIII a and Figure 10). Soft, smooth (3.40), lightweight (3.33) and flexible fabrics (3.19) are also equated to comfort. Absorbency is used slightly

less as comfort indicator (3.03), and openness of weave or knit is used even less (2.45) when assessing comfort.

TABLE VIII a: INDICATORS OF COMFORT WHEN BUYING FORMAL DAY OR OFFICE WEAR

Feature	Always (n=116)	Some-times (n=116)	Seldom (n=116)	Never (n=116)	Mean score	Std. Devia-tion	Overall impor-tance	H_0 rejected on 5% level of significance
Cool on skin (opposed to clammy)	75	39	2	0	4.28	0.520	1	✓
Soft and smooth	55	52	9	0	3.40	0.631	2	✓
Absorbent	34	59	16	7	3.03	0.823	5	✓
Lightweight (opposed to bulky)	46	62	8	0	3.33	0.601	3	✓
Stretchy (moves with body)	41	58	15	2	3.19	0.721	4	✓
Openness of weave or knit	15	43	37	21	2.45	0.936	6	x

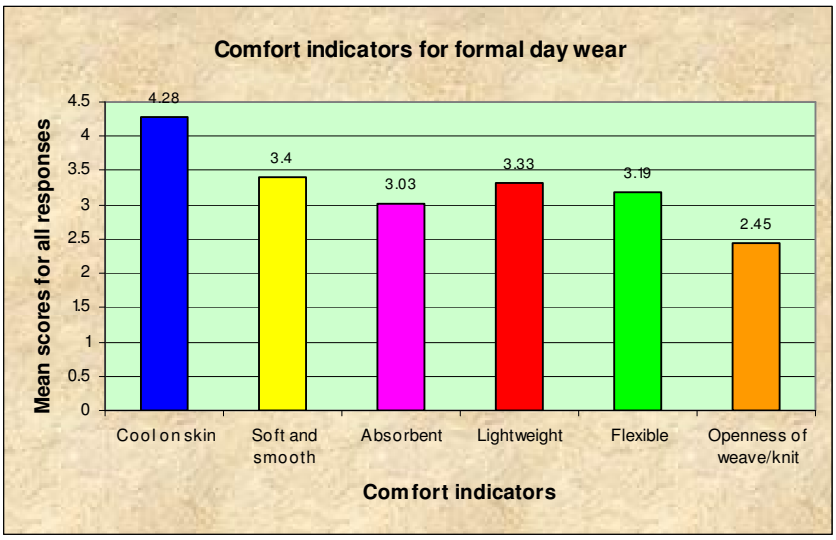

FIGURE 10: COMFORT INDICATORS WHEN PURCHASING FORMAL DAYWEAR

When determining the statistical significance of these results, the null hypothesis was rejected in all cases except one. In the case of 'openness of weave and/or knit' as comfort indicator, the null hypothesis could not be rejected, as fewer than 67 respondents 'always' or 'sometimes' used this as indicator (Table VIII a and Figure 10). Eight respondents (7 %) also mentioned that they looked at the style and fit of the garment, its appearance and the drape ability of the fabric when they assessed comfort.

The Cronbach alpha coefficient value was 0.70 in this case – once again an acceptable value for internal consistency of responses for comfort.

TABLE VIII b: INDICATORS OF COMFORT WHEN BUYING CASUAL WEAR

Feature	Always (n=116)	Some-times (n=116)	Seldom (n=116)	Never (n=116)	Mean score	Std. Devia-tion	Overall impor-tance	H_0 rejected on 5% level of significance
Cool on skin (opposed to clammy)	85	29	2	0	3.72	0.490	1	✓
Soft and smooth	51	52	12	1	3.32	0.693	5	✓
Absorbent	57	50	6	3	3.39	0.707	2	✓
Lightweight (opposed to bulky)	54	50	12	0	3.36	0.665	3	✓
Stretchy (moves with body)	54	50	11	1	3.35	0.688	4	✓
Openness of weave or knit	20	42	39	15	2.58	0.925	6	x

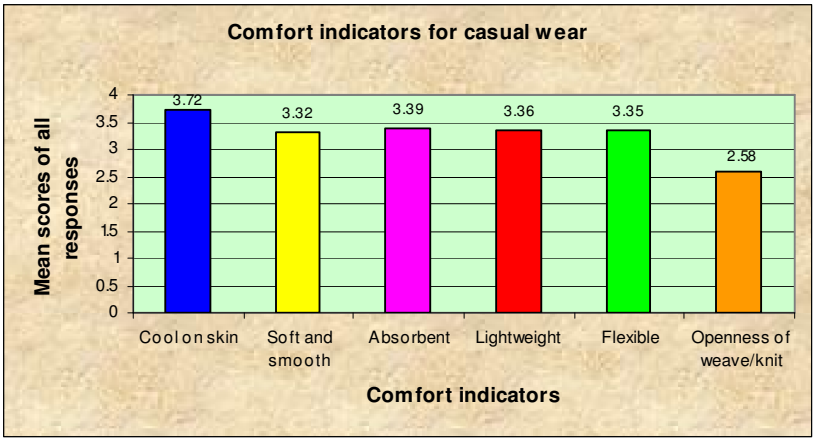

FIGURE 11: COMFORT INDICATORS WHEN PURCHASING CASUAL DAYWEAR

For casual wear, the mean scores indicate that coolness on skin is rated as the most important indicator of comfort (3.72). Absorbency (3.39), lightweight (3.36), flexibility (3.35), and softness and smoothness of the fabric (3.32) are also used as measures of comfort. Once again openness of weave or knit is not often used (2.58) to assess comfort (Table VIII b and Figure 11).

When determining the statistical significance of these results, the null hypothesis was rejected in all cases except one. In the case of 'openness of weave and/or knit' as comfort indicator, the null hypothesis could not be rejected, as less than 67 respondents 'always' or 'sometimes' used this as indicator (Table VIII b).

As in the case of formal daywear, the Cronbach alpha coefficient was 0.70 – an acceptable value for internal consistency of responses for comfort.

Five respondents (4%) also mentioned in an open-ended question that they looked at the style and fit of the garment, its appearance and the drape ability of the fabric when they assessed comfort.

Once again the inclusion of all these aspects in a textile guide would benefit the consumer.

- **Rating of maintenance features of textiles (Sub-objective 1.1.3)**

TABLE IX a: INDICATORS OF EASY-CARE WHEN BUYING FORMAL DAY OR OFFICE WEAR

Feature	Always (n=116)	Some-times (n=116)	Seldom (n=116)	Never (n=116)	Mean score	Std. Devia-tion	Overall import-ance	H_0 rejected on 5% level of significance
Soil resistance	54	45	12	5	3.28	0.819	6	✓
No static build-up	39	45	29	3	3.03	0.833	8	✓
Wrinkle resistance	88	28	0	0	3.76	0.430	1	✓
Heat resistance	40	52	21	3	3.11	0.789	7	✓
Stain resistance	33	56	22	4	3.00	0.789	9	✓
Colourfastness	62	41	10	3	3.40	0.756	4	✓
Machine washable	78	34	4	0	3.64	0.550	2	✓
Tumble dryable	36	43	24	13	2.88	0.979	10	✓
Little or no ironing	52	49	11	4	3.28	0.778	5	✓
Good shape retention	66	44	6	0	3.52	0.587	3	✓

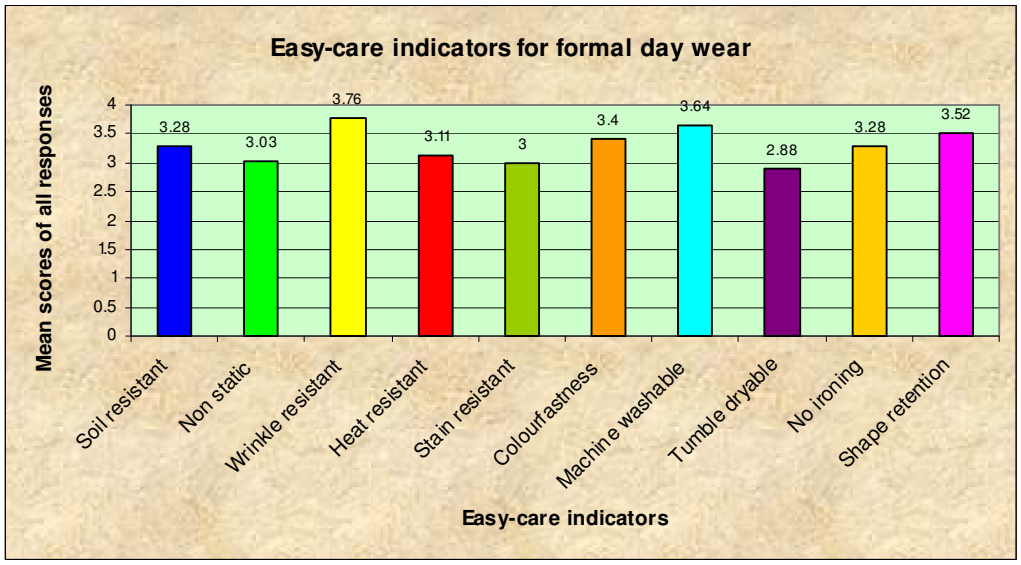

FIGURE 12: EASY-CARE INDICATORS WHEN PURCHASING FORMAL DAYWEAR

Wrinkle resistance was judged as the most important indicator of easy-care (3.76). Machine washable garments were also seen as easy-care (3.64) as well as garments that have good shape retention (i.e. do not stretch or shrink – 3.52). Although slightly less important than the first three properties, colourfastness (3.40) was also judged to be an indicator of easy-care (probably this means less sorting or worrying about colour staining). No or little ironing and soil resistance closely followed colourfastness as easy-care indicators for formal daywear. [Although the mean scores of all the responses indicated that no or little ironing was used as often than soil resistance (3.28), more respondents (54) indicated that they 'always' used soil resistance as indicator, fewer respondents (52) 'always' used this as indicator (Table IX a)]. The mean scores indicate that heat resistance (3.11), non-static properties (3.03) and stain resistance (3.00) were less used indicators of easy-care. The property that was least used to indicate easy-care was if the garment could be tumble-dried (the mean score of all responses was 2.88).

When determining the statistical significance of these results, the null hypothesis was rejected in all cases as more than 67 respondents 'always' or 'sometimes' used these as indicators of easy care (Tables IX a).

In this case the Cronbach alpha coefficient value, used to assess the degree of internal consistency of the responses for ease-of-care, was 0.71, which is also an acceptable value for internal consistency of responses.

Two respondents also mentioned non-dry cleanable and one respondent wrinkle-free appearance as additional indicators of easy-care in an open-ended question.

For casual wear (Table XI b and Figure 13) the mean scores of all responses indicate that the ability to machine wash garments (3.75) is seen as the most important easy-care property. The ability of a garment to retain shape (3.57) was the second and wrinkle resistance (3.49) the third most important indicator of easy-care properties for casual daywear, followed by

colourfastness (3.38), little or no ironing (3.36), and soil resistance (3.21). Heat resistance (3.10), stain resistance (3.09) and non-static properties (3.08) were almost equally important, and once again the ability to tumble dry a garment was based on the mean scores of all responses (3.02), the least important easy-care property.

TABLE IX b: INDICATORS OF EASY-CARE WHEN BUYING CASUAL WEAR

Feature	Always (n=115)	Some-times (n=115)	Seldom (n=115)	Never (n=115)	Mean score	Std. Devia-tion	Overall import-ance	H_0 rejected on 5% level of significance
Soil resistance	47	52	9	7	3.21	0.832	6	✓
No static build-up	38	52	21	4	3.08	0.807	9	✓
Wrinkle resistance	67	39	7	2	3.49	0.693	3	✓
Heat resistance	41	50	19	5	3.10	0.831	7	✓
Stain resistance	36	55	22	2	3.09	0.756	8	✓
Colourfastness	60	40	14	1	3.38	0.732	4	✓
Machine washable	87	27	1	0	3.75	0.456	1	✓
Tumble dryable	49	33	19	14	3.02	1.043	10	✓
Little or no ironing	55	49	8	3	3.36	0.728	5	✓
Good shape retention	67	46	2	0	3.57	0.532	2	✓

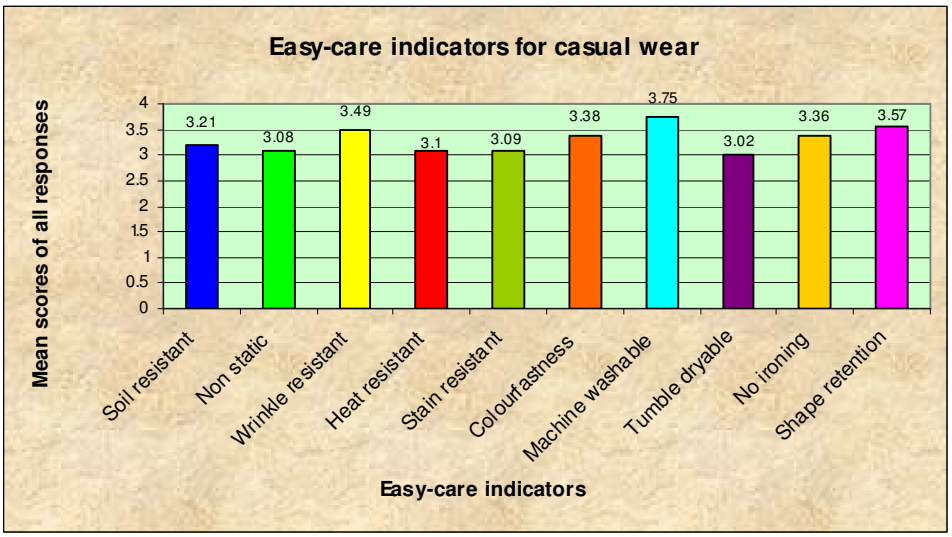

FIGURE 13: EASY-CARE INDICATORS WHEN PURCHASING CASUAL DAYWEAR

When looking at the respondents that 'always' or 'sometimes' use these properties as indicators of easy-care, the results are slightly different. The ability to machine wash a garment is 'always' or 'sometimes' used by 114 of the respondents as indicator of easy-care. The ability of a garment to retain

shape is ‘always’ or ‘sometimes’ used by 113 respondents as easy-care indicator, while wrinkle resistance is used by 106 respondents. Little or no ironing was ‘always’ or ‘sometimes’ used by 104 respondents and 100 respondents ‘always’ or ‘sometimes’ used colourfastness to assess easy-care, followed by 99 respondents who use soil resistance as easy-care indicator. Both heat resistance and stain resistance are ‘always’ or ‘sometimes’ used by 91 respondents as indicators of easy-care. Non-static properties was ‘always’ or ‘sometimes’ used by 90 respondents, while 82 used the ability to tumble dry a garment as easy-care indicator.

When determining the statistical significance of these results, the null hypothesis was rejected in all cases as more than 67 respondents ‘always’ or ‘sometimes’ used these as indicators of easy-care (Table IX b). As easy-care instructions are familiar to the South African consumer, they would expect information on easy-care properties in the guide to help them with decision-making.

The Cronbach alpha coefficient value was higher than in the case of formal daywear. The alpha value was 0.79 which an acceptable indication of internal consistency of the responses relating to ease-of-care (Watson & Klassen, 2004).

Five respondents answered the open-ended question and mentioned the use of non-dry cleanable, appearance, and durability as additional indicators of easy-care.

An open-ended question (Section A: 7) was added to determine if consumers consider any other aspects as important when purchasing apparel. Only 37 (32 %) respondents mentioned other aspects, which they judged to be important when buying apparel. These aspects varied from appearance (including colour) (20 of the 37 respondents); comfort (including fit) (12 of the 37 respondents); practical style or mix-and-match possibilities (9 of the 37 respondents); value for money (8 of the 37 respondents); workmanship of garment (6 of the 37 respondents); price (4 of the 37 respondents);

uniqueness (3 of the 37 respondents); and no ironing problems (3 of the 37 respondents). Although a variety of extra properties were mentioned, only the performance properties relating to textiles were used in the guide.

- **Respondents' assessment of fabrics for end-use serviceability (Sub-objective 1.1.4)**

A set of samples, suitable for both formal and casual wear, was supplied to determine if handling the actual fabric would support the results of Section A of the questionnaire.

The set of samples consisted of three medium weight woven fabrics used in apparel, which would be suitable for jackets, skirts or pants; three light weight woven fabrics that would be suitable for tops, blouses or shirts, and possibly for unstructured suits; three knitted fabrics, one a medium weight double knit, a single jersey knit, and a lacy knit.

The respondents were asked to rate the durability, comfort and easy-care properties of each set of samples after examining and handling them as they would before purchasing. They were also asked to give reasons for their choices.

➢ **Durability rating of the fabric samples**

As some respondents only indicated their first choice, the results in Tables X a – c, Table XI a – c and Table XII a – c are indicated in percentage; the frequencies are indicated in brackets.

TABLE X a: THE DURABILITY RATING OF MEDIUM WEIGHT WOVEN FABRICS

Fabric type	Most durable	Durable	Least durable	Mean score	SD	Overall durability
Fabric 1A: Twill weave (n=113)	50.44 % (57)	42.48 % (48)	7.08 % (8)	2.43	0.625	1
Fabric 1B: Balanced plain weave (n=115)	31.25 % (38)	39.29 % (44)	29.46 % (33)	2.10	0.782	2
Fabric 1C: Uneven yarn thickness – plain weave (n=113)	21.24 % (24)	17.81 % (19)	61.95 % (70)	1.59	0.90	3

Although fabric structure as cue to assess quality was placed eighth (out of nine – see Table V), the respondents were able to recognise that the twill weave would be the most durable fabric of the medium weight woven fabrics.

TABLE X b: THE DURABILITY RATING OF LIGHT WEIGHT WOVEN FABRICS

Fabric type	Most durable	Durable	Least durable	Mean score	SD	Overall durability
Fabric 2A: Balanced plain weave – lawn (n=112)	18.75 % (21)	11.61 % (13)	69.64 % (78)	1.49	0.794	3
Fabric 2B: Balanced plain weave – slightly crinkled finish (n=114)	34.21 % (39)	54.39 % (62)	11.40 % (13)	2.23	0.639	2
Fabric 2C: Balanced plain weave – crinkled finish (n=112)	50.00 % (56)	32.14 % (36)	17.86 % (20)	2.32	0.762	1

Here the fabric with the more crinkled finish was judged to be more durable than the one with a slightly less pronounced crinkled finish (it was slightly heavier - 145g/m^2 - than the less crinkled fabric, which weighed 132 g/m^2). The smooth lawn fabric was assessed as the least durable (it was also the lightest weight; 117,5 g/ m^2)(Table X b).

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TABLE X c: THE DURABILITY RATING OF KNITTED FABRICS

Fabric type	Most durable	Durable	Least durable	Mean score	SD	Overall durability
Fabric 3A: Double knit (n=115)	67.83 % (78)	23.48 % (27)	8.70 % (10)	2.59	0.647	1
Fabric 3B: Single jersey knit (n=112)	21.43 % (24)	42.86 % (48)	35.71 % (40)	1.86	0.746	2
Fabric 3C: Lacy knit (n=111)	12.61 % (14)	32.43 % (36)	54.95 % (61)	1.58	0.708	3

These knits varied in weight, with the double knit the heaviest (295 g/ m^2), the single jersey knit slightly lighter (230 g/ m^2) and the lacy knit the lightest (190 g/ m^2), but with a coarser look than both the double and the single knit. The double knit was judged to be the most durable, followed by the single jersey fabric (Table X c).

In an open-ended question the respondents were asked to indicate what had helped them to decide which fabric in each set would be the most durable. Of the respondents 28 % used sturdiness or firmness of weave or knit to determine durability, while 19 % said that they judged durability by the hand of the fabrics; another 14 % assessed durability by the fabric's appearance

and 11 % used fibre content to judge durability. Other properties used were flexibility (9 %), predicted shape retention (5 %), anticipated care procedures (2 %), and ability to maintain a matt surface (< 1 %).

To summarise, it seems as if most respondents used tactile aspects and appearance to judge the durability of a fabric. As one of the problems with online buying is the lack of a tactile experience, special attention had to be given to these aspects when designing the website and online textile assessment guide. In the guide descriptive explanations are used to indicate which fibre and fabric properties are related to durability.

- **Comfort rating of the fabric samples**

TABLE XI a: THE COMFORT RATING OF MEDIUM WEIGHT WOVEN FABRICS

Fabric type	Most comfortable	Comfortable	Least comfortable	Mean score	SD	Overall comfort
Fabric 1A: Twill weave (n=113)	46.90 % (53)	40.71 % (46)	12.39 % (14)	2.35	0.691	1
Fabric 1B: Balanced plain weave (n=114)	47.37 % (54)	35.09 % (40)	17.54 % (20)	2.30	0.762	2
Fabric 1C: Uneven yarn thickness – plain weave (n=112)	7.14 % (8)	23.21 % (26)	69.64 % (78)	1.38	0.617	3

The twill weave fabric was judged to be slightly more comfortable than the balanced plain weave (187.5 g/ m^2), in spite of being the heaviest of the three fabrics (242.5 g/ m^2). The fabric with the uneven yarn thickness was assessed as the least comfortable, in spite of being the lightest fabric (177.5 g/ m^2) (Table XI a). The fibre content was indicated on the sample sheet; the twill weave fabric was a blend of polyester and viscose, while the other two fabrics were both 100 % polyester. It is possible that the fibre content helped the respondents to rate the comfort of the three fabrics.

TABLE XI b: THE COMFORT RATING OF LIGHT WEIGHT WOVEN FABRICS

Fabric type	Most comfortable	Comfortable	Least comfortable	Mean score	SD	Overall comfort
Fabric 2A: Balanced plain weave – lawn (n=114)	23.68 % (27)	19.30 % (22)	57.02 % (65)	1.67	0.838	3
Fabric 2B: Balanced plain weave – slightly crinkled finish (n=114)	36.84 % (42)	47.37 % (54)	15.79 % (18)	2.21	0.697	1
Fabric 2C: Balanced plain weave – crinkled finish (n=114)	41.23 % (47)	32.46 % (37)	26.32 % (30)	2.15	0.812	2

The fabric with the slightly crinkled finish was assessed as the most comfortable, followed by the fabric with the more pronounced crinkle. The fabric seen as the least comfortable was the balanced plain weave lawn fabric that was also lighter in weight (Table XI b).

TABLE XI c: THE COMFORT RATING OF KNITTED FABRICS

Fabric type	Most comfortable	Comfortable	Least comfortable	Mean score	SD	Overall comfort
Fabric 3A: Double knit (n=112)	19.64 % (22)	47.32 % (53)	33.04 % (37)	1.87	0.717	2
Fabric 3B: Single jersey knit (n=115)	60.87 % (70)	21.74 % (25)	17.39 % (20)	2.43	0.774	1
Fabric 3C: Lacy knit (n=110)	20.91 % (23)	30.91 % (34)	48.18 % (53)	1.73	0.789	3

The single jersey knit was chosen as most comfortable knitted textile. This was the only cotton / Lycra blend; the other two fabrics were 100 % polyester fabrics. This might have been the reason for choosing the single jersey knit as most comfortable. Although the double knit was only slightly heavier than the single jersey, it was assessed as less comfortable (this could be due to knowledge or experience of the comfort properties of polyester and cotton fabrics, or that double knits are perceived as being warmer). The lacy knit was slightly lighter in weight, but looked bulkier and could therefore have been perceived as less comfortable (Table XI c).

In an open-ended question the respondents were asked to indicate what had helped them to decide which fabric in each set would be the most comfortable. 39 % said that they had used the fabric hand and feeling on the skin to determine comfort, while 18 % used the flexibility of the fabric to assess comfort. The visible texture was used by 14 % to assess comfort. Although not related to comfort, 12 % felt that fabric durability gave them an indication of comfort. To some appearance (6 %) and wrinkle resistance (4%) and even colourfastness (1%) indicated comfort. Only 1 % indicated that they used fibre content to assess comfort (this contradicts the results as discussed above).

Once again most respondents used tactile aspects to assess comfort. This also meant that special attention was given to descriptive explanations to describe comfort related aspects in the online guide. Care was taken to indicate which fibre and other properties would contribute to comfort properties.

- **Ease of care rating of the fabric samples**

TABLE XII a: THE EASE OF CARE RATING OF MEDIUM WEIGHT WOVEN FABRICS

Fabric type	Easy to care for	Moderately easy to care for	Least easy to care for	Mean score	SD	Overall comfort
Fabric 1A: Twill weave (n=112)	43.75 % (49)	29.46 % (33)	26.79 % (30)	2.17	0.826	1
Fabric 1B: Balanced plain weave (n=113)	26.55 % (30)	54.87 % (62)	18.58 % (21)	2.08	0.670	2
Fabric 1C: Uneven yarn thickness – plain weave (n=114)	31.58 % (36)	14.91 % (17)	53.51 % (61)	1.78	0.900	3

The twill weave was assessed to be slightly easier to care for than the balanced plain weave, while the fabric with the uneven yarn size was assessed as having the least easy-care properties (Table XII a).

TABLE XII b: THE EASE OF CARE RATING OF LIGHT WEIGHT WOVEN FABRICS

Fabric type	Easy to care for	Moderately easy to care for	Least easy to care for	Mean score	SD	Overall comfort
Fabric 2A: Balanced plain weave – lawn (n=111)	18.02 % (20)	21.62 % (24)	60.36 % (67)	1.58	0.781	3
Fabric 2B: Balanced plain weave – slightly crinkled finish (n=113)	24.78 % (28)	57.52 % (65)	17.70 % (20)	2.07	0.651	2
Fabric 2C: Balanced plain weave – crinkled finish (n=111)	59.46 % (66)	19.82 % (22)	20.72 % (23)	2.39	0.811	1

The two fabrics with the crinkled finish were assessed as having more easy-care properties than the smooth plain weave fabric. The fabric with the more pronounced crinkles was also chosen above the one with slightly less crinkles. As these crinkles would mask wrinkling, this result was expected (Table XII b).

TABLE XII c: THE EASE OF CARE RATING OF KNITTED FABRICS

Fabric type	Easy to care for	Moderately easy to care for	Least easy to care for	Mean score	SD	Overall comfort
Fabric 3A: Double knit (n=112)	45.54 % (51)	41.07 % (46)	13.39 % (15)	2.32	0.700	1
Fabric 3B: Single jersey knit (n=113)	19.47 % (22)	34.51 % (39)	46.02 % (52)	1.73	0.768	3
Fabric 3C: Lacy knit (n=114)	36.84 % (42)	23.68 % (27)	39.47 % (45)	1.97	0.877	2

The fact that the only cotton fabric was assessed to have the least easy-care properties indicates that respondents are probably aware of cotton's ability to crease (Table XII c). In an open-ended question the respondents were asked to indicate what had helped them to decide which fabric in each set would be the most easy to care for. The respondents seemed to use crease resistance as most indicative of ease of care (43 %). To 14 % the type of care procedure (i.e. being able to tumble dry the garment) indicated ease of care, while to 11 % little or no ironing indicated easy-care. Some (7%) used propensity to lose colour or stain (changes in appearance) as indicators. Only 7 % related ease of care to fibre content. A few (6 %) felt that "good quality" or durability would include easy-care properties. 5 % said that the hand of the fabric indicated ease of care (this could mean that they had crushed the fabric to test crease resistance!). Almost the same number of respondents (4 %) used changes in visible texture and shape retention as indicators.
Care was once again taken to relate ease of care properties to fibre and fabric properties in the online textile assessment guide.

- **End-use serviceability of the fabric samples**

To determine the reason for choosing specific fabrics for formal daywear and casual wear (end-use serviceability), two-way frequencies were used. The respondents were asked to choose one fabric from any of the three sample sets, which they would consider using for a suit (jacket and skirt or pants) for formal daywear (Section D: Q 4.1). They were then asked to give reasons for their choice.

As the respondents were asked to give two to three reasons for their choice of fabric for the specified end-use, the total number of responses for each fabric (row total) is indicated as well as the total number of responses for the different properties (column total) (Tables XIII a – e).

TABLE XIII a: MOST PREFERRED FABRIC FOR A SUIT (JACKET, SKIRT / PANTS) FOR FORMAL DAYWEAR AND REASONS FOR CHOICE

Frequency Percentage	Comfort	Shape retention	Weave density	Easy-care	Appearance professional / neat	Crease resistance	Personal taste	Durability	**Total of responses**
Twill weave	8 5.26 %	6 3.39 %	13 8.55 %	5 3.29 %	22 14.47 %	18 11.84 %	1 0.66 %	28 18.42 %	**101** **66.45 %**
Balanced Plain weave	3 1.97 %	3 1.97 %	8 5.26 %	2 1.32 %	8 5.26 %	8 5.26 %	0 0.00 %	11 7.24 %	**43** **28.29 %**
Uneven plain weave	1 0.66 %	0 0.00 %	0 0.00 %	0 0.00 %	3 1.97 %	0 0.00 %	0 0.00 %	0 0.00 %	**4** **2.63 %**
Slightly crinkled	1 0.66 %	0 0.00 %	1 0.66 %	0 0.00 %	0 0.00 %	0 0.00 %	0 0.00 %	0 0.00 %	**2** **1.32 %**
Double knit	0 0.00 %	0 0.00 %	0 0.00 %	0 0.00 %	0 0.00 %	1 0.66 %	0 0.00 %	0 0.00 %	**1** **0.66 %**
Lacy knit	0 0.00 %	0 0.00 %	0 0.00 %	0 0.00 %	0 0.00 %	1 0.66 %	0 0.00 %	0 0.00 %	**1** **0.66 %**
Total	**13** **8.55 %**	**9** **5.92 %**	**22** **14.47 %**	**7** **4.61 %**	**35** **23.03 %**	**26** **17.11 %**	**1** **0.66 %**	**39** **25.66 %**	**152** **100 %**

As can be seen from Table XIII a, six of the nine fabrics were chosen and the twill weave fabric seemed to be the most popular choice for a suit (jacket and skirt/pants) for formal daywear (101 of the 152 responses). Durability was the most cited reason (28 responses; 18 %) for the choice followed by appearance (described as professional or neat) (22 responses; 14 %). Another reason given for the choice was the fabric's crease resistance (18 responses; 12 %) and a smaller percentage (13 responses; 9 %) chose the fabric because of the sturdiness of the weave (density). Only eight respondents (5 %) chose the fabric because they expected it to be comfortable. Shape retention and easy-care properties were respectively used by six (3.4 %) and five (3.3 %) of the respondents. For all the fabrics chosen by the respondents, the same pattern emerged – 39 (26 %) of the respondents chose the fabric they preferred because they thought it was the most durable; 35 respondents (23 %) chose their preferred fabric because

the appearance was professional and neat; while 26 (17 %) chose their preferred fabric because it was assessed to be crease resistant and 22 (14 %) used fabric density (count) when choosing a fabric for a formal daywear suit. A smaller number of respondents (13; 9 %) felt the fabric they had chosen would be the most comfortable, nine (6 %) chose the fabric that they thought would retain its shape the best, and seven (5 %) of the respondents felt that the fabric of their choice would have easy-care properties. One respondent (<1%) said she chose the fabric because of personal taste.

The respondents were also asked to choose one fabric from any of the three sample sets, which they would consider using for a blouse, shirt, or top for formal daywear (Section D: Q 4.2). They were then asked to give reasons for their choice (Table XIII b). Eight of the nine fabrics were chosen for a blouse, shirt or top for formal daywear.

TABLE XIII b: MOST PREFERRED FABRIC FOR A BLOUSE, SHIRT OR TOP FOR FORMAL DAYWEAR AND REASONS FOR CHOICE

Frequency Percentage	Comfort	Shape retention	Weave / knit density	Easy-care	Appear-ance	Crease resis-tance	Personal taste	Flexible	Durabi-lity	**Total of responses**
Twill weave	0 0.00 %	0 0.00 %	1 0.59 %	0 0.00 %	0 0.00 %	1 0.59 %	0 0.00 %	0 0.00 %	0 0.00 %	**2** **1.18 %**
Balanced Plain weave	0 0.00 %	0 0.00 %	1 0.59 %	1 0.59 %	0 0.00 %	0 0.00 %	0 0.00 %	0 0.00 %	0 0.00 %	**2** **1.18 %**
Light weight plain weave	10 5.92 %	0 0.00 %	3 1.78 %	2 1.18 %	7 4.14 %	4 2.37 %	0 0.00 %	0 0.00 %	1 0.59 %	**27** **15.98 %**
Slightly crinkled	31 18.34 %	1 0.59 %	21 12.43 %	3 1.78 %	11 6.51 %	12 7.10 %	0 0.00 %	1 0.59 %	2 1.18 %	**82** **48.52 %**
Crinkled finish	13 7.69 %	2 1.18 %	8 4.73 %	4 2.37 %	11 6.51 %	6 3.55 %	1 0.59 %	1 0.59 %	2 1.18 %	**48** **28.40 %**
Double knit	0 0.00 %	0 0.00 %	0 0.00 %	0 0.00 %	0 0.00 %	1 0.59 %	0 0.00 %	1 0.59 %	0 0.00 %	**2** **1.18 %**
Plain jersey knit	0 0.00 %	0 0.00 %	0 0.00 %	0 0.00 %	0 0.00 %	0 0.00 %	0 0.00 %	1 0.59 %	0 0.00 %	1 0.59 %
Lacy knit	1 0.59 %	0 0.00 %	1 0.59 %	0 0.00 %	2 1.18 %	1 0.59 %	0 0.00 %	0 0.00 %	0 0.00 %	5 **2.96 %**
Total	**55** **32.54 %**	**3** **1.78 %**	**35** **20.71 %**	**10** **5.92 %**	**11** **18.34 %**	**25** **14.79 %**	**1** **0.59 %**	**4** **2.37 %**	**5** **2.96 %**	**169** **100 %**

For formal blouses, shirts or tops the respondents preferred the light- weight woven fabric with a slightly crinkled finish (82 of 169 responses; 49 %) followed by the lightweight woven fabric with the more pronounced crinkle finish (48 responses; 28 %). The third choice was the lightweight plain weave fabric (27 responses; 16 %). A few respondents chose the lacy knit (5 responses; 3 %), the medium weight twill weave, the medium weight balanced plain weave and the double knit (1 %), were only chosen by two respondents each. Only one respondent (< 1%) chose the single jersey knit (Table XIII b). The main reason for choosing the slightly crinkled fabric was because the respondents (31; 18 %) thought it would be the most comfortable. The other most cited reason was weave density (21; 12 %), which is also related to comfort. Twelve of the respondents (7 %) chose this fabric because of its crease resistance and 11 (6.5 %) because they thought it had a neat appearance. Three respondents (2 %) chose the fabric because they thought it would have easy-care properties and two (1%) because it seemed to be durable. Only one respondent (<1 %) chose the fabric because it was expected to have a good shape retention and flexibility (Table XIII b).

Overall the most common reason cited for the preferred choice was comfort (55 responses; 33 %), followed by density (35 responses; 21 %) and appearance (31 responses; 18 %). Crease resistance (25 responses; 15 %) was also a reason given for making a specific choice. A few respondents (10 responses; 6 %) chose the preferred fabric because of crease resistance. Durability (5 responses; 3 %), flexibility (4 responses; 2 %) and shape retention (3 responses; 2 %) seemed to be less important when choosing a blouse fabric for formal daywear (Table XIII b).

The respondents were asked to choose one fabric from any of the three sample sets, which they would consider using for a skirt or pair of slacks for casual wear (Section D: Q 4.3). They were then asked to give reasons for their choice (Table XIII c).

As indicated in Table XIII c, seven of the nine fabrics were chosen for skirts or slacks for casual daywear.

TABLE XIII c: MOST PREFERRED FABRIC FOR A SKIRT OR SLACKS FOR CASUAL WEAR AND REASONS FOR CHOICE

Frequency Percentage	Comfort	Shape retention	Weave / knit density	Easy-care	Appear-ance:	Crease resis-tance	Personal taste	Flexible	Durabi-lity	**Total of responses**
Twill weave	6 4.20 %	1 0.70 %	5 3.50 %	1 0.70 %	9 6.29 %	2 1.40 %	0 0.00 %	0 0.00 %	6 4.20 %	**30** **20.98 %**
Balanced Plain weave	7 4.90 %	1 0.70 %	2 1.40 %	3 2.10 %	9 6.29 %	5 3.50 %	1 0.70 %	0 0.00 %	3 2.10 %	**31** **21.68 %**
Plain weave uneven yarns	1 0.70 %	0 0.00 %	0 0.00 %	0 0.00 %	1 0.70 %	3 2.10 %	0 0.00 %	0 0.00 %	0 0.00 %	**5** **3.50 %**
Slightly crinkled	7 4.90 %	0 0.00 %	3 2.10 %	2 1.40 %	0 0.00 %	4 2.80 %	0 0.00 %	0 0.00 %	1 0.70 %	**17** **11.89 %**
Crinkled finish	7 4.90 %	0 0.00 %	1 0.70 %	1 0.70 %	4 2.80 %	2 1.40 %	1 0.70 %	3 2.10 %	0 0.00 %	**19** **13.29 %**
Double knit	6 4.20 %	3 2.10 %	5 3.50 %	1 0.70 %	1 0.70 %	1 0.70 %	1 0.70 %	12 8.39 %	1 0.70 %	**31** **21.68 %**
Plain jersey knit	4 2.80 %	0 0.00 %	0 0.00 %	0 0.00 %	1 0.70 %	0 0.00 %	1 0.70 %	4 2.80 %	0 0.00 %	**10** **6.99 %**
Total	**38** **26.57 %**	**5** **3.50 %**	**16** **11.19 %**	**8** **5.59 %**	**25** **17.48 %**	**17** **11.89 %**	**4** **2.80 %**	**19** **13.29 %**	**11** **7.69 %**	**143** **100 %**

Here two fabrics, the medium weight balanced plain weave and the double knit fabric, were indicated as most popular fabrics for casual skirts or slacks. In both cases 31 (22 %) of the respondents chose one of the two fabrics. The most common reasons for choosing the medium weight balanced plain weave were its neat appearance (9 responses; 6 %), comfort (7 responses; 5 %), and crease resistance (5 responses; 4 %), while flexibility (12 responses; 8 %), comfort (7 responses; 5 %) and density (5 responses; 4 %) were the most common reasons for choosing the double knit. The twill weave fabric was the next most popular fabric (30 responses; 21 %), the main reasons being its neat appearance (9 responses; 6 %), comfort (6 responses; 4 %), durability (6 respondents; 4 %) and weave density (5 responses; 4 %). The lightweight plain weave with the more pronounced crinkle finish was chosen by 19 (13 %) of the respondents for casual skirts or pants, because they judged it as being a comfortable fabric (7 responses; 5 %). The lightweight fabric with the slightly crinkled appearance was chosen by 17 (12 %) of the respondents for the same reason (7 responses; 5 %). Ten responses (7 %) opted for the single jersey knit fabric, the main reasons

being its comfort (4 responses; 3 %) and flexibility (4 responses; 3 %). A few respondents (5 responses; 4 %) chose the uneven yarn medium weight plain weave as the preferred fabric for casual skirts or pants mainly because of its crease resistance (3 responses; 2 %). The overall most popular reason given for the choice of fabric for casual skirts or slacks was comfort (38 responses; 27 %), followed by appearance (25 responses; 17 %) and flexibility (19 responses; 13 %). Crease resistance (17 responses; 12 %) and weave/ knit density (16 responses; 11 %) were more or less equally important when deciding on a fabric for a casual skirt or pair of slacks. Durability (11 responses; 8 %) and easy-care properties (8 responses; 6 %), and shape retention (5 responses; 4 %) seem to be less important features when choosing fabric for casual skirts and slacks. Four respondents (3 %) said the fabric of preference was chosen because of personal taste (Table XIII c).

TABLE XIII d: MOST PREFERRED FABRIC FOR A BLOUSE, SHIRT OR TOP FOR CASUAL WEAR AND REASONS FOR CHOICE

Frequency Percentage	Comfort	Shape retention	Weave / knit density	Easy-care	Appear-ance	Crease resist-ance	Personal taste	Flexible	Durability	**Total of responses**
Balanced Plain weave	1 0.70 %	0 0.00 %	0 0.00 %	1 0.70 %	0 0.00 %	0 0.00 %	0 0.00 %	0 0.00 %	0 0.00 %	**2** **1.40 %**
Light weight plain weave	5 3.50 %	0 0.00 %	1 0.70 %	1 0.70 %	1 0.70 %	1 0.70 %	0 0.00 %	0 0.00 %	0 0.00 %	**9** **6.29 %**
Slightly crinkled	8 5.59 %	0 0.00 %	2 1.40 %	3 2.10 %	3 2.10 %	1 0.70 %	0 0.00 %	0 0.00 %	0 0.00 %	**17** **11.89 %**
Crinkled finish	16 11.19 %	1 0.70 %	7 4.90 %	5 3.50 %	7 4.90 %	7 4.90 %	1 0.70 %	0 0.00 %	0 0.00 %	**44** **30.77 %**
Double knit	3 2.10 %	1 0.70 %	1 0.70 %	1 0.70 %	0 0.00 %	0 0.00 %	0 0.00 %	1 0.70 %	1 0.70 %	**8** **5.59 %**
Single jersey knit	24 16.78 %	0 0.00 %	4 2.80 %	0 0.00 %	0 0.00 %	2 1.40 %	1 0.70 %	16 11.19 %	0 0.00 %	**47** **32.87 %**
Lacy knit	7 4.90 %	0 0.00 %	1 0.70 %	3 2.10 %	2 1.40 %	1 0.70 %	0 0.00 %	2 1.40 %	0 0.00 %	**16** **11.19 %**
Total	**64** **44.76 %**	**2** **1.40 %**	**16** **11.19 %**	**14** **9.97 %**	**13** **9.09 %**	**12** **8.39 %**	**2** **1.40 %**	**19** **13.29 %**	**1** **0.70 %**	**143** **100 %**

The respondents were asked to choose one fabric from any of the three sample sets, which they would consider using for a top for casual wear (Section D: Q 4.4). They were then asked to give reasons for their choice.

Once again seven of the nine fabrics were chosen for a blouse, shirt or top for casual daywear.
The most preferred fabric for casual wear tops was the single jersey knit (popularly known as T-shirt material) (Table XIII d). This fabric was chosen by 47 (33 %) of the participants. The most popular reason for this choice was comfort (24 responses; 17 %), followed by flexibility (16 responses; 11 %) that also contributes to comfort. The lightweight plain-weave fabric with the more pronounced crinkled finish was the second most popular choice for casual tops (44 responses; 31 %), with comfort also given as the main reason for the choice (16 responses; 11 %). The lightweight plain weave fabric with the slightly crinkled look was chosen by 17 (12 %) of the respondents and the lacy knit by 16 (11 %). Once again the main reason for these choices was comfort (respectively 8 responses; 6 % and 7 responses; 5 %). A few respondents (9 responses; 6 %) chose the smooth lightweight plain weave fabric and 8 (6 %) the double knit. Only two respondents (<1 %) chose the medium weight balanced plain weave for this end-use (Table XIII d).

The overall most common reason given for the preferred fabric choice was comfort (64 respondents; 45 %). Flexibility (19 respondents; 13 %) and weave or knit density (16 respondents; 11 %), both properties related to comfort, were the second and third most often mentioned reason for the preference. Other reasons given for the preferred choices were easy-care properties (14 respondents; 10 %), fashionable appearance (13 respondents; 9 %) and crease resistance (12 respondents; 8 %). Shape retention (2 respondents; 1 %), personal taste (2 respondents; 1%) and durability (1 respondent; < 1 %), were other reasons mentioned for the preferred fabric choice.

The respondents were also asked to choose one fabric from any of the three sample sets, which they would consider using for a jacket for casual wear (Section D: Q 4.5). They were then asked to give reasons for their choice. In total fewer responses (122) were received.

As indicated in Table XIII e the respondents chose eight of the nine fabrics, but the double knit seemed to be the most popular choice (35 responses; 29 %), followed closely by the medium weight balanced plain weave fabric (27 responses; 22 %) and the twill weave fabric (25 responses; 20 %). These choices were followed by the medium weight uneven plain weave fabric and the single jersey knit fabric were chosen by an equal number of respondents (10 responses; 8 %), and the lightweight plain weave fabric with the slightly crinkled finish chosen by nine respondents (7 %). A few respondents chose the more crinkled lightweight plain weave fabric (4 responses; 3 %) and only two respondents (<2 %) thought that the lacy knit was an appropriate choice.

TABLE XIII e: MOST PREFERRED FABRIC FOR A JACKET FOR CASUAL WEAR AND REASONS FOR CHOICE

Frequency Percentage	Comfort	Shape retention	Weave / knit density	Easy-care	Appear-ance	Crease resist-ance	Personal taste	Flexible	Durability	**Total of responses**
Twill weave	3 2.46 %	0 0.00 %	6 4.92 %	1 0.82 %	9 7.38 %	2 1.64 %	0 0.00 %	1 0.82 %	3 2.46 %	**25** **20.49 %**
Balanced plain weave	4 3.28 %	0 0.00 %	3 2.46 %	5 4.10 %	9 7.38 %	3 2.46 %	0 0.00 %	0 0.00 %	3 2.46 %	**27** **22.13 %**
Uneven yarn plain weave	1 0.82 %	1 0.82 %	0 0.00 %	2 1.64 %	3 2.46 %	1 0.82 %	2 1.64 %	0 0.00 %	0 0.00 %	**10** **8.20 %**
Slightly crinkled	4 3.28 %	0 0.00 %	4 3.28 %	0 0.00 %	0 0.00 %	0 0.00 %	0 0.00 %	0 0.00 %	1 0.82 %	**9** **7.38 %**
Crinkled finish	1 0.82 %	0 0.00 %	1 0.82 %	1 0.82 %	1 0.82 %	0 0.00 %	0 0.00 %	0 0.00 %	0 0.00 %	**4** **3.28 %**
Double knit	8 6.56 %	1 0.82 %	5 4.10 %	0 0.00 %	3 2.46 %	1 0.82 %	0 0.00 %	15 12.30 %	2 1.64 %	**35** **28.69 %**
Single jersey knit	5 4.10 %	0 0.00 %	0 0.00 %	1 0.82 %	0 0.00 %	2 1.64 %	1 0.82 %	1 0.82 %	0 0.00 %	**10** **8.20 %**
Lacy knit	1 0.82 %	0 0.00 %	0 0.00 %	0 0.00 %	1 0.82 %	0 0.00 %	0 0.00 %	0 0.00 %	0 0.00 %	**2** **1.64 %**
Total	**27** **22.13 %**	**2** **1.64 %**	**19** **15.57 %**	**10** **8.20 %**	**26** **21.31 %**	**9** **7.38 %**	**3** **2.46 %**	**17** **13.93 %**	**9** **7.38 %**	**122** **100 %**

The overall most common reason cited for the preferred choice was comfort (27 responses; 22 %), closely followed by the neat and fashionable appearance (26 responses; 21 %). In the case of the double knit, comfort (8 respondents; 7 %) and comfort related properties (flexibility; 15 responses; 12 % and density, 5 responses; 4 %) were listed as those properties that influenced the choice, while in the case of the two more popular medium

weight plain and twill weaves, neatness of appearance was the main reason for the choice (9 responses; 7% in both cases). The third and fourth most often mentioned reasons that influenced the preferred choice of all the respondents were weave or knit density (19 responses; 16 %) and flexibility (17 responses; 14 %) – properties both related to comfort.

Overall easy-care was only used by 10 (8 %) of all the respondents when choosing a fabric for casual wear jackets. Crease recovery (related to easy-care) and durability are apparently not considered very often [each by only 9 (7 %) of the respondents] when deciding on a fabric for casual wear jackets. Three respondents (2.5 %) said that the fabric choice was because of "personal taste", and only two respondents (< 2 %) considered shape retention when choosing a fabric for this end-use.

All these aspects on end-use serviceability were included to determine if and how the consumer relates end-use serviceability with fabric properties. The responses were also compared to the initial responses (Tables VI a & VI b and Figures 6 & 7) to determine which cues were used as quality indicators for both formal and casual daywear. This information was used when choosing the styles and fabrics for the on-line guide.

4.2.1.2 The importance of label information

- **The frequency of label use when making purchase decisions (Sub-objective 1.2.1)**

Respondents were asked how often they read labels that are attached to garments (Table XIV).

TABLE XIV: THE FREQUENCY WITH WHICH LABEL INFORMATION IS USED

Number of respondents	Frequency n=116
Always	31
Often	59
Seldom	25
Never	1

The respondents who always or often read labels were asked to complete five more questions relating to label-information.

- **The type of label information used when making purchase decisions (Sub-objective 1.2.2)**

The questions were used to determine what type of label information these respondents use when making purchase decisions. Here extrinsic aspects were also included (this information was also used in the designing of the mock web-site for phase three of the study).

As explained in Chapter 3, only the respondents who 'always' or 'often' read care labels when buying garments, were asked to complete the questions on label information. A total of 90 respondents answered these questions. Here the Z-values (normal distribution) were also used. The critical Z-value was determined to be 1.645; if the Z-value exceeded 1.645 (was > 1.645) the null hypothesis (H_0) was rejected.

The following formula was used to determine the Z-value of each variable where applicable:

$$Z = \frac{P - \pi_0}{\sqrt{\frac{\pi_0(1-\pi_0)}{n}}}$$

where $P = \frac{X}{n}$

and X = the number of respondents who chose 'always' or 'very important'

n = total number of respondents (only respondents who always or usually consult labels were asked to complete a set of questions; in which case n = 90 respondents).

On a 5 % level of significance X (number of respondents who chose 'very important' or 'important') was calculated to be 52.80, which means that

if 53 or more respondents (n = 90) always viewed the option as 'very important' and 'important', the null hypothesis (H_0: $\pi_0 = 0.5$) was rejected.

TABLE XV a: THE IMPORTANCE OF DIFFERENT TYPES OF LABEL INFORMATION WHEN PURCHASING FORMAL DAY OR OFFICE WEAR

Type of label information	Very important (n=90)	Important (n=90)	Slightly important (n=90)	Not important (n=90)	Mean score	SD	Overall impor-tance	H_0 rejected: 5% level of significance
Fibre content	19	37	25	9	2.73	0.909	4	✓
Brand name	2	21	44	23	2.02	0.764	6	x
Care instructions	59	26	5	0	3.60	0.596	2	✓
Additional information	14	35	36	5	2.64	0.812	5	x
Price	46	43	1	0	3.50	0.595	3	✓
Size	66	19	3	1	3.69	0.595	1	✓

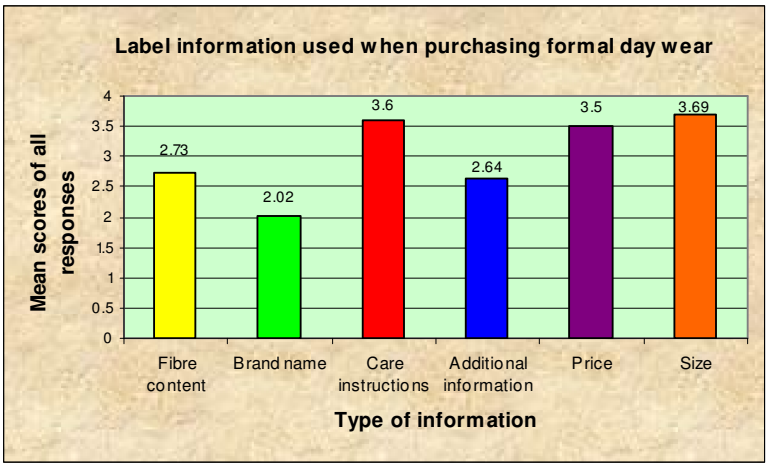

FIGURE 14: IMPORTANCE OF LABEL INFORMATION WHEN PURCHASING FORMAL DAYWEAR

If the responses to 'very important and 'important' are grouped together, the results indicate that price is seen as the most important aspect when purchasing garments for formal daywear (89 of the 90 respondents). This is followed by size and care instructions (85 respondents in both cases). When the mean scores of all responses are viewed, size seems to be the most important type of label information used by all respondents (3.69) (Table XV a and Figure 14). This is a logic response, as one would usually want to know if the garment was available in the correct size. The mean scores indicate that information about sizing is very important, but that care instructions (3.60) rate higher than price (3.50). Fibre content was seen as 'very important' or 'important' by 56 respondents. Additional fabric or garment

information was not as important to the respondents (49) as size, care instructions, price, and fibre content. In comparison with other label information brand name seems to be far less important for this sample than other label information (only 23 respondents thought that this was 'very important' or 'important', while 67 said it was 'slightly important' or 'not important').

The null hypothesis was rejected in the case of price, size, care instructions and fibre content, as more than 53 respondents rated these aspects as 'very important' or 'important'(Table XV a). Of the intrinsic factors care instructions (85 respondents) were considered more important than fibre content (56 respondents). This indicates that these aspects should be included in the textile guide as consumers would look for these aspects to help them with their decision-making.

TABLE XV b: THE IMPORTANCE OF DIFFERENT TYPES OF LABEL INFORMATION WHEN PURCHASING CASUAL WEAR

Type of label information	Very important (n=90)	Important (n=90)	Slightly important (n=90)	Not important (n=90)	Mean score	SD	Overall impor-tance	H_0 rejected: 5% level of significance
Fibre content	19	34	31	6	2.73	0.872	4	✓
Brand name	1	23	35	31	1.93	0.804	6	x
Care instructions	48	33	8	1	3.42	0.703	3	✓
Additional information	5	31	45	9	2.36	0.739	5	x
Price	49	38	3	0	3.51	0.566	2	✓
Size	61	23	4	1	3.62	0.631	1	✓

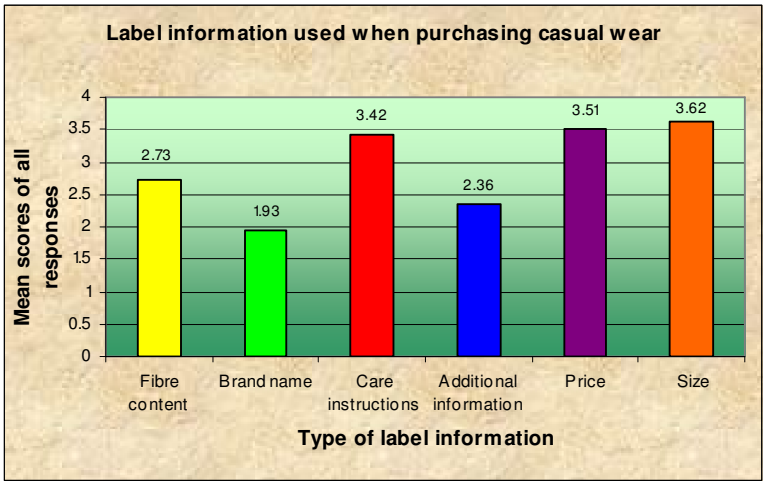

FIGURE 15: IMPORTANCE OF LABEL INFORMATION WHEN PURCHASING CASUAL DAYWEAR

For casual wear, the results were slightly different (Table XV b & Figure 15). Price was also the most important label information (87 respondents). Once again size seemed to be slightly more important (84 respondents) than care instructions (81 respondents). Fibre content (53 respondents) was less important, followed by additional garment information (36 respondents) and brand name (24 respondents).

The null hypothesis was once again rejected in the case of price, size, care instructions and fibre content as more than 53 respondents rated these aspects as 'very important' or 'important'. Fibre content was the least important of these aspects (53 respondents). (All hypotheses were tested on a 5 % level of significance).

The consumers were given the opportunity to specify which other label information they would find useful - only seven (6 %) of the respondents responded to this question. The other information they would like to find on labels was information on colourfastness (3 respondents), more information on finishes (2 respondents), and country of origin (1 respondent). One respondent mentioned fibre content (which is usually on garment labels in South Africa, but seldom on piece goods).

TABLE XV c: THE IMPORTANCE OF FIBRE CONTENT TO CONSUMERS

Should fibre content be indicated on labels?	Frequency (n=90)	Responses %
Yes fibre content is necessary	42	46.67
It makes no difference	43	48.78
No, it does not mean anything to me	5	5.56

The 42 respondents (47 %) with a "yes" response were asked, in an open-ended question, why it was important for them to know the fibre content (Table XV c). They could give two reasons. A variety of reasons were given why fibre content is required. Consumers use fibre content to determine care procedures, durability, comfort, and to a lesser extent appearance. (These aspects all relate to performance features of textiles). Other aspects that consumers relate to fibre content are value for money and the specific

occasion for which the garment is being bought. One respondent is allergic to certain synthetic fibres and therefore interested to know what the fibre content is, another admitted that her interest was purely based on curiosity.

4.2.2 Consumers' experience with and willingness to participate in distance shopping (Important for Objective 2)

The first four questions were Yes/ No questions to determine if the respondents had already bought apparel from catalogues or the Internet. Only five respondents (4 %) had bought apparel from catalogues and no one had purchased any apparel through the Internet yet. Only ten of the respondents (9 %) said that they would consider buying apparel from the Internet. Twelve respondents (10 %) said that they used different criteria to assess a garment offered in a catalogue to one bought in a shop. Five of the respondents who answered this question would like more written (label) information. Four respondents wanted to touch and three to try on the garments before making a decision. When asked about problems they had with distance shopping, five respondents were worried that their expectations would not be met. One respondent was worried that the product would differ from the catalogue picture, two were unsure of the return policy, and three respondents were uncertain if standard sizing was used.

Nineteen of the seventy-four respondents (26 %) who answered the question (Sec B: Q7) said that they would consider doing distance shopping if provided with more product information.

The following table (Table XVI) indicates what product information the respondents would find helpful. (Only 62 of the 74 respondents supplied this information).

TABLE XVI: PRODUCT INFORMATION THAT WOULD INDUCE CONSUMERS TO DO DISTANCE SHOPPING

Type of information	Extre-mely helpful (n=62)	Helpful (n=62)	Mode-rately helpful (n=62)	Not neces-sary (n=62)	Mean score	SD	Overall impor-tance	H_0 rejected on 5% level of significance
Fibres and their properties	17	26	15	4	3.15	0.882	3	✓
The effect the yarns can have on fabric properties	3	23	13	23	2.10	0.970	5	x
Fabric performance during use	27	24	9	2	3.23	0.818	2	✓
Fabric performance during fabric care	33	21	7	1	3.39	0.754	1	✓
The effect special finishes have on fabric properties and performance	16	27	14	5	2.87	0.896	4	✓

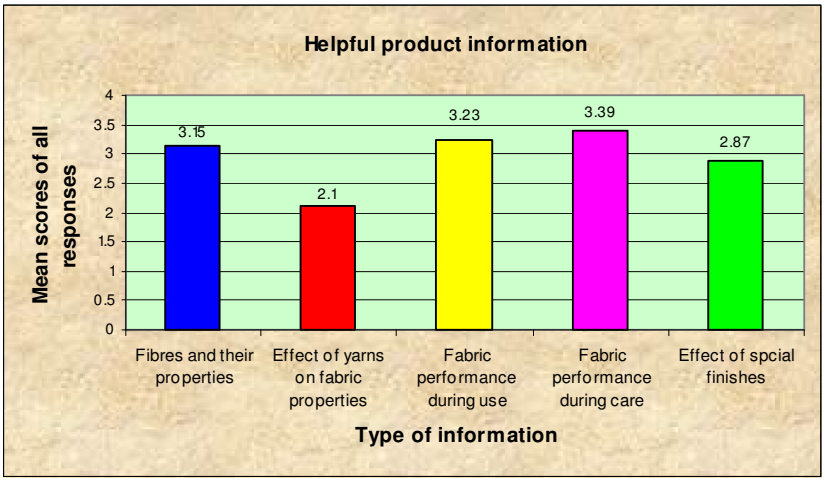

FIGURE 16: HELPFUL INFORMATION FOR DISTANCE SHOPPERS

From these results it is clear that consumers need more information on fabric performance during care and use; of all the respondents 54 would find information on fabric performance during care and 51 information on fabric performance during use 'extremely helpful' or 'helpful' (Table XVI & Figure 15). They would also find more information on fibre properties and the effect of special finishes on fabrics and their performance (43 respondents in both cases), 'extremely helpful' or 'helpful'. The respondents were not really interested to know what effect yarns can have on fabric properties (only 26 respondents thought this information would be 'extremely helpful' or 'helpful'). Only six respondents (5 %) listed other information they would find helpful in an open-ended question. Five of the six would like uniform sizing of garments, two would like all garment labels to indicate fibre content, one

would like information regarding durability ("how long it would last") and one would like to visualise the drape ability of the fabric.
Here the Z-values (normal distribution) were once again used. The critical Z-value was determined to be 1.645; if the Z-value exceeded 1.645 (was > 1.645) the null hypothesis (H_0) was rejected.

The following formula was used to determine the Z-value:

$$Z = \frac{P - \pi_0}{\sqrt{\frac{\pi_0(1-\pi_0)}{n}}}$$

where $P = \frac{X}{n}$

and X = the number of respondents who chose 'extremely' or 'helpful'

n = total number of respondents (who answered the question, in which case n = 62 respondents).

On a 5 % level of significance X (number of respondents who chose 'extremely helpful' or 'very helpful') was calculated to be 37.48, which means that, the null hypothesis (H_0: $\pi_0 = 0.5$) was rejected if 38 or more respondents thought that the product information would be 'extremely helpful' or 'helpful'. Once again the hypotheses were tested on a 5 % level of significance. In all the cases, except one, the null hypothesis was rejected in favour of the alternative hypothesis. As indicated, only 26 respondents thought that information on how yarn type can affect fabric properties would be 'extremely helpful' or 'helpful' when purchasing garments. These results therefore indicate that consumers would like more information on fibres and their properties, fabric performance during use and care, and the effect of special finishes on fabric properties and performance.

Cronbach's Alpha coefficient was once again used to measure the internal consistency of the responses to the type of information consumers would like to find on labels or on a website. In this case the alpha value was 0.80 which

indicates a good internal consistency (an alpha value of $P \geq 0.80$ is a good measure of consistency) (Watson & Klassen, 2004).

4.2.3 Other information obtained from the questionnaire

TABLE XVII a: PRICE RANGES RESPONDENTS WERE WILLING TO PAY FOR FORMAL DAY OR OFFICE WEAR

Garment	< R 500	R 500 - 799	R 800- 1000	> R 1000
Three piece suit	11.21 % (13)	46.55 % (54)	31.03 % (36)	11.21 % (13)
Tailored jacket	11.30 % (13)	43.48 % (50)	30.43 % (35)	14.78 % (17)
Skirt/pants	8.62 % (10)	38.79 % (45)	37.93 % (44)	14.66 % (17)
Blouse/ shirt/ top	5.17 % (6)	43.97 % (51)	38.79 % (45)	12.07 % (14)

It seems that most of the respondents would be willing to pay between R 500 and R 1 000 (± US $ 70 - $ 140) for any of the apparel items mentioned. The lower end of this range (R 500 – 799) (± US $ 70 - $ 114) seemed to be the most popular price class for all the garments. (The frequencies are indicated in brackets; one respondent mentioned that she did not buy tailored jackets separately).

TABLE XVII b: PRICE RANGES RESPONDENTS WERE WILLING TO PAY FOR CASUAL WEAR

Garment	< R 200	R 200 - 299	R 300- 500	> R 500
Jacket	23.28 % (27)	40.52 % (47)	31.03 % (36)	5.17 % (6)
Skirt/pants	12.07 % (14)	41.38 % (48)	35.34 % (41)	11.21 % (13)
Blouse/ shirt/ top	16.23 % (19)	47.41 % (55)	28.45 % (33)	7.76 % (9)
T-shirt	23.48 % (27)	54.78 % (63)	20.00 % (23)	1.74 % (2)

Once again, the two middle price ranges (R 200 – 500; ± US $ 25 - $ 65) were the prices respondents were more willing to pay. The lower end of the range (R 200 – 299: ± US $ 25 - $ 40) seemed to be the most preferred price range for casual daywear apparel items. (The frequencies are indicated in brackets; one respondent mentioned that she hates T-shirts and never buys them).

It is evident that most respondents are willing to pay reasonably high prices for both formal and casual daywear garments. When referring to the results indicated in Table V (beginning of this chapter), most respondents cited price as the most important indicator of quality.
When designing the web page, it was decided not to use this information, as price (an extrinsic factor) was not an aspect included in this study. Another reason for excluding price was that indicating price might once again influence the respondents' choice and be linked to quality when using the web page.

4.3 INTERPRETATION OF THE RESULTS OF THE FIRST PHASE OF THE STUDY

4.3.1 Introduction

The objective of the first phase of the study was to determine which quality cues are used by adult career women when purchasing garments for formal day or office wear and casual daywear. To obtain this information questions were asked to determine if adult female consumers use the formal, physical features of textiles (i.e. fibre, yarn, fabric structure and finish) in their assessment of textile quality. Questions were also posed to obtain information on their ability to relate the formal physical features of textiles to performance properties such as durability, comfort and ease of care. The respondents also assessed three sets of samples to indicate their ability to relate formal physical features of textiles to expected end-use performance. They were also asked to indicate their use of label information when purchasing garments for formal and casual daywear. These results were used to develop an online textile quality assessment guide and a mock web page as well as a questionnaire to assess the information included in the guide.

The results of the research are interpreted in this chapter to indicate which quality cues are used by career women when purchasing garments for formal and casual daywear. The sub-objectives for the first phase of the study are used as guideline for the interpretation. The results are also compared to those of other researchers and authors as discussed in Chapter 2.

The following aspects will be covered in the interpretation of the results:

- The formal physical features that adult career women use in their assessment of apparel textile quality when purchasing formal and casual daywear (Sub-objective 1)
- The relatedness of formal, physical features of textiles (durability, comfort and ease of care) and functional performance aspects when assessing quality (Sub-objective 1.1.1 – 1.1.3)
- Respondents' assessment of fabrics for end-use serviceability (Sub-objective 1.1.4)
- The frequency of use and type of label information used when making purchase decisions (Sub-objective 1.2.1 & 1.2.2)

4.3.2 The formal physical features that adult career women use in their assessment of apparel textile quality when purchasing formal and casual daywear (Sub-objective 1)

From the results it is clear that price (an extrinsic factor) is used by a statistically significant number of respondents as indicator of quality. This result is in accordance with findings by Eckman *et al*. (1990) and Swinker & Hines (2006) that price is often used as a quality cue, but also depends on which other extrinsic and intrinsic cues are available when the consumer is making a purchase decision.

The intrinsic factors used as important indicators of quality by most respondents are the suitability of the fabric for the end-use, the specified care procedure, type of fabric finish, fabric texture, and, to lesser extent, attention

to detail. Intrinsic cues relating to fabric quality assessment were also identified in other studies (Eckman *et al.,* 1990; Abraham-Murali & Littrell, 1995a; Brown & Rice, 1998: 44; Jacobs, 2003: 138, 146-8; Swinker & Hines, 2006).

When looking at the overall importance of the different aspects used as quality indicators all the listed aspects are, to a certain extent, used by the respondents. In this study all the intrinsic indicators, with the exception of fabric structure were judged to be 'very important' or 'important' by a statistically significant majority of respondents when assessing quality during the buying process.

In the South African context this could be an important result. Although consumers use these indicators very little information pertaining to textiles and their properties is generally supplied to consumers. This is an important aspect to bring to the attention of retailers and marketers of apparel products. The lack of information, however, seems to be more universal as Chen-Yu, Hong and Lee (2001) express the same concern.

By paying attention to the inclusion of all the listed intrinsic aspects in consumer guide, the consumer (in this case, the online consumer) could be equipped to make better decisions concerning fabric quality during the buying process. Aspects relating the cues used by the respondents (Table V and Figure 5) as well as aspects relating to durability, comfort, ease of care and end-use serviceability were therefore all included in the guide (Tables VI a & VI b through to Table IX a &b and Figure 6 through to Figure 13).

4.3.2.1 The relatedness of formal, physical features of textiles and performance aspects when assessing quality (Sub-objective 1.1)

The mean scores of all responses were calculated. For formal office/ daywear the appearance was rated the most important property when purchasing garments (Table VI a and Figure 6). In the open-ended question,

as well as in the fabric assessment (Section D), some respondents said they would choose a specific fabric because “it looks professional or stylish”. Individuals interviewed by Jacobs (2003: 138, 140, 147) and Lubbe (2003:100) confirm the importance of a neat professional appearance for office or formal daywear.
As expected, the rating for ‘comfort’ was the highest for casual wear (Table VI b and Figure 7). Jacobs (2003: 146) and Zhang *et.al.*(2002) confirm these results.

These aspects were all considered when designing the website and guide. Care was taken to choose both formal and casual images of garments and descriptions pertaining to appearance, comfort, durability and performance were included in the guide.

- **Do consumers relate the formal features of textiles to the functional performance aspect of durability? (Sub-objective 1.1.1)**

  As indicated by the results, a statistically significant majority of respondents used abrasion resistance, elastic recovery and the fabric’s snagging propensity as indicators of fabric durability when purchasing formal office or daywear (Table VII a and Figure 8). In the studies done by Abraham-Murali and Littrell (1995a), Jacobs (2003: 139) and Hines and Swinker (2006) respondents also used these performance characteristics when making purchase decisions.

  In comparison with these three indicators far less, but still a statistically significant number of respondents used closeness of weave or knit and fabric fineness (fabric count or gauge) as durability indicators. Thickness of yarn was the only indicator that was not used by a statistically significant number of respondents as durability indicator (Table VII a & Figure 8).

  For casual daywear the results follow more or less the same pattern, but here both fabric fineness and yarn thickness were not used by a statistically

significant majority of respondents to assess durability (Table VII b and Figure 9).

As only two of the durability indicators are not commonly used to assess durability, it is essential to include all these aspects in a consumer guide as consumers would look for these indicators in a guide to help them with their online decision-making.

- **Do consumers relate the formal features of textiles to the functional performance aspect of comfort? (Sub-objective 1.1.2)**

When assessing comfort during the purchase of office or formal daywear only one of the comfort indicators, openness of weave or knit, was not used by a statistically significant majority (Table VIII a and Figure 10). Coolness on skin, softness and lightweight seemed to be used most often as comfort indicators. Zhang *et al.* (2002), Jacobs (2003: 167) and De Klerk and Lubbe (2007) also found that these aspects were used as indicators of comfort.

Slightly fewer respondents (but still a statistically significant majority) used the fabric's flexibility and absorbency as indicators of comfort.

The same pattern emerged for casual daywear. The only comfort indicator that was not used by a statistically significant majority of respondents was once again 'openness of weave or knit' (Table VIII b and Figure 11). The same number of respondents used 'coolness on skin' as indicator when purchasing casual daywear. Here the second largest number of respondents used absorbency as indicator, followed by fabric weight, flexibility and softness and smoothness of the fabric. Once again the openness of weave or knit was seen as the least important indicator of comfort.

The responses indicate that it is necessary to include all these indicators related to comfort in a quality assessment guide. In the guide comfort was related to fibre, fabric and garment properties to give the consumer an indication of all the different aspects that influence comfort.

- **Do consumers relate the formal features of textiles to the functional performance aspect of maintenance? (Sub-objective 1.1.3)**

  The results indicate that for formal daywear all of the listed indicators of easy-care properties were used by a statistically significant number of respondents. Fewer respondents regarded stain resistance, non static properties and tumble dryable garments and as easy-care indicators (Table IX a and Figure 12).

  In the case of casual daywear the same pattern emerged. Most of the respondents looked for machine washable garments, followed by good shape retention, wrinkle resistance and 'little or no ironing' (which could be because more knits are used for casual daywear than for formal daywear). Colourfastness was also rated as an indicator that was used to assess easy-care properties. Once again fewer respondents used heat resistance, stain resistance, garments, non-static properties and tumble dryable as indicators of easy-care (Table IX b and Figure 13). Zhang *et al.* (2002) and Jacobs (2003: 138, 142) also found that wrinkle resistance and colourfastness were aspects consumers often used when making purchase decisions.

  These results indicate that most of these indicators should be included in the quality assessment guide to give consumers a better idea the easy-care properties of textiles. Here it can be mentioned that the respondents do not, in most cases relate fibre content to the performance characteristics of a textile (see discussion on the use of label information in paragraph 4.3.2.2).

- **Do consumers relate the formal features of textiles to the functional performance aspect of end-use serviceability? (Sub-objective 1.1.4)**

  - **Durability rating of samples**

  It is interesting to observe that the respondents did not rate fabric structure as an important indicator of quality, but could recognise twill weave as a durable

medium-weight structure and rate it more durable than the balanced plain weave and the plain weave made from uneven yarns when comparing samples (Table X a). Various researchers also found that consumers link quality to structure or type of textile (Eckman *et al.,* 1990; Abraham-Murali & Littrell, 1995a; Jacobs, 2003: 139).
All the lightweight fabrics were balanced plain weave fabrics. Two were finished to have a crinkled appearance, the one more pronounced than the other. The majority of respondents chose the more crinkled fabric as most durable (Table X b). This fabric was the heaviest of the three, which could have influenced the respondents' choice, which could indicate that they equate fabric weight to higher durability. In the case of the knitted fabric the heavier double knit was chosen as most durable by a statistically significant majority of respondents (Table X c).

In spite of seldom using fabric structure as quality indicator, the respondents had enough knowledge (or experience) to identify which fabrics would be more durable. Durability was also the main reason cited for the respondents' preference for the twill weave fabric for a suit (jacket and skirt/pants) intended for formal daywear. More direct reference to the influence of fabric structure on durability in the quality assessment guide could provide helpful information for future purchase decisions. As it seems that consumers use their sense of touch to judge fabric weight and relate this to durability, descriptions referring to these aspects were also included in the guide to make up for the lack of touch experienced by online buyers.

- **Comfort rating of samples**

For the medium-weight fabrics virtually the same number of respondents chose the twill (53) and balanced plain weave (54) fabrics as the most comfortable even though the twill was a polyester / viscose blend and the balanced plain weave a 100 % polyester fabric (Table XI a). This could indicate a lack of fibre knowledge and be a further justification to include more fibre information in the guide.

For the lightweight fabrics both the crinkled fabric were favourites, but on average the fabric with the less crinkled appearance (which was also slightly lighter in weight) was chosen as most comfortable by a slight margin (Table XI b). Both the fabrics were 100 % viscose fabrics. Although the third fabric (a polyester/ cotton blend) had the lightest weight, respondents did not choose it as the most comfortable fabric. It is possible that the respondents used the fact that the crinkled fabrics had more stretch due to the finish, and would therefore "give" more during wear, to help them identify these fabrics as more comfortable.

The cotton/ Lycra single jersey knit was chosen by a statistically significant majority of respondents as the most comfortable knit fabric (Table XI c). This is the fabric commonly used in T-shirts and known to most respondents as a comfortable stretch fabric. Although the lacy knit had an open knit structure, it was rated the least comfortable of the knits.

The reasons given for judging the different fabrics as comfortable varied, but most respondents who gave reasons used fabric hand (texture) and coolness on skin as indicators. Jacobs (2003: 147) and Zhang *et al.* (2002) got similar responses. When choosing the most preferred fabric for a blouse or shirt for formal daywear as well as for casual daywear, comfort was the reason most often cited for the choice. As fabrics used for this end-use are in close contact with the skin, this is a logic response. For casual daywear jackets flexibility (which would also add to comfort) was the most common reason cited for the preference of fabric.

More information on how fibre properties and fabric structure link with comfort would also help consumers to make decisions concerning the comfort of a variety of fabric types for different garments. These aspects were also addressed in the guide.

- **Easy-care ratings of samples**

Although a statistically significant majority of respondents want wrinkle

resistant fabrics, they did not relate this property to easy-care, as this feature was seldom cited as reason when choosing fabrics for the different end-uses (Table XII a).

It is not clear why the majority of respondents chose the twill weave as the fabric that would have the best easy care properties, as both the other medium-weight samples were 100 % polyester fabrics, while the twill weave was a polyester/ viscose blend that would probably crease more due to the viscose content. All the fabrics, however, seemed to have a reasonable resilience when scrunched, which could indicate that the viscose blend had received a crease resistant finish. (This would account for the good resilience when scrunched).

The lightweight fabric chosen as the most likely to have easy-care properties was the 100 % viscose fabric with the more crinkled appearance, although the plain-woven polyester/ cotton blend would probably crease less due to the fibre content (Table XII b). The reason for the choice can most likely be ascribed to the already crinkled appearance (which would mask creases formed during wear and care of the fabric). This choice is probably due to the crinkled look being fashionable at present and not because the respondents are aware that the crinkled effect would mask creases!

The double knit (100 % polyester), followed by the lacy knit was chosen by the majority of respondents as most likely fabric to have easy-care properties (Table XII c). Even though the jersey knit had Lycra in the blend, the respondents seem to know that cotton fabrics are more prone to creasing and would at least need touch-up ironing, and are also aware that cotton T-shirts often warp when machine washed and tumble-dried. This contradicts the above interpretation that fibre content does not play a role in the choices the respondents for this study made, and supports responses of interviewees in the study done by Jacobs (2003: 138). This could indicate experience with the specific fabric, rather than knowledge of fabric properties.

As easy-care was seldom cited as a reason for choosing a fabric for a specific end-use, it would be fair to say that more information on fabric and fibre properties would probably also help consumers in their decision-making concerning easy-care properties. Easy-care properties were linked to fibre, fabric and finish properties in the online guide to give the consumer a better idea of the effect these aspects can have on easy-care properties.

- **Do consumers relate the formal features and performance to end-use serviceability? (Sub-objective 1.1.4 b)**

As explained earlier (p 88), the respondents were asked to consider the end-use serviceability of three sets of samples. Two-way frequency tables (Table XIII a – XIII e) were drawn up to indicate how the respondents related their choices to end-use serviceability. From the results it seems that respondents do relate the type of fabric for a specific end-use to certain formal and performance aspects.

For formal daywear fabrics seen as suitable for jackets and skirts/pants were chosen mainly for their durability and neat appearance, or because they were judged to be crease resistant. These aspects were also important attributes indicated in other studies (Abraham-Murali & Littrell, 1995a &b; Zhang *et al*., 2002; Swinker & Hines , 2006). When indicating the importance of performance features when purchasing formal daywear, the respondents indicated that appearance was the most important feature, followed by comfort. Durability was only rated the third most important feature (Table VI a and Figure 6). However, crease recovery also contributes to appearance retention – if these responses are added to those of “neat appearance” this would correspond with the initial choice of appearance as most important feature for formal daywear. When confronted with the actual fabrics, more than three times as many respondents chose durability above comfort for a jacket or skirt/pants, but when choosing a fabric for a blouse, shirt or top, comfort was rated far more important than any other feature. For casual wear the results corresponded to the results indicated in Table VI b and Figure 7.

These findings are supported by studies done in Taiwan, China and the USA (Hsu & Burns, 2002; Zhang *et al*., 2002; Swinker & Hines, 2006). It was therefore very important to give an indication of fabric hand and feel in the consumer guide, as online buying could be very confusing due to the inability to actually feel and see the fabric.

4.3.2.2 The use of labels and type of information utilised in the decision-making process (Sub-objective 1.2)

A large majority of the respondents (78 %) always or often read labels (Table XIV). A statistically significant majority of respondents read the label to determine the size of the garment when purchasing formal daywear. In the case of casual wear a statistically significant majority read labels to determine care instructions. Other studies (Zhang *et al.,* 2002; Swinker & Hines, 2006) confirm that size and care procedures are aspects often used by consumers during decision-making. Price was only the third most important reason for reading labels when purchasing both formal and casual daywear. This confirms the findings of Zeithaml (1988) and Zhang *et al.* (2002), but is contradicted by Brown and Rice (1998: 41) and Kinkade, Giddings and Chen-Yu (1998).

When purchasing both formal and casual wear hardly any respondents thought that fibre content was very important (Table XV a & XV b and Figures 14 & 15). The reason is possibly that few people have knowledge of fibre properties and may only be interested in fibre content when it relates to prior experience (Gaal & Burns, 2001; Hines & Swinker, 2001; Jacobs, 2003: 138). When asked directly if fibre content on labels was important, less than half of the responses were affirmative (Table XV c). Nearly half said that it did not really matter if fibre content was indicated or not. A few said that this information meant nothing to them. The respondents who wanted an indication of fibre content on labels used this information to make decisions about care procedures, durability and comfort.

More information on fibre properties seems to be an urgent need. By including information on fibre properties the consumer will be better informed and know what to expect from the fabric in terms of durability, comfort and maintenance, which would, in the long run, also help in the decision-making process. This is especially important for the South African consumer who often only has a care label to rely on for information. Although the fibre content is indicated in most cases, consumers still don't seem to relate fibre content to performance properties. By including more information in the guide that indicates the importance of fibre content in determining performance, this problem could be addressed.

4.3.3 The type of textile information that would be helpful for decision-making (Sub-objective 1.2.2)

As explained in the discussion of the results, and confirmed by researchers (Kinkade *et al*., 1998; Chen-Yu *et al*., 2001; Gaal & Burns, 2001) a statistically significant majority of respondents want more information on fabric performance during care (i.e. if the fabric will wrinkle; stretch or shrink; need ironing; lose or take up colour). A statistically significant majority of respondents would also like to know how fabrics should perform during use (Table XVI and Figure 16). Information on fibre properties as well as the effect of special finishes on fabric properties and performance would also be helpful to a statistical majority of respondents. This confirms the need to include this type of information in a textile quality assessment guide.

4.3.4 Other information obtained from the questionnaire

Information was obtained about the amount respondents were willing to pay for different apparel items intended for both formal and casual daywear (Tables XVII a and XVII b). Two-way frequencies were also determined to see if respondents' age and level of qualification had an effect on the price they were willing to pay for various apparel items for both formal daywear and

casual daywear. In the end this information was not used in the development of the guide as explained earlier.

In Chapter 5 the methodology used for the second and the final phases of the study will be explained and discussed. Here the aspects included in the guide are justified; the compilation of the final questionnaire is discussed as well as the data-analysis methods.