



NORTH-WEST UNIVERSITY  
YUNIBESITI YA BOKONE-BOPHIRIMA  
NOORDWES-UNIVERSITEIT

**The use of clothing labels by  
female black low-literate consumers**

**J. VAN STADEN**

**10365788**

**(M Tech Fashion)**

Thesis submitted in partial fulfilment of the requirements for the degree  
PhD in Consumer Sciences at the Potchefstroom Campus of the North-  
West University

Promoter: Prof. M van der Merwe

Co-promoter: Prof. A.M. van Aardt

November 2012, Potchefstroom

## **ABSTRACT**

Low-literate consumers display distinctive behaviour in the marketplace, and in the first phase of a mixed method study, the aim was to explore the challenges and coping strategies of low-literate clothing consumers. Due to fairly high levels of low-literacy in South Africa and limited research, this research was undertaken to better understand the behaviour of low-literate clothing consumers in the marketplace. Semi-structured interviews were used to gather data, and through inductive, interpretative data analysis three broad themes were identified, namely personal (cognitive, social, financial and affective), product (types and format of product information, evaluative criteria) and store-related (store assistants' behaviour, store selection and in-store information) challenges and associated coping strategies. The results of this study can be used to advise marketers regarding the needs of these consumers, and were also used to develop a quantitative measuring instrument to investigate low-literate consumers' use of clothing labels in the retail setting.

In the second quantitative phase of the study, the use of clothing label information amidst low-literate respondents' personal- (reading and numeracy skills, concrete and pictographic thinking) and product-related challenges (the format of labels, care-label knowledge and evaluating clothing products' quality) were investigated. The study sample consisted of 450 black female consumers with literacy levels between Grades 5 and 8, residing in the Emfuleni Local Municipality area, in the southern part of Gauteng, South Africa. Interviewer administered questionnaires were filled out, and it was examined for validity and reliability. Data analysis included descriptive statistics and correlations were drawn between reliable factors, and practical significant correlations were reported. ANOVA's indicated statistically significant differences with mostly medium effect sizes between the occupation of respondents and selected factors. Respondents indicated that they do read and understand clothing labels, but results revealed that they did experience problems when using information on labels. Their numeracy skills were average, and abstract thinking related to numeracy, were fair. Pictographic thinking was evident in their preference for symbolic and graphic presentation of size format, but not when they were presented altered store logos. Care label knowledge was poor, and clothing products were evaluated concretely. Some of the respondents, especially the older respondents were inclined to follow the peripheral route of elaboration when reading clothing label information.

**KEYWORDS**

- Consumer behaviour
- Low-literate consumers
- Challenges and coping strategies
- Clothing labels

## **ACKNOWLEDGEMENTS**

I would like to take this opportunity to express my sincere gratitude and appreciation to the following people who contributed to this study, guided and supported me through the duration thereof:

- My promoters, Prof Daleen van der Merwe and Prof Annette van Aardt for professional guidance, motivation and endless support during this study
- Dr Suria Ellis for the statistical data analysis of the second phase of the study
- Mrs Anneke Coetzee (Library) for assistance regarding literature searches and references
- Prof Carisma Nel (Curriculum-based studies) and Dr Tumi Khumalo (Psychology) for professional advice regarding the development of the questionnaire
- Mrs Cashandra van der Westhuizen for assistance in the design and development of graphic images in the questionnaire
- Me Melanie Law (C-Trans, NWU , Vanderbijlpark Campus) for language editing
- My colleagues from Consumer Sciences for continuous support and assistance
- Prof Annamarie Kruger for granting financial support towards the completion of this study
- Prof Herman Strydom (Social work) for assistance during the pilot interviews

To my husband Fanie, children Stefan, Adriaan and Mareli, special thanks for your love, support and all the sacrifices you made in supporting me for the duration of this study, and my sister Mari, for love and continuous support and help. Finally, thanks to all my friends for friendship and encouragement.

***SOLI DEO GLORIA***

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# CHAPTER 1

## INTRODUCTION

### 1 PROBLEM STATEMENT AND SUBSTANTIATION

#### 1.1 Introduction

Low-literate clothing consumers constantly face challenges with making informed decisions in the marketplace. The challenge for these consumers lies in possible alternative choices concerning various products and services that have to be made continuously (Rousseau, 2007b:259; Schiffman & Kanuk, 2010:26). In order for the consumer to make informed purchase decisions, they must distinguish between comparable products, using product-related information (Rousseau, 2007b:260; Schiffman & Kanuk, 2010:26). However, the consumer decision-making process, as well as the purchase decision, is often a complex processes due to external or environmental influences. These influences have to be interpreted in terms of the internal reference framework of the consumer (Erasmus *et al.*, 2001:82; Rousseau, 2007b:260, 263). These decision-making processes are also controlled by internal thought processes concerning aspects such as needs, motives, personality, perception, learning and attitudes (Rousseau, 2007b:261).

Before deciding whether to buy a product or not, the clothing consumer will search for product related information from internal sources (the consumers' own memory) and external sources (such as product labels, fashion magazines and advertisements) (Sproles & Burns, 1994:268; Solomon & Rabolt, 2009:386, 387). Clothing related information, for example price, size, care instructions, fibre content, and country of origin, is conveyed to the consumer through product labels on packaging, sewn-in labels and hang tags (Davis, 1987:8; Brown & Rice, 2001:82, 83; Chowdhary, 2003:244). Product labels are the first link between the clothing product and the consumer (Chowdhary, 2003:244), and these labels are the informative foundation from which consumers make purchase decisions (D'Souza *et al.*, 2006:163).

The selection of new clothing articles, as indicated by Sproles and Burns (1994:xiii), is an intricate consumer decision-making process and can therefore not be compared with studies in other fields of consumer behaviour (De Klerk, 1999:116). Due to the complexity of this

decision-making process, various authors (Lennon & Davis, 1989a:42; Nagasawa, *et al.*, 1991:54; De Klerk, 1999:116) argue that the socio-psychological and cognitive perspectives should be integrated with the theory of consumer behaviour in order to obtain a better understanding of the behaviour of the clothing consumer.

## **1.2 Problem statement**

People are wearing clothes for various reasons, namely modesty, immodesty, protection and adornment (Solomon & Rabolt, 2009: 118, 119), and the need for clothing is, according to Maslow's hierarchy of needs, a basic need (Schiffman and Kanuk, 2010:116). This study is concerned with low-literate consumers that experience various problems in the marketplace (Gau & Viswanathan, 2008), when buying clothing products. Due to the correlation between literacy and income (Viswanathan and Gau, 2005), low-literate consumers are also often poor in terms of financial resources and physical living conditions, although they spend a high percentage of their income on necessities such as clothes (Viswanathan *et al.*, 2008:302). Furthermore, information provided on clothing labels which is necessary to take into account during the purchasing of, and caring for clothing items, is often considered to be difficult or technical in nature by literate consumers (Shin, 2000:20, 21, 28)). It is questionable whether low-literate consumers would be able to optimally utilise this information to make informed decisions. Thus due to necessity but also the often high cost of clothing, as well as the technical nature of the clothing label, a study focussing on low literacy and clothing is highly relevant. The focus of this study will be on the challenges concerning the reading, understanding and application of information on clothing labels by these consumers. Although a person is regarded as literate if they have passed Grade 7 and are able to read and write in one language (UNESCO, 2006:148), it is questioned whether a person with such a low qualification will be functionally literate. Functional literacy means being able to read, understand and apply product-related information (Wallendorf, 2001:505). The process of low-literate consumers' search for product information may proceed differently than that of literate consumers, as low-literate consumers often rely on family or friends for assistance during the search for information (Adkins, 2001:6). Assistance is required possibly due to poor memory and reading skills (Wallendorf, 2001:508; Viswanathan *et al.*, 2005:15).

Low-literate clothing consumers process and evaluate information differently than literate consumers (Williams, 2002:250, 252). The Elaboration of Likelihood Model (ELM) provides insight into these differences as well as the decision-making process of low-literate consumers

when confronted with written information at the point of purchase (Jae & Delvecchio, 2004:343, 351) (1.3.3). Low-literate consumers often have a low need for cognition and do not involve themselves intensively when searching for product information (Wallendorf, 2001:508). These consumers will thus follow the peripheral route to persuasion and are influenced by simple inferred cues (Jae & Delvecchio, 2004:351). For the purpose of this study these inferred cues are: familiar brand names, colourful hangtags and attractive packaging. Product selection according to these cues may result in the purchase of poor quality products which may be inconsistent with the needs of the consumer (Jae & Delvecchio, 2004:351). Product information on labels is mostly provided in text format, which is often difficult to read and understand, and requires a higher level of cognitive involvement (the central route to persuasion) (Yan *et al.*, 2008:533; Hoyer & MacInnis, 2010:52). The low-literate clothing consumer may be disadvantaged and may not be able to evaluate a garment effectively.

Research on low-literate consumers' use (reading, understanding and application) of labels in the subject areas of food (Viswanathan *et al.*, 2009a) and pharmacology (Dowse & Ehlers, 2005; Wolf *et al.*, 2006) is available. However, no evidence could be found (NEXUS, PROQUEST) of any related studies regarding low-literate consumers' use of clothing labels. Given the uncertainty as to the extent consumers are influenced by product labels (D'Souza *et al.*, 2006:162), the limited literature, as well as restrictive empirical research on the use of clothing labels by low-literate consumers during the decision-making process, it is clear that this field needs further investigation. This investigation will be to the benefit of low-literate clothing consumers. It will also benefit retailers and marketers that should develop a better understanding of the needs of functionally low-literate consumers (as defined in 2.3.6) regarding their use of clothing labels.

The low-literate consumer faces various cognitive (such as poor reading and mathematical skills), product-related (for example, understanding sizing of a garment and care-instructions), social (for instance language difficulties) and affective (such as insecurity when entering the retail environment) challenges, which will largely influence their decision-making capabilities (Adkins & Ozanne, 2005a:153; Gau & Viswanathan, 2008; Viswanathan, 2009a:136). However, despite these challenges, low-literate consumers display various coping strategies in an attempt to meet their needs and maintain themselves as reasonably competent consumers (1.3.2). When focusing on low-literate clothing consumers, it is unknown which challenges they face, and the

coping strategies they apply in a literate marketplace. In addition, it is undefined how low-literate clothing consumers read, understand and apply product-related information on clothing labels during the decision-making process. The research questions are stated in section 2.2 of this article.

## **1.3 Substantiation**

### **1.3.1 The South African consumer**

The estimated size of the South African population is 51.7 million and comprises various race groups. The largest population group is the black group (79.6%), followed by the coloured (9%), white (8.9%), and Indian (2.5%) population groups (Statistics South Africa, 2012:16). Although the majority of South African consumers are black, their aspirations, income and lifestyle are often ignored – this was especially true during the Apartheid Era – by the retail sector. However, new generations grow up, incomes improve and aspirations are changing (Rousseau, 2007a:49).

In South Africa, the average household income per month is R8600.00 ( $\pm$  US\$980), of which the largest variation in average household income between population groups in South Africa is that between black and white households. The average black households' income (R5 050 [ $\pm$  US\$577]) is about a sixth of white households, (Statistics South Africa, 2012:37). However, the percentage expenditure patterns of quintile 1 (20% of households with the lowest income) on clothing is proportionately more than twice as much as those of households in quintile 5 (20% of households with the highest income) (Statistic South Africa, 2008:18), implicating the importance of purchasing clothing products to low literate consumers who are also of low-income in the present study. Price, durability and reliability are important criteria to consider before purchasing products (Williams 2002:253). Therefore, black consumers will have to make wise purchase decisions in order to survive financially. Based on the economic buyer theory, consumers will be forced to compare product alternatives in terms of price and significance, as well as obtaining the best quality at the lowest prices (Schiffman & Kanuk, 2010:20). The implication of this is that the search for relevant product information should become very important.

For any consumer to be able to read and understand product information, a certain level of literacy is necessary (Wallendorf, 2001:505). However, due to South Africa's political

background, a relatively large segment of the population was previously deprived of a quality education due to a lack of educational funding, poor teacher training and improper facilities (Posel, 2011:40). According to Statistics South Africa (2012:31), 82.6% of all adults, but only 70.7% of blacks adults (people 20 years of age and older), in the country are literate, which means that they have passed Grade 7. The literacy level of South African women is slightly lower than that of South African men (Statistics South Africa (2012:31), and considering the low literacy levels of women in general – who are mostly responsible for household purchases – a lack of functional literacy may lead to poor product selection for the household (Wallendorf, 2001:508). Consumers need proper information when purchasing clothing, and one way to acquire this product information is by reading and studying product labels (Shin, 2000:21, 22; Chowdhary, 2003:244). Limited functional literacy skills (read, interpret and apply product information) can be a barrier for consumers with low literacy levels (Wallendorf, 2001:505). Literacy is a cognitive indicator which has, amongst other factors, a definite influence on consumers' decision-making process (Rousseau, 2007b:261).

### **1.3.2 Theoretical perspective: a socio-cognitive approach to the decision-making process**

The consumer decision-making process is indicated as a complex process, which is influenced by personal and environmental variables (Rousseau, 2007b:260, 263). From a rational point of view, the decision-making process is a cognitive process, which entails problem solving (Jacobs & De Klerk, 2003; Rousseau, 2007b:260; Schiffman and Kanuk, 2010:479). However, the clothing consumer's decision-making process is more complicated due to an array of behavioural processes (Sproles & Burns, 1994:xiii). Personal variables that influence the decision-making process include the needs, motives, personality, perceptions, learning and attitudes of the consumer, whereas environmental variables entail culture, social influences, reference groups, family, economic demand, and business and market influences (Rousseau, 2007b:261). This study will be executed from a socio-cognitive perspective although none of the personal and environmental variables are more prevalent than the other. For the purpose of this study, the focus will be on cognitive influences (literacy and numeracy), social influences (such as personal relations and language), and retail and marketing influences (specifically clothing labels). A socio-cognitive perspective on the study of consumer behaviour - in this case low-literate consumers' use of clothing labels - will aim at understanding the effect of internal (cognitive involvement) and external (social world in which consumers are active and market influences) factors on consumer behaviour (Jacobs & De Klerk, 2003).

Social cognition is the way in which individuals – and consumers – interpret, analyse, remember and use information about the social world (Baron & Byrne, 1997:78). Various authors agree that a basic component of knowledge is schema, which can be defined as mental frameworks or associative networks consisting of a series of representative concepts with links between them. These associative networks or schemas will allow people – in this case, consumers – to organise large amounts of information in an effective and efficient way and to recall this information for reference purposes (Baron & Byrne, 1997:79, Schiffman & Kanuk, 2010:227; Hoyer & MacInnis, 2010:94). It is further contended by Baron and Byrne (1997:80) that schemas have influential effects on some aspects of social behaviour.

Consumers can derive a wide range of product information from product labels (Rousseau, 2007b:260; Schiffman & Kanuk, 2010:228). In order to make purchase decisions, extrinsic cues, such as brand names and price, are often recalled during internal searches for information by making use of associative networks or schemas (Hoyer & MacInnes, 2010:94-96). The principle of schemas influencing behaviour may find application in this study since clothing labels display information such as brand, price, manufacturer, store and country of origin, which may all be cues associated with specific social groups. Baron and Byrne (1997:111) confirm that schemas help individuals to interpret social situations and once social interpretations are formed, people notice only that information which is consistent with these schemas.

It is the opinion of Baron and Byrne (1997:82-84) that when consumers are faced with large amounts of information, they often find a quick and easy way to deal with it. One potential shortcut for reducing mental effort requires the use of heuristics, which entails simple rules for drawing inferences in a quick and apparently effortless way. It is emphasised by Bloemer *et al.* (2009:63) that consumers will use information cues if they are useful to them and relevant to the particular product. Proceeding from this point of view, it can be assumed that extrinsic attributes of clothing items specified on clothing labels (such as brand names, manufacturer, country of origin and price), are often used as cues of specific intrinsic attributes, such as product quality (Schiffman & Kanuk, 2010:195).

Consumers' ability to read and process information is largely dependent on their education (Hoyer & MacInnis, 2010:63). Therefore, the degree to which a person acquires cognitive skills is expressed in terms of their literacy level (UNESCO, 2006:147). The literacy level of a person

is seen as a cognitive, multi-faceted indicator concerning the capability of using written language – such as the information on clothing labels – and ultimately, the ability to draw logical conclusions and think critically. Therefore, using labels in the marketplace setting is a cognitive activity (Wallendorf, 2001:505). Considering the importance of literacy as a cognitive indicator, it is stated by various authors (Wallendorf, 2001:507; Jae & Delvecchio, 2004:342; Adkins & Ozanne, 2005b:94) that the social context in which literacy manifests may never be ignored. Consumers must not only possess basic literacy skills in terms of reading and writing, but they also need skills to enable them to function within a social context (Adkins & Ozanne, 2005a:153).

Low-literate consumers, with limited functional literacy skills, can experience a vast array of challenges when entering the retail environment. Firstly, cognitive difficulties such as direction-finding in the store, reading signs, and information overload can be problematic for these consumers (Viswanathan *et al.*, 2005:15). Secondly, they may also experience product-related challenges in terms of numerical information such as price, as well as reading and applying text-based information found on product labels (Gau & Viswanathan, 2008). A third challenge that low-literate consumers may face, is the social challenge of language. Product information is mostly provided in English, which is very often not the native language of the consumer (Wallendorf, 2001:507). Low-literate consumers use concrete ways of thinking and often use single pieces of information when selecting a product. For example, when price is considered, the size of the product could be ignored (Viswanathan *et al.*, 2005:19). For low-literate clothing consumers, the reading, understanding and application of information found on clothing labels may be challenging since information on clothing labels is mostly provided in text format. Information found on care labels is often provided in symbol format, but can also be provided in text, or as text and symbol format (Yan *et al.*, 2008:533). Low-literate consumers disclose cognitive preferences as displayed in the peripheral route of persuasion, which indicates that these consumers prefer visual information such as symbols and pictorial images above written text for information (Jae & Delvecchio, 2004:343) (2.3.6). Lastly, the low-literate consumer may also perceive shopping experiences as negative (Gau & Viswanathan, 2008) because of hostile sales persons and the misunderstanding of product information. The misunderstanding of product information results in the inability to make informed choices and may lead to feelings of being cheated and poor self-confidence (Adkins & Ozanne, 2005b:93; Gau & Viswanathan,

2008). Consumers with low functional literacy skills may have the perception that they are labeled as unintelligent and socially dependent (Adkins & Ozanne, 2005a:154).

Despite these challenges that low-literate consumers may experience, they reveal several social coping strategies during shopping experiences (Adkins & Ozanne, 2005b:93). Some of the coping skills that low-literate consumers implement to enable them to be independent during the shopping experience are:

- visiting familiar stores with helpful personnel (Gau & Viswanathan, 2008);
- memorising brand names, logos, symbols, packaging and store-layout (Adkins & Ozanne, 2005b:96);
- pre-planning purchases (Adkins & Ozanne, 2005b:97);  
acting as if they are literate and pretending that they can read product information (Adkins & Ozanne, 2005b:99; Gau & Viswanathan, 2008); and  
making symbolic associations with letters and numbers through pictographic thinking (Viswanathan, *et al.*, 2005:27; Gau & Viswanathan, 2008).

Considering the cognitive processes that consumers use to make decisions, as well as their interaction with people and social behaviour, clothing can act as a cue to the personality and preferences of the consumer (Lennon & Davis, 1989b:1; Nagasawa *et al.*, 1991:56). Various authors, such as Nagasawa *et al.* (1991:53) and Kaiser (1997:33), argue that clothing consumer behaviour must be viewed from different cognitive, behavioural, symbolic interactionism and cultural perspectives. Therefore, for the purposes of this study, the use of clothing labels by low-literate clothing consumers during the decision-making process will be investigated from a socio-cognitive perspective.

### **1.3.3 Clothing-related information needed and used during various stages of the decision-making process**

When new clothing items are purchased, consumers are involved in a decision-making process which includes five stages: the awareness or problem recognition stage, the information searching stage, the evaluation of alternatives stage, the decision or product choice stage, and the post-purchase stage (Sproles & Burns, 1994:17, 264; Solomon & Rabolt, 2009:382). However, for the low-literate consumer, the traditional five-stage consumer decision-making process may

proceed differently. Need recognition, the evaluation and purchase of the products as well as the post purchase stage are the most prevalent stages during their consumer decision-making process (Adkins, 2001:6). Information seeking may be limited to an external search for information, provided by family or friends (Adkins, 2001:6) because of factors such as poor memory and reading skills (Wallendorf, 2001:508; Viswanathan *et al.*, 2005:15). A short overview of the stages of the consumer decision-making process will now be given in order to provide background information against which low-literate consumers make purchase decisions.

### **1.3.3.1 Problem recognition**

The foundation of any purchase decision is the realisation of consumers that a discrepancy exists between their ideal state and the actual state of affairs that needs to be satisfied (Solomon & Rabolt, 2009:385; Schiffman & Kanuk, 2010:484). For the clothing consumer, contact with familiar brand logo's on labels, store and window displays, or even other people wearing the item may create the awareness for the need of the item (Chen-Yu & Kincade 2001:30-31; Solomon & Rabolt 2009:381). After a need has been recognized, the search for information follows (Schiffman & Kanuk, 2010:485).

### **1.3.3.2 Information search**

The second stage in the consumer decision-making process is the search for information about the product in question (Schiffman & Kanuk, 2010:485). Consumers' search for information is two-fold, namely internal and external. An internal search for information concerns the consumers' use of information from their own memory, including information that has been obtained from past experiences. An external search for information concerns family, friends and marketing sources (Sproles & Burns, 1994:75, 264; Solomon & Rabolt, 2009:387). In the case of clothing purchases, labels may be consulted and internal information searching (such as brand names and price recalled from memory) may be combined with external information searching, such as considering information found on labels. The search for product information is prevalent during the evaluation of alternatives stage and product choice stage at the point of purchase (Sproles and Burns, 1994:267). Low-literate consumers who experience difficulties with reading and understanding of product information (Wallendorf, 2001:505), who often belong to lower income groups (Williams, 2002:252; Viswanathan *et al.*, 2009b:86), will search for information in a different way than literate consumers (Adkins, 2001:6). Factors such as low prices and the durability of products will be important aspects to consider for low-literate consumers when

buying products (Williams, 2002:252). Yet, they may not be able to understand the information presented on labels.

### **1.3.3.3 Evaluation of alternatives**

After consumers have gone through the process of gathering information regarding potential items, they must make a choice between the alternatives (D'Souza *et al.*, 2006:163; Solomon & Rabolt, 2009:392). A set of evaluative criteria is developed by the consumer which is applied when evaluating a product and can be based on serviceability, the price of a product, or the aesthetic value thereof (Chen-Yu & Kincade, 2001:40; Williams, 2002:249-250). Labels can assist consumers when evaluating a product because they provide information such as, price, size and care instructions (Shin, 2000:21; Brown & Rice, 2001:82, 83, 197).

### **1.3.3.4 Decision or purchase stage**

Based on the obtained information, consumers will, at this stage of the decision-making process, decide whether or not to buy the product (Sproles & Burns, 1994:265; Rousseau, 2007b:268). The choice of the product at the point of purchase can be determined by incorporating information from sources such as previous experience with the product, available information from labels, trust in the brands and acquaintance with retail stores. Labels can play an important role in the selection of a product at the point of purchase, especially when alternative choices are available (Davies & Wright, 1994:57).

### **1.3.3.5 Outcome or post-purchase stage**

The post-purchase stage entails the consumption and the evaluation of the purchased product in order to determine whether the purchase of the product was satisfactory or not (Rousseau, 2007b:269; Schiffman & Kanuk, 2010:497, 498). It is critical for the clothing consumer to be able to read and understand the information on care labels at this stage of the decision-making process, because proper care-taking of the garment will contribute to its durability and longevity (Williams, 2002:21, 28; Yan *et al.*, 2008:533).

## **1.3.4 The role of clothing labels during the consumer decision-making process**

Various sources of information are prevalent during each stage of the decision-making process (Sproles & Burns, 1994:264). Mass media play a significant role as a source of information during the need recognition and information searching stages. Commercial sources such as

packaging, hangtags and labels as well as personal communication with family and friends, are important sources of information during the evaluation stage (Sproles & Burns, 1994:267, 268). For the duration of the product choice stage, information is most often derived from sources such as in-store displays, sales persons, hangtags and labels.

Labels can be used as sources of information during all the stages of the consumer decision-making process, but the use of information on labels is more prevalent during the evaluation of alternatives stage and the purchase and post-purchase stages of the decision-making process. Care labels are predominantly used during the purchase and post-purchase stages (Shin, 2000:28; Yan *et al.*, 2008:533).

Low-literate consumers face various challenges such as, reading difficulties, poor mathematical skills and insecurity when entering the retail environment (Adkins & Ozanne, 2005a:153; Gau & Viswanathan, 2008; Viswanathan, 2009a:136) which will largely influence their decision-making capabilities. Therefore, low-literate consumers' purchasing behaviour is often habitual (Adkins, 2001: 89, 91; Viswanathan *et al.*, 2005:22, 25). It was found that when low-literate consumers buy food products, they tend to buy the same brands, at the same stores (Viswanathan *et al.*, 2005:25). However, it will be necessary for low-literate clothing consumers to engage in information searching when buying clothing, because the same clothing products will not be continuously available, due to changes in the needs of clothing consumers and changes in fashion (Frings, 2008:64). Therefore, these consumers will have to involve themselves in the studying and understanding of labels at the point of purchase.

Labels can be used effectively as a source of clothing-related information during clothing purchases by low-literate consumers, provided that they are in a format that can be read, understood and interpreted by the consumer. This view is also shared by Rotfeld (2006:408) when stating that information on labels must be presented in such a format that it accommodates the level of education of the consumer.

### **1.3.5 The characteristics of clothing labels and types of information presented**

Various sources of information are used to convey clothing-related information to consumers. The first impression formed and association made by consumers about a clothing product, is often through objective information in the form of product labels (Shin, 2000:20; Chowdhary,

2003:244; D'Souza *et al.*, 2006:163). The format of the information found on a product label may influence the purchase decision (Shin, 2000:21). The primary function of labels is to provide information about products that are not immediately recognisable or verifiable by the consumer when observing the product. This enables consumers to make informed decisions based neither on the visual properties of the product nor from previous buying experiences (Howard & Allen, 2006:439).

A range of garment-related information such as fibre content, size, price, care and country of origin is conveyed by clothing labels (Shin, 2000:21; Brown & Rice, 2001:29, 82, 83, 197; Solomon & Rabolt, 2009:534-538). Some of the information on labels is optional, for example trademarks and brands (Brown & Rice, 2001:29), whereas fibre content and care labeling are mandatory types of information according to the South African Merchandise Marks Act (17/1941) (SA, 2000:88). Although consumers demand relevant and precise information on product labels, it is questioned what type of information consumers are looking for when studying labels. (D'Souza *et al.*, 2006:163).

Information on clothing labels are mostly presented in text or written format while care information is often presented in symbol format (Brown & Rice, 2001:82, 83). The effective use of information on clothing labels is dependent on consumers' ability to read, understand and interpret this information (Shin, 2000:24). Therefore, the information on labels should be formulated in such a way that consumers can understand and use it effectively (Yan *et al.*, 2008:535). The failure of consumers to correctly interpret clothing label information is due to a number of reasons. The first set of reasons refers to difficult terminology, insufficient indication of the contents, poor knowledge of textile fibers and the language used on the labels that is not the primary language of the consumer (Shin, 2000:24, 25). The second set relates to the format in which information is presented on labels, whether text, symbols or a combination of text and symbols, is also contributory to the understanding or lack of understanding label information (Yan *et al.*, 2008:533; Hoyer & MacInnis, 2010:213, 241). The third reason deals with the fact that the understanding and application of information on labels are dependent on the consumers' need for cognition (Yan *et al.*, 2008:533). The final reason is that understanding is dependent on the consumers' functional literacy skills (Wallendorf, 2001:508).

For the low-literate consumer, who has a low need for cognition and prefers visual information in the form of symbols or pictorials (Yan *et al.*, 2008:533), it can be difficult to read and interpret information on clothing labels that is mostly presented in text format. The outcome of this intricacy in reading and application of label information may result in uninformed purchases, and consequently, financial implications, especially for the low-literate consumer.

### **1.3.6 Consumers' levels of literacy and implications for understanding information on clothing labels**

Although literacy is defined as the ability to read and write (Mutumbuka, 2004; UNESCO, 2006:148), it is regarded as multi-faceted and is more intriguing than simply deciphering and producing text (UNESCO, 2006:148; Ntiri, 2009:98). Apart from reading and writing skills, numeracy skills as well as the skill to access knowledge are included in the term literacy. In addition, a literate person must be able to interpret and apply reading, writing and numeracy skills. Literacy is regarded as a learning process, which implies that while the individuals learn, they become more literate. Furthermore, literacy is regarded as the ability to analyse and interpret text (UNESCO, 2006:149-152). Although it is important to keep the different facets of literacy in mind when discussing literacy, it cannot be separated from the cultural and socio-political context in which it manifests (Ntiri, 2009:98). Selected concepts regarding literacy applicable to this study are:

- Social literacy: the ability to successfully communicate within the person's particular community (Mutumbuka, 2004).
- Information literacy: the ability to apply critical thinking skills in order to locate, evaluate and use information (Mutumbuka, 2004; Ntiri, 2009:98).
- Aliteracy: a person has the ability to read, but prefers not to do so. They prefer visual information to textual information (Wallendorf, 2001:506; Mutumbuka, 2004).
- Low-literacy: a person that did not complete Grade 7 at school (Adkins & Ozanne, 2005b:93; Statistics South Africa, 2012:31).
- Functional literacy: the successful engagement of individuals in all the dimensions of literacy and the ability to function effectively in their social and economic context (Wallendorf, 2001:505; Mutumbuka, 2004; Adkins & Ozanne, 2005a:153; UNESCO, 2006:30; Ntiri, 2009: 99).

For the purpose of this study, the focus will be placed on low-literacy. Although the differences between low-literacy and functional literacy are vague, these terms are increasingly used interchangeably and low-literate consumers are also described as functionally low-literate (Viswanathan *et al.*, 2009a:136).

Globally, millions of consumers without the necessary literacy skills are involved daily in purchasing decisions (Adkins & Ozanne, 2005a:153). However, the focus of marketers, retailers and consumer researchers is on literate consumers (Adkins & Ozanne, 2005b:93; Guo & Meng, 2008:260). Considering the number of adults in South Africa that passed Grade 7, it is questioned whether a person with such a low qualification will be functionally literate – able to read, argue and interpret information (Wallendorf, 2001:505).

Consumers with lower literacy levels process and evaluate information differently than consumers with higher literacy levels (Williams, 2002:250, 255). The ELM can provide insight into these differences because it provides an understanding of how consumers are involved in a product search and elaborates on information provided in advertisements (Petty *et al.*, 1983:135). The ELM also states that low-literate consumers follow either one of two routes of persuasion during a decision-making process. Firstly, consumers who are interested in thinking about information, elaborate on message information and have a high need for cognition, follow the central route of persuasion. The central route of persuasion includes factors such as cognitive validation, the learning, understanding, and integration of information and the consumer's individual cognitive responses (Petty *et al.*, 1983:135-137; Jae & Delvecchio, 2004:343; Hoyer & MacInnis, 2010:124). Secondly, consumers that are not highly involved in a product do not elaborate on information and evaluate a product without engaging themselves extensively in cognitive thinking. These consumers have a low need for cognition and follow the peripheral route of persuasion (Petty *et al.*, 1983:135-137; Jae & Delvecchio, 2004:343; Hoyer & MacInnis, 2010:124). They evaluate a product based on simple inferred cues, for example a consumer may accept a product because a famous actor was wearing a specific brand and not on the grounds of the studied attributes of the product (Wright, 1997:418; Petty *et al.*, 1983:135-137; Jae & Delvecchio, 2004:343). Although the ELM has been applied in the context of advertising, it can be extended to other forms of marketing information such as product labels (Davies & Wright, 1994:57; Wright, 1997:417).

Decision-making by low-literate consumers, in terms of their processing of written information at the point of purchase, can be explained through the ELM (Jae & Delvecchio, 2004:343, 351) because low-literate consumers often do not involve themselves intensively in the search for information (Wallendorf, 2001:508). These consumers will thus follow the peripheral route to persuasion and are influenced by simple inferred cues (Jae & Delvecchio, 2004:351), such as familiar brand names, colourful hangtags and attractive packaging. This way of product selection may result in the purchase of a product of which the quality is not consistent with the peripheral cue (Jae & Delvecchio, 2004:351). The reading of textual format information on clothing labels requires a higher level of cognitive involvement (the central route to persuasion) (Yan *et al.*, 2008:533), and the low-literate consumer may not be able to evaluate a garment objectively. Low-literate consumers, who for example only focus on the aesthetic properties of a garment and do not use the information on product labels, can experience difficulties with available money, correct sizing and the care-taking of the garment (Shin, 2000:22; Adkins & Ozanne, 2005b:93). It is the opinion of the researcher that the provision of more visual information on clothing labels such as the different garment sizes that are indicated graphically on the label, may assist low-literate consumers who often experience difficulty in the comprehension of written information to make an informed decision (Jae & Delvecchio, 2004:351). The ELM can therefore be integrated in this research concerning how consumers read, understand and apply information found on clothing labels.

### **1.3.7 Implications for low-literate consumers**

Literacy and educational accomplishments are highly valued in any society and in a marketplace that merely provides for literate consumers, low-literate consumers may face various challenges (Adkins & Ozanne, 2005a:154). These consumers may feel vulnerable and often have negative experiences when purchasing products due to misunderstanding the marketing information (Adkins & Jae, 2010:95). As mentioned in 1.3.6, low-literate consumers follow the peripheral route to persuasion due to their low need for cognition (Jae & Delvecchio, 2004:351; Yan *et al.*, 2008:533), and rely on concrete and pictorial thinking (Viswanathan *et al.*, 2008). The implication is that low-literate consumers may experience challenges in reading product labels, understanding the sizing of garments and calculating the unit-price of a product if there are two or more products in a package. The result of these challenges is that low-literate consumers may make uninformed and incorrect purchase decisions and end up buying the wrong product. Additionally, low-literate clothing consumers may not have enough money available for the

purchase and may waste time struggling to overcome these difficulties. All of this may lead to humiliation, anxiety and emotional stress for the low-literate consumer (Viswanathan *et al.*, 2008). Despite the various strategies that low-literate consumers have developed to cope with these challenges, it is important for marketers and retailers to take cognisance of the problems that low-literate consumers experience when active in the retail setting (Adkins & Ozanne, 2005a:154).

### **1.3.8 Implications for marketers and retailers regarding low-literate consumers**

Clothing consumers are continuously involved in the buying process of clothing products and it is of utmost importance for retailers and marketers to determine if low-literate consumers make informed decisions about a product and how these decisions are made. It is necessary for clothing retailers and marketers to be aware of the cognitive, product-related and language challenges that low-literate consumers experience when evaluating, purchasing and taking care of products after purchases have been made (Wallendorf, 2001:507; Viswanathan *et al.*, 2005:15; Gau & Viswanathan, 2008). Retailers and marketers should also find methods to meet the needs of low-literate consumers as competently as possible (Viswanathan *et al.*, 2005:27-31). It is necessary for retailers to make special efforts to distribute more readily available product information to consumers, who are increasingly demanding more information (Solomon and Rabolt, 2009:386).

Additionally, it is emphasised that retailers should train sales persons to be sensitive to the needs of low-literate consumers and to be able to assist these consumers with, for example, the reading of labels while protecting their dignity (Viswanathan *et al.*, 2005:28). Consumers' level of literacy is an important factor for marketers to keep in mind when they introduce new products and in particular, new clothing products. Since low-literate consumers rely on familiar brands and brand images, they may switch to less familiar products that they have noted before, as a result of uncertainty that has been created due to product changes (Viswanathan *et al.*, 2005:29).

The researcher is of the opinion that it is of the utmost importance that marketers and retailers of clothing must convey clothing-related information, provided on labels, in such a manner that consumers, more specifically low-literate consumers, will be able to make informed decisions when buying clothes. It is important to empower low-literate consumers (Viswanathan *et al.*,

2009b:85) because they are entitled to the best quality and value for money when purchasing clothes.

## **2 PURPOSE STATEMENT, RESEARCH QUESTION AND OBJECTIVES**

### **2.1 Purpose statement**

The general purpose of this sequential exploratory mixed method study is to investigate the challenges that low-literate clothing consumers experience. It also explores the coping strategies they apply in the retail setting, as well as the use (reading, understanding and application) of information on clothing labels by these female consumers. The investigation for the quantitative phase of this study will be based on the explored results of the qualitative phase of this study.

The purpose of the qualitative phase of the study will be to explore the challenges that purposefully selected low-literate female clothing consumers, residing in the Emfuleni Local Municipality area (located in southern Gauteng, South Africa) are subjected to, as well as the coping strategies they apply when experiencing problems during the purchasing of clothing products. This qualitative exploration is approached using a phenomenological framework, by means of semi-structured individual interviews. The purpose of the quantitative phase of the study will be to describe and explain, by means of questionnaires, to what extent these consumers read, understand and apply the information on clothing labels, and how this information is acquired.

### **2.2 Research Questions**

Considering the challenges that low-literate consumers experience, and the coping strategies they apply, the intended study will be guided by the following research questions: What are the challenges that low-literate clothing consumers experience when buying clothing products, and how do they cope with these challenges? Further, how do low-literate female clothing consumers use (read, understand and apply) clothing labels? The researcher will aim to answer the first part of the question in an exploratory manner by means of qualitative research. The second part of the question will be answered in an explanatory manner by means of quantitative research. Therefore, an exploratory mixed method approach in answering the research question is used. Consequently, the mixed method research question is: How do the statistical results obtained in the quantitative phase of the study explain the explored qualitative findings?

## **2.3 Specific Objectives**

The following three-fold – literature-related, empirical-related and study implication-related – specific objectives have been formulated, to support the general aim of the study:

### **2.3.1 Literature-related objective**

The literature-related specific objective will be to conduct a literature review on the background of the study concerning the challenges and coping strategies of low-literate consumers. Additionally, the use of clothing labels during the purchasing of clothing products by low-literate consumers is included in the literature review as displayed in the theoretical framework (Figure 1).

### **2.3.2 Empirically related objectives**

For the empirical part of the study, an exploratory mixed method approach will be followed in two sequential phases. The respective objectives for each of these stages are given below.

#### **2.3.2.1 Qualitative exploratory objectives**

The following objectives for the qualitative phase of the study intended to explore the:

- Challenges (cognitive, product-related, social and affective) that low-literate female consumers experience when operating in the clothing retail setting; and
- Strategies that low-literate clothing consumers apply to cope with the cognitive, product-related, social and affective challenges they may experience in the clothing marketplace.

#### **2.3.2.2 Quantitative objectives**

The following specific objectives for the quantitative phase of this study were derived from the results of the qualitative phase of this study. The objectives specifically relate to the personal and product-related challenges that low-literate participants revealed when reading product information on clothing labels. The objectives for the quantitative phase of this study intended to:

- Determine the demographic characteristics of the low-literate respondents;
- Investigate personal-related challenges of the low-literate respondents in the marketplace relating to:
  - their reading of product information on clothing labels;

- their understanding of price, size and care instructions on clothing labels;
- their numeracy skills in the retail setting;
- concrete thinking in the retail setting; and
- pictorial thinking in terms of store logos.
- Investigate product-related challenges of the low-literate respondents in the marketplace relating to:
  - size information format on clothing labels;
  - care label knowledge;
  - the use of care label information at the point of purchase and post-purchase stage of the consumer decision-making process; and
  - evaluative criteria for clothing products.
- Draw conclusions about the low-literate respondents' functional literacy levels; and
- Draw conclusions about the ELM concerning the route of elaboration (central or peripheral) that low-literate respondents follow when using price, size and care information on clothing labels.

### **2.3.3 Implication-related specific objectives**

The specific objectives related to the implications of the study were to make recommendations regarding:

- Consumer education, with reference to the use of clothing labels during the consumer decision-making process.
- Retail strategies concerning the supply of clothing-related information to consumers on labels in such a format that it can be understood by low-literate clothing consumers.

## **3 THEORETICAL FRAMEWORK**

Cognitive, product-related, social and affective challenges that low-literate consumers experience, and the coping strategies they apply when searching for product-related information on clothing labels in terms of price, size and care are explored. The ELM explains that consumers can select either one of two routes of elaboration when searching for information, namely the central or peripheral route of elaboration (Petty *et al.*, 1983:135). The ELM can be applied, within the socio-cognitive perspective, to describe low-literate consumers' behaviour in the retail setting in terms of their use of clothing labels, on which product-related information is

provided in either symbol, text or a combination of text and symbol format (Brown & Rice, 2001:82, 83). Furthermore, the ELM can be applied in order to understand and analyse the way that low-literate consumers use (read, understand and apply) information from clothing labels during the consumer decision-making process (Wright, 1997:417; Gau & Viswanathan, 2008; Yan *et al.*, 2008:533). Upon completion of the study, the researcher was able to make recommendations regarding consumer education, as well as recommendations to retailers and marketers with reference to the results of the study. A theoretical framework for this study is presented in Figure 1.

#### **4 CHAPTER DIVISION**

The study consists of seven chapters with the content of each summarised as follows:

**Chapter 1:** The introduction, theoretical background and motivation for this study. The problem statement, research questions, as well as aims and objectives.

**Chapter 2:** A literature review on the challenges experienced and coping strategies that low-literate consumers apply in the clothing retail setting (Article 1).

**Chapter 3:** A literature review on the use of clothing labels by low-literate consumers during the consumer decision-making process (Article 2).

**Chapter 4:** A complete discussion on the research methodology for the qualitative phase of this mixed method study (semi-structured, one-to-one interviews), and for the quantitative phase (data gathering by means of questionnaires, processing and statistical analysis), which was developed from the results of the qualitative phase. The research approach, population and sample selection, research setting, data collection and data analysis for both studies are also described.

**Chapter 5:** A full report on the qualitative phase of the study using semi-structured interviews and the findings that contributed to develop the measuring instrument for the quantitative phase (Article 3).

**Chapter 6:** A full report on the quantitative stage of this study and the results will be compared with the relevant literature discussed in Chapter 3 (Article 4).

**Chapter 7:** A summary of the study, conclusions, recommendations, limitations and implications for retailers, manufacturers and consumers.

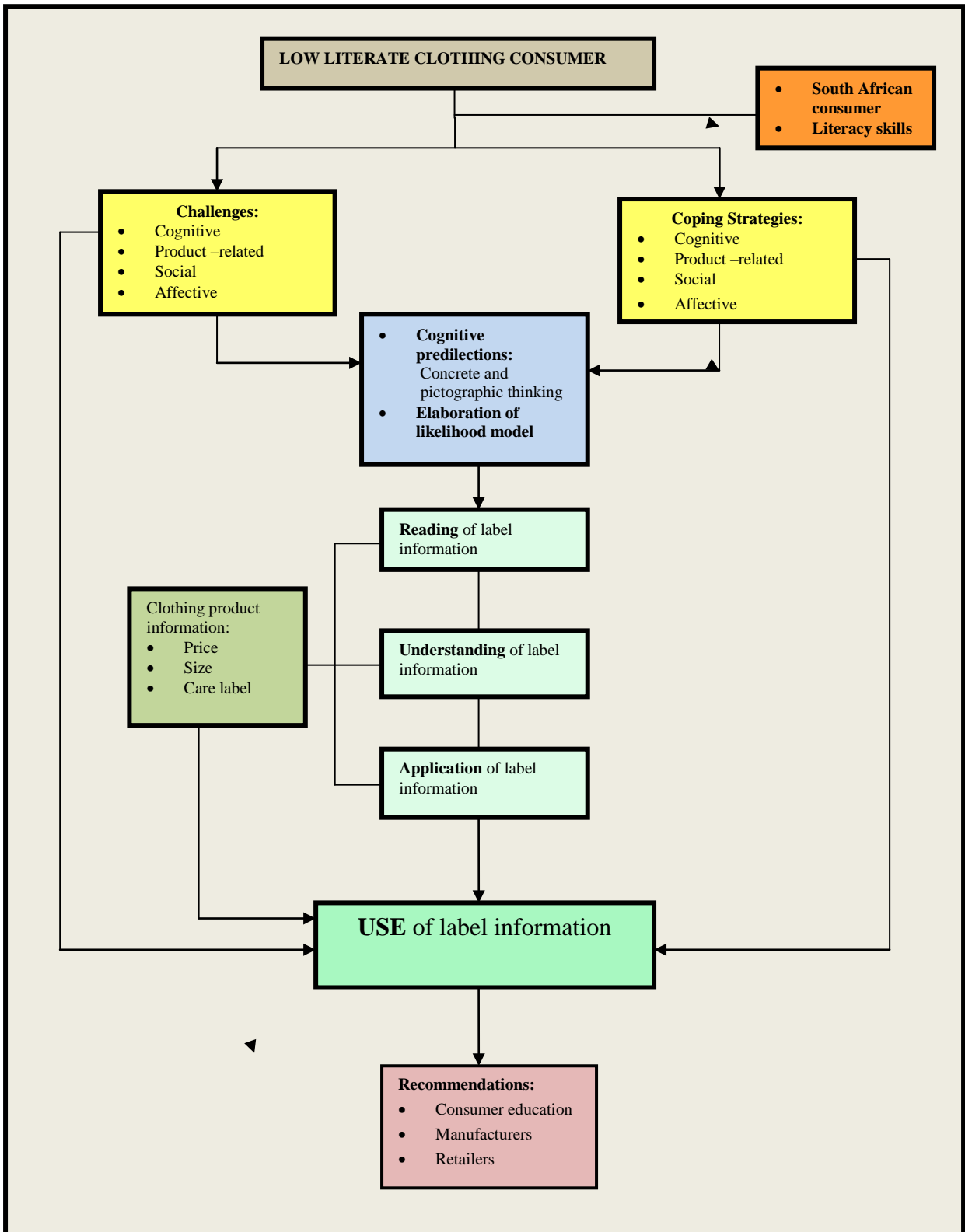


Figure 1 Theoretical framework: Consumer challenges and coping strategies of low-literate consumers (Petty & Cacioppo, 1986:126; Wright, 1997:419; Adkins, 2001:6; Gau & Viswanathan, 2008)

## 5. AUTHOR'S CONTRIBUTIONS

This study, reported in the thesis, was planned and executed by a team of researchers. The role of each researcher is reported in Table 1.

**Table 1 Authors contribution**

Author	Contribution
Mrs J. van Staden	Researcher
Prof. M. van der Merwe	Promoter and general project advisor, funding
Prof. A.M. van Aardt	Co-promoter and project advisor on clothing labels
Dr S.M. Ellis	Statistician

## 6. ARTICLES

The result of this study has been reported in four articles, which is explained in Table 2.

**Table 2 Articles written as result of the research.**

	Article Title	Authors
1	Review article: Challenges and coping strategies of low-literate clothing consumers	<ul style="list-style-type: none"><li>• Mrs J van Staden</li><li>• Prof. M. van der Merwe</li><li>• Prof. A.M. van Aardt</li></ul>
2	Review article: Clothing labels for the functionally low-literate consumer: valuable resource or red herring?	<ul style="list-style-type: none"><li>• Mrs J van Staden</li><li>• Prof. M. van der Merwe</li><li>• Prof. A.M. van Aardt</li></ul>
3	Qualitative research article: Coping with low-literacy in a South African Clothing retail environment	<ul style="list-style-type: none"><li>• Mrs J van Staden</li><li>• Prof. M. van der Merwe</li></ul>
4	Quantitative article: The use of clothing labels by low-literate clothing consumers amidst personal and product related challenges	<ul style="list-style-type: none"><li>• Mrs J van Staden</li><li>• Prof. M. van der Merwe</li><li>• Prof. A.M. van Aardt</li><li>• Dr S.M. Ellis</li></ul>

The following is a statement from the co-authors confirming their individual role in the study, and giving permission that the articles may form part of this thesis.

*I declare that I have approved the articles included in this thesis, that my role in the study, as indicated above, is representative of my actual contribution, and that I hereby give my consent that it may be published as part of the Philosophiae Doctor in Consumer Sciences of Mrs J van Staden.*

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**J van Staden**  
**Researcher**

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**Prof. M. van der Merwe**  
**Promoter and co-author**

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**Prof. A.M. van Aardt**  
**Co-promoter and**  
**co-author**

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**Dr S.M. Ellis**  
**Co-author of quantitative**  
**research article**

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**CHAPTER 2**  
**REVIEW ARTICLE**

**TITLE**

**Challenges and coping strategies of  
low-literate clothing consumers**

(Manuscript to be submitted for publication in the  
International Journal of Emerging Markets)

This article has been written according to the author guidelines for this journal, and is provided in Appendix 1

## **Abstract**

**Purpose** – The aim of this literature review is to explore the behaviour of low-literate clothing consumers, within the framework of research on low-literate consumers in various countries as well as the research of other disciplines on consumer behaviour.

**Research design, approach and method** – A non-empirical, theoretical research approach was followed through a review of published empirical research articles in order to explore the challenges and coping strategies of functionally low-literate clothing consumers.

**Main findings** – Functionally low-literate consumers display distinctive consumer behaviour such as concrete and pictographic thinking when operating in the marketplace due to cognitive, product-related, social and affective challenges. However, these consumers devise coping strategies to counteract the challenges, such as repeatedly visiting the same stores and relying on friends and family for advice regarding purchases.

**Practical/managerial implications** – Due to limited research, as well as the fairly high number of people with low literacy levels, this review article is motivated by the need to understand the behaviour of low-literate consumers in the marketplace. By understanding the needs of functionally low-literate consumers, researchers can advise marketers and consumer education authorities on marketing strategies and the empowerment of these consumers to allow them to make informed and wise purchase decisions that will increase their consumer satisfaction.

**Keywords:** Clothing consumers, challenges, coping strategies, functional low-literacy

## **1. Introduction and background**

In the retail setting, strategies applied by marketers and retailers are aimed at literate consumers (Viswanathan and Rosa, 2007; Chikweche and Fletcher, 2010; Schiffman and Kanuk, 2010), even though there are about four billion consumers worldwide with low-literacy skills, amongst other particular characteristics (D'Andrea *et al.*, 2006). Owing to the direct correlation between literacy and income (Viswanathan and Gau, 2005), such consumers are also often poor in terms of financial resources and physical living conditions (Viswanathan *et al.*, 2008). These consumers are normally described as 'people at the bottom of the pyramid' or 'subsistence consumers' (Viswanathan and Rosa, 2007). Although subsistence consumers are characterised in terms of demographic, psychographic and socio-economic factors, low literacy levels play an important role when these consumers operate in the marketplace. This article focuses on the

challenges encountered and the coping strategies applied by these consumers as a result of their low literacy levels.

The literacy status of people – clothing consumers, for the purpose of this article – is indicated as ‘literate’ if they have passed Grade 7 (that is, completion of primary school) and are able to read and write in one language (UNESCO, 2006). However, the question has been raised as to what extent a person with such an education level is ‘functionally literate’ - being able to read, understand and apply information (Wallendorf, 2001). To be functionally literate, people with reading, writing, and numeracy skills must also be able to think critically about product information, draw logical inferences (Wallendorf, 2001; Viswanathan and Gau, 2005) and cope with consumer-related tasks (Adkins and Ozanne, 2005b).

Literacy is not simplistic but multi-faceted, and for someone to be literate implies a broad-based learning process which is conceptualised in terms of four cognitive skills, namely reading, writing, numeracy and visual literacy (UNESCO, 2006). Reading and writing are essential to the way consumers analyse and comprehend information (Marrapodi, 2006; Greene and Peters, 2009), for example product information. Numeracy implies the ability to process, interpret and apply numerical information (UNESCO, 2006; Dieckmann, 2008). At a basic level it implies the ability to perform simple mathematical calculations (Reyna *et al.*, 2009) such as calculating the total cost of purchases. At a more advanced level, it requires the ability to reason, understand fractions, percentages and proportions, as well as the ability to perform multi-level calculations (Greene and Peters, 2009; Reyna *et al.*, 2009), such as calculating unit-price of multi-packaged products and the prices of products advertised at a percentage discount. For the low-literate consumer, these numeric calculations are often too complex to execute. A fourth cognitive skill, namely visual literacy, is noted for its importance to consumers. Reading implies the ability to decipher and recognise words as well as the ability to identify and interpret signs, symbols and pictures (UNESCO, 2006).

Another aspect, complimentary to functional literacy, is the marketplace literacy of consumers, which refers to their knowledge of the economic, financial and media aspects that they will encounter in the marketplace (Viswanathan *et al.*, 2009b). Marketplace literacy operates at three levels of thinking. First, at the occupational level, consumers must be able to execute a simple purchasing task. Second, at the procedural level, consumers must be able, for example, to find a discount product. Finally, at the conceptual level, consumers must have the ability to compare the attributes of different products (Viswanathan and Gau, 2005; Viswanathan *et al.*, 2009b). Functionally low-literate consumers mostly operate at the occupational level, but

may still lack complete marketplace literacy (Viswanathan *et al.*, 2009b). These consumers generally use only one piece of product information at a time, for example the price of the product (Viswanathan and Gau, 2005).

Factors that have an influence on the behaviour of consumers are broadly categorised as individual (needs, motives, personality, perceptions, learning and attitudes) and environmental (cultural and social influences, reference groups, and market-related influences) (Rousseau, 2007). A socio-cognitive perspective of the study of consumer behaviour – in this case low-literate clothing consumers – will contribute towards explaining the effect of cognitive, social and retail-related variables on consumer behaviour (Jacobs and De Klerk, 2003; Gau and Viswanathan *et al.*, 2008). Since low-literate consumers do not typically behave similarly to literate consumers, it is important for researchers and marketers to acknowledge their needs, preferences and ways of communication and operation in the retail setting.

Various authors have undertaken research on low-literate consumers in several countries, including India (Viswanathan *et al.*, 2008; Viswanathan *et al.*, 2010), Latin America (D'Andrea *et al.*, 2006; Trujillo *et al.*, 2010), the USA (Jae and Delvecchio, 2004; Adkins and Ozanne, 2005a; Gau and Viswanathan, 2008) and Zimbabwe (Chikweche and Fletcher, 2010). This type of research has also been done in South African in the context of pharmacology (Dowse and Ehlers, 2004) and the marketing of dairy products (Van Biljon and Jansen Van Rensburg, 2011). Internationally, there are no studies available on the buying behaviour of low-literate clothing consumers. As a starting point for understanding these consumers' behaviour, the aim of this article was to review available literature on low-literate consumers, and more specifically the objective was to uncover aspects relevant to the challenges that low-literate clothing consumers experience in the retail environment and the strategies they devise to cope with these challenges.

The proposed framework can be seen as a starting point in an attempt to identify the related variables influencing the behaviour of low-literate consumers in the marketplace.

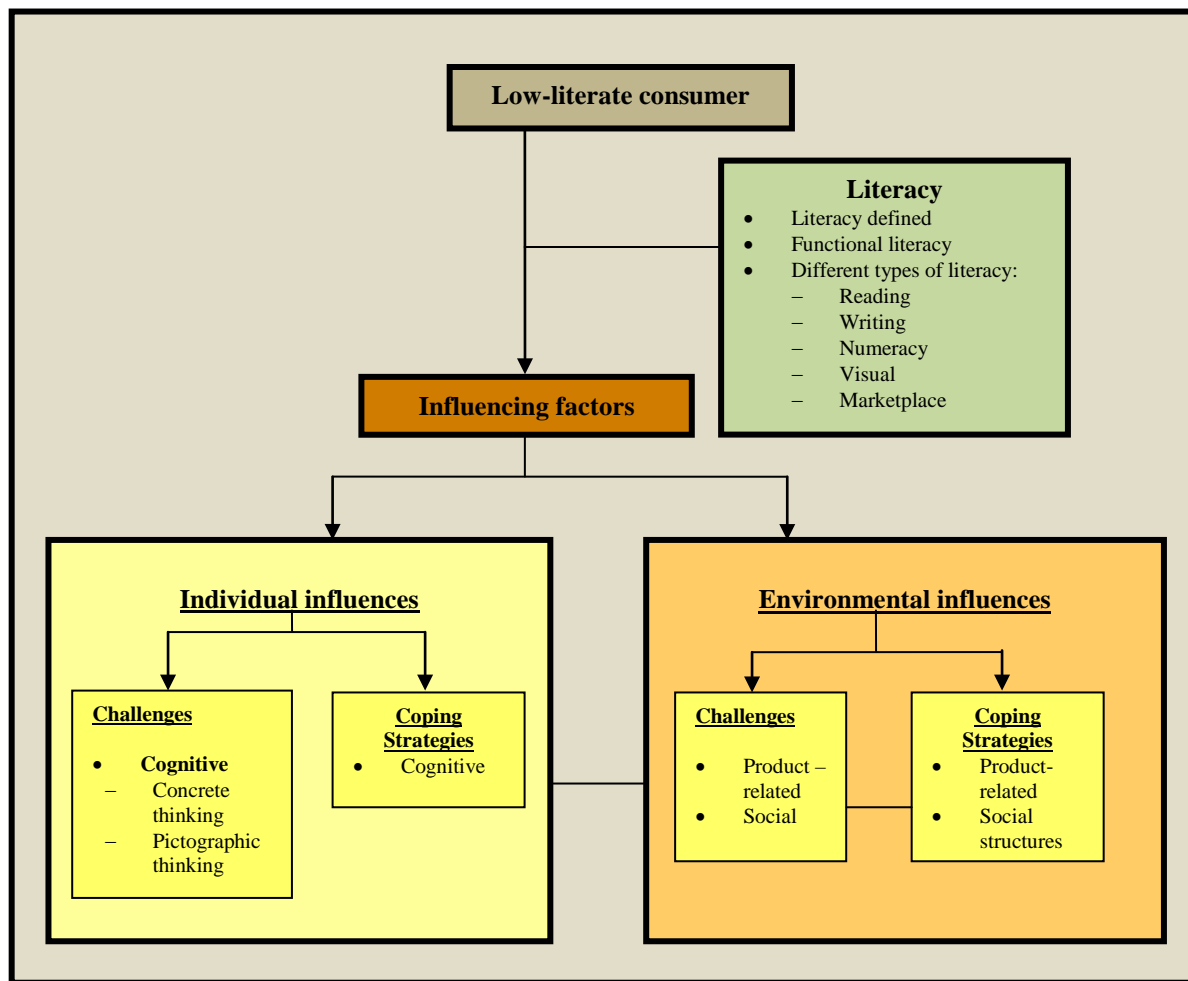


Figure 1: Theoretical framework: Functionally low-literate clothing consumers: Challenges and coping strategies. Adapted from: Rousseau (2007:260); Gau and Viswanathan (2008)

## 2. Methodology

A non-empirical, theoretical research approach was followed in order to explore the challenges and coping strategies of functionally low-literate clothing consumers. This method led to the development of a theoretical framework (Figure 1) that can be used as a tool to achieve the objectives of the research (De Vos and Strydom, 2011). The authors identified a perspective (in this case, a socio-cognitive perspective) that served as a guide to the approach to this study (Plano Clark and Creswell, 2010). Data from empirical research articles were collected to create a scientific report about the phenomena under investigation. Data relating to consumer behaviour, but more specifically to low-literate consumer behaviour, were obtained mostly from scientific journal articles, but theses and text books were also consulted. The Google Scholar web search engine was initially used to obtain a broad variety of information on this topic, and

searches were narrowed down by consulting data bases such as Emerald, ScienceDirect and EBSCOhost. Journals that focus mostly on business and marketing-related topics were accessed. Admission to these data bases was supported by the [http://www.nwu.ac.za/af/library/index\\_a.html](http://www.nwu.ac.za/af/library/index_a.html) web portal. Once topic-related articles were found, the reference lists of these articles were also consulted for further reference to articles relating to low-literate consumer behaviour. Keywords mostly used in the search for relevant information were: consumers, consumer behaviour, literacy, low-literacy, functional literacy, bottom-of-the-pyramid consumers and subsistence consumers. A preliminary overview of relevant research (consisted of thirty-two articles, five text books and two doctoral dissertations) was done. Articles that reported empirical findings and served the aim and objective of this article were analysed. The findings of the empirical research articles that were reviewed concerning individual (schema, language and reading) and environmental (retail and social) influences on the challenges that low-literate consumers experience and the coping strategies they apply will subsequently be communicated.

### **3. Literature Review**

#### *Market segmentation of functionally low-literate consumers*

The behaviour of low-literate consumers in the marketplace is not typical of that of literate consumers (Viswanathan *et al.*, 2005), and is influenced by characteristics typical of low-literate consumers. Common practice in consumer research is to segment consumer markets into groups based on their demographic and psychographic characteristics and personality traits (Martins, 2007; Schiffman and Kanuk, 2010). Demographic characteristics, such as age, gender, ethnicity, education and income, can be further categorised into geo-demographic segments, which implies that consumers who live in the same area possess similar financial means, preferences and lifestyles, as well as social class – the latter is more clearly defined by income, education and occupation (Schiffman and Kanuk, 2010). Although literacy is emphasised as the main demographic variable of consumers for the purpose of this article, another characteristic namely, income, will also be noted.

It is often problematic for consumers with low literacy and income levels to be socially acceptable in the community (Hamilton, 2009; Trujillo *et al.*, 2010). Appearance is important for clothing consumers, and there is a relationship between their social class and the perception of their appearance (Kaiser, 1997). Subsistence clothing consumers may feel socially excluded when comparing their clothes with those of more affluent consumers. Considering the correlation

between low literacy and income (Viswanathan and Gau, 2005; UNESCO, 2006), the implication is that low-literate consumers are often marginalised regarding their social status and their acceptance by the general consuming public (Hamilton, 2009).

The psychographic segmentation of consumers is more subjective, because characteristics such as lifestyle, personality, interests and opinions form the basis thereof (Martins, 2007; Schiffman and Kanuk, 2010). Low-literate consumers may encounter obstacles that are beyond their literacy and income levels, which affect their feelings of self-worth, especially when confronted with new products (Trujillo *et al.*, 2010), such as new fashionable clothing. The shopping behaviour of subsistence consumers is influenced by these characteristics, and is evident in their conduct regarding, among others, brand and store loyalty, price sensitivity, advertisements and promotions (D'Andrea *et al.*, 2006). These consumers will feel empowered if they can interact in the marketplace and are able to purchase products (Viswanathan and Rosa, 2007; Gau and Viswanathan, 2008).

Marketing, business and consumer-related research focuses mostly on affluent markets and consumers (Viswanathan and Rosa, 2007; Gau and Viswanathan, 2008). However, collectively, low-literate consumers contribute to consumer purchasing power to a large extent (Viswanathan and Rosa, 2007). A discussion regarding the factors that influence the behaviour of low-literate clothing consumers will subsequently follow.

#### *Individual influences: Cognitive challenges and coping strategies*

The implication of low literacy and numeracy skills among functionally low-literate consumers is greatly reflected in the cognitive preferences (concrete and pictographic thinking) they display when active in the retail environment (Viswanathan and Rosa, 2007; Viswanathan *et al.*, 2008). Concrete reasoning by low-literate consumers is exhibited in various ways. First, these consumers use single pieces of information when selecting products. For example, when the price of a garment for a growing child is considered, the smaller size (which is often cheaper than the larger sizes) will be selected even though the bigger garment may last longer (Viswanathan *et al.*, 2005; Viswanathan *et al.*, 2009c). A second aspect regarding concrete reasoning that emerges is that low-literate consumers cannot determine unit prices (Viswanathan *et al.*, 2005). The price of a packet containing three pairs of socks, for example, is seen as more expensive than the single packaged pair, in spite of the unit price (of the three pairs of socks), which totals less than the price of the single packaged product. Finally, low-literate consumers' numeracy skills tend to be domain specific (Viswanathan *et al.*, 2005). These

consumers might show the ability to make simple calculations, but in the retail setting they tend to determine the available money to buy products in terms of the quantity of products they want to buy, instead of calculating the prices of the products (Viswanathan *et al.*, 2005).

Pictographic thinking, which strongly correlates with concrete reasoning, takes place when functionally low-literate consumers visualise product information (Viswanathan *et al.*, 2009c). For example, these consumers determine the size of clothes by visualising themselves in the garment, instead of verifying the actual size of the garment against their body measurements. Other cognitive difficulties that relate to pictographic thinking by low-literate consumers are direction-finding in stores and the reading of information on signs, which may result in anxiety when these consumers enter an unfamiliar store (Viswanathan *et al.*, 2005). They see store signs and brand names as images or objects in a picture, instead of inferring the real message that is conveyed through the text (Viswanathan *et al.*, 2009c). For instance, when the colour or font style of store signage is changed, these consumers may become confused (Viswanathan *et al.*, 2005). A lack of language and reading skills – thus marketplace literacy – may be the reason for the behaviour mentioned (Viswanathan *et al.*, 2009b).

The schema theory, which was initially derived from a positivist viewpoint, was seen as a cognitive activity (McVee *et al.*, 2005; Ringberg and Reihlen, 2008), but from a social constructivist perspective, knowledge is socially produced and defined by the context in which it is used. Schemata can therefore be defined as stored, associative cognitive structures of knowledge that can also be harnessed to organise and process social information (in this case information in the retail clothing setting) (Baron and Byrne, 2004). Social cognition is influenced by schemata through processes that play an influencing role in the way knowledge is transferred. Consumers are likely to internalise incoming information that is consistent with stored knowledge in schemata and is interpreted in terms of existing schema, whereas inconsistent information may be discarded (Baron and Byrne, 2004; Sakamoto and Love, 2004). Changes in the long-term memory lead to the formation of new schemata, which confirms that new information that is consistent with existing schemata is more likely to be remembered and applied (Baron and Byrne, 2004; Sakamoto and Love, 2004; Ringberg and Reihlen, 2008).

From a socio-cognitive perspective, the way individuals (such as low-literate consumers) use information about the social world (in this case clothing-related information) stems from the cognitive mind of individuals (Baron and Byrne, 2004; Ringberg and Reihlen, 2008), and interaction with friends, family and the retail clothing environment influences the way that this knowledge is transferred (Ringberg and Reihlen, 2008). People with high levels of cognitive

ability, who can successfully extend their internalised schemata, exhibit reflective processing, whereas habitual integration of information (use of heuristics) into existing schemata is known as categorical processing (Ringberg and Reihlen, 2008). This type of processing is typically implemented by people with low literacy levels and may result in predictable outcomes. The principle of schemas influencing behaviour may become concrete when the consumer notes that clothing products display information such as brand, price, manufacturer, store and country of origin (Solomon and Rabolt, 2009). From this point of view, it can be assumed that extrinsic attributes of items of clothing such as brand name, manufacturer, country of origin and price are often used as cues specific intrinsic clothing attributes, such as good style and product quality (Solomon and Rabolt, 2009). Language – as a socio-cultural indicator – plays an important role in the understanding of incoming information, whether verbally or in the textual format (McVee *et al.*, 2005). Due to the categorical thinking of low-literate consumers (Ringberg and Reihlen, 2008), they tend to use single pieces of information (Viswanathan *et al.*, 2005) mostly provided in English, and which is often not the consumers' native language (Wallendorf, 2001). The reading of product-related information, for example on product labels (Rousseau, 2007) can lead to poor comprehension of product-related information, resulting in unwanted and poor quality purchases (Gau and Viswanathan, 2008).

In order to cope with cognitive challenges, low-literate consumers apply several strategies to counteract these challenges. They prefer to visit smaller stores with a limited variety of products that they are familiar with (Gau and Viswanathan, 2008), because direction finding in large stores with a variety of products can be intimidating for them (Viswanathan *et al.*, 2005). Due to low-literate consumers' tendency towards pictographic thinking, where store names, brand names on product packaging and logos are seen as whole images (Viswanathan and Gau, 2005), they prefer to buy the same brands and products repeatedly, because it is difficult to read product information if a product's packaging is changed (Adkins and Ozanne, 2005b; Viswanathan *et al.*, 2005; Viswanathan and Gau, 2005). Because of their low numeracy skills, it is difficult for these consumers to accurately determine the total cost of products, and they therefore count in rounded amounts (Gau and Viswanathan, 2008) and buy products one at a time to ensure they have enough money (Viswanathan *et al.*, 2005; Viswanathan and Gau, 2005).

#### *Environmental retail influences: Product-related challenges and coping strategies*

Apart from the cognitive challenges that low-literate consumers experience (Gau and Viswanathan, 2008), they also face product-related, social and affective challenges, which will

influence their decision-making capabilities (Adkins and Ozanne, 2005a; Gau and Viswanathan, 2008; Viswanathan *et al.*, 2009a).

Closely related to cognitive challenges that low-literate consumers experience, are product-related challenges. The use of numerical information such as price and size, as well as textual information on product labels and packaging, for example care instructions, can be challenging (Gau and Viswanathan, 2008). Care instructions on clothing labels are also provided in symbol format (Yan *et al.*, 2008). Low-literate consumers reveal cognitive preferences for visual product information, such as symbols and pictorial images, above written text (Jae and Delvecchio, 2004). These consumers tend to remember product information better when it is revealed as it is in real life (for example when advertised by a famous person), and also when it is inferred through the visual sense, rather than through abstract processing (Viswanathan *et al.*, 2009c). The large variety of products and information offered in stores results in difficulties for these consumers when they have to select among alternatives (Gau and Viswanathan, 2008)

To cope with these challenges, low-literate consumers have a tendency to habitually purchase specific brands at specific stores as a strategy to maintain self-esteem, because this creates a sense of knowing what they are doing (Viswanathan and Gau, 2005; Gau and Viswanathan, 2008). They also display this acting behaviour while evaluating products or examining labels because they want other consumers and the store assistants to think that they are in fact reading the product information (Adkins and Ozanne, 2005b; Viswanathan *et al.*, 2005). Functionally low-literate consumers are inclined to visualise product attributes to avoid text or numerical information (Gau and Viswanathan, 2008). They will, for example, visualise how to take care of the product, instead of trying to read the care-taking instructions on the clothing label. Another product-related coping strategy that low-literate consumers apply is to use only single attributes of a product to evaluate it in order to avoid complex product assessments (Viswanathan *et al.*, 2005). For example, they will only focus on the colour of a garment, regardless of the quality of its manufacture.

#### *Environmental social influences: Social challenges and coping strategies*

Personal attributes such as income and socio-economic status can contribute to exclusion from what is known as the accepted consumer culture, and feelings of exclusion and vulnerability may be experienced by such consumers (Baker *et al.*, 2005; Viswanathan *et al.*, 2008; Hamilton, 2009). Due to the lower income of low-literate consumers (material deprivation), they are often subjected to market exclusion, and only have limited access to products of lower quality

(Viswanathan *et al.*, 2008; Hamilton, 2009). This may lead to low-literate consumers experiencing exclusion and shame about their situation (Hamilton, 2009), resulting in poor self-esteem and awareness of their low social standing (Trujillo *et al.*, 2010).

The recognition of being different owing to the specific characteristics of low literacy, low income and language difficulties, leads to feelings of devaluation (Hamilton, 2009; Garret and Toumanoff, 2010). Such consumers can feel vulnerable and less motivated if they find themselves in a purchase situation where they lack the numeracy skills to determine whether they have enough money to pay for their purchases (Baker *et al.*, 2005; Viswanathan *et al.*, 2008).

Low-literate consumers may be resource poor in terms of income and literacy, but they are network rich as a result of strong social relations with family and friends who can assist them with the limitations of low income and low literacy (Viswanathan *et al.*, 2008). Due to aspects such as poor memory and poor reading skills, low-literate consumers might rely strongly on verbal communication with family, friends or store assistants for product-related information and are dependent on people they trust (Adkins, 2001; Viswanathan and Gau, 2005). Due to the reliance of these consumers on social relationships, they prefer to visit retail stores when accompanied by family or friends (Viswanathan *et al.*, 2005). Through this behaviour they get reassurance when they make purchases. To avoid embarrassment when shopping, low-literate consumers often delegate some of the shopping responsibilities to people they know and trust (Viswanathan *et al.*, 2005).

Functionally low-literate consumers have a preference for one-on-one communication with people (Viswanathan and Rosa, 2007), and prefer to do their purchasing at smaller shops where they can build strong relationships with the store owner and get to know the store assistants personally (Viswanathan *et al.*, 2005; Viswanathan *et al.*, 2008). Personal relationships with store assistants provide trust and security in the retail environment for these consumers (Gau and Viswanathan, 2008). In the case of purchasing at small stores, social networks provide support to functionally low-literate consumers (Viswanathan *et al.*, 2010), which is not always possible in large retail shops and shopping centres (Viswanathan *et al.*, 2009b).

#### **4. Implications for marketers and retailers of low-literate consumers**

Clothing consumers are continuously buying clothing products, and it is of the utmost importance for retailers and marketers to know how low-literate consumers make informed decisions about a product. Furthermore, they need to be aware of the cognitive, product-related

and social challenges that low-literate consumers may experience when evaluating, purchasing and taking care of clothing products (Wallendorf, 2001; Viswanathan *et al.*, 2005; Gau and Viswanathan, 2008), as well as to find methods to meet these needs as best they can (Viswanathan *et al.*, 2005).

Retailers should train store assistants to be sensitive to the needs of low-literate consumers and to be able to assist them with, for example, reading labels, while at the same time preserving their dignity (Viswanathan *et al.*, 2005). Marketers and advertisers normally do not target low-literate consumers when launching new products (such as a new clothing brand range), which may lead to poor product knowledge (the latest fashion of a new season) (Trujillo *et al.*, 2010). Marketing strategies that mostly focus on socio-economically more fortunate consumers and emphasise the ability to consume, can on the contrary create a feeling on the part of low literacy and income level consumers of being marginalised (Hamilton, 2009; Garret and Toumanoff; 2010, Trujillo *et al.*, 2010), a situation which almost certainly calls for advice from researchers.

The authors are of the opinion that it is of the utmost importance for marketers and retailers of clothing products to convey clothing-related information in such a manner that consumers, specifically including low-literate consumers, will be able to make informed decisions when buying clothing. It is important to empower low-literate consumers (Viswanathan *et al.*, 2009b) because they are entitled to the best quality and value for their money when purchasing clothes.

## **5. Conclusion**

Although 82% of adult consumers in South Africa are regarded as literate, the question regarding adequate shopping behaviour remains. When operating in the marketplace, functionally low-literate consumers are confronted by various challenges, which are cognitive, product-related and social in nature. Despite these challenges, low-literate consumers have devised various coping strategies to assist them during shopping, which are revealed in distinctive behaviour when they operate in the retail environment. Research on consumer behaviour has until now been focused mainly on literate consumers, which may contribute to a lack of understanding of functionally low-literate consumers. In countries with a developing economy, with consumers from diverse income, expenditure and education backgrounds, it is of the utmost importance for consumers to have, among other factors, access to product information. A better understanding of the behaviour of functionally low-literate consumers may contribute to the empowerment of these

consumers so that they can make better and more informed purchasing decisions. The insight gained from this exploration may lead to a study on the behaviour of low-literate South African clothing consumers to assist them to make their purchasing more effective.

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**CHAPTER 3**  
**REVIEW ARTICLE**

**TITLE**

**Clothing labels for the functionally low-literate consumer: valuable resource or red herring?**

(Manuscript was submitted for publication in the  
International Journal of Consumer Studies)

This article has been written according to the author guidelines for this journal, and is provided in Appendix 1

Proof of submission of this article is provided in appendix 2.

## **ABSTRACT**

Functionally low-literate consumers experience various challenges when operating in the retail setting due to cognitive factors of low literacy, such as poor reading and numeracy skills. Product-related challenges can also be experienced during the consumer decision-making process. The broad aim of this article is to explore functionally low-literate consumers' use of the information provided on clothing labels. Due to the limited research that has been done, as well as the fairly high levels of low literacy worldwide, the aim of this review is to understand how functionally low-literate clothing consumers use the information provided on clothing labels in the retail setting. A non-empirical, theoretical research approach, by means of a review of published empirical research articles, was followed to explore the cognitive and product-related challenges presented to functionally low-literate female clothing consumers when reading clothing labels. Functionally low-literate consumers apply various coping strategies to counteract cognitive and product-related challenges when they operate in the retail marketplace. Information on clothing is provided in text or symbol format on objects such as clothing labels, hangtags and packaging. The Elaboration of Likelihood Model (ELM) provides insight into the use of the information provided on product labels through the central or peripheral routes of elaboration. By understanding how functionally low-literate consumers in the marketplace use clothing labels, researchers can advise marketers and consumer education authorities on how to empower these consumers to make informed purchase decisions that will increase consumer satisfaction.

**Keywords:** Functionally low-literate, consumers, clothing labels, Elaboration of Likelihood Model.

## **Introduction**

To enable consumers to distinguish between products and make informed purchase decisions, product-related information is necessary (Rousseau, 2007; Schiffman and Kanuk, 2010). Marketing strategies are mostly directed towards literate consumers (Viswanathan and Rosa, 2007; Schiffman and Kanuk, 2010), although, worldwide there are about four billion people with, apart from low-income levels, also low literacy levels (D'Andrea *et al.*, 2006). For consumers to be able to read and understand product information (such as on labels and packaging), a certain level of literacy is required, although the level that product information is

written in, is at a level too difficult for low-literate consumers to understand (Jae and Delvecchio, 2004). Collectively, the purchase power of low literate consumers contributes largely to the purchasing power of all consumers (Viswanathan and Rosa, 2007), and their needs in the marketplace are often neglected by providing product information at a level above their comprehension (Jae and Delvecchio, 2004).

The most common understanding of basic literacy is the ability of people to read and write a short statement in their own language and passed Grade 7 (UNESCO, 2006). Numeracy and visual literacy are complementary to basic literacy (UNESCO, 2006). Numeracy implies the integration of quantitative information (Reyna *et al.*, 2009), whereas visual literacy involves the interpretation of signs, symbols and images (UNESCO, 2006).

Considering the literacy level of consumers who have only passed Grade 7, it is questionable whether they are able to comprehend product information (Wallendorf, 2001). Functional literacy, in other words the ability to engage in activities where literacy is necessary for effective functioning in every-day life, is further clarified by marketplace literacy (Adkins and Ozanne, 2005b; Viswanathan *et al.*, 2009b). Consumers must be able to execute simple purchasing tasks, establish discount prices, find products and compare product attributes in order to be marketplace literate (Viswanathan and Gau, 2005; Viswanathan *et al.*, 2009b). For consumers with limited literacy, these actions can be problematic – such consumers can be regarded as functionally low-literate, and thus lack marketplace literacy (Wallendorf, 2001; Viswanathan *et al.*, 2009b).

Research on consumer behaviour has focused predominantly on literate consumers (Viswanathan and Rosa, 2007; Schiffman and Kanuk, 2010), and research on low-literate consumers' use of labels has been mostly in food-related areas (Viswanathan *et al.*, 2009a) and no research regarding clothing labels was found. Considering that product information is mostly available in the written form (Yan *et al.*, 2008), the retail experience of low-literate clothing consumers can be challenging. Questions regarding functionally low-literate clothing consumers' use of product information on clothing labels may emerge.

This review article attempts to understand the behaviour of low-literate clothing consumers in the marketplace. The broad aim of this article was to explore functionally low-literate consumers' use of information as provided on clothing labels. More specifically, the objectives of this article concerns low-literate consumers' behaviour during the consumer decision-making process and clothing labels as source of product-related information. Finally the way these consumers use clothing labels as a source of information during the consumer

decision-making process in the retail environment will also be addressed and explained by means of the Elaboration of Likelihood Model (ELM).

A literature review will consequently be presented in accordance with the theoretical framework (Figure 1) regarding the use of clothing labels during the consumer decision-making process by functionally low-literate consumers.

Consumers with limited literacy skills can experience challenges in the retail environment when purchasing clothing products. Cognitive difficulties, such as direction-finding in stores, reading signs, and poor mathematical skills, can be problematic for these consumers (Viswanathan *et al.*, 2005). They may also experience challenges regarding the reading and application of text-based information on product labels (Gau and Viswanathan, 2008). Language for most South Africans can be challenging because product information is mostly provided in English, which is not their first language (Dowse *et al.*, 2010). A further challenge, which is affective in nature, is the sense of exclusion and stigmatisation (Viswanathan *et al.*, 2008; Hamilton, 2009). These challenges can influence low-literate consumers' decision-making capabilities (Adkins and Ozanne, 2005a; Gau and Viswanathan, 2008).

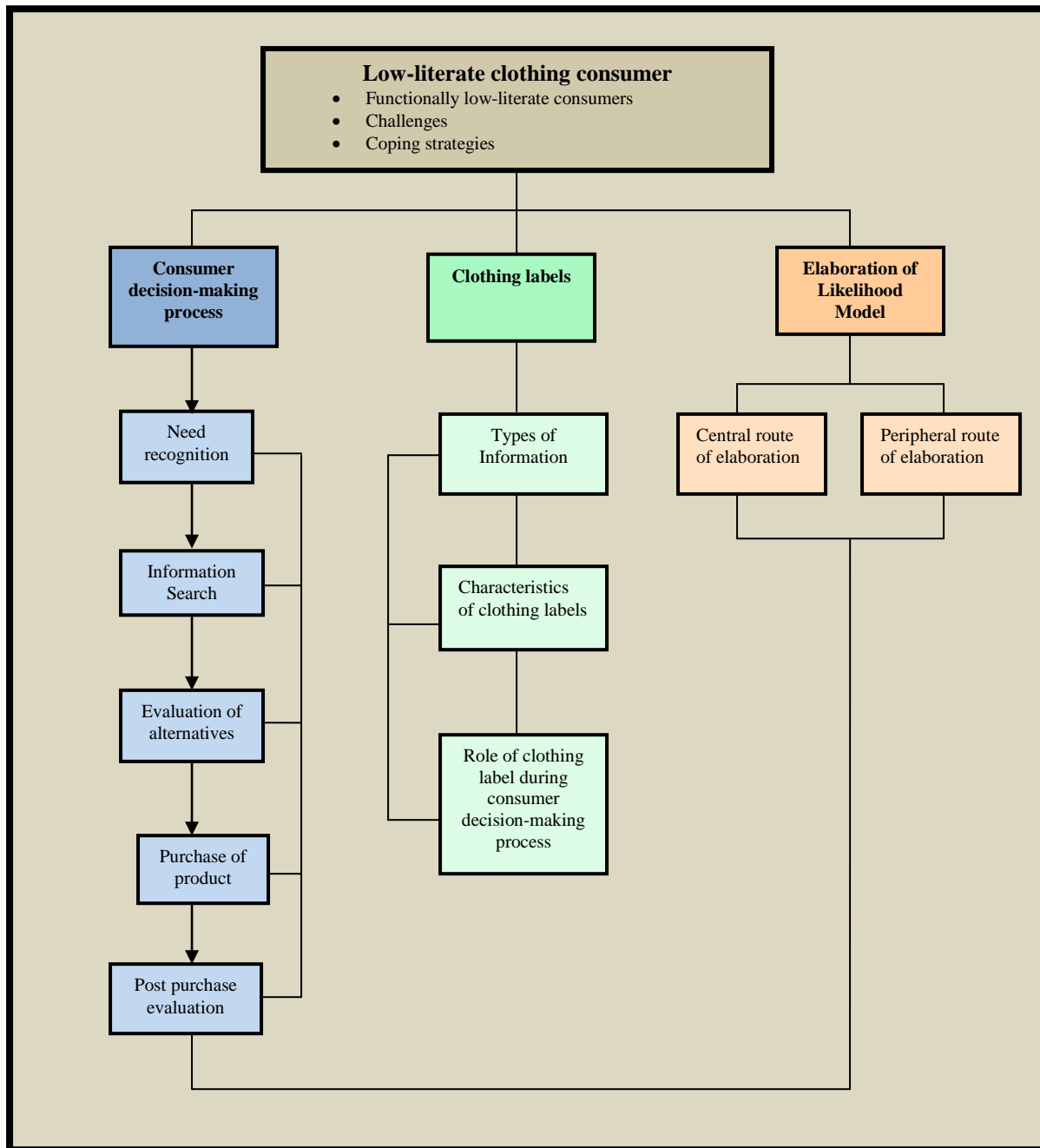


Figure 1 Conceptual framework: Functionally low-literate clothing consumers' use of clothing labels (Jae and Delvecchio, 2004; Gau and Viswanathan, 2008; Yan *et al.*, 2008; Viswanathan, 2009).

Low-literate consumers however apply various strategies to put themselves forward as reasonably competent consumers (Adkins and Ozanne, 2005b). One of the coping skills that they apply is to visit smaller, familiar stores that carry a limited range of products (Viswanathan, *et*

*al.*, 2005; Gau and Viswanathan, 2008). In such stores they can memorise brand names and the store layout (Adkins and Ozanne, 2005b). A second coping strategy is to simplify cognitive demands by considering single pieces of product information, for example the price of products (Viswanathan and Gau, 2005). Thirdly, these consumers try to maintain their self-esteem (Viswanathan and Gau, 2005) by acting as if they are literate and pretending to read product information (Adkins and Ozanne, 2005b; Gau and Viswanathan, 2008). Lastly, low-literate consumers rely strongly on verbal communication with store personnel, family and friends for product-related information (Viswanathan and Gau, 2005).

When consumers purchase products, they normally proceed through a series of stages of the consumer decision-making process. This process comprises five stages: need recognition, information seeking, evaluation of alternatives, purchasing of the product and the post-purchase stage. They use various sources of information to obtain product-related information (Schiffman and Kanuk, 2010). For functionally low-literate consumers, information on, for example, product labels can be complex, due to the cognitive and product-related challenges they experience at the point-of-purchase (Gau and Viswanathan, 2008).

Low-literate consumers apply different information-processing and decision-making strategies than literate consumers (Williams, 2002; Viswanathan *et al.*, 2005; Viswanathan, 2009). The Elaboration of Likelihood Model (ELM), developed by Petty and Cacioppo (Petty *et al.*, 1983), provides insight into how consumers elaborate upon information provided in advertisements. The authors postulate that consumers with a high need for cognition will follow the central route of persuasion (in-depth exploration of product information), while functionally low-literate consumers who do not elaborate upon information follow the peripheral route of persuasion (preference for visual information such as symbols and pictorial images) (Petty *et al.*, 1983; Jae and Delvecchio, 2004). The ELM can provide insight into the use of other forms of product information, such as product labels (Davies and Wright, 1994; Wright, 1997).

## **Research approach**

A non-empirical, theoretical research approach, in which empirical research articles were reviewed, was followed to explore the cognitive and product-related challenges of functionally low-literate female clothing consumers when reading clothing labels. A conceptual framework was developed in which phenomena were classified according to the interrelationship between

concepts (Figure 1). The conceptual framework can be used to answer the research question and to create a scientific report on the phenomena under investigation (De Vos and Strydom, 2011).

### **Targeted body of literature**

The web search engine Google Scholar was initially used to obtain information regarding low-literate consumer behaviour, and databases such as Emerald, ScienceDirect and EBSCOhost were also consulted. Admission to these databases was supported by the [http://www.nwu.ac.za/af/library/index\\_a.html](http://www.nwu.ac.za/af/library/index_a.html) web portal. The reference lists of articles were studied for further articles relating to low-literate consumer behaviour.

Keywords used in the search for relevant information were: consumers, consumer behaviour, literacy, low-literacy, functional literacy and subsistence consumers. A preliminary overview of relevant research was done by reviewing the abstracts of the articles, specific articles were analysed in depth.

### **Analysis of the data**

Information from articles, text books and websites such as Statistics South Africa (for demographic information) was included in this research to provide background to this article as presented in the literature study, and to compile the conceptual framework (Figure 1).

### **Research findings**

The findings of reviewed research on the challenges and coping strategies of low-literate consumers will be reported.

## **The consumer decision-making process: the functionally low-literate clothing consumer**

Seen from a rational perspective, consumers proceed through a problem-solving process before purchasing new products (Rousseau, 2007; Schiffman and Kanuk, 2010). The traditional model of decision-making is a process applied by literate consumers (Viswanathan, 2009), although globally, millions of consumers without the necessary literacy and numeracy skills are involved in purchasing decisions (Adkins and Ozanne, 2005a). For clothing consumers, the consumer decision-making process is also subjective due to factors such as fashion and style (Sproles and Burns, 1994). The consumer decision-making process may be different for functionally low-

literate consumers (Viswanathan, 2009) because they may proceed from need recognition directly to the purchasing stage (Viswanathan, 2009). However, the coping strategies that these consumers apply allow them to operate in the marketplace (Adkins and Ozanne, 2005b).

### **Need recognition**

Low-literate consumers are willing to spend money on socially visible products, such as items of clothing (Subrahmanyam and Gomez-Arias, 2008; Viswanathan *et al.*, 2008). The need for clothing products may be recognised when consumers see items of clothing in stores and window displays, or when clothing is needed for a specific purpose (Solomon and Rabolt 2009), such as traditional or religious festivals (Subrahmanyam and Gomez-Arias, 2008).

### **Information seeking**

Consumers' may obtain information about clothing products internally from their own memory of past experiences (Schiffman and Kanuk, 2010), or externally from marketing sources, for instance from advertisements and product labels (Rousseau, 2007; Solomon and Rabolt, 2009).

Low-literate consumers process information in ways dissimilar to those of literate consumers, and they will search for information differently (Gau and Viswanathan, 2008). They interpret information concretely (Viswanathan *et al.*, 2005; Gau and Viswanathan, 2008), and often do not integrate available product information with information stored in their memory (Viswanathan, 2009) due to their poor memory and reading skills (Wallendorf, 2001; Viswanathan *et al.*, 2005), and also because text-based information is written at a level beyond their understanding (Jae and Delvecchio, 2004). The search for product-related information by these consumers may be limited to external sources, as they rely strongly on social relationships with family or friends (Viswanathan *et al.*, 2008) and have a preference for the verbal communication of information (Jae *et al.*, 2008).

### **Evaluation of alternatives**

Objective evaluative criteria found on clothing labels, for example price, size and care instructions (Shin, 2000), may be difficult for functionally low-literate consumers to understand due to their poor reading skills (Wallendorf, 2001; Jae and Delvecchio, 2004; Viswanathan *et al.*, 2005). Functionally low-literate consumers prefer single pieces of information (Viswanathan *et al.*, 2005). In the case of clothing products, where the labels include different types of

information, such as price, size, care instructions and fibre content, which have to be interpreted and evaluated, it might be confusing for these consumers to find garments that fulfil their needs.

### **Decision or purchase stage**

Low-literate consumers often use heuristics when making purchase decisions, which is reflected in the use of single attributes when evaluating products and habitual buying of specific brands at the same stores (Viswanathan, *et al.*, 2005). In order not to be criticised by other consumers for their lack of functional literacy, these consumers may forfeit good quality and value by buying products without searching for product-related information or evaluating it (Viswanathan, 2009). However, it is essential for these consumers to buy products that provide the best quality for the available money (Williams, 2002).

### **Outcome or post-purchase stage**

It is critical for the functionally low-literate clothing consumer to be able to read and understand the information on care labels at this stage of the decision-making process, because proper care-taking of the garment will contribute to its durability and life span (Williams, 2002; Yan *et al.*, 2008). However, these consumers may not be able to understand the information presented on the labels, which can result in improper care-taking of garments, which in turn can lead to dissatisfaction with the garment or even the brand, and eventually to financial loss.

## **Clothing labels as a source of information**

Clothing labels are sources of objective information, such as size, price, care, and country of origin (Shin, 2000; D'Souza *et al.*, 2006). However, they also provide information about the products which is not easily identified by the consumer, such as fibre content and care-taking instructions.

### **Types of information presented on clothing labels**

Some of the information provided on labels is voluntary, for example trademarks and brands, whereas fibre content and care labelling are mandatory according to the South African Merchandise Marks Act (17 of 1941) (South Africa, 2000). Other compulsory information on clothing labels are the manufacturer's taxpayer identification number for goods made in South Africa, and the South African Revenue Services' (SARS) importer registration code for imported

goods (Strachan, 2005). Although consumers demand relevant and precise information on product labels, D'Souza *et al.* (2006) question whether it is really known what type of information consumers are looking for when studying labels, which also applies to functionally low-literate consumers.

### **The characteristics of clothing labels**

Information on clothing labels, such as price, size, fibre content and country of origin, is mostly presented in text format, whereas care information is given in both symbol and text format (Yan *et al.*, 2008). The effective use of information on clothing labels is dependent on the consumers' ability to read and understand the information (Shin, 2000), as well as the way it is formulated (Yan *et al.*, 2008). The failure of consumers to interpret clothing label information is firstly due to difficult terminology in the text, the size, layout and readability of the label, and little knowledge of textile fibres used on the labels (Shin, 2000; D'Souza, 2006). Secondly, the format in which information is presented on labels, whether as text or symbols or a combination of both, also contributes to poor understanding of label information (Shin, 2000; Yan *et al.*, 2008). Thirdly, consumers' need for cognition will influence their level of involvement in the reading of clothing labels (Yan *et al.*, 2008). Lastly, understanding is dependent on the consumers' functional literacy skills (Wallendorf, 2001).

In a study by D'Souza (2006), 60% of the respondents had a secondary school qualification (Grade 12 in South Africa), and 39.4% of those respondents found the information on clothing labels difficult to read and understand. For low-literate consumers, textual information may be more difficult to read and understand (Yan *et al.*, 2008), which may result in uninformed purchases with consequent financial implications.

### **The role of clothing labels during the consumer decision-making process**

The use of objective information – for this purpose, price, size and care instructions – on clothing labels, hangtags and product packaging is more prevalent during the evaluation of alternatives and purchase stages (Shin, 2000; Williams, 2002; Yan *et al.*, 2008), whereas information on care labels is predominantly used during the purchase and post-purchase stages (Shin, 2000; Yan *et al.*, 2008).

The authors are of the opinion that clothing labels can be effectively used as a source of clothing-related information, and specifically for this purpose by functionally low-literate consumers, on condition that the information on labels is presented in a format that is understandable and

addresses the level of education of these consumers. If clothing information is provided in such a format, it is likely that functionally low-literate consumers will use clothing labels as a source of information (Yan *et al.*, 2008). The self-assurance of clothing consumers is related to their ability to process information that is provided on clothing labels (Yan, *et al.*, 2008). However, the question as to insight into clothing information (price, size and care instructions) by functionally low-literate consumers remains.

### **Elaboration of Likelihood Model**

People can be distinguished from one another by, among other traits, the need for cognition (Schiffman and Kanuk, 2010). These traits can be linked to specific behaviour displayed by consumers in the retail setting (Sojka and Giese, 2001). Consumers' need for cognition is an important trait in the explanation of their interpretation of written and visual marketing messages (Sojka and Giese, 2001). The ELM complements this and provides insight into how consumers process these types of marketing information (Jae and Delvecchio, 2004). Firstly, if a product is of high relevance, consumers with a high need for cognition will involve themselves in the reading and analysis of written marketing messages as found on, among other things, product labels (Petty *et al.*, 1983; O'Keefe, 2008). Such consumers will follow the central route of elaboration that emphasises factors such as cognitive validation, the learning, understanding and integration of information, as well as their individual cognitive responses (Petty *et al.*, 1983; Jae and Delvecchio, 2004). On the other hand, consumers with a low need for cognition, as in the case of low-literate consumers, evaluate products without engaging in cognitive thinking, and will follow the peripheral route of elaboration (Petty *et al.*, 1983; Jae and Delvecchio, 2004; O'Keefe, 2008).

The ELM, which was initially developed to provide an understanding of consumers' elaboration of information provided in advertisements (Petty *et al.*, 1983), has been extended to provide insight into consumers' use of other forms of written marketing information such as product labels (Davies and Wright, 1994; Wright, 1997), as well as low-literate consumers' processing of the information (Jae and Delvecchio, 2004). Low-literate consumers' reading skills are estimated to be at a level that is at or below Grade 6 (Adkins and Ozanne, 2005a; Jae and Delvecchio, 2004), and the level of information provided in sources such as magazines, advertisements and product labels is far beyond the skills of these consumers (Jae and Delvecchio, 2004). The understanding of information is associated with people's ability to

recognise words, as well as their comprehension of the language it is written in (Sabatini *et al.*, 2010). Therefore, functionally low-literate consumers might experience difficulties in reading verbal information on clothing labels, as well as comprehending the information, which is mostly written in English (Wallendorf, 2001).

Consumers who follow the peripheral route to persuasion are influenced by simple inferred cues (Jae and Delvecchio, 2004), such as familiar brand names, colourful hangtags and attractive packaging. Functionally low-literate consumers may not be able to comprehend the written information on product labels (Shin, 2000; Adkins and Ozanne, 2005b), and may therefore evaluate products based on heuristics or simple inferred cues (Petty *et al.*, 1983; Wright, 1997; Jae and Delvecchio, 2004; O’Keefe, 2008). These consumers will, for example, only focus on the aesthetic aspects of items of clothing when evaluating them. Product selection based on peripheral cues such as these may result in the purchase of a product of poor quality (Jae and Delvecchio, 2004), or the wrong size or incorrect care-taking of the item of clothing. Since most product information on labels is in text format, which requires a higher level of cognitive involvement to comprehend (the central route to persuasion) (Yan *et al.*, 2008), the low-literate consumer may be disadvantaged and may not be able to evaluate a garment objectively.

Consumers with lower levels of literacy process and evaluate product-related information differently than literate consumers (Williams, 2002; Viswanathan, 2009), and reveal cognitive preferences as displayed in the peripheral route of persuasion. This indicates a preference for visual information such as symbols and pictorial images over written text (Jae and Delvecchio, 2004), thereby displaying pictographic thinking (O’Keefe, 2008). Given the preference of low-literate consumers to infer information from peripheral cues and their limited cognitive processing ability (Jae and Delvecchio, 2004), the provision of visual information displayed graphically on clothing labels, for example different garment sizes, may possibly assist low-literate consumers, who often experience difficulty comprehending written information, to make informed decisions (Sojka and Giese, 2001; Jae and Delvecchio, 2004). It is, however, important that there is congruency between the verbal and visual information provided, otherwise low-literate consumers will remain uninformed (Jae *et al.*, 2008).

## **Conclusion**

Functionally low-literate clothing consumers experience cognitive difficulties (such as poor reading and numeracy skills) and product-related challenges (for example, poor understanding of textual information on clothing labels) when operating in the retail environment. Information on product labels, for example price, size and care-taking instructions can be used during various stages of the consumer decision-making process to enable the consumer to make informed purchase decisions, although low-literate consumers may experience difficulties when they have to relate different types of information, in order to make wise purchase decisions. Most information on clothing labels is provided in text (verbal) format, and therefore the cognitive predilections of functionally low-literate clothing consumers – a low need for cognition – can be an obstacle for them when they attempt to read the information. The ELM provides insight into how these consumers elaborate on information on product labels, and the model can therefore be integrated into research on how low-literate consumers read, understand and apply the information provided on clothing labels. Consumers with a high need for cognition are likely to follow the central route of elaboration (those who are highly involved in reading, for example clothing labels), whereas consumers with a low need for cognition will follow the peripheral route of elaboration. At this point, these consumers will rely more on information in symbol or picture format, thus displaying concrete thinking. It is therefore suggested by the authors that further empirical research should be conducted to investigate the following aspects: firstly, functionally low-literate consumers' use (reading, understanding and application) of clothing labels during the consumer decision-making process; secondly, their understanding of text and symbol information on labels in terms of price, size and care instructions; and lastly, by applying the ELM, comparing the understanding of product-related information in text and symbol format (central versus peripheral route of elaboration) on clothing labels with reference to price, size and care instructions. If research could reveal an effective way of presenting product information on clothing labels, the low-literate consumer will be enabled to understand and apply this information in order to make knowledgeable purchase decisions.

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## CHAPTER 4

### METHODOLOGY

#### 4.1 INTRODUCTION

In this chapter, the methodology and the research design used in this study will be described. A mixed method research design, of an exploratory sequential nature was required in order to accomplish the aims and objectives of this study (Creswell , 2009:211).

#### 4.2 RESEARCH APPROACH

##### 4.2.1 Analysis of the literature

The review of literature provides the researcher with relevant information regarding current and completed research in the researcher's specific field of interest. Additionally, it assists the researcher in identifying under-researched areas (Delpont *et al.*, 2011:302; Fouché & Delpont, 2011:134). In the case of this study, the researcher identified –by studying literature on clothing consumer behaviour – a lack in research in the marketplace behaviour of low-literate clothing consumers. Although limited research on low-literate consumers exists world-wide, the researcher could only find limited research on low-literate consumers in South-Africa. A review of existing relevant literature enabled the researcher to shape and motivate the research questions (Delpont *et al.*, 2011:302; Fouché & Delpont, 2011:134).

The exploratory, qualitative part of this study followed an interpretative phenomenological design, in which the literature review served as a point of departure before data collection. It also acted as part of a control method after the data had been collected (Delpont *et al.*, 2011:305; Thompson, 1997:442). The literature provided insight into the challenges experienced and coping strategies applied by low-literate consumers in the retail setting, and allowed the focus of this study to be on low-literate clothing consumers.

In the explanatory, quantitative phase of the study, a literature review of similar research topics guided the researcher towards the main aspects to be investigated, as well as to confirm the

results of the study (Fouché & Delpont, 2011:135). The literature stemming from the results of the qualitative phase of this study was analysed to determine the challenges experienced and coping strategies applied by low-literate consumers. This analysis led to the planning of the investigation regarding the reading, understanding and application of information on clothing labels during the consumer decision-making process of low-literate clothing consumers.

## **4.3 EMPIRICAL INVESTIGATION**

### **4.3.1 Epistemological assumption**

Research methodologies within the social sciences are underlined by different philosophies such as interpretivism applied in qualitative research. Interpretivism denotes that human behaviour and experiences can only be explained by interpreting certain behaviour and that facts are not explanatory (Fouché & Schurink, 2011:309). The positivist paradigm applied in quantitative research denotes that only objective and observable facts can be researched (De Vos *et al.*, 2011:6). Social sciences can benefit from a balanced research perspective by incorporating qualitative and quantitative research methods (Mott-Stenerson, 2008:433). It is beneficial because a mixed method approach to research is more elaborate and provides a deeper understanding of the research problem (Creswell, 2009:138, 139). The combination of qualitative and quantitative research methodologies resulting in a mixed method design can best be described within pragmatic philosophy, that constitutes that the emphasis of mixed method studies lies within the successful answering of the research question, thereby obtaining valuable results (Delpont & Fouché, 2011:436; Ivankova *et al.*, 2010:263). The quantitative measuring instrument used to test the use of clothing labels by low-literate consumers was based on the qualitative findings. The qualitative findings reflected the challenges experienced and coping strategies applied by low-literate consumers during the decision-making process. A thorough literature review also aided the development of the quantitative measuring instrument.

### **4.3.2 Research strategy**

Two methods of investigation were followed in this study: an empirical phase (a mixed qualitative and quantitative method of research) and a literature study. Qualitative and quantitative methods of research postulate differently in terms of assumptions and goals (Arora & Stoner, 2009:273; Ivankova *et al.*, 2010:265). Combining these two methods of research, allows for in-depth insight into the research question and create an opportunity to explore under

researched areas (Arora & Stoner, 2009:274; Creswell, 2009:212). A sequential, exploratory mixed method study was therefore followed. The qualitative and quantitative data were sequentially collected, analysed and integrated. The results from the qualitative exploratory phase were used to develop a measuring instrument for the quantitative phase in order to provide an in-depth understanding of the phenomena (Creswell, 2009:212; Ivankova *et al.*, 2010:271). No evidence could be found (NEXUS – database of the National Research Foundation) of any related studies in a South African context. Therefore, the problems regarding the reading, understanding and application of product-related information found on clothing labels by low-literate female consumers, were explored in the qualitative phase and explained in the quantitative phase.

#### 4.3.3 Visual representation of the procedures of the design

A schematic representation of the sequence concerning the exploratory mixed method design (first the QUALITATIVE phase, then the quantitative phase) applied in this study is provided in Figure 1.

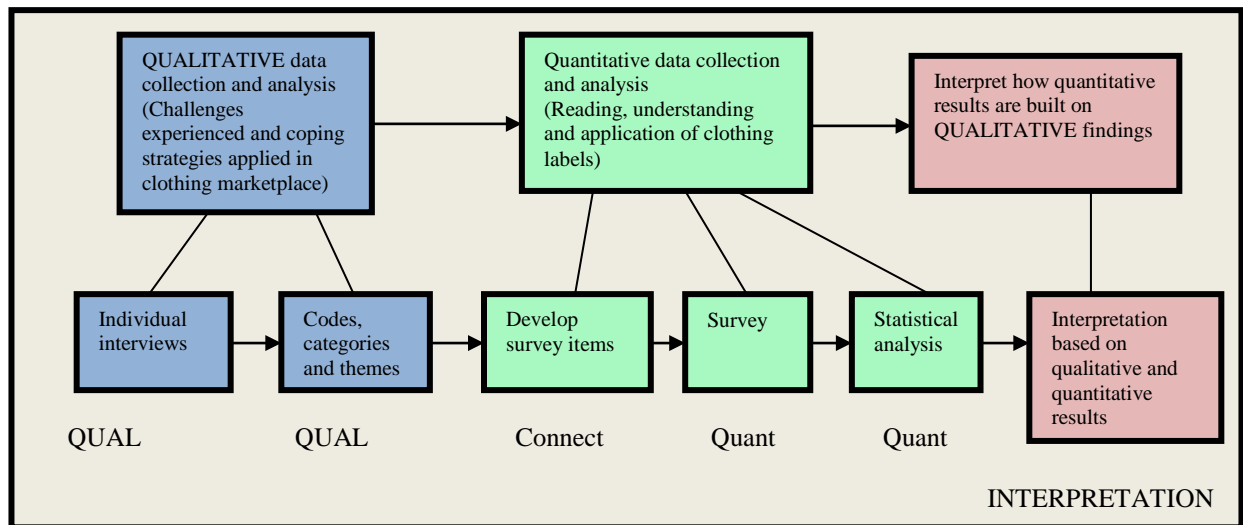


Figure 1 A visual representation of the procedures of the mixed method design in order to investigate low-literate female consumers' use of clothing labels (Adapted from Ivankova *et al.*, 2010:266, 274).

#### 4.3.4 Demarcation of the field of study

In this mixed method study regarding the reading, understanding and application of clothing labels, the focus was on:

- low-literate female consumers;

- information on clothing labels regarding brand, price, size and care instructions;
- information on hangtags, sewn-in labels and packaging; and
- the socio-cognitive perspective as point of departure for this study

#### **4.4 QUALITATIVE PHASE**

The purpose of the qualitative phase of the study was to explore the challenges that low-literate female clothing consumers are subjected to, as well as the coping strategies they apply in the retail setting. The low-literate female clothing consumers were purposefully selected from the Emfuleni Local Municipality area. Examples of the challenges they experience include the use of labels when reading the label with reference to price, size and care instructions, evaluating alternatives, making purchases, and coping with the post purchase phase. Aspects regarding the qualitative phase of the mixed method study are discussed below.

##### **4.4.1. Research approach**

In this qualitative phase of the study, an exploratory research approach from an interpretative phenomenological point of view was followed. This approach was used to explore and describe the real-life experiences (Creswell, 2009:13; Fouché & Schurink, 2011:316, 317; Thompson, 1997:442) of low-literate female consumers in terms of the challenges and coping strategies they experience in the marketplace when reading clothing labels in order to gain product-related information at the point of purchase. The researcher obtained insight from literature (Thompson, 1997:442) based on low-literate consumers in general. Since this is an under-researched area of study, the approach used is suitable as it permits the exploration, as well as the provision of a deeper understanding of the actual experiences (Adkins & Ozanne, 2005:94; Creswell, 2009:13) of low-literate consumers operating in the clothing retail setting.

##### **4.4.2 Sampling**

The participants – low-literate female clothing consumers – for the qualitative phase of the study, were selected based on a purposive, convenience sampling technique. Purposive sampling is a selection technique whereby participants are selected based on defined characteristics that they possess and because they have experience in the field of study. This type of selection helps to fulfil the aims of the study (Nieuwenhuis, 2010b:79; Strydom & Delport, 2011:392). Therefore,

the participants of this research phase were selected based on their low-literacy and their experience in the clothing retail setting. The following inclusion criteria were determined before the onset of this study in order to best answer the research questions.

- Participants in this study had to be adult females (18 years of age and older), because women are mostly responsible for household purchases, such as clothing (Wallendorf, 2001:508);
- The participants had to have a school qualification ranging from Grades 5-8. Although a person with Grade 7 as their highest qualification is regarded as literate (Posel, 2011:40). The researcher made the decision to include Grade 8 as highest school qualification based on the research experience of Viswanathan *et al.* (2008a:244) of low-literate consumers. In their research, participants' reading and numeracy skills were tested before the inception of research. In accordance with these results, participants were divided into the three groups, namely Grades 0-4, 5-8 and 9-12. (Viswanathan *et al.* 2008a:244);
- Participants had to be clothing consumers actively engaging in the retail settings, and not with second-hand suppliers, because second-hand clothes often do not possess price, size and care labels;
- Participant had to be residents of the Emfuleni Local Municipality area which forms a part of the Sedibeng region, located in southern Gauteng, South Africa. The Sedibeng region comprises three municipalities: Emfuleni, Midvaal and Lesedi. The relatively small geographical area that Emfuleni covers, and the fact that it comprises 81% of the population in the Sedibeng area (Sedibeng, 2011), made it a suitable area for sourcing participants for this study; and
- Participants had to be from the black population group, since they comprise 84% of the population in the Emfuleni Local Municipality area (Sedibeng, 2011).

#### **4.4.3 Research setting**

The interviews were conducted with two groups of participants. The first group consists of participants who are employed as cleaners by the Vaal University of Technology (VUT) in Vanderbijlpark and Servest which is the company providing cleaning services at the North-West University's (NWU) Vanderbijlpark Campus. The second group of participants in this study are entrepreneurs from the Training and Management Agency (TRAMA), situated in a local township in the Emfuleni Local Municipality area. The townships in which all the participants reside, pose many social and economic challenges (Oldewage-Theron & Slabbert, 2010:2).

#### **4.4.4 Data collection**

The researcher aimed to gain insight concerning the verbally communicated experiences of the participants, by understanding how these experiences are constructed (Nieuwenhuis, 2010a:59). The researchers aimed to set aside their own opinions in order to gain unbiased insight (Botma, *et al.*, 2010:190) into the experiences of the low-literate participants.

##### **4.4.4.1 Pilot study**

In order to test aspects concerning the methodology of the research, a pilot study was conducted comprising three participants possessing the same characteristics as the participants in the main study (Strydom & Delpont, 2011:394). A pilot study benefits and assists the researcher in establishing whether the interview schedule will allow the participants to give a full account of what they regard as important and not to restrict their opinions in relation to the research question. It also assists the researcher to react to unanticipated responses, and gain insight into the practical aspects of the study (Arthur & Nazroo, 2003:135). A pilot test reveals the sincerity of participants while partaking in the research, and demonstrates how effective communication is between the researcher and participant (Strydom & Delpont, 2011:394). It was especially important in this study to establish whether effective interaction and communication with low-literate participants could take place (Strydom & Delpont, 2011:394; Viswanathan *et al.*, 2008a:249), in order to achieve responses that reflect reality. This was important because the interviews were not conducted in the participants' first language. Furthermore, the pilot test assisted the researcher in determining whether the questions in the interview schedule were at the participants' level of understanding. It became evident during the pilot testing of the interview schedule, that probing in terms of follow-up questions and explanations (Legard *et al.*, 2003:148) were very important. Probing was done to encourage participants to further explain their responses as it was often difficult for the participants to express themselves clearly. Probing also allowed for the clarification of questions that were not understood (Legard *et al.*, 2003:150, 151).

The researcher realised that it was often necessary to create real-life examples to further explain certain questions. This was necessary because the low-literate participants found it difficult to place themselves in a hypothetical situation as a result of concrete thinking associated with low literacy levels (Viswanathan *et al.*, 2008b:213). By executing a pilot study and using the results to adapt to the needs of the participants, the researcher was able to effectively conduct the main study.

#### **4.4.4.2 Main Study**

Data gathering by means of interviews, took place at the workplaces of the participants, and permission was obtained from the relevant institutions and employers. The workplaces of the participants are familiar environments and the participants therefore do not feel intimidated during the interviews. Nineteen semi-structured, one-to-one interviews, lasting from 30 to 50 minutes, were conducted. The semi-structured interviews were completed over a three week period during November 2011. Semi-structured interviews for data generation were chosen for this study, because they allowed the researcher to obtain comprehensive information and insight (Greeff, 2011:351) regarding the challenges participants experience and the coping strategies they apply while shopping for clothing. Semi-structured interviews allow for flexibility, because this interview style permits the development of emerging lines during the interview (Greeff, 2011:351). However, it requires that the researcher be focused and assertive in order to recognise, probe and expand on the responses of participants during the interview (Nieuwenhuis, 2010b:87).

An interview schedule, with predetermined questions, was prepared in accordance with the objectives of the study (Creswell, 2009:183). However, a lithe approach was followed in order to allow participants to freely express their point of view (Botma *et al.*, 2010:208) regarding the challenges they experience and the coping strategies they apply when purchasing clothing products. The questions were divided into three sections: broad questions about the low-literate participants' shopping experience, the challenges they experience in the marketplace, and the coping strategies they apply, as suggested by Gau & Viswanathan (2008). The challenges were further divided into the following sub-categories: cognitive challenges, product-related challenges, social challenges and affective challenges. In terms of the coping strategies, the questions were directed towards retail and product-related coping strategies. The questions used during the semi-structured interview, and which were based on the results of Gau & Viswanathan (2008), are as follows:

##### ***Semi-structured interview schedule:***

##### **Broad questions**

- Tell me about when you buy clothes. What do you do?
- Tell me about the problems that you experience when buying clothes – what makes it difficult for you?

- What do you think about the labels on clothing items?

### **Cognitive challenges:**

- How easy / difficult is it for you to find the clothing products that you are looking for in the store?
  - Tell me about when you have to read the signs in a shop. (Probe)
  - How do you find your way into the different parts of a clothing shop? (Probe)
  - How do you feel about all the signs in the shop? (Probe)
- How easy / difficult is it for you to read the information on a clothing label?
  - Tell me about your experience when reading the label on a clothing item. (Probe)
  - How do you feel about clothing labels? (Probe)
- How do you know whether you've got enough money if you want to buy more than one product?
  - Tell me how you give the correct money to the cashier. (Probe)

### **Product-related challenges**

- Say for example, you want to buy a dress, tell me about the dress that you have decided to buy.
  - Tell me what you do to select the correct size of the dress. (Probe)
  - How do you know how to wash, dry, and iron the dress? (Probe)
  - How do you know what the price of the dress is? (Probe)
  - If you want to buy a new dress, what do you look at before buying it? (Probe)
  - How will you know if the new dress will fit you? What do you do? (Probe)

### **Social challenges**

- How easy or difficult is the language on the label to understand?
- How important is brand name to you when buying a clothing item?
- How do you go about selecting a clothing store to shop at?

### **Affective challenges**

- What do you do if you do not understand the label?
  - If you ask somebody, who will you ask for help? (Probe)

- Do you ask for help if you cannot find a product? (Probe)
  - How does this make you feel? (Probe)
- How does it make you feel if you hear from the cashier that you didn't give him/her enough money?

### **Retail environment coping strategies**

- After telling me about your problems, tell me now how do you handle these problems.
  - Do you go shopping alone, or do you take someone with you for assistance? (Probe)
  - Do you always go to the same shop, or do you visit more than one shop? Why? (Probe)

### **Product related coping strategies**

- Tell me, how do you think labels can help you with these problems when you buy clothes?
  - If you want to buy a new garment, what do you look at before buying it?
  - How will you decide whether a new garment will fit you?
  -

The interviews were conducted – with consent of the participants – in English or Afrikaans, of which neither is the native language of the participants, although they are the two languages that the researcher is proficient in. Special care was taken with the formulation of the questions so that the low-literate participants could understand clearly what was being asked (Viswanathan *et al.*, 2008a:249). In order to effectively facilitate the interviews, the researcher made use of concrete examples (T-shirt with clothing labels still attached to it, as well as photos of people operating in a retail setting). This was done to enhance the explanations of questions in order for the participants to verbally construct their clothing retail experience (Gau & Viswanathan, 2008; Viswanathan *et al.*, 2008a:244-245). Audio recordings of the interviews were made and the researcher also made notes so as to capture non-verbal information such as hand gestures and facial expressions from the participants (Creswell, 2009:183). The role of the researcher during the data collection was to engage in the interview, but to be neither objective nor isolated from the interview (Botma *et al.*, 2010:203).

#### **4.4.5 Data analysis for the qualitative phase of the study.**

The researcher listened the audio recording of each interview after completion thereof, in order to reflect on, and to gain insight into the opinions of the participants (Creswell, 2009:183. After

completion of the data gathering phase, the audio recordings were transcribed verbatim by an external person that was not part of the research team. However, every transcript was carefully read by the researcher while listening to the recording, in order to verify the correctness of the transcription (Botma *et al.*, 2010:214). Some of the interviews were conducted in Afrikaans (according to the participant's preference), and were translated by the researcher into English. All of these translations were language edited by an accredited language editor (Appendix 4) to improve trustworthiness of the data. These transcriptions, as well as the field notes, became the main sources of data for analysis.

The researcher read through all the data again in order to get a general sense thereof (Creswell, 2009:185, Schurink *et al.*, 2011:402), as well as to gain a deeper understanding of the retail store experiences of low-literate female clothing consumers (Gau & Viswanathan, 2008:4; Viswanathan, *et al.*, 2008a:245). Inductive, interpretative data analysis then took place by firstly conducting an intratextual analysis, starting at the broad base of the data (Adkins & Ozanne, 2005:94; Creswell, 2009:175; Thompson, 1997:441). In-depth reading of the interviews allowed data to be organised into segments or codes by means of descriptive words. The segments or codes were assigned to specific identified concepts categorised as; expected (based on past literature), surprising, and unusual topics (Creswell, 2009:186,187; Nieuwenhuis, 2010c:105). This is also referred to as open coding (Schurink *et al.*, 2011:412).

Further intertextual analysis of the data was done in order to gain a deeper understanding of the low-literate participants' retail store experiences (Gau & Viswanathan, 2008, Viswanathan, *et al.*, 2008a:245). The researcher was able to process data beyond the individual interviews and coding process in order to get a broader sense of the entire set of data (Thompson, 1997:441), by grouping corresponding codes into categories (Botma *et al.*, 2010:224; Schurink *et al.*, 2011:411). Categories were then further divided into broad themes which display the various opinions and experiences of the participants holistically (Creswell, 2009:189). Three broad themes of challenges were identified: '*personal*', '*product-related*' and '*store-related*' challenges. Coping strategies, along with the three broad themes of challenges, were identified. Various categories were grouped within each of the three broad themes in order to adhere to the objectives of this study.

The final stage in the analysis was the interpretation of data. It is important that the interpretation of the data reflects a merger between the interpreter's background knowledge and the text, as well as the relation with previous research (Thompson, 1997:441). In this study the interpretation of data was done in relation to literature and research on low-literate consumers in general. A summary of the findings is presented in Appendix 4

#### 4.4.6 Trustworthiness

In order to sustain trustworthiness throughout the qualitative phase of the research, four epistemological standards – truth value, applicability, consistency and neutrality (Lincoln & Guba, 1986) – was kept in mind. The principles of authors such as, Krefting (1991), Creswell (2009) and Williams and Morrow (2009) amongst other, were taken into consideration along with the four epistemological standards.

Regarding the aim of obtaining **truth value**, the following credibility strategies were applied by the researcher in order to ensure the accuracy of the results, based on research design, participants and context (Krefting, 1991:215):

- The researcher had contact with the participants in the study in order to obtain sufficient information from them (Lincoln & Guba, 1986:77). Data saturation were obtained after 17 interviews were conducted, and a further two interviews were executed in order to verify saturation. Data saturation is described by Williams and Morrow (2009:578) in terms of two aspects. The first aspect is redundancy. Redundancy of data refers to the researcher's goal to reach the point where no new information would be obtained by adding more data. The second aspect is theoretical saturation. Theoretical saturation indicates that all possible themes and categories were derived through data analysis. –In this data, themes and categories reflect the challenges and coping strategies of the low-literate participants during the purchasing of clothing products. Integrity of data was proven by confirming interpretation of results with the presentation of direct quotes of the participants (Williams & Morrow, 2009:579).
- Triangulation of data was obtained by ensuring that the aspects regarding low-literate clothing consumers' retail experiences have been investigated (Lincoln & Guba, 1986:77; Nieuwenhuis, 2010b:80). Triangulation of data was obtained by confirming the extent to which findings are supported by the results of the quantitative phase of this study (Nieuwenhuis, 2010b:80). Member checking took place by the study promoter through

verifying raw data, followed by the analysis thereof, and the interpretation of results. The promoter also ensured intercoder reliability by checking the codes, categories and themes that were initially derived (Creswell, 2009:191; Lincoln & Guba, 1986:77; Nieuwenhuis, 2010c:113, 114).

- Field notes, which served as a second source of data, were taken during the interviews which confirmed the data obtained, and identified new emerging lines of enquiry (Nieuwenhuis, 2010c:114).

**Applicability** of the results refers to the degree to which the results can be applied to other contexts or groups (Krefting, 1991:215). Thick descriptive data will allow for transferability of the findings of this qualitative phase of the research to develop into further research (Lincoln & Guba, 1986:77). The development of the measuring instrument for the quantitative phase of the study, in order to seek understanding of the participants' use of clothing label information, was the result of investigated further research.

**Consistency** refers to the process of the research, and whether it was logic, well documented and audited. It also accounts for changes in the studied phenomena, rather than on the average experience of the participants (Lincoln & Guba, 1986:77; Schurink *et al.*, 2011:420). A pilot study was conducted before executing the main study in order to explore the research setting, establish the efficiency of data collection methods and interview schedule, and for the researcher to become familiar with the research method and interview process.

**Neutrality** refers to the balance between the responses of the participants and how the researcher interprets these responses (Williams & Morrow, 2009:579). The researcher must be objective throughout the study and take care not to be biased because of her involvement in the qualitative phase of the study (Nieuwenhuis, 2010c:114; Schurink *et al.*, 2011:421). The researcher strived to be self-reflective during the study so as to be objective towards the collected data in order not to influence the interpretation thereof (Creswell, 2009:192; Williams & Morrow, 2009:579).

#### **4.4.7 Ethical considerations**

In order to ensure that the research was conducted in an ethical way, the following precautions regarding the research itself and the participants were considered:

#### **4.4.7.1 Permission to conduct study**

Permission to conduct this study – as part of the main project; “Influence of food and textile labels on South African consumers’ behaviour” (Reference code: NWU-00024-09-A1) – was granted by the Ethics Committee of the North-West University, Potchefstroom Campus. Verbal permission was granted by Miss Nini Serotho who is the supervisor of Servest Cleaning Staff, to conduct the interviews with selected staff members that work at the NWU Vanderbijlpark campus. Mrs E. Steyn, who is the campus registrar of the NWU Vanderbijlpark campus, authorised the use of the facilities of the university for the interviews (Appendix 3). Approval was obtained from Prof. A Louw (Deputy Vice Chancellor: Academic, VUT) to conduct interviews with the C3 workers (cleaning staff) of VUT as participants in the study (Appendix 6). The entrepreneurs of the TRAMA agency took part out of free will, and it was only necessary to obtain their permission to conduct the interviews. The research data will be filed and stored for at least 7 years in the Consumer Sciences Building (F15) of the Potchefstroom Campus of the North-West University. Researchers who request to see and study the original published data in order to verify the accuracy and validity thereof will need to obtain permission from the North-West University. The data remains the property of NWU, Potchefstroom.

#### **4.4.7.2 Considerations regarding low-literate participants in the study**

The researcher aimed to adhere to ethically correct procedures during this study as suggested by Strydom (2011a:113-119), and more specifically to the guidelines set by Viswanathan *et al.* (2008a:244, 245 248, 249) with a focus on studying low-literate participants. The following aspects were considered:

- Due to the poor reading skills of the participants, verbal consent was obtained from them to conduct interviews;
- Participation in the study was voluntary and participants could withdraw from the interview at any stage. Interviews were conducted in Afrikaans and English, and if participants were not comfortable communicating in these languages, they could withdraw from the research;
- Participants were informed about the nature and purpose of the study and participants were assured of their anonymity;
- The researcher aimed to build rapport with participants, and had an informal conversation with them before the onset of the interview;

- Although participants in the study were low-literate, they had considerable experience and knowledge to share and the researcher's intention was to have sincere well-intentioned conversations;
- The cognitive level of the interview was adapted in order for the participants to feel comfortable; and
- The researcher displayed respect for the participants by avoiding judgments about answers and maintained a positive tone during interviews.

## **4.5 QUANTITATIVE PHASE**

The purpose of the quantitative phase of the study was to determine respondents' use of clothing labels at the point of purchase, and to draw conclusions about their functional literacy levels in the marketplace. The aim was also to determine which method of the ELM these respondents preferred when using clothing labels. The role of the researcher during the quantitative phase of the research was to analyse and interpret data with an objective and unbiased attitude. The following aspects regarding the quantitative phase of this study will be discussed:

### **4.5.1 Research approach**

During the quantitative phase of the study, a non-experimental, descriptive design was followed. The fundamental purpose of this type of study design is to gain quantitative information that explains a specific research problem (Maree & Pietersen, 2010a:152). From a deductive point of reasoning, the aim was to answer the research questions in order to come to a conclusion about the population (Creswell, 2009:145), which in this case, consisted of low-literate female clothing consumers. The broad research question asked: How do low-literate female clothing consumers use clothing labels in the market place when buying clothing products?

### **4.5.2 Population and sample**

A non-probability, purposive sampling technique was applied in this study. Respondents were selected based on specific attributes and defined characteristics. This was done in order to answer the research questions (Maree & Pietersen, 2010c:176, 179; Strydom, 2011b:231, 232). The defining characteristics and attributes in this case included a low literacy level and similar criteria used in the qualitative phase of the study (4.4.2). Despite the careful selection of this

sample, and the effort to make the sample as representative as possible, a non-probability purposive sampling technique was applied. However, this sampling technique does not allow results to be generalised to the wider population. For this study, black female adults, 18 years and older, residing in the Emfuleni Local Municipality area, which is part of the Sedibeng region, located in southern Gauteng in South Africa, were selected for this study. Data for this study were collected with the assistance of fieldworkers. The fieldworkers were voluntary therapists at Lifeline, operating in the Emfuleni Local Municipality area and were trained before the onset of data collection. Respondents were recruited by fieldworkers that went from house to house in the different areas within the Emfuleni local Municipality. Respondents that met the criteria were interviewed.

The researcher aimed to collect data from 550 respondents, but ultimately 523 were collected respondents, of which 450 (81.8%) was usable.

#### **4.5.3 Development of the questionnaire**

In a sequential exploratory study, the quantitative phase builds on the findings obtained from the qualitative phase (Creswell, 2009:211). In the qualitative phase of this study, three broad themes in terms of participants' personal, product-related and store-related challenges and coping strategies in the marketplace were derived. For this study, a questionnaire (Appendix 7) was developed in accordance to guidelines suggested by Creswell (2009:149-151, 219). Based on the qualitative findings, selected aspects (Creswell, 2012) pertaining to the personal and product related challenges of respondents were used to develop the measuring instrument. The specific aspects referred to are the challenges respondents face when reading product-related information found on clothing labels. Codes obtained from the data analysis in the qualitative phase, and statements from the participants were incorporated in the development of items to be tested in the questionnaire. The questionnaire was also developed in order to adhere to the objectives of the study. Finally, the relevant literature regarding the marketplace behaviour of low-literate consumers in general as well as product-related information on clothing labels was consulted to finalise the questionnaire.

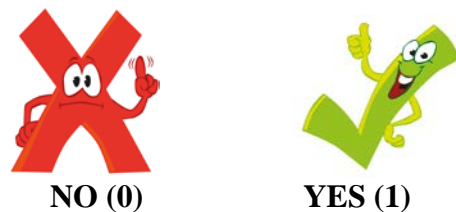
Low-literate consumers reveal distinctive behaviour in the marketplace (Viswanathan *et al.*, 2008b:213), and the cognitive predilections of the low-literate respondents participants had to be considered when developing the questionnaire (Gau *et al.*, 2012?) The preferences of low-literate

consumers for concrete and pictographic thinking were incorporated when questions and scales were developed. Their poor reading skills were also taken into consideration. All these considerations resulted in the decision to administer questionnaires by means of interviews. The inclusion of realistic and colourful visual representations to explain questions to the low-literate respondents is suggested by Townsend *et al.* (2008:181, 182, 185). This resulted in various questions being explained concretely and pictographically by means of show cards (Appendix 8). Likert scales were used for questions (A7, A8, B1-5, B19-23) that could be ordinally measured (Maree & Pietersen, 2010b:167). An example is presented in Figure 2



**Figure 2 Likert Scale presentation in questionnaires**

Binary item scaling was also applied to some of the questions (B6-12, C39-42, C45-54), where 1 represented 'Yes' and 0 represented 'No' (Delpont & Roestenburg, 2011b:218), and was also presented graphically as shown in Figure 3



**Figure 3 Binary scaling presentation in questionnaires**

The values that were assigned to scales were not presented to respondents in order not to confuse them. Descriptive sentences introducing the different sections in the questionnaire were omitted and the questions were also described simply, in order to consider respondents' low literacy levels. The questionnaire consisted of three sections:

- *Section A:* The demographic information of respondents, the stores where clothes are purchased and payment methods for purchases.

- *Section B*: Personal-related challenges and coping strategies in terms of the reading of clothing labels, numeracy skills in the marketplace, concrete (price and size of a clothing product) and pictographic (store logos) thinking.
- *Section C*: Product-related challenges and coping strategies concerning size presentation format, knowledge of care symbols, the use of care symbols and criteria for clothing quality assessment.

Categories and subsets of the questions in the questionnaire regarding the use of clothing labels are displayed in Table 1.

**Table 1: Categories and subsets for the use of clothing labels**

Section	Category	Subset	Number of questions	Total per category
B: Personal challenges and coping strategies	Reading skills	Help with reading clothing labels	5	18
		Truth about the reading of clothing labels	7	
		Recognition of information on a clothing label	6	
	Numeracy skills	Ways of calculating enough money	5	11
		Calculation of total price	3	
		Concrete thinking about price	3	
Pictographic thinking	Store logos	9	9	
C: Product-related challenges and coping strategies	Format of size, brands	Size and brand recognition	4	5
		Size format preference	1(5 sub-questions)	
	Label knowledge	Care symbol knowledge	1 (8 sub-questions)	3
		Use of care labels	2	
	Quality criteria	Assessment of clothing quality	8	8

The questionnaire was translated into Sesotho by a qualified Sesotho speaking translator. Sesotho is the language that most black residents in the Emfuleni area are familiar with. The questionnaire was also provided in English.

#### 4.5.4 Types of data collected

The identified themes and categories that resulted from the findings of the qualitative research phase of this study, served as the point of departure for designing the questionnaire. The questionnaire functioned as the method for data collection for the quantitative phase of the study. The quantitative phase of the study was conducted in two stages: a pilot study and the main

study. Both stages involved the use of interviewer-administered questionnaires, also known as a structured interview schedule (Delpont & Roestenburg, 2011a:186).

#### 4.5.4.1 Pilot study

A pilot study was executed in order to establish whether the methodology, sampling, instruments and interpretation of the questions were satisfactory. It gave the researcher the opportunity to adapt any controversy and uncertainties regarding the questionnaire. The pilot test was conducted with five participants who possess the same characteristics as the large target population (Maree & Pietersen, 2010b:155; Strydom, 2011c:243). The pilot study was executed in two stages. The first pilot stage was conducted after the completion of the questionnaire, and the second stage was conducted after adaptations were made to the questionnaire. The basic adaptations made to the questionnaire addressed the following aspects:

- *Graphic presentation of the 5-point Likert scale:* Initially, a 5-point Likert scale was used to test the ordinal questions. The scale was presented graphically, as suggested by research by Gau, *et al.* (2012?), in an ascending, grey scale tone order (Figure 4).

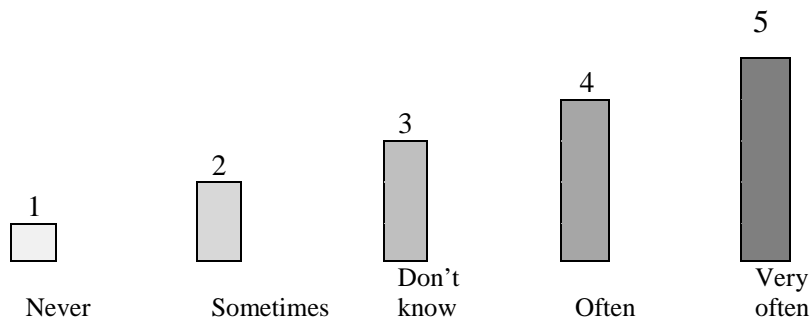


Figure 4 Graphic presentation of the 5-point Likert scale

Although the low-literate respondents understood the principle illustrated by this method of scaling, it was difficult for them to infer the question in terms of the 5-point scale, and mostly indicated answers as 'never' or 'very often'. The researcher was advised by the Statistical Consultation Service of the NWU to alter the 5-point Likert scale to a 3-point Likert scale with accompanying words such as 'never', 'sometimes' and 'always' presented in a descending order. After consultation with the Graphic Design Department of the NWU Potchefstroom Campus, the graphic presentation of the Likert scale was altered to a more pictographic format as presented in

Figure 2. This format was better understood by the respondents of the second pilot study, and they were able to relate the question to the 3-point scale.

- *Cognitive level of the questions and the language used:* It was found that respondents from the first pilot study did not understand questions clearly, even though the questions were administered by the researcher. Therefore, the linguistic level of the questions was simplified (Gau *et al.*, 2012?).
- *Headings of Sections:* The accompanying heading of each section was removed to further simplify the questionnaire.
- The modification of the questionnaire after the first pilot test is presented in Table 4.

**Table 2 Modification of the questionnaire**

<b>Section A: Demographic information</b>			
<b>Question</b>	<b>Changes</b>	<b>Original aspect</b>	<b>Altered aspect</b>
A7	1	5-point Likert scale (5= Very often; 1= Never)	3-point Likert scale: (3= Often; 2= Sometimes; 1= Never)
<b>Section B: Personal-related challenges an coping strategies</b>			
<b>Question</b>	<b>Changes</b>	<b>Original aspect</b>	<b>Altered aspect</b>
B1-5	1	How often do you ask somebody to help you to read clothing labels??	Who do you ask to help you to read clothing labels??
	2	5-point Likert scale (5= Very often; 1= Never)	3-point Likert scale: (3= Always, 2= Sometimes, 1= Never)
B6-12	1	How true are the following things about clothing labels?	Are the following things true about clothing labels?
	2	5-point Likert scale (5= Always true; 1= Never true)	Binary scale: (1 = Yes; 0= No )
B13-18	1	How true are the following things about clothing labels?	Please tell me the following on the clothing label: Respondent indicate aspects (Show card 1)
	2	5-point Likert scale (5= Always true; 1= Never true)	Respondent provide answer
B19-23	1	How TRUE are the following things when you buy clothes?	Do you do the following things when you buy clothes
	2	5-point Likert scale (5= Always true; 1= Never true)	3-point Likert scale: (3= Yes, 2= Sometimes, 3=No)
B24-25	1	How TRUE are the following things when you buy clothes?	Respondent had to do actual calculation (Show card 2)
	2	5-point Likert scale (5= Always true; 1= Never true)	Respondent provide answer
B27-29	1	No modification of question	Show card 3 was presented to assist respondent with better understanding of the question
B30-28	1	No modification of question	Show card 4 was presented to assist respondent with better understanding of the question
<b>Section C: Product-related challenges an coping strategies</b>			
<b>Question</b>	<b>Changes</b>	<b>Original aspect</b>	<b>Altered aspect</b>
C39-42	1	How difficult is it for you to understand the following information on a clothing label?	Can you understand the following information on a clothing label? Presented Show card 5
	2	5-point Likert scale (5= Very difficult; 1= Not difficult at all)	Binary scale: (1= Yes ; 0= No)
C43	1	No modification of question	Show card 6 was presented to assist respondent with better understanding of the question
C44.1-,8	1	Can you tell me the meaning of the following care instruction?	Please tell me the meaning of the following care instructions
	2	Each symbol provided with four possible answers	Respondent must simply provide the answer
	3	Symbols for: Do not wash, do not wring, do not dry-clean, tumble dry, do not tumble-dry and drip dry	Symbols removed
C45-46	1	No question asked	Added
C47-54	1	How important are the following things if you decide the quality of clothes?	Do the following things tell you something about the quality of clothes?
	2	5-point Likert scale (5= Very important; 1= Not important at all)	Binary scale: (1= Yes ; 0= No)

- A second pilot test stage was performed to test the alterations made. The researcher was satisfied with the outcome, and no further changes were made since the participants in this pilot test stage understood the questions and show cards clearly. The researcher then proceeded with the main study. The final questionnaire and show cards are provided in Appendices 7 and 8.

#### **4.5.4.2 Main study**

Data for the main study were collected in order to investigate low-literate consumers' use of clothing labels in terms of reading, understanding and applying information found on these labels at the point of purchase.

Data for the main study were collected with the assistance of fieldworkers who were voluntary counsellors at Lifeline (Sedibeng District). This is a service organisation, responding to people experiencing emotional trauma and individual crises, in order to provide emotional support (Lifeline, 2012). These counsellors work in the same area where the respondents are from. The decision to make use of the counsellors as fieldworkers was largely due to the fact that they are known to the residents of the area and that they are sensitive towards the needs and challenges of the participants. Furthermore, the fieldworkers were able to communicate in English and Sesotho. The fieldworkers were trained before the onset of the data collection, and this included the following:

- A full discussion of the aim of the study, in which each question of the questionnaire was thoroughly explained.
- A discussion of the criteria that participants had to comply.
- It was emphasised that participants must be treated ethically.
- Clarification that no guiding towards any answer on the questionnaire should be given.
- The field workers were also told not to indicate whether answers are correct or not.

Data collection took place in the first week of September 2012, and from the initial 523 questionnaires that were completed, 450 were regarded as valid. The 73 invalid questionnaires were discarded due to incomplete information, and because some respondents had either a higher or lower qualification than the inclusion criterion of Grade 5-8.

#### **4.5.5 Data analysis for the quantitative phase of the study.**

In order to solve the research problem (the use of clothing labels by low-literate female consumers), a statistical analysis was done by the Statistical Consultation Services of the North-West University, using the Statistical Package for the Social Sciences programme (SPSS Inc., 2011). The following analyses were performed:

#### 4.5.5.1 Descriptive statistics

Frequency analyses were done for all sections of the questionnaire and raw scores, means and standard deviations were obtained (Pietersen & Maree, 2010a:182-196).

#### 4.5.5.2 Validity and reliability of the measuring instrument

The instrument was also investigated for content and construct validity, while reliability was examined by computing alpha coefficients. No existing standardised measuring instrument could be found to measure low-literate consumers' use of clothing labels in the marketplace. As an important outcome and challenge of this sequential exploratory mixed method research, a new measuring instrument, which had to be standardized, was developed (Creswell, 2009:212).

- *Content validity* refers to the degree to which the measuring instrument includes all aspects regarding the personal and product-related challenges experienced by low-literate consumers. Content validity was obtained using the opinions of experts in the applicable field of study (Pietersen & Maree, 2010b:217). In this case, the expert opinions of colleagues from the NWU Potchefstroom Campus were used. These experts were from the School of Curriculum-based studies, Psychology, Graphic design and Consumer Sciences.
- *Construct validity* refers to the degree to which the measuring instrument measures different groups of related items and was assessed by means of an exploratory factor analysis (Delpont & Roestenburg 2011a:174-175; Pietersen & Maree, 2010b:219) for Sections A, B and C. Exploratory factor analysis was used for each individual scale due to the differences in the scales that were used. Some scales for example tested knowledge and skills (right and wrong answers), whereas others investigated behavioural patterns of the respondents. The exploratory factor analysis performed for each scale also assisted the researcher in reducing the data in the different sections. The principle axis factor analysis was used to place items in different factors by using Oblimin with Kaiser Normalisation as a rotation method (Field, 2009:644). The FACTOR procedure of SPSS Inc. (2011), IBM SPSS Statistics Version 20, Release 20.0.0 was used for this analysis. For subtracted factors to be regarded as statistically important, it was suggested that all factors with an Eigenvalue > 1 should be retained (Kaiser, 1960). The KMO measure of sampling adequacy was used to determine the relevance of the factor analysis, and factors with values > 0.5 were retained. In this study, factors had values between 0.508 and 0.866, whereby values > 0.5 are regarded as acceptable, and values > 0.8 are regarded as 'great' (Field, 2009:647).

- A *reliable* measuring instrument displays internal consistency, and Cronbach's alpha coefficient is a suitable measure for tests with multiple-scored items which are administered once, as was used in this study (Field, 2009:674; Pietersen & Maree, 2010b). The procedure comprises the determination of the variance of all respondents' scores for each item and the addition of these variances across all items (Malhotra, 2010:319). Alpha coefficients with a value  $< 0.6$  indicate unsatisfactory internal consistency reliability (Malhotra, 2010:319)

#### **4.5.5.3 Correlations and ANOVA**

- Correlations among ordinal scale factors in selected sections of the questionnaire were determined by computing Spearman's correlation coefficient. Spearman's correlation coefficient is a non-parametric correlation coefficient, and was used to determine the correlation between nominal and ordinal variables in this study (Field, 2009:179).  $P$ -values  $\leq 0.05$  (5% level of significance) indicate statistically significant correlations. Correlation coefficients ( $r$ -value) vary between +1.0 and -1.0.
- To determine the statistically significant differences between the occupations of respondents and purchasing at different shops, reading and numerical skills, knowledge and use of care labels and the evaluation of clothing products, a one-way analysis of variance (ANOVA) between subjects was conducted. Considering the non-probability method for sample selection, practical significance was determined, by computing Cohen's  $d$ -value as measure of effect size (Ellis and Steyn, 2003:XXX). Cohen's effect sizes are indicated as low ( $d=0.2$ ), medium ( $d=0.5$ ) and large ( $d=0.8$ ) (Cohen, 1988:20-27). To determine the differences between groups, post hoc Tukey B was performed.

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**CHAPTER 5**  
**QUALITATIVE RESEARCH ARTICLE**

**Coping with low-literacy in a South African Clothing retail environment**

(Manuscript to be submitted for publication in the  
Journal of Consumer Affairs)

This article has been written according to the author guidelines for this journal, and is provided in Appendix 1

## ABSTRACT

Low-literate consumers display distinctive behaviour in the marketplace, and in the first phase of this mixed-method study, the aim was to explore the challenges and coping strategies of low-literate clothing consumers. Due to fairly high low-literacy levels in South Africa and limited research, this research was undertaken to better understand the behaviour of low-literate clothing consumers in the marketplace. Semi-structured interviews were used to gather data, and through inductive, interpretative data analysis, three broad themes were identified: personal (cognitive, social, financial and affective), product (types and format of product information, evaluative criteria), and store-related challenges (store assistants' behaviour, store selection and in-store information) and associated coping strategies. The results of this study can be used to advise marketers regarding the needs of these consumers. These results were also used to develop a quantitative instrument to investigate low-literate consumers' use of clothing labels in the retail setting.

**Keywords: Clothing consumers, challenges, coping strategies, functional low-literacy**

## INTRODUCTION

Research on consumer behaviour and the focus of marketers and retailers are mostly directed towards literate consumers (Chikweche and Fletcher 2010; Schiffman and Kanuk 2010; Viswanathan and Rosa 2007), although there are about 4 billion people with, amongst other characteristics, low literacy levels worldwide (D'Andrea et al. 2006; Trujillo et al. 2010). Research on consumers that face challenges such as low income, poor housing facilities and low-literacy has commenced fairly recently (Viswanathan and Rosa 2007), and is based mostly in countries such as India (Viswanathan, Gajendiran and Venkatesan 2008; Viswanathan, Sridharhan and Ritchie 2010), Latin America (Argentina, Brazil, Chile, Columbia, Costa Rica

and Mexico) (D'Andrea et al. 2006; Trujillo et al. 2010), the USA (Adkins and Ozanne, 2005a; Gau and Viswanathan 2008; Jae and Delvecchio 2004) and Zimbabwe (Chikweche and Fletcher 2010). In South Africa, research about low-literate people is available in the area of health sciences (Dowse and Ehlers 2004, Maree and Wright 2010), however research on at low-literate consumers is sparse.

There are an estimated 51.7 million people living in South Africa, comprising of the black, coloured, Indian and white ethnic groups, of which the black ethnic group (~79.6%) is the majority (Statistics South Africa 2012b). South Africa is regarded as an emerging economy, although major differences exist amongst the population's literacy levels, and income and expenditure patterns (Hanushek and Woessmann 2008; Steytler and Powell 2010). Low literacy levels are found within all racial groups, but due to the legacy of unequal access to education during Apartheid, low literacy levels are prevalent mostly among black adults (Posel 2011). Although the literacy levels of South Africans are based mostly on their level of school completion (passed Grade 7) and their ability to read and write (Posel, 2011; Statistics South Africa 2012b), it is expected of consumers to be able to read, understand and apply written and numeric product-related information in order to function effectively in the marketplace (Viswanathan and Gau, 2005; Wallendorf 2001).

Literacy entails the acquisition and understanding of oral and written language (Ntiri 2009; UNESCO 2006). Reading and writing are two cognitive skills that are necessary for consumers to analyse and comprehend product-related information (Greene and Peters 2009; Marrapodi 2006) found on labels and packaging. Numeracy – or quantitative literacy – is regarded as a third type of cognitive skill (Reyna et al 2009) that accompanies basic literacy (Greene and Peters 2009; Viswanathan and Gau 2005) and entails the ability to process, interpret and apply numerical information (Dieckmann 2008; Reyna et al 2009; UNESCO 2006). Numeracy also allows, for example, for the calculation of the total cost and discount prices of

purchased clothing items. A fourth type of cognitive skill is visual literacy. Visual literacy entails the ability to recognise and interpret words as well as the ability to identify and interpret images, signs, symbols and pictures (Brill, Kim and Branch 2007; UNESCO 2006), such as the care symbols on clothing care labels. Successful integration and application of these skills will allow consumers to be able to access product-related information from different sources so as to demonstrate functional literacy and make informed purchase decisions. Reading and writing cannot be regarded as the only indicators of consumer literacy (Reyna et al. 2009; Wallendorf 2001), since literacy is also determined by the specific context in which it is applied (Viswanathan and Gau 2005).

The marketplace literacy of consumers is integral to functional literacy, incorporating knowledge about the economic, financial and media aspects of the marketplace (Viswanathan et al. 2009a). The number of years of formal schooling that people complete correlate with their level of marketplace literacy (Ringold 2005). Therefore, the functional literacy of low-literate consumers is a concern. Marketplace literacy is applied at three levels of operation: occupational, procedural and conceptual. At occupational level, consumers need to be able to execute a simple purchasing task. The procedural level entails that consumers must be able to, for example, calculate the price of a product offered on discount. Finally, consumers at a conceptual level have to be able to compare the attributes of different products (Viswanathan and Gau 2005; Viswanathan et al. 2009a), such as considering the different qualities of two clothing products in order to make informed purchase decisions. Functionally low-literate consumers are mostly able to perform a simple purchase task (occupational level), but may not be able to calculate the final price of a product that is presented at a discount (Viswanathan et al. 2009a).

In South Africa, expenditure on clothing products is proportionally twice as great amongst households with the lowest income, compared to those with the highest income (Statistics South Africa 2008), and 76.5% of all adults (persons 20 years and older) are regarded as literate

(passed Grade 7) (Statistic South Africa, 2012a). Low literacy levels and poverty are highly correlated and have widespread implications on the behaviour of these consumers in the marketplace (Viswanathan and Gau 2005). Although the focus of this study is specifically on the influence of low literacy on the behaviour of clothing consumers in the marketplace, it is important for lower income consumers to be able to compare the price and significance of products (Adkins and Ozanne 2005a; Jae and Delvecchio 2004; Wallendorf 2001) in order to obtain the best value for money. Women are mostly responsible for household purchases and a lack of functional literacy in terms of their ability to read and interpret product information, can lead to poor product decisions (Wallendorf 2001).

Low-literate consumers' behaviour in terms of their daily activities in the marketplace is evident in their cognitive preferences for concrete (for example, the use of single pieces of information) and pictographic thinking (such as visualising product information (Viswanathan, Rosa and Harris 2005; Viswanathan et al. 2009b). Low-literate consumers experience challenges (such as cognitive and product-related) during market-related activities. However, they have adapted multiple coping strategies to deal with these challenges (Gau and Viswanathan 2008).

Consumer behaviour is influenced by internal (needs, motives, personality, perceptions, learning and attitudes of consumers) and external (cultural and social influences, reference groups and family, and market related influences) aspects (Rousseau and Du Plessis 2007; Schiffman and Kanuk 2010). When studying consumers a socio-cognitive perspective will contribute to explaining the effect of internal (cognitive) and external (social and retail) factors on their behaviour (Jacobs and De Klerk 2003), especially in the case of low-literate consumers. These consumers do not typically behave in the same way as literate consumers, and it is therefore important for researchers and marketers to take note of low-literate consumers' needs in the marketplace (Gau and Viswanathan 2008; Viswanathan and Rosa 2007).

While most of the existing research focuses on low-literate consumers' challenges and coping strategies when purchasing food products (Gau and Viswanathan 2008; Viswanathan and Gau 2005), no evidence can be found in either international or national research, concerning the influence of low-literacy on clothing purchases. The question as to how low-literate female clothing consumers in South Africa function in the marketplace, arises. In the South African context, with its diverse population and low literacy rates, this study may also be relevant in other countries where low literacy levels are a concern. Drawing from research on low-literate consumers' behaviour and functionality when purchasing food products, this research question has emerged. Therefore, the aim of this study is to explore, within a South African context, the challenges and coping strategies of low-literate female consumers during the purchasing of clothing products by means of semi-structured individual interviews.

## **LITERATURE REVIEW**

Due to differences in the marketplace behaviour of consumers (Gau and Viswanathan 2008), low-literate consumers face product-related, social and affective challenges due to their cognitive predilections. These challenges influence their decision-making capabilities (Adkins and Ozanne 2005a; Gau and Viswanathan 2008). In this section, literature regarding the challenges and coping strategies of low-literate consumers will be reviewed.

### **Challenges of Low-Literate Consumers in the Marketplace**

#### *Cognitive challenges*

The cognitive preferences of low-literate consumers, namely concrete and pictographic thinking, are a result of their low literacy and numeracy skills (Viswanathan and Rosa, 2007; Viswanathan, Sridharhan and Ritchie. 2008). **Concrete reasoning** by low-literate consumers manifests in their tendency to use single attributes to evaluate products (Viswanathan, Rosa and

Harris 2005; Viswanathan *et al.* 2009b), for example, the price and the size of a garment is often not inferred. Another display of concrete reasoning is the inability of low-literate consumers to determine the unit prices of multi-packaged products (Viswanathan, Rosa and Harris 2005). Single items of clothing are seen as cheaper than the multiple packaged items. Finally, low-literate consumers' numeracy skills tend to be domain specific, because they might be able to make simple calculations, but in the retail setting they are likely to determine the available money to purchase products in terms of the amount of products they want to purchase (Viswanathan, Rosa and Harris 2005).

**Pictographic thinking**, associated with concrete reasoning (Viswanathan, Rosa and Harris 2005), takes place when functionally low-literate consumers visualise product information (Viswanathan, Hastak and Gau 2009). To determine the size of a clothing item, they often visualise themselves wearing it, instead of confirming the size of the item. Direction finding in unfamiliar stores and locating products can be difficult for low-literate consumers due to the challenges experienced with reading and inferring of information from store signage (Viswanathan, Rosa and Harris 2005). Store signs and brand names, are seen as objects in a picture rather than a message that is conveyed through the text (Viswanathan *et al.* 2009b). When the colour or font style of a store sign is changed, these consumers may become confused and distracted (Viswanathan, Rosa and Harris 2005). A lack of language and reading skills – thus marketplace literacy – may be the reason for this behaviour (Viswanathan *et al.* 2009a).

#### *Retail-related challenges*

**Product-related challenges** that low-literate consumers may experience in the marketplace involve the reading, understanding and application of information (Gau and Viswanathan 2008). With regard to numeracy skills, clothing consumers must be able to use and understand numerical information (Dieckmann 2008; UNESCO 2006; Reyna *et al.* 2009), such as prices and sizes of clothing products. Furthermore, they must be able to perform multi-level calculations

(Greene and Peters 2009; Reyna et al. 2009) in terms of the final price when a clothing product is offered at a discount price, as well as the unit price of multi-packaged products. Information on clothing labels is presented mostly in text format, although care instructions on clothing labels are often provided in symbol format as well (Yan, Yurchisin and Watchravesringkan 2008). Low-literate consumers often have cognitive preferences for visual product information, such as symbols and pictorials rather than written text (Jae and Delvecchio 2004). Functionally low-literate consumers remember product information better when it is presented as it would be in real life (for example when advertised by a well-known person), and also when it is communicated through sensory (visual), rather than abstract reasoning (Viswanathan et al. 2009b). Due to low-literate consumers' use of single pieces of information, a large variety of products and information offered in stores may lead to an overload of information which can be confusing when they have to choose the best option among alternatives (Gau and Viswanathan 2008).

The **social and affective challenges** that low-literate consumers experience concern the language of product-related information and the vulnerability these consumers may experience in the marketplace. English is the language in which product-related information (such as labels and packaging) and marketing messages (such as advertisements) are presented, which is often not these consumers' first language (Wallendorf 2001), as is the case in South Africa (Dowse, Lecoko and Ehlers 2010). Even though there are 11 official languages in South Africa (National Planning Commission 2010), product-related information and marketing messages are mostly communicated in English. Poor understanding of the information communicated to these consumers, whether written or verbally, can result in unwanted and poor quality purchases (Gau and Viswanathan 2008).

Low-literate consumers may also experience exclusion from what is known as consumerism. Consumerism is concerned with the rights and privileges of consumers in the marketplace (Du

Plessis 2007). It is important for all consumers to be part of the accepted consumer culture, and personal attributes of low-literate consumers such as a low income and socio-economic status, can contribute to their vulnerability in the marketplace (Hamilton 2009; Viswanathan, Gajendiran and Venkatesan 2008). These consumers often have limited access to products and product variety, and therefore, they often have to be satisfied with lower quality goods (Hamilton 2009; Viswanathan, Gajendiran and Venkatesan 2008). This may create a strong sense of awareness about their social class, which is challenging to cope with (Hamilton 2009; Trujillo et al. 2010).

From a socio-cognitive perspective, the way in which individuals (such as low-literate consumers) understand and apply information about the social world (in this case, clothing-related information from the clothing retail environment) stems from the cognitive mind and is influenced by environmental factors such as friends, family, the clothing retail environment and the media (Baron and Byrne 2004; Ringberg and Reihlen 2008). The possible outcome of the socio-cognitive vulnerabilities of low-literate consumers, may result in failure to plan shopping activities, checking the prices of products (Viswanathan, Sridharhan and Ritchie 2008; Viswanathan et al. 2009a), misunderstanding of product-related information (Adkins and Ozanne, 2005b), purchasing unwanted and below standard products (Jae and Delvecchio 2004; Wallendorf 2001), anxiety when entering an unfamiliar store (Viswanathan, Rosa and Harris 2005; Viswanathan et al. 2009b), and feelings of humiliation and embarrassment (Adkins and Ozanne 2005a; Ozanne, Adkins and Sandlin 2005). However, despite the various challenges that low-literate consumers experience, they still manage to operate in the retail setting (Adkins and Ozanne 2005b; Viswanathan 2009).

## **Coping Strategies Applied in Response to Challenges**

Coping can be described as the cognitive and behavioural attempts of consumers to manage internal (in this case, low-literacy) and external (such as the clothing retail environment) challenges (Lazarus and Folkman 1984). The coping strategies are implemented in order for low-literate consumers to present themselves as reasonably competent consumers when purchasing products (Adkins and Ozanne 2005b; Hamilton 2008; Viswanathan 2009), such as clothing. Low-literate consumers display coping strategies that relate to the types of challenges (cognitive, product, social and affective-related) they experience in the marketplace (Viswanathan Gajendiran and Venkatesan 2008), which can be emotional or behavioural in nature (Hamilton 2008). Although different coping strategies are applied by low-literate consumers, the strategies cannot be viewed in isolation from one another.

### *Cognitive coping strategies*

In order to manage poor reading skills, low-literate consumers show dependence on other people, such as family, friends or store assistants for assistance with consumer-related reading tasks (Viswanathan Gajendiran and Venkatesan 2008). To counter-act low numeracy skills (such as the calculation of total costs), these consumers simplify cognitive demands by purchasing one product at a time, rounding off amounts or, handing all their money to the cashier in the hope of receiving the correct change (Viswanathan and Gau 2005; Viswanathan Rosa, and Harris 2005).

Since it is also difficult for low-literate consumers to make shopping lists and plan purchases properly, they tend to purchase randomly until all their money has been spent, regardless of whether wise purchase decisions were made or not (Viswanathan and Rosa 2007). If they do create shopping lists, abbreviations (for example 'T' for 'trousers') are often used to represent the products they want to purchase (Adkins and Ozanne 2005b). In large stores, low-literate consumers can experience cognitive overload (Viswanathan Rosa, and Harris 2005), and therefore prefer visiting smaller, familiar stores (Gau and Viswanathan 2008).

As already mentioned, functionally low-literate consumers have a tendency towards pictographic thinking making symbolic associations with letters and numbers (Gau and Viswanathan, 2008; Viswanathan, Rosa and Harris 2005), and as a result, prefer to purchase the same brands and products repeatedly because it is difficult to read product information if, for example, a product's packaging has changed (Adkins and Ozanne, 2005b; Viswanathan and Gau, 2005; Viswanathan, Rosa and Harris 2005).

#### *Product-related coping strategies*

Low-literate consumers build strong relationships with, and are loyal to, stores where they feel comfortable (Gau and Viswanathan 2008). In order to create a sense of knowing and to maintain self-esteem, low-literate consumers engage in habitual purchasing of specific brands at specific stores (Viswanathan and Gau 2005). They also mimic the behaviour of literate consumers when they, for example, inspect the quality of a garment before purchasing it (Gau and Viswanathan 2008), as they want other consumers and store personnel to think that they can read the product information (Adkins and Ozanne 2005b; Gau and Viswanathan 2008; Viswanathan Rosa, and Harris 2005) such as clothing labels. Functionally low-literate consumers are inclined to visualise product attributes in order to avoid textual or numerical information (Gau and Viswanathan 2008). They will, for example, visualise how to take care of the product instead of reading the care-taking instructions on the clothing label. Another coping strategy that low-literate consumers apply is to use only single attributes of a product to evaluate the entire product in order to avoid complex product assessments (Viswanathan, Rosa, and Harris 2005). They will, for example, only focus on the colour of a clothing product, regardless of the quality of the fabric that it is made of.

#### *Social and affective coping strategies*

Due to characteristics such as poor memory and poor reading skills, low-literate consumers often rely on their social relationships with family or friends for verbal communication to obtain

product-related information, and are often accompanied by these acquaintances when visiting retail stores (Adkins 2001; Viswanathan and Gau 2005). Through this behavioural coping strategy (Hamilton 2008), low-literate consumers are reassured when purchases are made (Viswanathan Rosa, and Harris 2005).

Low-literate consumers also prefer one-on-one communication with people (Viswanathan and Rosa 2007), and favour shops where they can build relationships with the store-owner and store personnel (Viswanathan Rosa, and Harris 2005). This provides trust and security for these consumers in the retail environment (Gau and Viswanathan 2008). However, this is not always possible in large retail shops and shopping centres (Viswanathan *et al.* 2009a).

Based on the discussion above, a qualitative research approach was selected to answer the following research questions in a South African context:

RQ1: What are the challenges that low-literate clothing consumers experience when buying clothing products?

RQ2: How do they cope with the challenges they experience?

In Figure 1, a conceptual framework is presented in order to guide this qualitative study. The framework presents concepts of this study according to research by Gau and Viswanathan and to address the research questions.

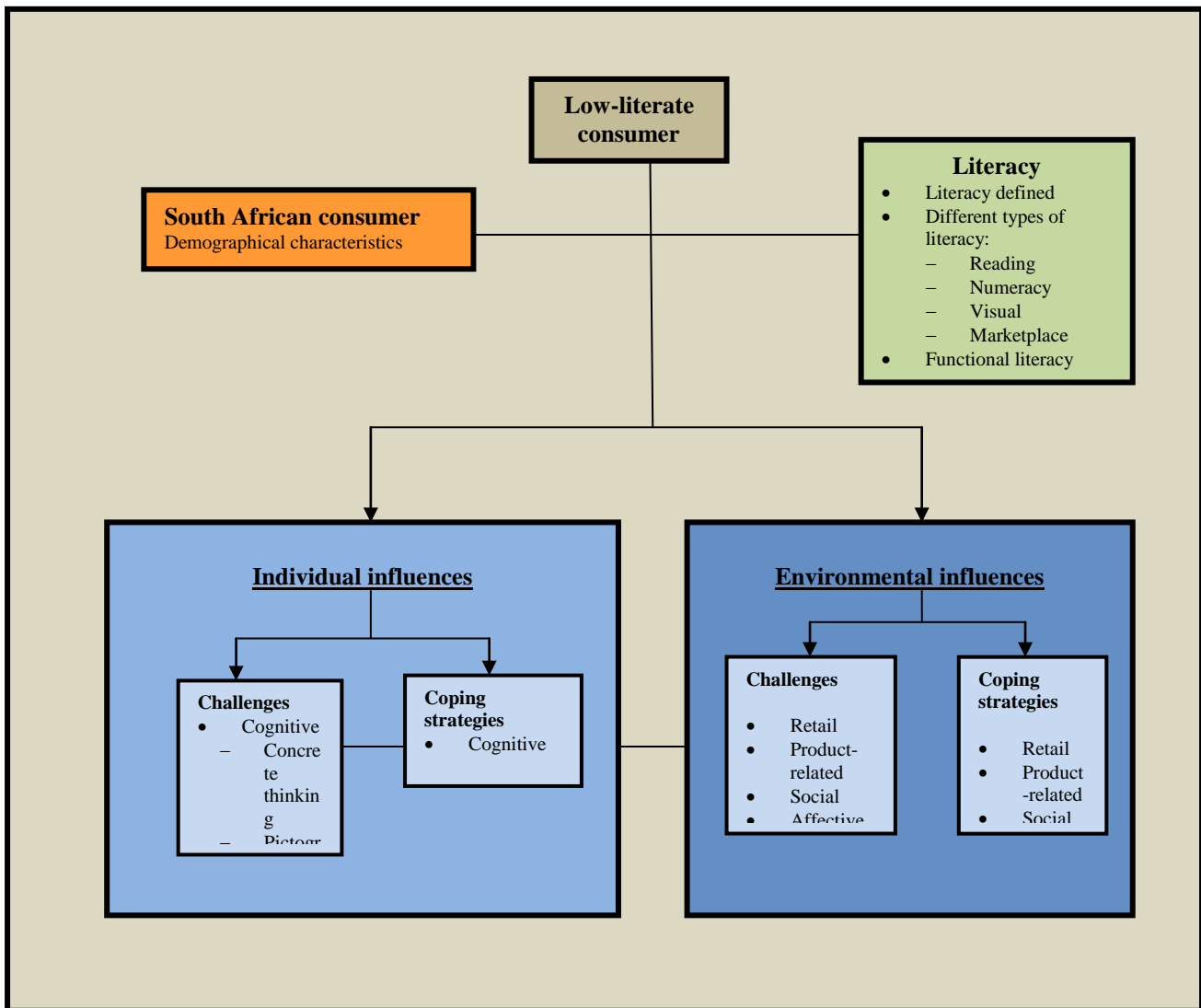


Figure 1 Conceptual framework: Challenges and coping strategies of low-literate clothing consumers (Adapted from: Gau and Viswanathan (2008); Rousseau and Du Plessis (2007))

## METHODOLOGY

### Research Approach

This qualitative study is the first phase of an exploratory mixed-method study, and was selected in order to explore and describe the real-life experiences (Creswell 2009; Fouché and Schurink 2011) of low-literate female consumers when purchasing clothing products. Due to limited

research in this field, this qualitative phase permits the exploration of the actual experiences of these consumers to provide a deeper understanding (Adkins and Ozanne 2005b; Creswell, 2009) of their behaviour in a clothing retail setting. By following an interpretive phenomenological approach, the authors draw insight from literature (Thompson 1997) based on low-literate consumers in general, with the intention to develop an interview schedule for this study. The authors aimed to gain insight into the verbally communicated experiences of participants (Nieuwenhuis 2010a) and the findings thereof will be used to develop a quantitative measuring instrument in order to generalise the findings in the quantitative phase of the overseeing project (Creswell 2009).

### **Sampling**

A purposive, convenience sampling technique was used to select low-literate female clothing consumers according to certain defining characteristics (Maree and Pietersen, 2010; Nieuwenhuis, 2010b; Strydom and Delpont, 2011), such as low-literacy levels and their experiences in the clothing retail setting. Furthermore, the participants had to purchase clothing products from formal retail settings. Females were selected for this study because they are mostly responsible for household purchases (Van Biljon and Jansen van Rensburg, 2011), such as clothing products. The participants were black adult females with school qualifications ranging from Grades 5 to 8, although people with Grade 7 as highest qualification are regarded as literate (Posel, 2011; Statistic South Africa 2012b) The authors grounded their decision to include Grade 8, in the research of Viswanathan, Gau and Chaturvedi (2008), where participants' reading and numeracy skills were tested before the onset of their research, and based on these results, were divided in the three groups (Grades 0-4, 5-8 and 9-12). The participants are residents of the Emfuleni Local Municipality area, which is part of the Sedibeng region, and is located in southern Gauteng, South Africa. The population of the Emfuleni Local Municipality comprises 86% of the Sedibeng region (808 000), of which 97% of this population is from the

black population group (Sedibeng 2011). Participants who met the inclusion criteria were recruited by the first author. They were interviewed, with permission from their supervisors, during working hours.

## **Data Collection**

### *Pilot study*

Three pilot interviews, prior to the main study, were conducted to test aspects concerning the methodology of the research (Strydom and Delpont 2011), gain insight into the practical aspects thereof (Arthur and Nazroo 2003) and establish whether the interview schedule and the level of the questions would allow participants to give a full account of their retail experiences. It was also important to find out whether effective interaction with low-literate participants would take place (Strydom and Delpont 2011; Viswanathan, Gau and Chaturvedi 2008), since the interview was not conducted in the participants' first language. It became evident during the pilot tests that probing in terms of follow-up questions (Legard, Keegan and Ward 2003) and real-life examples (Viswanathan, Gau and Chaturvedi 2008) were important to ensure that participants could elaborate on their responses and that questions not immediately understood by them could be clarified (Legard, Keegan and Ward 2003).

### *Main Study*

Data for the main study were collected by conducting 19 semi-structured, one-on-one interviews. Comprehensive information and insight (Greeff 2011) regarding the challenges that participants experienced, and the coping strategies they applied during clothing shopping, were obtained. The interviews lasted between 30 and 50 minutes.

An interview schedule was prepared in accordance to the research questions of the study (Creswell 2009), and the questions were divided into three sections: low-literate participants' shopping experiences; the challenges they experienced in the marketplace; and the coping strategies applied (Gau and Viswanathan 2008). The challenges were divided into four sub-

categories: cognitive challenges ('How easy/difficult is it for you to read the information on a clothing label?'); product-related challenges ('Tell me about the dress that you have decided to buy'); social challenges ('How easy is the language on the label to understand?'); and affective challenges ('How does it make you feel to ask somebody if you do not understand the information on the label?'). In terms of the coping strategies, the questions were directed towards retail (such as 'After telling me about your problems, tell me now how do you handle these problems') and product-related (such as 'If you want to buy a new garment, what do you look at before buying it?') coping strategies. A lithe approach in terms of the interview schedule was followed to allow the participants to freely express their thoughts (Botma et al. 2010; Hamilton 2009).

The interviews were conducted – with consent from the participants – in English or Afrikaans although neither of these languages is their first language. However, they are the two languages that the researcher is proficient in. Special care was taken with the formulation of the questions, in order for the low-literate participants to clearly understand them (Viswanathan, Sridharhan, and Ritchie 2010). The researcher made use of concrete examples (T-shirt with clothing labels still attached to it, as well as photos of people operating in a retail setting) to enhance the further explanation of questions (Viswanathan, Gau and Chaturvedi 2008). The interviews were audio recorded, and notes were made to capture non-verbal information such as the hand gestures and facial expressions of the participants (Creswell 2009).

### **Data Analysis**

After the completion of the data collection process, audio recordings were transcribed verbatim and were carefully read by the researcher while listening to the recordings, in order to verify their accuracy (Botma et al. 2010). Interviews conducted in Afrikaans were translated by the researcher into English, and the language was edited by an accredited language editor. These transcripts and field notes became the main source of data for analysis. The transcripts were re-

read to obtain a general sense of the data (Creswell 2009) and to gain a deeper understanding of the experiences of participants (Viswanathan, Gau and Chaturvedi 2008) in the clothing retail context. Inductive, interpretative data analysis took place by firstly conducting an intratextual analysis, starting at the broad base of the data (Adkins and Ozanne 2005b; Creswell 2009; Thompson 1997). The data were then organised into segments, and codes were assigned to specific identified concepts, according to expected (based on past literature) and unusual topics (Creswell, 2009; Nieuwenhuis, 2007c). This is also referred to as open coding (Schurink, Fouché and De Vos 2011).

In order to gain a deeper insight into the participants' experiences (Viswanathan, Gau and Chaturvedi 2008) in the clothing retail setting, further intertextual analysis of the data was done. The researcher was able to process data beyond the individual interviews and coding process in order to get a broader sense of the entire data set (Thompson 1997), by grouping corresponding codes into categories (Botma *et al.* 2010; Schurink, Fouché and De Vos 2011). Categories were then further divided into broad themes which holistically display the various opinions and experiences of participants (Creswell 2009), in order to adhere to the research questions of this study. The final stage of the data analysis was the interpretation, where the comprehension of the data reflected a merger between the interpreter's background knowledge and the text. This also reflected a relation with literature and previous research (Thompson 1997), on low-literate consumers in general.

### **Trustworthiness**

In order to obtain truth, value and assure credibility, the researcher had contact with the participants in the study to obtain sufficient information from them (Lincoln and Guba 1986). Data saturation were obtained after 17 interviews, although two further interviews were conducted to confirm this. Redundancy of data was obtained at the point where no new information was acquired, and theoretical saturation was attained by identifying all possible

themes and categories through data analysis (Williams and Morrow 2009). The integrity of the data was displayed by confirming the interpretation of the findings by presenting direct quotes from participants (Williams and Morrow 2009). Triangulation of data was obtained by ensuring that the aspects regarding low-literate clothing consumers' retail experiences had been investigated, and that conclusions based on this data can be confirmed with the results of the quantitative study (Lincoln and Guba 1986; Maree and Van der Westhuizen 2010), during the second phase of this mixed method research project. Other sources of information, such as literature about low-literate consumers, were applied to verify the findings (Nieuwenhuis 2010c). Intercoder reliability also took place by the second author when checking the codes, categories and themes that were initially derived (Creswell 2009; Lincoln and Guba 1986; Nieuwenhuis 2010c).

### **Ethical Considerations**

Ethical approval for this study was obtained from the Ethics Committee of NWU (Ref no: NWU-00024-09-S1), and regarding the participants, guidelines as set by Viswanathan, Gau and Chaturvedi (2008) were applied. Due to participants' difficulty with reading and writing, verbal consent was obtained to conduct the interviews. Participation was voluntary and participants could withdraw from the interview at any time. They were informed about the nature and purpose of the study and were assured of their anonymity. The researcher established a rapport with participants (Gau and Viswanathan 2008), by starting the interview with an informal conversation and had a respectful approach towards them. The cognitive level of the interview was at a level which allowed the participants to feel comfortable and participate freely. After the interview, each participant was handed a small incentive (Strydom 2011).

## FINDINGS AND DISCUSSION

Nineteen black female participants, aged between 24 to 61 years, participated in this study. Fifteen of them were employed as cleaners, while the other four were entrepreneurs from a local township in the Emfuleni Local Municipality area. The employed participants (cleaners) earned fairly low salaries, and the other participants' earnings in their entrepreneurial activities, were minimal too.

The findings regarding the challenges and coping strategies of participants are presented in accordance with three broad themes; personal, product and store-related challenges, and coping strategies. Although the three themes are discussed separately, they are interrelated and can thus not be viewed independently from one another.

### **Personal-related challenges and coping strategies**

Categories relating to the first theme, are cognitive (literacy, numeracy, concrete thinking and pictographic associations), social (language and social interaction), financial (lack of money) and affective (disheartened) in nature.

#### *Cognitive*

It was evident that there are various challenges regarding the participants' cognitive abilities (such as reading and numeracy), that make it difficult for them to operate in the clothing retail-setting. They found it challenging to read product information on for example, clothing labels (such as price, size and care instructions) and store-signage, which resulted in a lack of understanding and confusion about this information.

*'My head. I want to read, but..... I struggle to read' [#4, aged 59]*

The cognitive challenge of reading resulted in an unwillingness or even refusal to read product information. A dislike of reading was offered as an excuse for not reading store signage. This reaction is presumably due to a lower need for cognition (Yan, Yurchisin and

Watchravesringkan 2008), which is described as a low interest to engage in cognitive activities (Cacioppo et al 1996).

However, some of the participants stated that they can read, but when requested to read some text on a clothing label, they reported that the language was too difficult to understand, or they simply could not read the information, using the excuse that they forgot to bring their glasses. Poor reading skills are associated with low literacy levels, and influence the ability to read, understand and use written product information (Wallendorf 2001). Due to cognitive overload, low-literate consumers struggle to read product information (Viswanathan, Rosa and Harris 2005), which is consistent with the findings of this study. Another coping strategy to deal with the cognitive challenge of reading and understanding product information, is the reliance on people they trust (their children and store assistants) as confirmed in research by Adkins and Ozanne (2005b) as well as Viswanathan and Gau (2005). This is also an indication of low-literate consumers' dependency on verbal information (Jae, Delvecchio and Cowles 2008) in order to function in the marketplace.

*'... the people [store assistants] help us in the shop, and maybe I don't know to read, they read for your size, it is not your size, and how much [price] the articles you want, she [store assistants] tell me' [#3, aged 55]*

In regard to the numeric skills of the participants, they reported that calculations in terms of prices and total amounts of clothing items are challenging. They establish total amounts of purchases by asking the cashier the total cost of intended purchases, which again confirms their dependence on other people for information (Adkins and Ozanne 2005b; Viswanathan and Gau 2005). When participants in this study tried to establish whether they had enough money for intended purchases, they did not mention the actual prices of products, but used rounded amounts (for example R20.00 or R50.00), or paid for the garments one-by-one. This concrete

way of coping with numerical challenges in the marketplace is consistent with previous studies (Gau and Viswanathan 2008; Viswanathan and Gau 2005).

The participants' criteria for the selection of a garment involved cognitive coping strategies of considering one attribute at a time; for example, either the price or the size of the clothing product, of which price was mostly mentioned. Low-literate consumers often have difficulty with trade-offs (between price and size) (Viswanathan, Rosa and Harris 2005), although some of the participants realised the association between the price and size of garments to a certain extent; for example, that the cost of adult clothing products are more expensive than those of children.

*'...and if you buy [children's wear] at Ackermans the price is low and the price of adults is strong [high]' [#15, aged 44]*

An unexpected coping strategy that a few of the participants mentioned was the use of their cellular phone's calculator function, which indicates the awareness of new technology (Trujillo et al. 2010), despite their low literacy levels. However, they admitted that they had to ask their children to assist them in using the function. The children may have more product knowledge than their parents which could possibly be due to exposure to media and information in schools (Trujillo et al. 2010).

*'I check. I used to use my phone's calculator and I calculate them. How much and then I can afford to pay that amount' [#7, aged 34]*

When advertisements were shown to the participants (one about women's and girls' dresses and another one about boys' and girls' shoes), they based the identification thereof on the symbolic associations made with child-like decorations on the dress, and colour associations like blue for boys and pink for girls, and not by reading the accompanying written information. This behaviour is reflected in the pictographic association of visual information and is illustrative of an inability to infer written product information (Viswanathan, Rosa and Harris 2005).

Pictographic thinking was also displayed when participants reported about the size of garments. Some indicated it by showing the imaginary size of the garment with their hands. This visual and concrete way of inferring product related information is confirmed by Viswanathan *et al.* (2009b).

### *Social*

A second challenge relating to this theme is social in nature and involves language and social interaction. When participants were asked about the difficulty of English on clothing labels or store signs, several indicated that these are difficult to read and understand. This results in either their refusal to read the information, or to ask their children or store assistants to read the care instructions on clothing labels to them. This is also mentioned by Adkins and Jae (2010) as an active coping strategy.

*'You see, I am the one that don't understand everything, but if I want to know, I have to ask' [#15, aged 44]*

Some of the participants indicated that they are not always positive about social interaction in the marketplace and they mostly prefer to go shopping alone. They feel ashamed of fitting garments in the presence of other people, and do not like the pressure they feel from accompanying people to make unnecessary purchases. This action confirms low-literate consumers' strategy to preserve their self-esteem (Adkins and Jae 2010). Participants however, tend to rely more on store assistants for advice and information (Low and Freeman 2007) rather than family or friends.

### *Financial abilities*

There is an association between low-literacy and low income (Viswanathan, Sridharhan and Ritchie 2008) and for the participants in this study, their financial ability is a serious challenge in terms of their income and spending abilities. When the participants were asked about the problems they experience while purchasing clothing items, their responses were often directed

towards their financial ability. They also emphasised that they have commitments such as providing for housing, food, transport, electricity and school fees for their children. As confirmed by previous studies (D'Andrea et al. 2006; Hamilton, 2009), it was important for participants to keep their financial responsibilities in mind due to their low monthly income, as some of them were the sole providers in their families.

Another outcome, due to the poor financial abilities of participants, was that clothing purchases were not a hedonic action for them (Hamilton 2009), but a planned action by means of monthly savings for the purchases, such as children's school uniforms. This planning of purchases is consistent with findings of Viswanathan, Sridharhan and Ritchie (2008) and indicates that they are aware of the amount of money available to spend on clothing items.

*'If I go out of the house, I make the budget. If my child wants this, and the shoes, I say here is the money. You have to buy for this money. No more other things, because I make the budget' [#9, aged 53]*

When a few of the participants mentioned prices of clothing items, it was unrealistically low, for example R20 for a pair of shoes. Such price expectations may lead to disappointment and shame when realising that they do not have enough money to pay for the intended purchases (Hamilton 2009). When they were asked about how they handle insufficient money to pay for clothing purchases, they indicated their willingness to purchase fewer items and make lay-by purchases. A lay-by purchase is a method of payment made by the consumer by depositing a certain amount of money and then paying monthly installments in order to pay off the outstanding amount. The consumer only receives the product once the balance is settled (Erasmus and Mathunjwa 2011). A few of the participants indicated that they will purchase clothing products on credit on their store accounts. This is a convenient way of making unaffordable purchases, but can easily lead to overspending of money, and in time may be detrimental to consumers' financial situations (Erasmus and Mathunjwa 2011). Another strategy

that they implement, is to wait until the end of the month when they receive their salaries, before purchasing the clothing items, or simply by saving money until it is sufficient to purchase the garment. Some of the participants indicated that they may cancel the purchase if they do not have enough money.

*'I will check my money first to see this is R20.00, this pair of shoes is R50.00 so I check my money how much I have got in my purse and it is going to qualify it [meaning enough]'* [#2, aged 61]

Poor financial abilities resulted in behavioural coping strategies (Hamilton 2008) by comparing prices of individual items in a store as well as those of different retailers. Participants in this study did most of their clothing purchases at discount stores, and also indicated their alertness to store discounts and mark-downs offered by retailers. Consumers with low literacy and low income are price conscious, and the affordability of products is a significant consideration when making purchases (Chikweche and Fletcher 2010; Subrahmanyam and Gomez-Ariaz, 2008).

*'You go to the shop and then you check the price, and then you will say this one is right, and this one is not right. You look at your money if it is right [enough] or not. You don't know if you have enough money, but you will look inside the shop'* [#10, aged 45]

Consumers with poor financial abilities are aware of branded products (Chikweche and Fletcher, 2011), which corresponds with participants in this study who viewed branded products as high quality. However, participants often avoided purchasing branded clothing products since these products are expensive.

### *Affective*

Low-literate consumers make a considerable effort to cope with cognitive, social and financial challenges in order to be efficient in the marketplace. These efforts may culminate in feelings of low self-esteem, anxiety and humiliation (Trujillo *et al* 2010; Viswanathan, Rosa and Harris

2005). When the participants of this study were asked about the feelings they experience due to an insufficient amount of money to pay for purchases, various negative emotional responses of hurt, shame and anger were mentioned.

*'[If money is not enough]...I will feel very hurt, because I want that things [clothes] for me or my children'. [#1, aged 55]*

Another aspect that evoked negative emotions in the participants was inappropriate treatment by store assistants when they approach them for assistance. In order for these participants to cope with negative treatment by store assistants, as well as the lack of money they sometimes choose to avoid these situations by leaving the store, which is an emotional way of coping (Hamilton 2008).

*'[Feel] Bad. I just leave that store and I don't go [back]' [#13, aged 47]*

However, a few of the participants reported that they experienced no negative feelings by asking for help from store assistants.

### **Product-related challenges and coping strategies**

Selecting clothing products involves the acquisition of product information mostly from clothing labels, store signage and advice from store assistants. The selection of clothing products can however be challenging for low-literate consumers. Categories concerning product-related challenges and coping strategies are; the types of information, the format of label information, and evaluative criteria for clothing products.

#### *Types of product-related information*

Labels on clothing items provide many types of product-related information (Shin 2000) such as price, size and care information. It is the right of consumers to have access to information labels which, they must be able to read and understand (Mastamet-Mason et al. 2008).

Related to the financial abilities of the participants, is the affordability of clothing items, making it important for them to acquire price information by consulting clothing labels and store signage. Some of the participants were often confused about the marked price of a clothing item, especially if offered at a special or discounted price. They were unable to calculate the discounted price, and were then unsure about the actual product price which is consistent with the findings of Viswanathan, Rosa and Harris (2005).

Furthermore, most participants are aware of the indication of the size of clothes on labels. The sizing system mostly mentioned was small (S), medium (M) and large (L), in a non-informative lettered-size format (Mastamet-Mason et al. 2008). Only a few of the participants indicated that they have knowledge of the numbered sizing system, for example sizes 32, 34 and 36, however, some incorrectly mentioned dress sizes such as size 39, even though dress sizes are only available in equal numbers (Mastamet-Mason et al. 2008). None of the participants mentioned an awareness of the alternative type of numeric sizing system namely, 10, 12 and 14, confirming that numeric information is often too abstract for low-literate consumers to understand (Viswanathan, Hastak and Gau 2009). Participants emphasised that it was important to fit the clothes in order to visually assess the size of the chosen garment. Participants were often not aware of their own body measurements, and rather made pictographic associations with the sizing symbols (S, M, L and XL) in terms of smaller and larger body types.

*'You first look at the label if it is medium or small or large. Then you go to the fitting room and you fit it'* (#15, aged 44).

A third type of information regarded as important was the care taking instructions which can be obtained by consulting the care label of the clothing product (Shin 2000; Yan, Yurchisin and Watchravesringkan 2008). Care-taking aspects frequently mentioned, concerned the method of washing (by hand or machine), the ironing, as well as the use of fabric softeners and chlorine bleach during the washing process. If consumers understand the washing instructions on care

labels, they are more likely to use the information (Shin 2000). It is therefore uncertain whether only the partial use of label information (Viswanathan, Hastak and Gau 2009) was due to an unawareness of the information or whether it was difficult to understand (Shin 2000). In a study by Feltham and Martin (2006), 59% of female respondents almost always use care label information, but this decreased to 47% when a lower level of education was considered. The low literacy level of participants might have had a definite influence on their knowledge and understanding of information on clothing labels (Shin 2000).

#### *Format of label information*

Closely related to understanding product information on clothing care labels, is the format that the information is provided in, namely text, symbol or a combination of text and symbols (Yan, Yurchisin and Watchravesringkan 2008). A few participants indicated their ability to read and understand the text of care information, whereas some preferred the symbol format. A limited number of participants preferred the combination of text and symbol format of information. Low-literate consumers may understand written product information if uncomplicated terminology is used (Jae, Delvecchio and Cowles 2008), but they tend to rely more on visual, concrete information (Jae and Delvecchio 2004). However, when the participants were requested to read some text information or identify symbols on a care label, only a few were able to identify the information correctly. Many of the participants admitted that they asked either the store assistants or their children to assist them with care information on labels that they do not understand, which again confirms their reliance on verbal information (Jae, Delvecchio, and Cowles 2008).

#### *Evaluative criteria for selecting clothing products*

Within the theme of product-related challenges and coping strategies, a third category, the evaluative criteria for selecting clothing products, was identified. Three sub-categories within

this category were noted: evaluation of clothing products quality, aesthetic value, and fitting of the product.

From the participants' responses it was clear that the purchase of good quality clothing products is important to them. Although various aspects were mentioned as *evaluative criteria for good quality* (for example retailers, price, type of fabric, care of clothing products and brands), it was evident that participants viewed the criteria independently from one another. Various retailers were mentioned as suppliers of good quality clothing products, which is probably due to participants' stored knowledge about retailers (Viswanathan Rosa and Harris 2005). Another important indicator of product quality was the price of products (Subrahmanyam and Gomez-Arias 2008; Swinker and Hines 2006). Participants were of the opinion that there is a positive relationship between the price and the quality of a clothing product, and a few were willing to pay higher prices for good quality clothing products. The type of fabric of clothing products, as an intrinsic apparel attribute (Swinker and Hines 2006), was also mentioned as a quality criterion. Participants described that fabric quality must '*be good*', not shrink or wrinkle, be colourfast, fashionable and '*last for a long time*', which is consistent with findings of a study by Hugo and Van Aardt (2012). Clothing products not damaged during care taking are also an indicator of good quality. It was clear that participants mostly assessed clothing products visually and by feeling the fabric, but it is doubtful whether this concrete assessment method of the quality of fabric can accurately determine aspects such as colourfastness or possible shrinkage of the fabric, which can, in turn lead to poor quality and dissatisfaction with purchases.

*'If I look at the dress, if I wash it perhaps the dye [colour] will come out. I look at the things. Perhaps other time, if you buy and you wash it, the dress can shrink. The dress is not your size anymore. Another time when you wash it the dye [colour] come out. Now it is not that dress anymore. If the dress is not wrinkled. You look at the elastic. I want to buy the dress, but I look at the wrinkles'* [#4, aged 59]

The final aspect mentioned as a quality indicator of clothing products was well-known clothing brands, since it is important for poor, low-literate consumers to be able to purchase branded clothing (Chikweche and Fletcher 2011; Hamilton 2009). Participants in this study considered branded clothing to be an indication of high quality which they would like to purchase for their children. However, most of them admitted that they cannot afford to purchase these products.

Although not considered an important evaluative criterion, the *aesthetic value* of clothing products was mentioned, and some stated that if they want to purchase a dress, '*it must be beautiful*' and '*smart*' [stylish garments]. Aspects such as colour, the pattern [style] of the garment, decorations and beautiful fabric also came forth (Hugo and Van Aardt 2012; Swinker and Hines 2006).

Finally, participants regarded proper *fitting of clothing products* as an important selection criterion. Participants were unaware of their own body-measurements according to which clothing products are selected (Mastamet-Mason et al 2008), and the visual observation of clothing products was important to them to confirm the fitting thereof.

*'They [shop] have the fitting room. I take the dress, and I ask if I can go and fit, then I go to the fitting room and fit the dress. Then I look - there is the mirror in the fitting room. The mirror will show me if the dress fit me and if I look beautiful'* [#10, aged 45]

Fitting is described as very personal, since individuals have their own opinion as to what good fitting entails, for example, loose fitting, tightness and length of the garment (Pisut and Connell 2007). However, none of the participants mentioned any particular aspects regarding fitting as important to them.

### **Store-related challenges and coping strategies**

Three categories concerning the third theme were identified. These categories involved the behaviour of store assistants, store selection and the in-store information.

### *Behaviour of store assistants*

Participants in this study were often dependent on store assistants for, amongst other reasons, the use of clothing product-related information (such as price and size) and finding clothing products in the store. Participants were appreciative of the store assistants that reacted positively upon their requests for assistance and who treated them well and talked ‘*nicely*’ to them. Positive interaction with store assistants is important behaviour whereby store service is personalised (Hu and Jasper, 2006:29), and contributes to consumers’ confidence in the retail setting, as well as positive attitude towards the store (Lee and Dubinsky 2003; Van der Merwe, Stoltz and Jacobs 2008).

However, several participants perceived the behaviour of store assistants as negative. They referred to the unwillingness of store assistants to assist them, and felt offended when store assistants made rude verbal remarks about the assistance requested. Participants perceived the pressure from store assistants to purchase clothing products as threatening and when followed around by them, as distrust (Van der Merwe, Stoltz and Jacobs 2008). Participants verbalised this negative behaviour of store assistants as ‘*my heart feeling sore*’ and ‘*not feeling well*’, which contributed to the personal affective challenges they experienced. Participants coped emotionally (Hamilton 2008) with the negative behaviour of store assistants by leaving the store without any purchases (Low and Freeman 2007). Clothing store assistants can contribute to longstanding relationships between retailers and consumers. Their negative behaviour can have an impact on the purchase intentions of clothing consumers (Hu and Jasper 2006; Van der Merwe, Stoltz and Jacobs 2008), as well as the self-confidence of low-literate consumers for future engagement with store assistants (Trujillo et al. 2010).

### *Store selection*

One of the important factors that influenced participants’ criteria for store selection was to obtain clothing products at the best prices. It was noticeable that they compare the prices of different

retailers and plan if they want to purchase new clothing products since their financial abilities are limited. It is thus important for consumers with financial constraints to select stores that enable them to purchase new clothing products (Hamilton 2009).

*'Because I compare the prices then this one is cheaper than that one. That is why I go to there and there and there [indicate various shops]' [#14, aged 51]*

Another consideration of the participants when selecting a store to purchase at, was the retailer's provision of high quality clothing products, although as previously mentioned, participants presented various viewpoints about what they regard as good quality clothing. Consumers with limited financial resources, such as the low-literate participants of this study, are often proud to make their knowledge of stores providing good quality clothing products known (Hamilton 2009). An additional factor that participants mentioned as a criterion for store selection was the availability of clothing products and the sizes they need. Well-organised stores were also important, since it is challenging for low-literate consumers to operate in retail environments with large product choices and store layouts that may be difficult to explore (Gau and Viswanathan 2008).

The participants in this study continuously mentioned specific discount stores that they generally purchase at, which can be related to low-literate consumers' loyalty to specific brands in order to decrease the cognitive risks associated with product choice (Wallendorf 2001) and their limited financial abilities. Although participants did mention other retailers that they support as well, but from further response it was clear that it was not the case. Some of those retailers' target market is the more affluent population, and when participants mentioned the prices, it was well below the prices that are offered at these retailers. This action came forth as a strategy to cope with their shame associated with their low-income (Adkins and Ozanne 2005a).

### *In-store information*

The participants in this study indicated that they obtain information about clothing stores and the type and variety of products the stores supply by, amongst others, observing window displays. During this action, they also compare the clothing products of various stores in terms of price, aesthetic value and special offers. Observing window-displays is an indicator of whether consumers will enter the store for further investigation of clothing products (Sen, Block and Chandran 2002).

Participants also indicated an awareness of store signage, and pointed out that it provides information about prices, special offers regarding clothing products, and the position of products in the different divisions of the store. However, their actual usage of store signage remains unclear. Visual information in stores, in the form of store signage and displays, creates a sense among consumers that the merchandise and service of the store are of high quality (Hu and Jasper 2006), provided that this information is offered in a format also understood by low-literate consumers, as in the present study.

## **CONCLUSION**

Although consumer behaviour research as well as retailers' and marketers' strategies are mostly directed towards literate consumers, low-literate consumers face various challenges in the marketplace. From the findings of this exploratory study, it is clear that participants' behaviour is subjected to internal (personal) and external (product and store-related) challenges associated with their low-literacy levels.

From the semi-structured interviews, various challenges (RQ1) emerged which were addressed by coping strategies (RQ2). The following observations were made: The personal challenges that they experience is evident in problems with reading product-related information, and the subsequent reliance on people (mostly children and store assistants) as a strategy to

handle these problems. In coping with poor numeracy skills (calculation of total cost, discount prices and enough available money), participants again showed dependency on other people to assist them with calculations, and although they were aware of technology such as the calculator function on cellular phones, they often did not know how to utilise it themselves. Another way in which participants coped with poor numeracy skills was by thinking concretely about costs and prices. Multiple clothing products are paid for one at a time, and the prices of items are often rounded off in order to simplify calculations. The participants also had problems with integrating various types of information, and the price of clothing products are often dominant when considering purchases. Pictographic thinking was applied when participants imagined the size of a garment, because they do not understand body measurements and therefore cannot determine the size of a clothing product. English, the language used to convey product information, was another personal-related challenge that the participants had to cope with. They often do not understand English, and again rely on children or store assistants to help them in this regard. The financial abilities of the participants were constantly mentioned, and have a large influence on clothing purchase decisions. However, they managed to plan clothing purchases and selected stores to obtain the best possible prices. Due to financial constraints, the purchasing of clothing products is mostly utilitarian, and almost never a hedonic action. The culminating effect of cognitive, social and financial challenges, result in affective challenges (such as shame and poor self-esteem) that participants have to cope with. They often do not finish intended purchases, and leave the store in response to these challenges.

The product-related challenges that participants had to deal with, concern the type of clothing-related information (the format thereof) as well as criteria to evaluate clothing products. The types of information that the participants mostly used were price, size and care instructions. Again, price is important for participants to consider when purchasing clothing products, due to limited financial abilities and discount prices are also not always calculated correctly. The size of

clothing products are better understood when they are provided in non-informative lettered size format for example, small (S), medium (M) and large (L), and pictographic associations between their body size and this size format can be made. Numeric size information is often difficult to understand, because they struggle to make the association between this type of information and their body size. Care instructions on clothing labels were important to the participants, although the correct use thereof is questionable. The reading of the text-format instructions is not always successful, and although low-literate consumers have a tendency towards the symbol format of information, their knowledge of care symbols is not good. It is important for the participants to buy good quality clothing products, and they applied various criteria when evaluating clothing products. The evaluative criteria that were important to them include the quality of clothing products, aesthetic value and good fitting. However, due to cognitive predilections of low-literate consumers, they often view clothing product attributes in isolation, and have difficulties with inferring multiple attributes when selecting clothing products. The way that participants evaluated quality of clothing products were concrete, for example, the quality of fabric was determined by feeling the fabric, and not by reading product information on clothing labels. Further, they preferred beautiful clothes that fitted properly, although they did not clearly define what they regarded as good fitting.

In terms of store-related challenges, participants viewed store assistants, store selection and in-store information as important. Store assistants were regarded as very important for assistance concerning various aspects in the retail environment, and participants were dependent on their guidance. Good behaviour of store assistants was appreciated, and participants perceived negative behaviour as humiliating. Participants had a clear opinion about their preferred retailers, and price and good quality were important considerations when selecting a store. Participants revealed loyalty to certain stores, which in this case were mostly discount stores. Clothing stores were compared in terms of price and available products, which was obtained by observing

window-displays. Store signage in stores, as source of information, was used to a lesser extent. Even though the low-literate participants in this study revealed several challenges they experienced in the marketplace, they did apply several coping strategies and did manage to maintain themselves as fairly competent consumers.

### **IMPLICATIONS OF RESEARCH FINDINGS**

Due to the qualitative nature of this study and small sample size used to collect data, the results cannot be generalised to the broad South African population. Little is known about the needs of the low-literate clothing consumers in the South African retail setting, and since they are frequently involved in purchasing clothing products, it is important for retailers and marketers to determine whether and how, these consumers make decisions about a product. Marketers and retailers must consider low-literate consumers' challenges in the marketplace, for example, their dependence on store assistants. When store assistants are trained, they must be made aware of the special needs of these consumers. Apart from treating these consumers with respect, store assistants must be attentive towards language, reading and numeracy challenges of low-literate consumers and how these influence their behaviour in the retail setting in order for them to assist these consumers to the best of their ability. It is also important for marketers and retailers to take note of the challenges of low-literate consumers, in order to present clothing-related information in such a manner that they will be able to use it efficiently. The concrete and pictographic thinking of these consumers can be considered regarding the sizing systems of clothing products, care instruction and other aspects such as the presentation of discount prices. It is therefore necessary to further investigate the personal and product-related challenges that low-literate consumers experience. Findings from the current study were used to develop a measuring instrument for the second quantitative phase of this exploratory mixed method study, specifically focused on the reading and numeracy skills of low-literate consumers using clothing

labels. The collective purchase power of low-literate, low-income consumers contributes to the purchasing power of all consumers (Viswanathan and Rosa 2007), especially in a developing country such as South Africa, where they make up a large percentage of the population (Hanushek and Woessmann 2008). Results from such a study can provide information to retailers and marketers, because it is important to empower low-literate consumers to be efficient in the marketplace.

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**CHAPTER 6**  
**QUANTITATIVE RESEARCH ARTICLE**

**Low-literate clothing consumers' use of clothing labels amidst personal and  
product related challenges**

(Manuscript to be submitted for publication in the  
African Journal of Business Management)

This article has been written according to the author guidelines for this journal, and is provided in Appendix 1

## **ABSTRACT**

This study focused on low-literate female clothing consumers. The purpose was to investigate their use of clothing labels amidst personal and product-related challenges in the marketplace. Personal challenges include reading skills, numeracy skills, concrete thinking and, pictographic thinking. Product-related challenges relate to the format of labels, care-label knowledge and evaluating the quality of clothing products. The study sample consisted of 450 black females with literacy levels between Grades 5 and 8, residing in the Emfuleni Local Municipality area, in the southern part of Gauteng, South Africa. Participants filled out questionnaires pertaining to their use of clothing labels that was administered by an interviewer. ANOVA's indicated statistically significant differences with mostly medium effect sizes between the occupation of respondents and selected factors. Respondents indicated that they do read and understand clothing labels. However, results revealed that they experienced problems when using information found on clothing labels. Their numeracy skills were average and abstract thinking skills, related to numeracy, were fair. Their preference for symbolic and graphic presentation of size format provided evidence of pictographic thinking, with the exception of altered store logos. Care label understanding was poor, and clothing products were evaluated concretely. Some of the participants, especially the older generation, were inclined to follow the peripheral route of elaboration when reading clothing label information. Low-literate consumers might be able to use information on clothing labels more sufficiently if it is provided in a format that they can read and understand in order to apply the information.

## **1. INTRODUCTION**

The purchasing of clothing products is often complex since it involves many behavioural processes (Solomon and Rabolt, 2009). In addition, people's varying needs concerning clothing products adds to the complexity (Holmlund et al., 2011). In order for consumers to fulfill these varying needs, consumers must have access to clothing product-related information sources (Solomon and Rabolt, 2009), in order to make informed purchase decisions. Clothing information sources include clothing labels that provide information such as price, size and care instructions (Shin, 2000).

In South Africa, with an estimated 51.7 million people, the largest population group is the black ethnic group (~79.6%) (StatsSA, 2012a). The consumption patterns of South Africans differ greatly due to varying income and literacy levels (Steytler and Powell, 2010, De Bruyn and Freathy, 2011). In recent years, members of the black ethnic group migrated to larger towns and cities, resulting in remarkable population growth in informal settlements surrounding the larger towns and cities (Collinson et al., 2007). The retail sector in townships was previously poorly organised, and mostly privately owned (Klemz et al., 2006). However, more recently, national retailers started to open branches in townships and from 2006, large shopping malls opened in various townships throughout the country. The exposure to national retail branches and large shopping malls, gave black consumers more access to the formal retailing sector (De Bruyn and Freathy, 2011), and subsequently, access to a larger selection of clothing products.

For consumers to make effective purchases, a certain level of literacy is required mostly based on the level of school completion (i.e. passed at least Grade 7) and the ability to read and write (Posel, 2011, StatsSA, 2012b). Only 82.6% of the total adult (20 years of age and older) population have completed Grade 7, out of which 70.7% of black people were successful (StatsSA, 2012a). This is a rather low level of qualification for people to be regarded as literate (Posel, 2011). A substantial number of people have difficulty with reading and performing basic calculations (StatsSA, 2012b). Therefore, the functional literacy levels of black female consumers in a South African context, is questionable. To purchase clothes from formal retailers create challenges for low-literate consumers. These challenges are a result of the diversion of formal retailers' focus away from personal relationships with consumers, in contrast to the situation with small, privately owned retailers (Klemz et al., 2006). Low-literate consumers strongly rely on personal relationships for product information (Gau and Viswanathan, 2008), and shopping in the more formal retail sector requires them to rely more on their own skills for obtaining this information.

Research on low-literate consumers mostly focuses on their retail experiences when buying food products (Viswanathan and Gau, 2005; Chikweche and Fletcher, 2010), while qualitative research by Van Staden (2012) explores the challenges and coping strategies of low-literate black female consumers in the clothing retail environment. Findings from this research, which was the first phase of an exploratory

mixed method research project, and preceded the quantitative phase reported in the present article, revealed that low-literate consumers experience challenges on three levels: personal challenges (cognitive, social, financial and affective in nature), product-related challenges (information on clothing labels and evaluative criteria for clothing products) and store-related challenges (behaviour of store-assistants and information in stores). As a result of these challenges, the participants applied several coping strategies. Low-literate consumers reveal distinct behaviour – pertaining to the challenges – when operating in the marketplace, especially when reading clothing labels, which influences their decision-making process.

The way in which information is processed and the way in which decisions are made, is different for low-literate consumers than for literate consumers. This is due to the cognitive predilections (concrete and pictographic thinking) of low-literate consumers (Williams, 2002; Viswanathan et al., 2005; Viswanathan, 2009). The Elaboration of Likelihood Model (ELM), developed by Petty and Cacioppo (Petty et al., 1983), provides insight into how consumers elaborate on information in advertisements. The influence of the ELM on the use of clothing labels can be viewed in relation to the personal and product-related challenges experienced by low-literate consumers. Consumers with a high need for cognition, who are more involved in product-related information, follow the central route of elaboration, which requires an in-depth exploration of product information (Petty et al., 1983; Jae and Delvecchio, 2004). Contrary to this, functionally low-literate consumers often do not elaborate on information and evaluate products without engaging themselves extensively in the exploration of product information. They often have a low need for cognition and prefer visual information such as symbols and pictorial images (Jae and Delvecchio, 2004). Therefore, they follow the peripheral route of elaboration (Petty et al., 1983; Jae and Delvecchio, 2004). The ELM can offer insight into the use of various forms of product information, such as product labels (Davies and Wright, 1994; Wright, 1997), and in the context of this study, the labels on clothing products.

Before purchasing new products, consumers proceed through various stages in order to make informed decisions. This decision-making process comprises of five stages. These five stages are: the recognition of a need for clothing products stage, the information seeking stage, the evaluation of alternatives stage, the decision or product

choice stage and, the post-purchase stage (Sproles & Burns, 1994; Solomon & Rabolt, 2009).

In the first stage, consumers' need for clothing products may arise when they come into contact with clothing items, or when clothing is needed for a specific purpose (Solomon and Rabolt, 2009), such as school wear for children (Van Staden, 2012). During the second stage, when seeking for information, these consumers' approach is rather concrete (Viswanathan et al., 2005; Gau and Viswanathan, 2008). Due to the influence of low-literacy on memory and reading skills, product information is often not integrated (Wallendorf, 2001; Viswanathan et al., 2005; Viswanathan, 2009), because the information is written at a level too difficult for low-literate consumers to understand (Jae and Delvecchio, 2004). Low-literate consumers also struggle to integrate different types of information (such as the price and size of a garment), and simplify cognitive demands by using single pieces of information (Gau and Viswanathan, 2008), which supports the notion that they probably follow the peripheral route of elaboration. These consumers also rely on communication with, amongst others, store assistants (Van Staden, 2012), or family and friends (Viswanathan et al., 2008a).

During the third stage, which is the evaluation stage, low-literate clothing consumers apply criteria when evaluating clothing products. The criteria they apply mainly concerns the quality, aesthetic value and the fit of the desired clothing product (Van Staden, 2012). Objective, evaluative criteria indicated on clothing labels, for instance price, size and care instructions (Shin, 2000), may be difficult for low-literate consumers to understand due to their poor reading skills and the content format of labels (Jae and Delvecchio, 2004; Yan et al., 2008).

During the fourth stage, which is the final purchase stage, low-literate consumers often use heuristics to simplify the process. This heuristic method is in accordance with the behaviour of consumers that rely on the peripheral route of elaboration to make a decision (Jae and Delvecchio, 2004). Price is often the only determinant when low-literate participants select clothing products, because their financial abilities are often a challenge that they have to cope with (Van Staden, 2012).

During the fifth stage, the post-purchase stage, low-literate clothing consumers should be able to read and understand the information on care labels in order to take proper care of the garments (Williams, 2002; Yan et al., 2008). If they are not able to

use the care instructions found on clothing labels, the result may lead to dissatisfaction with the garment and eventually, financial losses (Van Staden, 2012).

Dicks (2007) suggested that the ELM model can be applied to stages two to five of consumers' decision-making process in a study concerning food labels. Similarly, it is proposed that the ELM can be applied to the same stages of low-literate consumers' decision-making process regarding clothing labels. However in the context of low literacy differences will be found. Low-literate consumers are more concrete in their approach towards seeking product information. They tend to use single pieces of information when evaluating products, due to difficulties to integrate different types of information. These concrete actions result in the use of heuristics when making purchase decisions

The motivation for the current study evolved from the qualitative findings of research conducted by Van Staden (2012) which explored the challenges and coping strategies of low-literate clothing consumers in the marketplace. The aim of this quantitative study was to investigate the use (reading, understanding and application) of clothing labels by low-literate black female consumers in a South African context, amidst the personal- and product-related challenges they experience. The specific objectives of this study were to:

- investigate the demographic characteristics of the low-literate respondents, their store preference and preferred method of payment for clothing products;
- investigate low-literate respondents' use (reading, understanding and application) of information on clothing amidst personal- and product-related challenges;
- determine associations between low-literate consumers' age, income, school qualification, occupation and their use of clothing labels;
- make inferences from the results regarding the application of the Elaboration of Likelihood Model (ELM) by these low-literate black female consumers in a South African context.

The main research question of this article was: *Do low-literate female clothing consumers read, understand and apply information on clothing labels?*

A conceptual framework, derived from the findings of a qualitative study conducted by Van Staden (2012) and research by Gau and Viswanathan (2008), was developed to guide this quantitative study.

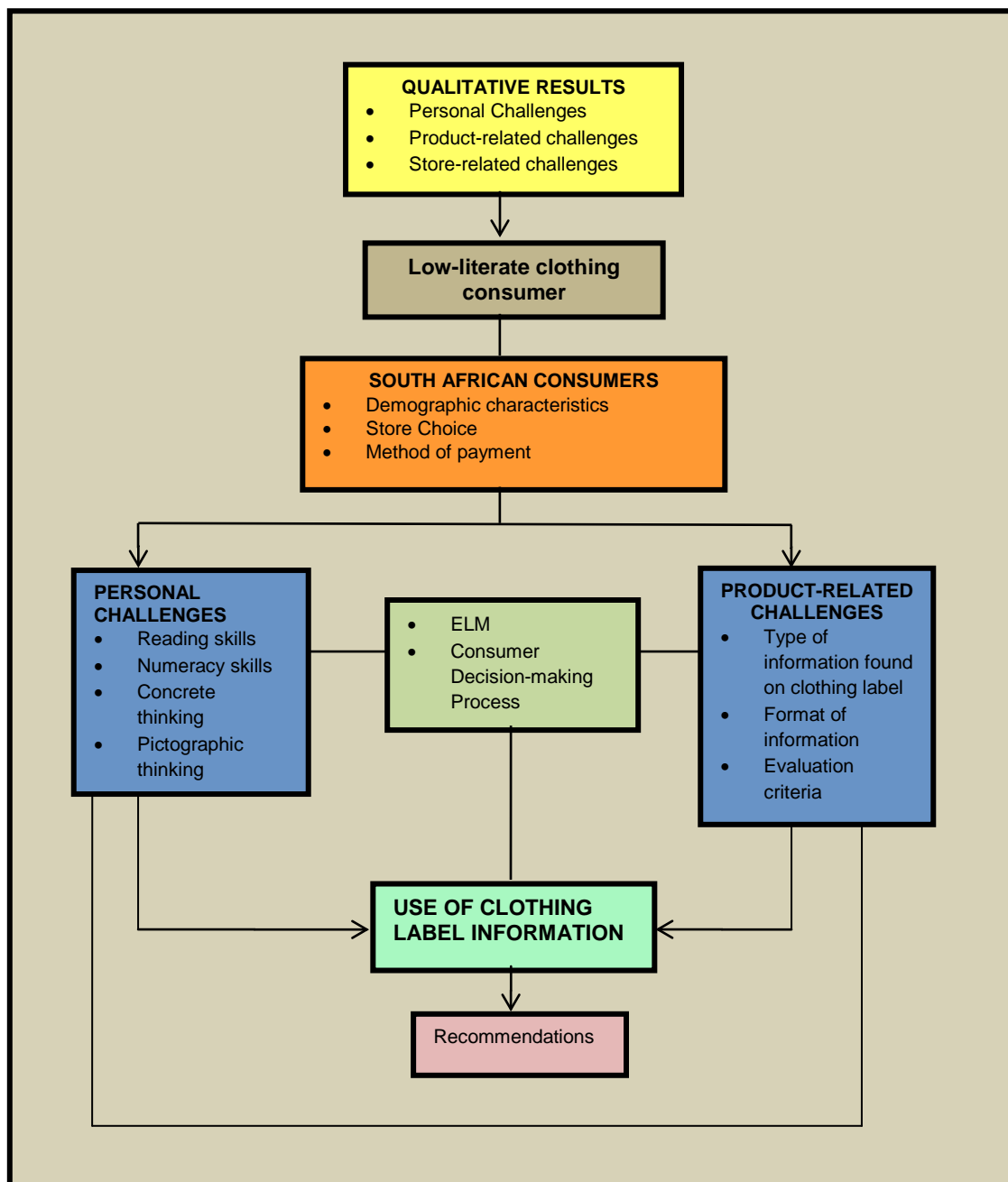


Figure 1 Conceptual framework for a study determining the use of clothing labels by low-literate female consumers in a South African context.

## **2. RESEARCH METHODOLOGY**

This study is the second phase of a sequential exploratory mixed method research study. A non-experimental, descriptive design was followed, in order to gain quantitative information to meet the objectives of this study (Creswell, 2009; Maree and Pietersen, 2010a), which is the use of clothing label information by black female low-literate clothing consumers.

### **2.1 Study population and sampling**

The study population in this phase held similar inclusion criteria to the qualitative phase of the study (Van Staden, 2012) and consisted of black, female, adult clothing consumers, 18 years and older, residing in the Emfuleni Local Municipality area that is part of the Sedibeng region, located in the southern Gauteng Province, South Africa. A non-probability, purposive sampling technique was applied, and respondents were selected based on an educational level of between Grades 5 and 8, as suggested by Viswanathan et al. (2008b).

### **2.2 Development and administration of the questionnaire**

In the sequential exploratory study, the present quantitative phase built on the findings of the qualitative phase from which three broad themes were derived. Two selected themes (Creswell, 2009), specifically pertaining to the personal and product related challenges of these low-literate participants, were used to develop the measuring instrument. Codes (obtained from data analysis of the qualitative phase) and statements from the participants were incorporated in the development of items, which also corresponded with the objectives of the study.

Low-literate consumers' preferences for concrete and pictographic thinking, as well as their poor reading skills (Gau, et al., 2012) were taken into consideration when questions and scales were developed. These considerations resulted in the decision to administer questionnaires by means of interviews (Van Biljon and Jansen van Rensburg, 2011). The inclusion of realistic and colourful visual presentations to explain certain questions to low-literate participants is suggested by Townsend et al. (2008). Therefore, various questions were concretely and pictographically explained by means

of show cards. Three-point Likert scales were used in questions that could be ordinally measured in order to accommodate the literacy levels of the participants (Maree and Pietersen, 2010b). These types of questions concern topics such as store choice, method of payment, assistance with the reading of clothing labels and numeracy skills. Binary item scaling (Delport and Roestenburg, 2011b) was also applied to some of the questions with topics such as reading clothing labels, understanding the information found on clothing labels and quality assessment of clothing products.

The questionnaire consisted of three sections, namely:

- *Section A:* The demographic information of respondents, the stores where clothes are purchased and payment methods for purchases;
- *Section B:* The use of clothing labels amidst personal-related challenges (the reading of clothing labels, application of numeracy skills, use of label information when making clothing decisions and reading of store information - pictographic thinking);
- *Section C:* The use of clothing labels amidst product-related challenges (understanding of size and brand information, size presentation format, understanding of care symbols, the use of care symbols and criteria for clothing quality assessment).

The questionnaire was available in Sesotho (the language mostly spoken by black residents in the Emfuleni area) and English. A pilot test was performed with a small sample of respondents who possessed the same characteristics as the large target population (Strydom, 2011; Maree and Pietersen, 2010b) in order to test the questionnaire for clarity and to identify potential problems. The participants' comments were incorporated in the revision of the questionnaire. Data for the main study were collected with the assistance of fieldworkers who are voluntary counsellors at Lifeline, working in the same area of residence of the respondents. The fieldworkers were trained before the onset of data collection. Data collection took place in the first week of September 2012. From the initial 523 questionnaires that were completed, 450 were regarded as valid. The 73 invalid questionnaires were discarded due to incomplete information, and because of participants that had higher or lower qualifications than the inclusion criterion of Grade 5-8.

### **2.3 Ethical Considerations**

Ethical approval for this study was obtained from the Ethics Committee of NWU (Ref no: NWU-00024-09-S1). In regard to the participants, guidelines as set by Viswanathan et al. (2008b) were applied. Due to participants' difficulty with reading and writing, verbal consent was obtained from them to conduct the interviews. Participation was voluntary and participants could withdraw from the interview at any time and were assured of their anonymity.

### **2.4. Analysis of data**

In order to meet the objectives of the study, statistical analyses were conducted by the Statistical Consultation Services of the North-West University, using the Statistical Package for the Social Sciences programme (SPSS Inc., 2011). Descriptive statistics by means of frequency analysis was done for all sections of the questionnaire. Raw scores, means and standard deviations were obtained (Pietersen and Maree, 2010a). Correlations among factors in selected sections of the questionnaire were determined by computing Spearman's correlation coefficients, which is a non-parametric correlation coefficient, and was used to determine the correlation between nominal and ordinal variables in this study (Field, 2009:179; Pietersen and Maree, 2010c).  $P$ -values  $\leq 0.05$  (5% level of significance) indicate statistically significant correlations. Correlation coefficients ( $r$ -value) vary between +1.0 and -1.0, and only  $r \geq 0.2$  will be discussed, indicating a medium effect size. To determine the statistically significant differences between the occupations of respondents and purchasing at different shops, personal- and product-related challenges, a one-way analysis of variance (ANOVA) between subjects was conducted. Considering the method for sample selection, practical significance was determined, by computing Cohen's  $d$ -value as measure of effect size (Ellis and Steyn, 2003).

### **2.5 Validity and reliability of the measuring instrument**

No existing standardised measuring instrument could be found to measure low-literate consumers' use of clothing labels in the marketplace. Since an important outcome of this sequential exploratory mixed method research study depended on such a measuring instrument, a new measuring instrument was developed (Creswell, 2009), which had to be standardised. *Content validity* refers to the degree to which the

measuring instrument includes all aspects regarding the personal and product-related challenges of low-literate consumers. Content validity was obtained by consulting experts in the field of study (Pietersen and Maree, 2010b). The experts who were consulted for this purpose are colleagues at the NWU from the departments of psychology, consumer sciences, education and graphic design. *Construct validity*, was assessed by means of conducting an exploratory factor analysis (Pietersen en Maree, 2010b; Delpont and Roestenburg, 2011a) for Sections A (store choice and method of payment), B (personal-related challenges) and C (Product-related challenges). Exploratory factor analysis was used for each individual scale due to the differences in the scales that were used. Some scales for example tested knowledge and skills (right and wrong answers), whereas others investigated behavioural patterns of the respondents. The exploratory factor analysis performed for each scale also assisted the researcher in reducing the data in the different sections. A principle axis factor analysis was used to extract items in different factors by using Oblimin with Kaiser Normalisation as a rotation method (Field, 2009), SPSS Inc. (2011), IBM SPSS Statistics Version 20, Release 20.0.0 was used for this analysis. For extracted factors to be regarded statistically important, it is suggested that all factors with an Eigenvalue  $> 1$  should be retained (Kaiser, 1960). Further was the Kaiser-Keyer-Olkin (KMO) measure of sampling adequacy used to determine the relevance of the factor analysis, and values between 0.508 and 0.866 were obtained (Tables 2, 3 and 4) whereby values  $> 0.5$  are regarded as acceptable, and values  $> 0.8$  are regarded as good (Field, 2009). The extracted factors in Tables 2, 3 and 5 all explained more than 50% of the total variance for each of the scales, and communalities exceeding 0.3 are the ideal (Hair et al., 1998).

A *reliable* measuring instrument displays internal consistency, which refers to the tendency of specific items on the scale to give the same response in repeated administration of the test (Malhotra, 2010; Delpont and Roestenburg, 2011a). Cronbach's alpha coefficient is a suitable measure for tests with multiple-scored items which are administered once (Pietersen and Maree, 2010b; Delpont and Roestenburg, 2011a), as was used in this study. Reliability alpha coefficients with values less than 0.6 are regarded as unacceptable, and indicates unsatisfactory internal consistency reliability (Malhotra, 2010)

### 3. RESULTS AND DISCUSSION

The results of this study will be presented in accordance with the objectives of the study.

#### 3.1 Demographical data, store choice and method of payment

##### Demographical characteristics of sample

The demographical information of respondents is provided in Table 1.

**Table 1** Demographic information of respondents

<b>N</b>	<b>Demographic characteristics</b>	<b>n</b>	<b>%</b>
450	<b>Age</b>		
	18-29 years	65	14.4
	30-39	76	16.9
	40-49	108	24.0
	50-59	112	24.9
	60 years and older	89	19.8
414	<b>Job</b>		
	Unemployed	140	31.1
	Cleaner	78	17.3
	Domestic worker	42	9.3
	Salesperson	65	14.4
	Clerical	13	2.9
	Pensioner	76	16.9
448	<b>School Qualification</b>		
	Grade 5 / Standard 3	87	19.4
	Grade 6 / Standard 4	81	18.1
	Grade 7 / Standard 5	99	22.1
	Grade 8 / Standard 6	179	40.0
441	<b>Marital status</b>		
	Never married	97	22.0
	Married	171	38.8
	Cohabitation / Living together	45	10.2
	Divorced / Separated	47	10.7
	Widow	81	18.4
419	<b>Monthly income</b>		
	<R500 (<US\$ 56.900)	53	12.6
	R501-R1000 (US\$57.00-113.97)	108	25.8
	R1001- R2000 (US\$114.00-227.93)	121	28.9
	R2001- R3000 (US\$228.00-342.90)	69	16.5
	R3001- R4000 (US\$343.00-455.86)	43	10.3
	R4001- R5000 (US\$456.00-569.82)	25	6.0

Age, occupation, school qualification, marital status and monthly income of respondents in this study are presented in Table 1. This information can be used by marketers to identify specific target markets (Schiffman and Kanuk, 2010). Almost half (48.9%) of the respondents are between 40 and 59 years of age, and 38.8% are married. Almost equal numbers of respondents had completed Grades 5, 6 and 7, while the biggest group of respondents (40%) had completed Grade 8. The largest group of the respondents (31.1%) was unemployed, while 17.3 % were employed as cleaners, 16.9% were pensioners, and 2.9% did clerical work. Other occupations that respondents held were dressmakers, kitchen workers (cooking), day-care workers and receptionists. However, these occupations surfaced in negligible numbers, and were not taken into consideration for further discussion of the results. The majority of the respondents (54.7%) earned a fairly low income amounting to R500 to R2.000 per month ( $\pm$  US\$57.00 to US\$228). The unemployed respondents indicated that they receive allowances from the government or from their husbands who are employed. Several respondents did not want to reveal their monthly income.

### **Store choice of respondents**

A list of stores mentioned in the qualitative phase preceding this quantitative phase of the study (Van Staden, 2012), as well as stores derived from research by the *All media and product survey* (AMPS) (South African Advertising Research Foundation (SAARF, 2012) was provided. Factor analysis was used to place the different stores in factors (upper class stores, discount stores, hyper stores and, separate items) which is presented in Table 2. Frequency analysis is not presented, but mean scores or percentages – which are relevant – of individual items will be provided in the discussion in brackets

**Table 2 Summary of exploratory factor analysis of the 15-item store preference scale (N=450)**

Item	Factor Loading			
	1 Upper class stores	2 Discount Stores	3 Hyper Stores	4 Unknown store
Truworths	<b>0.882</b>			
Woolworths	<b>0.873</b>			
Edgars	<b>0.634</b>			
Foschini	<b>0.620</b>			
Miladys	<b>0.457</b>			0.412
Jet		<b>0.695</b>		
Pep Stores		<b>0.627</b>		
Ackermans		<b>0.604</b>		
Mr Price		<b>0.603</b>		
Clothing City		<b>0.509</b>		0.332
Fashion Express		0.377		0.382
Makro			<b>0.451</b>	-0.453
Checkers Hyper			<b>0.844</b>	
Pick 'n Pay Hyper			<b>0.837</b>	
Meltz				-0.823
<b>Total variance explained by extracted sub-factors (%)</b>	55.669			
<b>Range of communalities</b>	0.439-0.776	0.414-0.513	0.507-0.723	0.655
<b>KMO</b>	0.790			
<b>Cronbach alpha coefficient</b>	0.8	0.7	0.6	
<b>Mean ±Standard deviation (SD)</b>	1.58• ±0.55	2.23• ±0.43	1.63• ±0.53	1.14 0.39

Factor loadings indicated in **bold**, are grouped together

Four factors pertaining to store choice were extracted; three of these factors, namely 'Upper class stores' ( $\alpha=0.8$ ), 'Discount stores' ( $\alpha=0.7$ ) and 'Hyper stores' ( $\alpha=0.6$ ) displayed satisfactory reliability coefficients. Four of these items (stores) loaded in two factors, but the researchers grouped them under the factor which was the most logical in each case. One store, namely 'Meltz' (*Unknown store*), was regarded as a separate item. From Table 2 it can be gathered that the most popular stores where the low-literate respondents sometimes or always shop for clothing products, were 'Discount stores' (mean = 2.23; SD  $\pm 0.43$ ) which sell merchandise at lower prices (Frings, 2008). This finding is consistent with price-conscious consumers' store patronage (Moore and Carpenter, 2006). Furthermore, these results correlate with data from SAARF (2012) regarding low-literate and low-income consumers' store preferences. Respondents indicated to less frequently (never to sometimes) shop at 'Hyper - (mean = 1.63; SD  $\pm 0.53$ ) and Upper class stores (mean = 1.58; SD  $\pm 0.55$ ), such as Woolworths, whose target market, is consumers from higher socio-economic groups (Woolworths, 2011). This finding is an indication that these respondents had limited financial

resources, which is in agreement with literature that states that low-literate people often fall under a lower socio-economic category (Viswanathan and Gau, 2005). It is important for low-income consumers to be able to buy new clothes, therefore their preference for discount stores (Hamilton, 2009). The separate item store, namely *Meltz* (mean = 1.14), was the least preferred by the respondents, and 87.2% indicated that they almost never shop there.

### **Method of payment for purchases**

The question including three items examining different methods of payment, yielded an unsatisfactory reliability measure ( $\alpha=0.4$ ). These measures will be regarded as separate items. The most popular method used to pay for clothing purchases (indicated on the scale: Never = 1, Sometimes = 2, Always = 3) indicated that 80% of the respondents almost always paid cash for clothing items (mean = 2.76; SD  $\pm 0.51$ ), followed by lay-by (mean = 2.20; SD  $\pm 0.80$ ). The least popular payment method were store accounts (mean = 1.88). This is probably an indication that respondents apply concrete thinking and experience a feeling of control over the amount of money they have available (D'Andrea et al., 2006). However, low numeracy skills often make it difficult for low-literate consumers to accurately calculate total prices in order to establish whether they have enough money for all the items they want to buy (Viswanathan and Gau, 2005). Lay-by is a method of payment that 76.1% of the respondents often or sometimes used. This is because of the distribution of payments over a period of time. Participants therefore feel more secure because the clothing items are reserved for them regardless of the fact that they do not have enough money at the time of purchase (Erasmus and Mathunjwa, 2011). The store account option was not a popular choice and 48% of the respondents never made use of this method. This could be an indication of credit-worthiness problems therefore many of them were not eligible for this option (Erasmus and Mathunjwa, 2011).

### **3.2 Respondents' use of clothing labels amidst personal challenges**

Respondents' use of clothing labels amidst personal challenges are described, in terms of reading, application of numeracy skills, the reading of store information and the use of label information when making clothing decisions. Factor analysis was used to group

different aspects regarding the use of clothing labels related to personal challenges of the respondents in factors.

### Reading of clothing labels: with or without assistance

Low-literate respondents were asked whether they read of clothing labels with or without assistance and answered according the scale: Never = 1; Sometimes = 2; Always = 3. One reliable factor, pertaining to respondents' reading of labels with assistance, was extracted ( $\alpha=0.6$ , mean = 1.98; SD  $\pm$  0.53), '*Reading with assistance*'. However, more than half of the respondents (63.4%) indicated that they prefer to read clothing labels by themselves (mean = 2.45; SD $\pm$  0.78).

### Reading of clothing labels: preference for reading and type of information

Regarding the question whether respondents read clothing labels, whether they like to read it, as well as the type of information they read, two reliable factors were extracted, '*Reading of labels*' and '*Reading of price and size*'. Respondents responded to this question, using the scale: No = 0; Yes = 1. The factor '*Difficulty of reading labels*' were unreliable ( $\alpha=0.4$ ) and was discussed as a separate item. The results are presented in Table 3.

**Table 3 Summary of exploratory factor analysis of the 7-item reading of clothing labels scale (N=450)**

Item	Factor Loading		
	1 Reading of labels	2 Reading price and size	3 Difficulty of labels
Like to read labels?	0.884		
Read labels?	0.784		
Read how to wash?	0.605		
Read the price?		0.854	
Read the size?		0.828	
Difficulty of reading labels			-0.753
Ease of reading the size of the letters on labels			0.749
<b>Total variance (%)</b>	66.608		
<b>Range of communalities</b>	0.571- 0.750	0.704- 0.729	0.568- 0.645
<b>KMO</b>	0.624		
<b>Cronbach alpha coefficient</b>	0.7	0.6	0.4
<b>Mean <math>\pm</math>Standard deviation (SD)</b>	0.47 $\pm$ 0.39	0.91 $\pm$ 0.25	0.6

Although respondents indicated that they mostly read '*Price and size*' on clothing labels ( $\alpha=0.6$ ; mean = 0.91; SD $\pm$  0.25), almost half of them indicated that information (separate items) on labels is '*Difficult to read*' (mean = 0.49; SD $\pm$  0.50), but the "*Lettering size*" on clothing labels was easy to read (mean = 0.71; SD $\pm$  0.45). However, these respondents indicated that they do not '*Read clothing labels*' ( $\alpha=0.7$ , mean = 0.47; SD $\pm$  0.39), probably indicating that they do not realise the important role that product information play in making informed purchase decisions (Shin, 2000). The influence of these respondents' low-literacy levels on their ability to read product information on labels cannot be ignored.

### **Reading of clothing labels: Ability to recognise label information**

Regarding the question to investigate respondents' ability to recognise various types of information on clothing labels (such as price, size, care instructions, the name of the store, type of fabric and the country of origin), one reliable factor was extracted, namely '*Ability to recognise label information*' ( $\alpha=0.7$ ; mean = 0.68; SD $\pm$  0.29). Although respondents previously indicated that they did not read clothing labels (Factor 1, Table 3), on average, 68% of them were able to recognise product label information correctly (Wrong =0; Correct = 1). Although the reading of clothing labels is not important to these respondents, they are exposed to clothing labels when visiting stores, explaining the fairly good recognition of label information.

### **Application of respondents' numeracy skills during label (price) reading**

In terms of respondents' application of their numeracy skills when using labels, the scale, Never = 1; Sometimes = 2; Always = 3 was used. Two factors were extracted, of which both were unreliable ( $\alpha=0.03$ ;  $\alpha=0.48$ ), therefore, the items regarding respondents' application of numeracy skills, will be discussed separately. When determining how concrete low-literate respondents were when practicing numeracy skills, 80.4% of them sometimes or always checked the money in their purse to see if they have sufficient money to pay for all the items they want to buy (mean = 2.75; SD $\pm$  0.53). Seeing that 80% of the respondents in this study preferred to pay cash for clothing purchases, this coping strategy is applied probably to save them from the humiliation of not having enough money when paying for purchases (Hamilton, 2009). Another strategy, namely to calculate the total price of more than one item read on

labels in their mind was sometimes applied (mean=2.24; SD± 0.83), probably indicating that they are confident about their numeracy skills. Respondents sometimes used a cellular phone's calculation function (mean = 1.82; SD± 0.90), although low-literate clothing consumers in a study by Van Staden (2012), were aware of this function but were not able to utilise it themselves, and had to ask their children for assistance. Asking somebody to help them calculate the total cost was (mean = 1.82) is a strategy often or sometimes applied by 56% of the participants, indicating dependence on other people. Slightly more than half of the participants indicated that they often or sometimes pay for clothing items one at a time (mean = 1.82), which corresponds with low-literate consumers' predisposition towards concrete thinking (Viswanathan and Gau, 2005).

### **Application of respondents' numeracy skills when calculating label prices**

When respondents were subjected to calculations, that included three items that required simplistic numeracy skills, one reliable factor was extracted ( $\alpha=0.6$ ), namely '*Numeracy – calculation skills*'. The accuracy of the numeracy skills (Wrong =0; Correct = 1) of the respondents were satisfactory and better than would have been expected considering their low-literacy. Respondents were requested to: add up two prices, calculate the price of a clothing item presented at 50% discount; and to calculate the unit price of a multi-packaged clothing product. An average of 62% were able to successfully execute the presented calculations (mean= 0.62; SD ± 0.33). However, the type of calculations was not intricate, and might explain this fairly good result of respondents' numeracy skills.

### **Using label information when making clothing decisions**

Respondents were presented with three questions to determine their ability to apply product information when making purchase decisions regarding price and size, best value for money and the rounding off of amounts. They answered the question according the scale: Wrong =0; Correct = 1. No factor was extracted since the KMO value was <0.5 and these items were viewed separately. In terms of the rounding off of an amount, 72.2% of the respondents indicated correctly that R49.99 is closer to R50 than to R49 (mean = 0.72; SD ± 0.45). The majority of the respondents revealed a certain level of abstract thinking, because 64.4% did not focus on a single attribute of a product, but integrated price and size and chose the correct size shirt presented to

them, even though it was more expensive (mean = 0.64; SD ± 0.48). Further, 59.3% of respondents indicated that buying multi-packaged clothing items provides better value for money (mean = 0.59; SD ±0.49). These results are contrasting to research about low-literate consumers' numeracy skills, and the assumption can be made that the respondents revealed marketplace literacy at a procedural level, which implies the ability to think fairly abstractly with reference to numeracy skills in the marketplace (Viswanathan and Gau, 2005; Viswanathan et al., 2009).

### Reading of store information - pictographic thinking

The application of pictographic thinking when reading store information was investigated by presenting altered store logos to the respondents (Wrong =0, Correct = 1). Two reliable factors regarding the reading of store information were extracted, namely '*Letter type, colour and shape changes*' and '*Logo only and taglines*' and are presented in Table 4.

**Table 4 Summary of exploratory factor analysis of the 9-item store identification scale (N=450)**

Item	Factor Loading	
	1 Letter type, colour and shape changes	2 Logo only and taglines
Edgars: Colour change	<b>0.910</b>	
Mr Pr: Colour change	<b>0.861</b>	
Woolworths: Colour, shape change	<b>0.854</b>	
Ackermans: Colour, font change	<b>0.846</b>	
Jet: Letter missing	<b>0.830</b>	
Pep: Only logo	0.500	<b>0.338</b>
Pep: Tagline		<b>0.795</b>
Jet: Tagline		<b>0.722</b>
Mr Price: Only logo		<b>0.603</b>
<b>Total variance (%)</b>	62.805	
<b>Range of communalities</b>	0.676-0.815	0.435-0.625
<b>KMO</b>	0.866	
<b>Cronbach alpha coefficient</b>	0.9	0.6
<b>Mean ± Standard deviation (SD)</b>	0.86 ±0.30	0.44 ±0.29

Low-literate consumers are inclined towards pictographic thinking, and may get confused when colour and letter types on for example store logos are changed (Viswanathan et al., 2005). This is contradictory to results found for '*Letter type, colour and shape changes*' ( $\alpha=0.9$ ) (mean = 0.86; SD  $\pm 0.30$ ), that indicated that these respondents were highly successful in identifying stores, even though the store logos' colour, letter types and shape were changed. It can be assumed, that these respondents did not reveal pictographic thinking when identifying store names. However, results for '*Logo only and taglines*' ( $\alpha=0.6$ ) (mean = 0.44; SD  $\pm 0.29$ ) revealed that less than half of the respondents were successful in identifying a store using a tagline or the logo only. The lack of success in identifying stores is an indication of a low need for cognition and demonstrates an inclination towards the peripheral route of elaboration (Jae and Delvecchio, 2004). This is because the successful identification of a store requires more involvement with store information.

### **3.3 Respondents' use of clothing labels amidst product-related challenges**

The use of clothing labels, despite the product-related challenges that respondents experience, were related to their understanding of label information, size format preference, understanding of care instructions, the stage when using care label information and the use of information when evaluation the quality of clothing products.

#### **Understanding of size and brand information on labels**

Regarding the understanding of size and brand information on labels, one reliable factor was extracted, namely '*Understand size and brand*' ( $\alpha=0.6$ ). Respondents were asked whether they understand size and brand information on clothing labels, and a fairly high number of respondents indicated that they do understand it (No = 0, Yes = 1) (mean = 0.78; SD  $\pm 0.27$ ). However, the results only indicate respondents' subjective understanding of label information, and did not reflect their understanding objectively (Moorman et al., 2004). Their objective understanding of label information may be lower, if considered in relation to the results of '*Reading of labels*' and their understanding of care labels in general.

### **Understanding of size presentation on clothing labels**

In order to establish respondents' understanding of various formats of indicating the size 'Medium' on a garment, they were presented with a show card which depicted various formats. They were asked to indicate the size format which will be the easiest for them to read a size 'Medium'. The non-informative lettered size format (which does not indicate any body measurements in the size format) that was presented pictographically, was mostly preferred by 36.2% of the respondents, followed by the ordinary non-informative lettered size format 'M' (29.1%). The numeric formats '36' (16.4%) and '12' (10%) – which can be associated with a size 'medium' – were the least preferred by respondents. The pictographic format of size presentation in the form of body shapes appealed to 15.1% of respondents, indicating a possible sensitiveness towards bodily presentations. These low-literate respondents did not prefer numeric formats, revealing a low need for cognition, which was also found in the results presented in 5.2.7. Respondents preferred information that was visually presented (Sojka and Giese, 2001), which was also supported by findings of Jae and Delvecchio (2004), and indicated that presenting a visual aid that summarises written product information, improves the ability of low-literacy consumers to make informed decisions.

### **Understanding of care label information**

Respondents were presented with eight different care symbols and they had to name these symbols in order to indicate their understanding thereof. The scale for this question was: Wrong =0, Correct = 1. Three reliable factors were extracted from the question that investigated respondents understanding of care label information in symbol format, namely '*Poorly understood care symbols*', '*Well- understood care labels*' and '*Average understood labels*'. The results are presented in Table 5.

**Table 5 Summary of exploratory factor analysis of the 8-item care label understanding scale (N=450)**

Item	Factor loading		
	1 Poorly understood care symbols	2 Well- understood care labels	3 Average understood labels
Symbol: Dry Flat	<b>0.934</b>		
Symbol: Line Dry	<b>0.920</b>		
Symbol: Cool Iron		<b>0.819</b>	
Symbol: Do not Iron		<b>0.814</b>	
Symbol: Hand wash		<b>0.613</b>	
Symbol: Can dry-clean			<b>0.776</b>
Symbol: Can use bleach			<b>0.730</b>
Symbol: Machine wash			<b>0.705</b>
<b>Total variance (%)</b>	65.935		
<b>Range of communalities</b>	0.883-0.879	0.490-0.680	0.429-0.692
<b>KMO</b>	0.606		
<b>Eigenvalue</b>	2.344	1.631	1.299
<b>Cronbach alpha coefficient</b>	0.9	0.6	0.6
<b>Mean</b>	0.03	0.82	0.189

*Well-understood care labels* ( $\alpha = 0.6$ ) yielded the highest mean score (mean = 0.82; SD  $\pm 0.26$ ), indicating that the respondents were familiar with the care instructions regarding ironing and hand wash. Care symbols that were *Average understood* ( $\alpha = 0.6$ ), included ‘machine wash’, dry-clean’ and ‘use of chlorine bleach’ (mean = 0.57; SD  $\pm 0.29$ ). Care symbols that were *Poorly understood* ( $\alpha = 0.9$ ) (mean = 0.03; SD  $\pm 0.16$ ) included ‘dry flat’ and ‘hang dry’. If consumers can understand care label information, their willingness and confidence may increase to care for clothing products (Yan et al., 2008). The respondents were possibly able to make associations with the symbols in the factor: ‘*Well- understood care labels*’ (for example, ‘ironing’ is presented with a concrete iron symbol), explaining this good understanding. From the results for the factor ‘*Poorly understood care symbols*’ and ‘*Average understood labels*’, it is evident that it was difficult for low-literate consumers to associate and interpret these symbols with the actual meaning thereof. Although low-literate consumers prefer information that is concretely presented (Viswanathan et al. 2005), such as care labels in symbol format, this way of presenting care information, is not always to the benefit of consumers (Yan et al. 2008), especially for the low-literate respondents in this study.

## Reading of care symbols

Regarding the reading of care symbols, respondents were asked whether they read the care instructions of clothing products in the store, or afterwards at home (No = 0, Yes = 1). No reliable factor was extracted, and the items were discussed separately. Respondents (71.7%) were indicated to read care labels at home when caring for clothing products (mean = 0.72, SD  $\pm$ 0.45) which is consistent with findings of Feltham and Martin (2006). Respondents indicated that they are not inclined towards the use of care label information in stores (mean = 0.42, SD  $\pm$ 0.49). When respondents read this information at home, their children probably assist them with the reading task (Van Staden, 2012), possibly explaining the low use of labels in stores. These results correspond with those of Feltham and Martin (2006), who found that less than half of the consumers with an education level lower than high school, used care label information at the point of purchase.

## Using label information when evaluating clothing product quality

When respondents' use of label information during the evaluation of clothing product quality were examined (No = 0, Yes = 1), one reliable factor, concerning respondents' '*concrete assessment of clothing product quality*' ( $\alpha = 0.7$ ), was abstracted. This factor concerned the 'beauty' of garments, well-known care procedures namely washing and ironing, and strength of the garment (mean = 0.73; SD  $\pm$ 0.33). These are all aspects that the respondents were more familiar with, and possibly easier to relate clothing quality with. The more abstract manner of evaluating clothing products, was regarded as separate items, as the factor presented low reliability ( $\alpha = 0.5$ ). These separate items concerning clothing product quality were, *type of material* (mean = 0.82; SD  $\pm$ 0.39), *price* (mean = 0.80; SD  $\pm$ 0.40), *the store* (mean = 0.78; SD  $\pm$ 0.41), and *the brand name* of the clothing product (mean = 0.71; SD  $\pm$ 0.46).

The '*type of material*' in this question, was considered an important evaluative criterion, but the frequency results within another factor, namely '*Ability to recognise label information fabric*', revealed that only 48.2% of the respondents were able to recognise the textile information on clothing labels. These conflicting results regarding fabric are of concern, because it indicates that the respondents reveal subjective knowledge regarding textile information. In a study by Van Staden (2012), participants concretely assessed the fabric of clothing products by feeling and touching it in order to

judge the quality thereof. This manner of evaluating quality but cannot be regarded as trustworthy seeing that information on clothing labels were not inferred in the process of evaluation (Van Staden, 2012), which confirms the results in the current study. The low-literate respondents in the present study indicated on various occasions that they do read clothing labels, although the actual use of information as in the evaluation of the quality of clothing products is questionable.

### **3.4 CORRELATIONS BETWEEN DEMOGRAPHIC VARIABLES, STORE CHOICE, METHOD OF PAYMENT AND USE OF CLOTHING LABELS AMIDST PERSONAL- AND PRODUCT-RELATED CHALLENGES**

Correlations, which were statistically significant at the  $p \leq 0.05$  level, pertaining to demographic variables, store choice, method of payment personal- and product-related challenges were determined. Spearman's correlation coefficients ( $r$ -value) vary between +1.0 and -1.0, and with 0.1 indicating small; 0.3 medium, 0.5 large effect sizes (Ellis and Steyn, 2003). Large effect sizes are considered to be of practical significance, and for the purpose of this study  $r$ -values  $\geq 0.2$  were reported, and are considered as having a medium effect in practice.

#### **Correlations between demographic variables and application of literacy skills in label reading**

There were 12 correlations between demographic characteristics, namely age, school qualification and the literacy skills (reading and numeracy) of respondents, but with only medium effect sizes indicating tendencies. Age correlated negatively with school qualification ( $r = -0.361$ ), but positively with '*Assistance with reading*' ( $r = 0.229$ ), indicating that older respondents had lower school qualifications, and thus reading skills, and tend to rely on other people for reading tasks. This correlation is consistent with the negative correlation between age and *Reading of labels* ( $r = -0.212$ ), the *Ability to recognise label information* ( $r = -0.289$ ) and the *difficulty of reading clothing labels* ( $r = -0.211$ ). Older respondents tended to have lower *Numeracy skills* ( $r = -0.206$ ), and were less inclined to use their cellular phones' calculator function ( $r = -0.266$ ), thus showing a tendency towards lower literacy and numeracy skills.

Respondents' school qualification correlated positively with *Self-reading of labels* ( $r = 0.320$ ), the *Ability to recognise label information* ( $r = 0.212$ ) the *Reading of price and size* ( $r = 0.267$ ) on clothing labels, as well as *Numeracy skills* ( $r = 0.268$ ). Higher school qualifications tended to improve respondents' reading and numeracy skills, and subsequently their functional literacy skills in the marketplace. Considering the high number of people in South Africa with poor school education levels (Statssa, 2012a), this result signifies the importance of providing product-related information at a level and format that is useful for low-literate as well as older consumers.

### **Correlations between various aspects of reading and understanding of labels**

Regarding the correlation between various aspects of reading clothing labels and numeracy calculations, seven associations of medium effect were found, as well as one practically significant association. Respondents' reading of clothing labels by themselves, correlated negatively with the '*Reading of labels*' ( $r = -0.207$ ), '*Price and size on labels*' ( $r = -0.269$ ) and '*Ability to recognise label information*' ( $r = -0.246$ ), which may be related to consumers' coping strategy with their poor reading skills by only pretending to read label information (Adkins and Ozanne, 2005). Further, there was a tendency for respondents who '*Understood size and brand*', '*Read clothing labels*' ( $r = 0.284$ ) better, to have a better '*Ability to recognise label information*' ( $r = 0.232$ ). Respondents with higher '*Numeracy skills: calculations*' ( $r = 0.437$ ) also had a practically significantly higher '*Ability to identify label information*'. These results also indicate that respondents who had better reading skills, tended to be more functional in the marketplace, which might result in more informed purchase decisions, confirming the importance to address low-literate consumers' needs to obtain product-related information in the marketplace.

### **Correlations between age and reading of store information - pictographic thinking**

Four associations between factors *Store Identification: Letter type, colour and shape changes*, *Store Identification: Logo only and taglines* and age, the *Ability to recognise label information* and *Understand size and brand* were found, with medium effect sizes. In the case of the factor: *Store Identification: Letter type, colour and shape changes*, a positive correlation were found with the factor '*Ability to recognise label information*' ( $r = 0.393$ ). This association indicates that respondents who are inclined to read and

understand label information tended not to be much influenced by changed colours and font types, revealing a lower tendency towards pictographic thinking (Gau and Viswanathan, 2008). '*Store Identification: Logo only and taglines*' also correlated with '*Ability to recognise label information*' ( $r = 0.241$ ) and '*Understand size and brand*' ( $r = 0.294$ ), indicating a tendency towards the central route of elaboration when reading clothing label information. Older respondents were less able to identify '*Store Identification: Logo only and taglines*' ( $r = -0.230$ ). The latter association implies that older respondents tended to be more likely to reveal pictographic thinking than younger respondents and will possibly follow the peripheral route of elaboration when reading marketing information such as store logos.

### **Correlations between income, store choice and method of payment**

Five correlations with medium effect sizes between payment methods, income and store-types were found. The more the respondents paid cash for clothing purchases, the less the tendency to purchase clothing products on store accounts ( $r = -0.258$ ). Respondents that buy clothing products on lay-by, tended to be more likely to buy more at *discount stores* ( $r = 0.294$ ). Furthermore, respondents who were more inclined to buy on store accounts, tended to have higher income levels ( $r = 0.214$ ), as well as a higher affinity for *Upper-class stores* (Factor 1;  $r = 0.360$ ) and *Hyper stores* (Factor 3;  $r = 0.215$ ). Respondents with higher levels of income, were more likely to search for clothing products at a larger variety of stores.

### **Correlations between respondents' use of clothing labels amidst different product-related challenges**

Correlations with medium effect sizes between '*Understanding of size and brand*', '*Reading of labels*', '*Ability to recognise label information*', '*Numeracy: Calculation skills*' and '*Well understood labels*' were found. Respondents' '*Understanding of size and brand*' correlated with '*Reading of labels*' ( $r = 0.201$ ), '*Ability to recognise information*' ( $r = 0.232$ ), '*Numeracy: Calculations skills*' ( $r = 0.201$ ) and '*Well-understood care labels*' ( $r = 0.201$ ). Respondents with higher reading skills also had higher numeracy skills, emphasising the importance of being able to read well. Consumers who are more motivated to involve themselves in product label information (central route of elaboration), will be able to make more informed purchases, which can be further

improved if product information is provided in a format that they understand (Jae & Delvecchio, 2004). No correlations between respondents' *'understanding of size and brand'*, and demographic characteristics were found.

### **3.5 THE ASSOCIATION OF OCCUPATIONS OF RESPONDENTS WITH STORE CHOICE AND THE USE OF CLOTHING LABELS**

A one-way ANOVA between subjects was conducted to compare the statistically significant difference at the  $p \leq 0.05$  level, between the different occupations (unemployed, cleaner, domestic worker, sales person, clerical worker and pensioner) of the respondents and store selection, *'reading of clothing labels'*, *the 'application of numeracy skills when calculating prices'*, *'reading of store information - pictographic thinking'*, *'using of label information when making clothing decisions'*, *'understanding of care labels'*, *'the reading of care symbols'* and lastly *'the using of labels when evaluating the quality of clothing products'*. To indicate whether statistically significant differences would be important in practice, Cohen's effect sizes were indicated as low ( $d = 0.2$ ), medium ( $d = 0.5$ ) and large ( $d = 0.8$ ) (Cohen, 1988), where only large effect sizes are considered to be practically significant and medium effect sizes are only indicative of tendencies (Cohen, 1988). Only Cohen's  $d$ -values were reported.

#### **Difference between occupations and store choice**

When comparing the differences between occupations of respondents and their choice of stores (Never = 1, Sometimes = 2, Always = 3), it is evident in terms of Cohen's effect sizes, that clerical workers (mean = 1.99) showed a tendency to buy more clothing products sometimes from upper class stores than respondents who are unemployed (mean = 1.54;  $d=0.67$ ), cleaners (mean = 1.58;  $d = 0.60$ ), domestic workers (mean = 1.67;  $d = 0.47$ ) and sales persons (mean score = 1.61;  $d = 0.56$ ), but practically significantly more than pensioners (mean = 1.45;  $d = 0.80$ ) who almost never purchased at these stores. Regarding clothing purchases at hyper stores, clerical workers showed a higher tendency (mean = 2.05) towards purchasing at these stores (sometimes) than sales persons (mean = 1.75;  $d=0.54$ ) and domestic workers (mean = 1.70;  $d=0.70$ ), but practically significantly more than unemployed respondents (mean = 1.57;  $d=0.88$ ), cleaners (mean = 1.52;  $d=1.10$ ) and pensioners (mean = 1.60;  $d=0.89$ ) who never to sometimes purchased at hyper stores. Clerical workers possibly earned

higher salaries than respondents with other occupations, which allow them to purchase clothing products at a larger variety of stores. Considering the negative correlation between age and school qualification, pensioners are possibly not interested in seeking more information about clothing products by visiting various types of stores, and therefore satisfied to purchase clothing products at stores that they are familiar with, namely discount stores in this case.

### **Difference between occupations and the reading of clothing labels**

Regarding the difference between occupations of respondents and the reading of clothing labels (No = 0, Yes = 1), it was revealed that pensioners (mean = 0.32) with medium effect were less inclined to read clothing labels than clerical workers (mean = 0.59;  $d=0.71$ ), cleaners (mean = 0.56;  $d=0.63$ ) and unemployed respondents (mean = 0.50;  $d=0.44$ ). Clerical workers (mean = 1.0) tended to read the '*price and size*' information on clothing labels more than pensioners (mean = 0.82;  $d=0.57$ ). Due to the age of pensioners (age correlated negative with school qualification;  $r= -0.361$ ), their reading skills were lower than respondents in other occupations, which explain pensioners' tendency to dislike reading labels. Due to the possibly higher income levels and younger age of clerical workers than that of pensioners, these respondents might have been more aware of fashionable clothing products, resulting in higher involvement in reading of product-related information on clothing labels.

### **Differences between occupation and the ability to recognise information on clothing labels**

When comparing the differences between occupations and respondents' ability to recognise information on clothing labels (Wrong =0, Correct = 1), pensioners (mean = 0.513) with medium effect sizes ( $d = 0.52$  to  $0.71$ ), tended to be less likely than respondents in other occupations (mean = 0.68 to 0.74) to identify clothing labels correctly. The ability of the respondents to do numeric calculations in relation to their different occupations, revealed differences with medium effect sizes between the *Numeracy skills* of respondents and the different occupations. Pensioners' numeracy skills (mean = 0.47) ( $d= 0.40$  to  $0.60$ ) were lower than that of respondents within other occupations (means = 0.62-0.69) with medium effect sizes. Again, the influence of age,

and possibly lower school qualifications of older respondents were evident in the tendency towards lower numeracy skills of pensioners.

### **Differences between occupation and the use of clothing labels during the evaluation of product quality**

A statistically significant difference between the occupations of respondents and their concrete assessment of clothing product quality ( $p= 0.003$ ) was found. Quality assessment was measured on the scale: No = 0, Yes = 1. Clerical workers (mean= 0.96), tended to be more inclined towards the assessment of clothing product quality than unemployed respondents (mean= 0.78;  $d= 0.63$ ) with a medium effect size and practically significantly more than pensioners (mean= 0.69;  $d= 0.74$ ) cleaners (mean= 0.69;  $d= 0.79$ ), domestic workers (mean= 0.66;  $d= 0.83$ ) and sales persons (mean= 0.63;  $d= 0.98$ ). Seeing that clerical workers read clothing labels and have a better understanding of the information on labels, they were most likely more able to evaluate the quality of clothing products. Clerical workers probably had to follow a more formal dress code, and therefore the purchase of good quality clothes was more important to them than for respondents with other occupations.

### **Differences between occupation and the difficulty to read clothing labels and the size of letters on the label**

When examining the differences between occupation and the difficulty to read clothing labels (0 = No, 1 = Yes), clothing label information tended to be more difficult to read for pensioners (mean = 0.66) than clerical workers (mean = 0.31;  $d = 0.73$ ) and sales persons (mean = 0.43;  $d = 0.46$ ) with medium effect sizes. The font size of letters on clothing labels, tended to be more difficult to read for pensioners (mean = 0.49) than domestic workers (mean = 0.69;  $d = 0.40$ ), unemployed respondents (mean= 0.74;  $d= 0.51$ ), cleaners (mean= 0.75;  $d= 0.52$ ) and sales persons (mean= 0.77;  $d= 0.56$ ) with medium effect and practically significant more difficult than for clerical workers (mean= 0.92;  $d= 0.87$ ). Pensioners perceived the reading of clothing labels as difficult which revealed poor reading skills that are associated with lower school qualifications. The font size of letters on labels were also problematic for them, and considering the relative small font size of letters on clothing labels and the age of pensioners, poor eyesight may have contributed to problems with size of letters on labels.

## 4 CONCLUSION

The conclusion of the results was compiled in accordance with the objectives of the study. The respondents of this study were mostly between 40 and 59 years of age, married, completed Grade 8 and fell into a lower socio-economic category. Most respondents were unemployed, while most of the employed respondents were cleaners. Older respondents tended to have lower school qualifications and numeracy skills and not to read clothing labels. Literacy and numeracy skills tended to improve with higher school qualifications. The low-literate respondents in this study mostly preferred to pay cash for clothing purchases and to buy clothing products at discount stores, which is consistent with their income levels. Respondents who were more inclined to buy on store accounts, had higher income levels and a higher affinity for *Upper-class stores* and *Hyper stores*.

Low-literate respondents use product-related information on clothing labels, amidst the personal challenges they experience. Their approach towards the reading of labels was rather negative, and almost half of them indicated labels as difficult to read. However, the respondents who were more able to recognise information on product labels were probably showing a tendency towards the central route of elaboration when considering their ability to read store information. Respondents who were able to identify stores even though store logos were altered, shown that they were not highly subjected to pictographic thinking, although a low need for cognition were revealed when they had to identify stores when only the logo or taglines were presented. Respondents' application of numeracy skills when calculating label prices, were satisfactory, and they showed a certain level of abstract thinking, when confronted with situations in which they had to infer price and size, consider unit prices and the rounding of amounts. This revealed marketplace literacy at a procedural level, possibly resulting in higher functional literacy skills in the marketplace. However, older respondents were more likely to reveal pictographic thinking than younger respondents and might possibly follow the peripheral route of elaboration when reading marketing information.

From the results concerning low-literate respondents' use of clothing label information, associated with *product-related* challenges, it was evident that their understanding of care label symbols was poor, except for hand wash and ironing instructions. Respondents were thus not objective about their own understanding of

label information, considering their more '*concrete way of assessing clothing product quality*', and low preference for reading care label information in stores. This poor understanding of care label information can have negative consequences regarding the durability of purchased clothing products. It can therefore be assumed that care label information is not very important to these respondents possibly due to poor understanding of care label information in textual format as well as symbol format. Regarding size information, respondents preferred the non-informative lettered size format that was presented pictographically, followed by the same format as it is actually presented on labels of clothing products. Respondents probably understood the meaning of terminology such small, medium and large, and can relate it to the size indication on labels, revealing pictographic thinking to a certain extent. Numeric size information were poorly understood, and revealed respondents' inability to infer numeric information at a more advanced level, seeing that they did not have knowledge of their own body sizes and measurements.

With reference to the differences between respondents' occupations, and store choice as well as with their use of clothing labels, the most practically significant differences were found between clerical workers and pensioners. Some of the differences included clerical workers' store choice, reading of clothing labels, evaluation of clothing product quality and awareness of the use of technology such as the calculator function on cellular phones. Pensioners, on the other hand, read clothing labels the least of all the occupations, experienced it as difficult and recognised label information poorly. The size of letters on labels was problematic to read, and their numeracy skills were lower than all the respondents in other occupations. Due to the more formal nature of clerical work, respondents in this occupation were possibly more in contact with the general public, which may create awareness of their appearance and to dress fashionable. Pensioners, on the other hand, are older consumers perhaps have a lower need for fashionable clothes, explaining the lower involvement in product-related information on clothing labels.

The low-literate respondents of this study provided the researchers with insight into their use of clothing label information. In summary it can be stated that these respondents were able to recognise label information, and revealed basic numeracy skills in the retail environment. However, to calculate discount prices, and understand the value of multi-packaged products was challenging for these respondents. The peripheral route of

elaboration came forth when respondents had to identify stores by means of a tagline. The numeric way of presenting sizes of clothing products were difficult to understand and pictographic thinking came forth in their preference for the graphic and symbolic presentation of a size. These consumers' understanding of care labels were poor, except for hand wash and ironing, implying that they were not able to infer the care symbols with the care instructions.

## **5 IMPLICATIONS OF THIS STUDY**

Low-literate consumers revealed distinct behaviour in the marketplace, and disclose cognitive predilections for concrete and pictographic thinking, which was confirmed by this study. A challenge experienced by the authors was to consider this way of thinking when compiling the measuring instrument, in order to meet the objectives of this study. Although non-probability sampling was used and results of this study cannot be generalised to a wider population, the results might provide insight to retailers and marketers regarding low-literate consumers in the clothing marketplace. In order to address the needs of low-literate clothing consumers when using label information, retailers and marketers must be made aware of their cognitive predilections, and how it influences their behaviour in the marketplace. Retailers should train store assistants to be sensitive to the needs of low-literate consumers, to treat them with respect and assist those who experience problems with reading and understanding of product-related information. In this regard special attention should be paid to low literate pensioners who might be particular vulnerable regarding market place literacy. Marketers must also take cognizance of the personal and product challenges that low-literate consumers experience, in order to provide information in a format that is accessible for these consumers. Regarding the presentation of sizes on clothing products, may a graphic presentation, as well as a combination of numeric size formats and non-informative lettered format, assist in low-literate consumers' understanding of size information. Although low-literate respondents experienced few problems with the reading and understanding of prices on labels, they struggled to understand information products were presented at a discount such as '50% off'. Again, marketers could provide associative graphic information, for example, a circle cut in half in order to

indicate '50% off'. Pictorial product information accompanied by congruent textual information can aid low-literate consumers' understanding of product information.

## **6 RECOMMENDATIONS FOR FUTURE RESEARCH**

This study can be repeated on a broader base in order to be able to generalise results. Further, the results of this study can be used to conduct experimental research in terms of providing graphic information congruent to textual information for size, price and care instructions. To observe low-literate consumers when doing clothing purchases, can broaden the understanding of these consumers' behaviour in the marketplace.

## **7 LIMITATIONS OF THE STUDY**

Considering that the sample selection for this study was purposive in nature, the results of this study cannot be generalised. However, it may serve as a starting point for further research regarding low-literate consumers in South Africa. Additional research, such as observing of the low-literate consumers' behaviour in the clothing marketplace can enhance research of this nature. Respondents' preference for pictographic thinking can be investigated by implementing experimental research to investigate this way of thinking in terms of care label information, different sizing formats, as well as the provision of graphic information accompanying textual information.

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## **CHAPTER 7**

### **CONCLUDING DISCUSSION**

#### **7.1 INTRODUCTION**

The broad research aim of this sequential exploratory mixed method study comprised two phases. The first qualitative phase sought to explore the challenges and coping strategies of low-literate female clothing consumers when purchasing clothing products in a South African context. The second quantitative phase built on the results of the qualitative phase, and investigated these consumers' use (reading, understanding and application) of product-related information on clothing labels. Therefore, the mixed method research question was: How do the statistical results obtained in the quantitative phase of the study explain the qualitative findings?

Chapter 1 presented the research problem and objectives of the study. In Chapter 2, a literature review manuscript that reported the challenges and coping strategies of low-literate female consumers was presented. Chapter 3 comprised a review manuscript of these consumers' use of clothing labels as source of product-related information. Chapter 4 explained the research methodology of this mixed method study. Chapter 5 presented that manuscript discussing the results of the qualitative phase of the study, while Chapter 6 outlined the manuscript pertaining to the quantitative phase of this study and the accompanying results.

In this final chapter, a summary of the main findings of the study is presented. Conclusions are drawn and the limitations of the study, recommendations for future research and implications for clothing retailers and consumer-education opportunities are discussed. Since it was a two-phase mixed method study, it would be helpful to summarise the two studies in one framework in order to get an overview of the relations between the concepts on which each study focused. A revised conceptual framework for this mixed method exploratory study is presented (Figure 1)

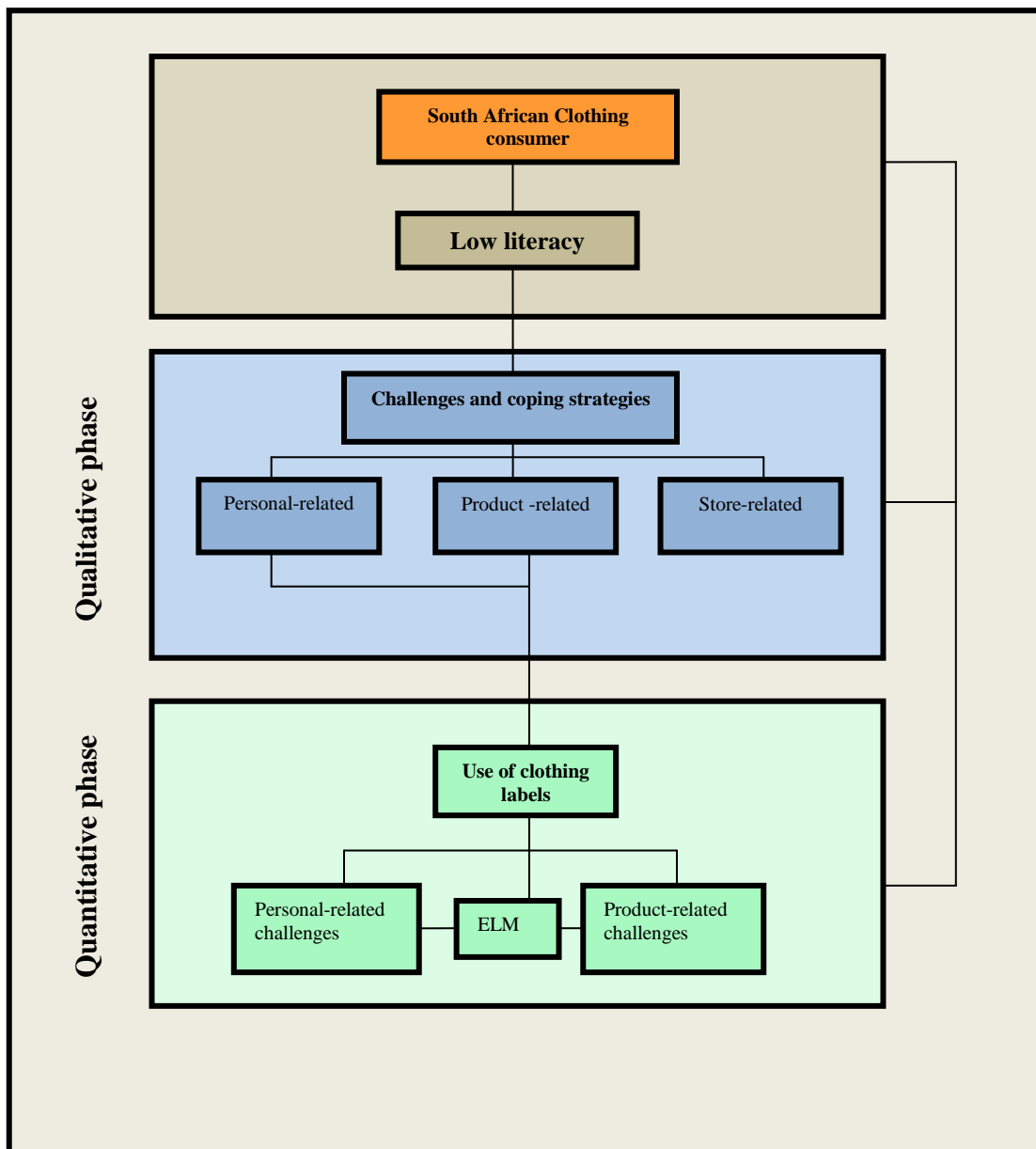


Figure 1 Revised conceptual framework: Low-literate clothing consumers' use of clothing labels

## **7.2 CONCLUSION**

For any country it is crucial to promote the economic prosperity for both consumers and retail segments. This is particularly true for an emerging economy such as South Africa, which has a diverse population and significantly low literacy levels that are coupled with a controversial history of large disadvantaged portions of the population. This implies that the cognitive demands of consumers must be met in order for them to make informed decisions and judicious purchases – something that is only possible if they can read, understand and apply information to the products they intend to purchase. Likewise, retailers must be aware of the needs of low-literate consumers in order to empower them so as to be functional in the retail setting when purchasing clothing products.

### **7.2.1 Qualitative exploratory phase of research**

The objectives for the qualitative phase of the study were to explore the challenges experienced and coping strategies applied by low-literate consumers in the marketplace. These objectives were addressed by conducting semi-structured interviews with low-literate female consumers. As a result of these interviews three broad themes for the challenges and coping strategies were identified: personal, product and store-related. The conclusion of the qualitative phase will be presented according to the findings of the study, because the challenges that these consumers experience, and the coping strategies they apply, are closely related and can therefore not be interpreted and presented separately.

#### **7.2.1.1 Personal-related challenges and coping strategies**

With regard to personal-related challenges and coping strategies, it was found that they could be classified as cognitive (literacy, numeracy, concrete thinking and pictographic associations), social (language and social interaction), financial (lack of money) and affective (disheartened) in nature. The cognitive challenges that participants experienced were related to their reading skills which were often problematic. Some of the participants revealed unwillingness to and dislike for reading labels, possibly reflecting a lower need for cognition. The participants coped with this challenge by relying on other people, such as store assistants and their children to help them obtain information. Furthermore, establishing the total price of intended purchases was also challenging, however participants implement concrete measures for achieving this. These measures include rounding up amounts, paying for one item at a time, asking cashiers for

assistance, or making use of the calculator function on cellular phones although children mostly assisted with the functioning thereof. These low-literate consumers were likely to use single attributes of clothing products to evaluate them, of which the price was used most often. Pictographic thinking was another aspect that came forth as a cognitive challenge, and was noticeable when these participants establish clothing sizes by showing an imaginary body size with their hands, and identifying information on clothing advertisements. Another personal-related challenge is social in nature, and was reflected in terms of language and social interaction. English, the language of communication for product information, was often difficult for these participants to read and understand. The participants were not enthusiastic about having company with them when making clothing purchases, and mostly preferred to shop alone. However, they did indicate that they take their children with them, or otherwise relied on store assistants for advice and information.

The financial inabilities of these participants posed a serious challenge for them. Although clothing was important to them, they also had other financial responsibilities in terms of food, transport, school fees and housing. Low-literacy and low-income are closely associated, and clothing purchases were therefore rarely hedonic in nature. They plan their purchases and often save money for an occasion that required special clothing, such as school wear for children. These participants often reported unrealistic expectations about the prices of clothing products, and insufficient money might lead to the disappointment of not being able to afford clothing products. They often cope with this type of situation by buying fewer clothing products, and only those that were affordable. Insufficient money also leads to other forms of payment such as lay-by, and for those who were credit-worthy, store accounts. Participants often saved money until the purchase could be made. Poor financial abilities also encouraged participants to compare different clothing stores' prices, and they mostly purchase clothing products from discount stores. These low-literate consumers view branded products as high quality, though expensive, and are willing to buy these for their children. The low-literate participants were dearly aware of the stigma associated with their low literacy levels, and were very sensitive about this. This affective challenge often caused hurt feelings and humiliation, especially if they lacked money to pay for purchases. Inappropriate treatment by store assistants often resulted in these consumers leaving the store.

### 7.2.1.2 Product-related challenges and coping strategies

The product-related challenges and coping strategies of low-literate participants pertain to the types of clothing information, the format of label information and the evaluative criteria for clothing products.

Clothing labels provided them with different types of information such as price, size and care information. Price was important to low-literate consumers, and was not difficult for them to read. However, when clothing products were offered at special prices, they often became confused and were unable to calculate the discounted price, which results in uncertainty about the actual product price after the discount has been calculated. Another type of information on clothing labels is *size*, and participants were mostly familiar with the non-informative lettered size format such small (S), medium (M) and large (L). This size format was easy for them to understand, possibly due to the pictographic association that participants made with the meaning of ‘small’, ‘medium’ and ‘large’. The numbered sizing system, for example sizes 10, 12 and 14 or 32, 34 and 36 was however confusing, because it was difficult and abstract for the participants to related this sizing format to their own body measurements, which is unknown to them. Care instructions are another product-related challenge that they cope with. Although they were aware that proper care taking of clothing products leads to the durability of the product, the symbol and textual information is often unknown to them. Care-taking aspects frequently mentioned included the methods of washing (by hand or machine), ironing, as well as the use of fabric softeners and chlorine bleach during the cleaning process. The low literacy level of participants might influence their knowledge and understanding of care information on clothing labels.

Concerning the format of label information, namely text, symbol or a combination of text and symbols, few participants indicated the ability to read and understand the text of care information, whereas some preferred the symbol format. The combination format of care symbols were preferred by only a few of the participants. Low-literate participants may understand written product information if uncomplicated terminology is used but they relied more on visual and concrete information. Poor care label knowledge were evident, and again these consumers relied on store assistants and children for help with unclear information. When the participants purchased clothing products, it was important to them that these products must be of good quality, the aesthetic value must be appealing, and the fitting of the garments must be proper, and they applied various evaluative criteria when selecting clothing products. Concerning

the quality of clothing products, various aspects were mentioned as indicators of good quality, for example retailers, price, type of fabric, care of clothing products and brands. However, these criteria were independently considered, reflecting low-literate consumers' tendency to consider single attributes when evaluating products. The aesthetic value of clothing products was described by its colour, the pattern [style] of the garment, decorations and beautiful fabric. The proper fitting of clothing products is also an important selection criterion. The participants were often unaware of their own body-measurements and the visual observation of clothing products is important in confirming the fitting thereof.

### **7.2.1.3 Store-related challenges and coping strategies**

The behaviour of store assistants, store selection and the in-store information were identified as aspects of store-related challenges and coping strategies. Participants in this study indicated dependence on store assistants for, amongst others, the use of clothing product-related information (such as price and size) and the finding of clothing products in the store. Participants indicated that they were appreciative of the store assistants who, for instance, reacted positively to their requests. However several participants perceived the behaviour of store assistants as negative. They often feel offended when store assistants made rude verbal remarks upon requests for assistance, and felt uncomfortable when store assistants pressured them to purchase clothing products. Being followed around by store assistants were perceived as a demonstration of distrust. This store-related challenge contributed to the personal affective challenges they experienced. Again, participants coped with this negative behaviour of store assistants by leaving the store without any purchases.

The participants' selection of stores was largely based on the affordability of a store's prices. Participants compare the prices of different retailers, and also regard the accessibility to good quality clothing products as important. An additional factor that participants mentioned as a criterion for store selection is the availability of clothing products and the sizes they needed. Well-organised stores are also important, since it is challenging for low-literate consumers to operate in a retail environments with large product choices and store layouts that were difficult to explore. Participants in this study indicated that they obtained information about clothing stores and the type and variety of products that they supply by observing window displays. Visual information in stores such as store signage and displays were also noted by the participants.

## **7.2.2 Quantitative investigative phase of research**

The objectives of the quantitative phase emerged from the findings of the qualitative phase of the study, which were specifically related to the use of clothing labels amidst personal and product-related challenges that low-literate respondents experienced regarding product information on clothing labels. The objectives for the quantitative phase of this study were therefore to: determine the demographic characteristics of the respondents, their store choice and method of payment for purchases; investigate the use of clothing labels considering personal and product-related challenges of the respondents; draw conclusions about the low-literate respondents' functional literacy and the ELM as the route of elaboration (central or peripheral) when using price, size and care information on clothing labels.

### **7.2.2.1 Demographical data of respondents, store preferences and method of payment**

Almost half (48.9%) of the respondents were between 40 and 59 years of age, and the largest group were married. Almost equal numbers of respondents had completed Grades 5, 6 and 7, while most of respondents (40%) had completed Grade 8. The older respondents in this study had lower school qualifications, and they were possibly pensioners, which accounts for 16.9% of the respondents. Of the remaining respondents, 31.1% were unemployed, 17.3 % were cleaners, 16.9% were pensioners, and 2.9% did clerical work. The majority of the respondents (54.7%) earned a low-income of between R500 and R2 000 ( $\pm$  US\$57.00- US\$228) per month. The unemployed respondents indicated that they receive allowances from the government or from their husbands who were employed. Regarding respondents' preferences for clothing stores, discount stores were mostly preferred. The second most popular choice was hyper-stores and the least popular was upper class stores, although clerical workers bought more clothing products from 'upper class' stores than respondents in other occupations. All the respondents preferred to buy at discount stores, regardless their occupation, which is most probably due to the generally low income levels of all respondents. The financial abilities of respondents had a causal effect on their awareness of prices of clothing products, and respondents mostly paid cash for clothing purchases. Respondents who do pay cash for their purchases preferred to buy at discount stores, and those with higher income levels preferred 'upper class' stores and hyper stores.

### **7.2.2.2 The use of clothing labels amidst respondents' personal-related challenges**

The use of clothing labels related to personal challenges included their reading of clothing labels, application of numeracy skills the use of label information when making clothing decisions, as well pictographic thinking when reading store information. Although respondents in this study preferred to read product labels by themselves, the reading of clothing labels did not receive high priority, and almost half of them found the reading of label information difficult. The older respondents in this study tended to be more reliant on other people for assistance with reading tasks. However, the majority of respondents were able to recognise product label information. The price and size of clothing products were the types of information that were mostly read by the respondents, and clerical workers most frequently read this type of information.

Due to the fact that paying cash was the most popular method of payment for clothing purchases, it was very important for respondents to check their money in order to observe the sufficiency thereof. Respondents indicated that they calculate the total price of clothing products in their mind, implying reasonable numeracy skills, which was confirmed when the majority of respondents correctly calculated prices when they had to apply numeracy skills. However, more than half of the respondents admitted that they had to ask for assistance when calculating total prices. Although respondents were aware of cellular phones' calculator function, they did not utilise it frequently, although clerical workers were more inclined to use this function than respondents with other occupations. The concrete method of determining enough money by paying for clothing items one by one was implemented by slightly more than half of the respondents.

Respondents did reveal abstract thinking to a certain extent when they used label information. More than half of them were able to relate price and size, and did correctly rounded off prices, but were not very successful when determining the value of multi-packaged clothing items. The respondents possibly revealed marketplace literacy at a procedural level, which implies the ability to think abstractly, particularly with reference to numeracy.

Pictographic thinking were not highly reflected when respondents had to identify stores when colour and letter types on store logos were changed. The respondents were also not very successful identifying stores by means of a tagline or when only the store logo was presented. This is probably an indication of a low need for cognition, and an inclination towards the

peripheral route of elaboration, because to read and remember a tagline, required more involvement into store information.

### **7.2.2.3 The use of clothing labels amidst the product-related challenges experienced by respondents**

Product-related challenges of respondents related to their understanding of size and brand, size format, understanding of care label information, the use of care label instructions and the evaluation of the quality of clothing products.

Respondents indicated that they understand size and brand information on clothing labels. When respondents were presented with various formats for the representation of size 'Medium', they mostly understood the non-informative lettered size format that was offered pictographically. The ordinary format, namely 'M' for presenting 'Medium', was the second most popular format. The numeric formats '36' and '12' were not popular, and the pictographic format of size presentation in the form of body shapes was the least popular. Low-literate respondents did not understand numeric formats that well, and revealed a lower need for cognition and preferred information that was visually presented. The respondents who were able to identify and understand label information better, are not influenced by changed colours and font types on store logos. They therefore demonstrate a lower tendency to pictographic thinking, and have a better understanding of care label information. Respondents who were more motivated to read and understand information on product labels, show a slight inclination towards the central route of elaboration, provided that the information is in a format that they can read and understand. Older respondents were more likely to reveal pictographic thinking than younger respondents and possibly followed the peripheral route of elaboration when reading marketing information such as store logos.

The respondents revealed poor care label understanding, except for hand wash and ironing instructions, and the majority of the respondents considered the use of care instructions at home when caring for clothing products, and was perhaps assisted by their children when reading the information. Concerning the evaluation of the quality of clothing products, the respondents are slightly more inclined towards the concrete assessment of clothing products that include well-understood care procedures. However, care methods were not really important to these respondents, which can be related to poor reading skills and product information that is not

clearly understood. This raises the question about the effectiveness of the respondents' evaluation of clothing products' quality. Clerical workers were more aware of the quality of clothing products than respondents in the other occupations, which may be due to a more formal dress code required for this particular job.

### **7.3 IMPLICATIONS OF RESEARCH FINDINGS**

Little is known about the needs of the low-literate clothing consumers in the South African retail setting, and since these consumers are frequently involved in purchasing clothing products to fulfill this basic need, it is important for retailers and marketers to take note of whether and how, these consumers make decisions about a product. It is important to consider the collective purchase power of low-literate, low-income consumers, especially in a developing country such as South Africa, where they make up a large percentage of the population. In order to address the needs of low-literate clothing consumers in the clothing marketplace, retailers and marketers must be made aware of the challenges that these consumers experience and how they cope with these challenges.

#### **7.3.1 Implications for low-literate consumers**

Literacy and educational accomplishment are highly valued in any society and in a marketplace that merely provides for literate consumers, low-literate consumers face various challenges. These consumers may feel vulnerable and often experience negative outcomes when purchasing products due to misunderstanding product-related information. Due to the cognitive predilections of low-literate consumers in terms of concrete and pictographic thinking, these consumers will possibly follow the peripheral route of elaboration due to their low need for cognition. Low-literate consumers often prefer not to involve themselves in complex, textual information on clothing labels and the implication of this is that they may experience challenges to, amongst others, read product labels and understand sizing of clothing products, resulting in improper use of clothing label information. These consumers may also struggle to make wise purchase decisions in terms of the unit price of a multi-packed product in relation to the price of a single packaged product. Simple calculations in terms of adding two prices may be feasible for these consumers, but the more abstract relations between clothing product and body sizes, might be too difficult for them to understand, resulting in purchasing of the wrong sizes. The effect of not understanding care labels can result in improper care taking of clothing products, causing

damage to garments, whereby dissatisfaction and financial loss may occur. As a result of these challenges low-literate consumers may use product information incorrectly, leading to poor purchase decisions. They may not have enough money available or may even waste time struggling to overcome these difficulties. The inability to use product information correctly might lead to humiliation, anxiety and emotional stress for these low-literate consumers. Low-literate consumers have implemented various strategies in order to maintain themselves as fairly competent consumers. Despite these strategies that low-literate consumers implement to cope with these challenges, it is important for marketers and retailers to take cognisance of the challenges that low-literate consumers experience when they are active in the retail setting in order to empower them to be well-informed clothing consumers.

### **7.3.2 Implications for retailers and marketers**

Low-literate consumers in this study revealed problems with reading product information (such as price, size and care instructions), with the subsequent reliance on store assistants' help. When store assistants are trained, they must be made aware of the special needs of these consumers. Due to the challenges that low-literate consumers experience, they often feel humiliated and exposed as a result of low-literacy. Store assistants must treat these consumers with respect and be made aware of the needs of these consumers, to the way low-literate consumers use product information particularly with regard to the language, reading and numeracy challenges that they face and how this influences their behaviour in the retail setting. Store assistants must be able to for example, inform low-literate consumers about the final price of a clothing product presented at a discount, or convert numbered sizing formats to the corresponding lettered size format.

Product information on product labels and in stores such as store signage, can be adapted to address the needs of low-literate consumers by providing pictorial and graphic images congruent to provided textual information. When products are presented at a discount price (for example, 'less 25%'), accompanying graphic images, such as a circle wherein a quarter is removed, can be displayed when products were presented at a discount, in order to enhance low-literate consumers' understanding thereof. Regarding the presentation of sizes on clothing products, graphic presentations, as well as a combination of numeric size formats and non-informative lettered format, can assist low-literate consumers to understand size information better. Store assistants must also be knowledgeable about care taking instructions of clothing products, so as to assist low-literate consumers when making purchase decisions, but simultaneously, explain

care information to these consumers to improve their understanding of care instructions, when taking care of clothing products at home. Retailers can further assist with these consumers' concrete predilections, by ensuring that store layouts and the organisation of stores are not only focused to the best marketing of products, but also to accommodate these consumers in terms of cognitive challenges. Marketers and retailers must take cognizance of their role in the empowerment of low-literate consumers in order to improve their functional literacy in the marketplace as well as their retail experience when buying clothing products. Considering the collective purchase power of these consumers, retailers can benefit from it if consumers are more confident and able to make informed purchase decisions, which in turn may lead to store loyalty. Retailers should support initiatives to educate consumers. Consumer education authorities can benefit from this research in order to develop educational opportunities to, in the first place educate consumers about the information on labels in order to better their understanding thereof, and secondly make consumers aware of the importance to read clothing label information.

### **7.3.3 Implications for research**

In terms of the research process, valuable insight was gained. It was a challenge interviewing the low-literate participants at a level at which they could understand the questions, in order to obtain valuable responses, seeing that these participants often had unique ways of expressing themselves. Quantitative research methods as in the case of the second phase of the study, is not widely applied on low-literate consumers. It was challenging and important to consider the cognitive needs of the respondents in terms of concrete and pictographic thinking, when compiling the quantitative measuring instrument. The questions had to be formulated in such a way that the respondents were able to understand and answer it, but importantly to meet the objectives of the quantitative phase, without sacrificing the quality of the questionnaire.

## **7.4 LIMITATIONS OF THIS STUDY AND RECOMMENDATIONS FOR FUTURE RESEARCH**

Although insight was gained regarding the behaviour of low-literate clothing consumers, the results of this study cannot be generalised, because the sample selection for this study was based on a purposive sampling. However, it may serve as a basis for broader-based research projects regarding low-literate consumers in South Africa and research on a national scale. Other methods of research, such as observation of the low-literate consumers' behaviour in the clothing

marketplace can be executed in order to obtain more objective data, seeing that the data reported by respondent were often subjective. In addition, the respondents' preference for pictographic thinking can be further researched by implementing experimental research to investigate this way of thinking, particularly with regard to care label information, different sizing formats, as well as the provision of graphic information accompanying textual information. The influence of branded products on low-literate consumers can be further investigated, as well as the store-related challenges that participants revealed in the qualitative phase of the study. The results of this study can also be further investigated by comparing it to consumers with even lower literacy levels than the respondents in this study.

# **APPENDICES**

## **APPENDIX 1**

### **Author Guidelines**

# INTERNATIONAL JOURNAL OF EMERGING MARKETS

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continuum", in Stankosky, M. (Ed.), *Creating the Discipline of Knowledge Management*, Elsevier, New York, NY, pp. 15-20.

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Sterman, J.D. (1992) Teaching takes off: flight simulation for management education. [WWW document]. URL <http://web.mit.edu/jsterman/www/SDG/beergame.html> (accessed on July 26th, 2006).

Stinchcombe, A. (1965) Social structure and organizations. In: *Handbook of Organizations* (ed. by J. March), pp. 142-193. Rand McNully, Chicago, IL, USA.

Yetton, P., Sharma, R. & Southon, G. (1999) Successful IS innovation: the contingent contribution of innovation characteristics and implementation process. *Journal of Information Technology*, **14**, 53-68.

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- Submit a copy of the *JCA* copyright form, signed & dated by the contact author

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Manuscript components should be arranged as follows:

- Author or authors' name(s)
- Title of article
- Abstract
- Author information, including the author's position, institutional affiliation, and e-mail contact address
- Any additional information, such as acknowledgments
- Text of article
- Appendices
- References

- Tables and figures

**NOTE:** Tables/figures/etc. should be on separate pages and follow the References, as they will be inserted where indicated by the compositors. See the **General Guidelines** section in **TABLE, FIGURE, GRAPH, AND CHART FORMAT** for further information.

## **TEXT FORMAT**

### **Line spacing**

Double-space all text, including quoted material, except footnotes and text that occurs with visuals (tables and figures) or in an accompanying note to a visual.

### **1st-level headings**

Centered, all caps

# AFRICAN JOURNAL OF BUSINESS MANAGEMENT

## Instructions for Authors

The **Title** should be a brief phrase describing the contents of the paper. The Title Page should include the authors' full names and affiliations, the name of the corresponding author along with phone, fax and E-mail information. Present addresses of authors should appear as a footnote.

The **Abstract** should be informative and completely self-explanatory, briefly present the topic, scope of the work, significant data, and point out major findings and conclusions. The Abstract should be 100 to 200 words in length. Complete sentences, active verbs, and the third person should be used, and the abstract should be written in the past tense. Standard nomenclature should be used and abbreviations should be avoided. No literature should be cited.

Following the abstract, about 3 to 10 **key words** that will provide indexing references should be listed.

**Results** should be presented with clarity and precision. The results should be written in the past tense when describing author's findings. Previously published findings should be written in the present tense. Results should be explained, but largely without referring to the literature. Discussion, speculation and detailed interpretation of data should not be included in the Results but should be put into the Discussion section.

**References:** In the text, a reference identified by means of an author's name should be followed by the date of the reference in parentheses. When there are more than two authors, only the first author's name should be mentioned, followed by 'et al'. In the event that an author cited has had two or more works published during the same year, the reference, both in the text and in the reference list, should be identified by a lower case letter like 'a' and 'b' after the date to distinguish the works.

Examples:

Smith (2000), Wang et al. (2003), (Kelebeni, 1983), (Singh and Chandra, 1992), (Chege, 1998; Bill, 1987a,b; Cohen, 1993, 1995), (Bauer et al., 2001)

References should be listed at the end of the paper in alphabetical order. Articles in preparation or articles submitted for publication, unpublished observations, personal communications, etc. should not be included in the reference list but should only be mentioned in the article text (e.g., A. Kingori, University of Nairobi, Kenya, personal communication). Journal names are abbreviated according to Chemical Abstracts. Authors are fully responsible for the accuracy of the references.

Examples:

Papadogonas TA (2007). The financial performance of large and small firms: evidence from Greece. *Int. J. Financ. Serv. Manage.* 2(1/2): 14 – 20.

Mihiotis AN, Konidaris NF (2007). Internal auditing: an essential tool for adding value and improving the operations of financial institutions and organizations. *Int. J. Financ. Serv.*

Manage. 2(1/2): 75 – 81.

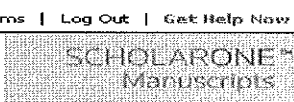
Gurau C (2006). Multi-channel banking in Romania: a comparative study of the strategic approach adopted by domestic and foreign banks *Afr. J. Financ. Servic. Manage.* 1(4): 381 – 399.

Yoon CY, Leem CS (2004).Development of an evaluation system of personal e-business competency and maturity levels *Int. J. Electron. Bus.* 2(4): 404 – 437.

## **APPENDIX 2**

Proof of submission of Review Article 2

**Clothing labels for the functionally  
low-literate consumer: valuable resource or red herring?**



[Main Menu](#) → [Author Dashboard](#) → Submission Confirmation

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## Submission Confirmation

Thank you for submitting your manuscript to *International Journal of Consumer Studies*.

Manuscript ID: IJC-OA-2012-352

Title: Clothing labels for the functionally low-literate consumer: valuable resource or red herring?

Authors: Van Staden, Hanlie  
Van der Merwe, Daleen

Date Submitted: 14-Nov-2012

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## **APPENDIX 3**

### **Permission to conduct interviews**

## Hanlie Van Staden - Re: Toestemming vir onderhoudvoering

---

**From:** Elbie Steyn  
**To:** Hanlie Van Staden  
**Date:** 2011/10/31 05:28 PM  
**Subject:** Re: Toestemming vir onderhoudvoering  
**CC:** Frans Basson

---

Me Van Staden

Ons verleen toestemming dat u die onderhoude met die laag geletterde werknemers kan voer. Ons het slegs 2 skoonmakers in diens. Die meerderheid van die skoonmakers is in diens van 'n kontrakteur. Ons kan dus nie toestemming ten opsigte van daardie personee gee nie. Ons het personeel in diens wat in die kombuis van die kafeteria werk. Ons het nie kombuiswerkers by die koshuise nie.

Sal u asseblief vooraf met die lynbestuurder van hierdie werknemers kommunikeer en reëlings tref. Ek kan in beginsel toestemming gee vir die onderhoude, maar ek kan nie toestemming gee dat die werknemer van sy werkstasie mag weg wees nie.

Elbie Steyn  
Campus Registrar / Kampusregistrator  
Vaal Triangle Campus / Vaaldriehoekcampus  
North-West University / Noordwes-Universiteit

P O Box 1174  
Vanderbijlpark  
1900  
Tel: 016 910 3290  
Fax: 016 910 3292

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>>> Hanlie Van Staden 10/26/2011 12:53 PM >>>  
Goeie dag Prof Steyn,

Ek is tans besig met my PhD studies, en beoog om eersdaags met data insameling in die Vaalstreek te begin. Die studie word in twee fases gedoen, waarvan die kwalitatiewe gedeelte eerste sal plaasvind. My studiepopulasie is laaggeletterde verbruikers, en ek wil o.a met bv skoonmakers en kombuiswerkers onderhoude voer. Ek wil dus van u toestemming vra om die Vaaldriehoekcampus hier by in te sluit. Die PhD studie is deel van 'n groter projek ("Influence of food and textile labels on South African consumers' behaviour") waarvoor reeds etiese goedkeuring verkry is (Verwysingskode: NWU-00024-09-A1).

Met dank,

## **APPENDIX 4**

### **Proof of language editing of document**



PO Box 1174, Vanderbijlpark, 1500

Tel: (016) 910-3485  
Fax: 086 719 5400  
Web: [www.nwu.ac.za](http://www.nwu.ac.za)

Ms Melanie Law  
E-mail: [Melanie.Law@nwu.ac.za](mailto:Melanie.Law@nwu.ac.za)

15 November 2012

To whom it may concern,

This letter serves to confirm that the dissertation entitled **THE USE OF CLOTHING LABELS BY BLACK FEMALE LOW-LITERATE CONSUMERS** by Ms H van Staden has been language edited by CTrans. CTrans is a registered corporate member of the South African Translators' Institute (membership number: 1002322).

The dissertation has thus been edited for spelling, grammar, formulation and syntax. However, the onus rests on Ms van Staden to work through the editorial changes proposed by CTrans, and to either accept or reject them.

Yours sincerely

Melanie Law  
CTrans: Project Manager

## **Appendix 5**

### **Summary of Qualitative findings**

	Themes	Categories	Codes
A	Personal-related	Language barriers	<ul style="list-style-type: none"> <li>English difficult to read and understand</li> <li>English not difficult to read and understand</li> </ul>
		Ability to read label information	<ul style="list-style-type: none"> <li>Able to read product info</li> <li>Unable to read product info</li> <li>Unable to read product info without assistance</li> <li>Excuses for inability to read label</li> <li>Font sizes affect ability to read label</li> </ul>
		Coping with a lack of money	<ul style="list-style-type: none"> <li>Budgeting</li> <li>Plan purchases</li> <li>Disheartened by low-income</li> <li>Checking for adequate money in purse</li> <li>Emotional response to insufficient money at cashier</li> <li>Practices of handling insufficient money at cashier – buy fewer items</li> <li>Practices of handling insufficient money at cashier – lay-buy or account use</li> <li>Cash purchasing</li> <li>Lay-buy purchasing</li> <li>Credit purchasing</li> <li>Supporting sales</li> </ul>
		Calculation of price	<ul style="list-style-type: none"> <li>Calculate total cost by writing</li> <li>Calculate price in ‘mind’</li> <li>Use calculator on cellphone, to calculate total cost</li> </ul>
		Company when shopping	<ul style="list-style-type: none"> <li>Personal company: child</li> <li>Reason for company: assistance to remember</li> <li>Reason for company: Children’s needs</li> <li>Reason for company: Personal safety</li> <li>Reason for company: Advice</li> <li>Reason for no company: unnecessary purchase</li> <li>Reason for no company: no assistance needed</li> </ul>
		Dependence on sales assistant	<ul style="list-style-type: none"> <li>Ask sales assistant for product, size and price information</li> <li>Confidence to ask advice from sales assistant</li> <li>Realising responsibility to ask for assistance</li> <li>Appreciation for positive behaviour of sales assistant</li> <li>Discouraged by negative behaviour of sales assistant</li> </ul>
		Paying for purchases/products??	<ul style="list-style-type: none"> <li>Calculating correct cash</li> <li>Reading the total cost</li> <li>Cashier provide total cost information</li> </ul>
		B	Product-related
Guidance by low price	<ul style="list-style-type: none"> <li>Cheapest clothes</li> </ul>		

		<ul style="list-style-type: none"> <li>• Comparing retailers' prices</li> <li>• Consult label to obtain price information</li> <li>• Consult store signage to obtain price information</li> <li>• Label confusion</li> </ul>
	Investigating fabric attributes	<ul style="list-style-type: none"> <li>• Aesthetic properties</li> <li>• Type of fabric</li> <li>• Fabric quality</li> </ul>
	Investigating garment attributes	<ul style="list-style-type: none"> <li>• Colour of garment</li> <li>• Style of the garment</li> <li>• Stylish garments</li> <li>• Aesthetic value of garment</li> <li>• Quality</li> </ul>
	Consulting labels	<ul style="list-style-type: none"> <li>• Source of product information</li> <li>• Label provides information about <b>retailer</b></li> <li>• Label provides <b>Brand</b> information</li> <li>• Label provides <b>care</b> information</li> <li>• Label provides <b>size</b> information</li> <li>• Label provides <b>price</b> information</li> <li>• Label provides <b>textile</b> information</li> <li>• Preference for <b>text</b> format on label</li> <li>• Preference for <b>symbol</b> format on label</li> <li>• Preference for combined <b>text and symbol</b> format on label</li> <li>• Labels assist in informed purchase decision</li> <li>• Labels provide post purchase information</li> <li>• Pictographic associations</li> <li>• Labels provide warranty information</li> <li>• Labels provide quality information</li> <li>• Not consulting label: experience of care-taking of clothing</li> <li>• Not consulting label: lack of understanding</li> </ul>
	Size selection	<ul style="list-style-type: none"> <li>• Select according awareness of known size</li> <li>• Confirm size with fitting</li> <li>• Select garment according to correct size</li> <li>• Visual observation of size</li> <li>• Label as a size indicator</li> <li>• Store signage as a size indicator</li> <li>• Sizes unavailable</li> </ul>
	Brand names	<ul style="list-style-type: none"> <li>• Brand names as quality indicators</li> <li>• Brand preference</li> <li>• Brand name: expensive association</li> <li>• Brand name avoidance</li> </ul>
	Quality of items	<ul style="list-style-type: none"> <li>• Quality requirement</li> <li>• Price as a quality indicator</li> <li>• Brand as a quality indicator</li> <li>• Visual observation</li> </ul>

			<ul style="list-style-type: none"> <li>• Label as a quality indicator</li> <li>• Wash resistance as a quality indicator</li> <li>• Retailer as a quality indicator</li> <li>• Feel/ touch the fabric for quality indication</li> </ul>
		Products unavailable	<ul style="list-style-type: none"> <li>• Unavailability of garments</li> </ul>
		Paying for purchases/products??	<ul style="list-style-type: none"> <li>• Calculating correct cash</li> <li>• Reading the total cost</li> <li>• Cashier provide total cost information</li> </ul>
C	Store-related	Store selection (retailer)	<ul style="list-style-type: none"> <li>• Store well organised</li> <li>• Availability of products</li> </ul>
		Window exhibition	<ul style="list-style-type: none"> <li>• Locating products via window displays</li> </ul>
		Location of products in store	<ul style="list-style-type: none"> <li>• Visually location products</li> <li>• Visually location different divisions in shop</li> <li>• Using store signs to locate store divisions.</li> <li>• Locating products via store signage</li> </ul>
		Use of store signage	<ul style="list-style-type: none"> <li>• Sign boards provide product information</li> <li>• Unwillingness to read sign boards</li> <li>• Don't read sign boards</li> <li>• Difficulty reading sign boards</li> <li>• Read sign boards with or without assistance</li> </ul>

## **Appendix 6**

### Questionnaire for quantitative study

**THE PURPOSE OF THIS QUESTIONNAIRE IS TO DETERMINE  
HOW DO LOW-LITERATE FEMALE CLOTHING CONSUMERS READ,  
UNDERSTAND AND APPLY THE INFORMATION ON CLOTHING LABELS.**

**To all respondents**

Ms Hanlie van Staden is doing research about the way in which you as female consumer from the Emfuleni Local Municipality area use clothing labels when shopping for clothing products. She needs your support and help to be able to complete this study. You participate out of free will and the information that you give will not be told to any body else, and you don't have to give your name. The numbers on the questionnaire are only for office use and cannot be used to identify you.

Please, it is important to answer all the questions on the questionnaire that is asked to you. It will not take more than 30 minutes of your time.

Thank you for your help.

---

Ms Hanlie van Staden

Promoter: Prof M. van der Merwe

Co-Promoter: Prof A.M. van Aardt

Northwest University, Potchefstroom

**SECTION A**

--	--	--

<b>A.1</b>	<b>What is your age?</b>	
	18-29 years	1
	30-39	2
	40-49	3
	50-59	4
	60 years and older	5
<b>A.2</b>	<b>What is your job?</b>	
	Unemployed	1
	Cleaner	2
	Domestic worker	3
	Salesperson	4
	Clerical	5
	Pensioner	6
	<b>Other, please specify:</b>	7
<b>A.3</b>	<b>What is your highest level in school that you passed? (Formal education)</b>	
	Grade 5 / Standard 3	1
	Grade 6 / Standard 4	2
	Grade 7 / Standard 5	3
	Grade 8 / Standard 6	4
	<b>Other, please specify:</b>	5
<b>A.4</b>	<b>What is your marital status?</b>	
	Never married	1
	Married	2
	Cohabitation / Living together	3
	Divorced / Separated	4
	Widow	5
<b>A.5</b>	<b>What is your monthly household income?</b>	
	<R500	1
	R501-R1000	2
	R1001- R2000	3
	R2001- R3000	4
	R3001- R4000	5
	R4001- R5000	6
	<b>Other, please specify:</b>	7

**A.7) Do you buy clothing products at the following SHOPS?**



**NEVER**



**SOMETIMES**



**ALWAYS**

		<b>NEVER</b>	<b>SOMETIMES</b>	<b>ALWAYS</b>
A.7.1	Ackermans			
A.7.2	Checkers Hyper			
A.7.3	Clothing City			
A.7.4	Edgars			
A.7.5	Fashion Express			
A.7.6	Foschini			
A.7.7	Jet			
A.7.8	Makro			
A.7.9	Meltz			
A.7.10	Miladys			
A.7.11	Mr Price			
A.7.12	Pep Stores			
A.7.13	Pick 'n Pay Hyper			
A.7.14	Truworths			
A.7.15	Woolworths			
A.7.16	<b>Any other store? Please specify:</b>			

**A.8) HOW do you PAY for the clothing products that you buy?**



**NEVER**



**SOMETIMES**



**ALWAYS**

	<b>Payment</b>	<b>NEVER</b>	<b>SOMETIMES</b>	<b>ALWAYS</b>
A.8.1	Cash			
A.8.2	Lay-by			
A.8.3	Store account			

**SECTION B: PERSONAL-RELATED CHALLENGES AND COPING STRATEGIES**

Who do you ask to help you to read clothing labels?



**NEVER**



**SOMETIMES**



**ALWAYS**

		<b>NEVER</b>	<b>SOMETIMES</b>	<b>ALWAYS</b>
<b>1</b>	A friend			
<b>2</b>	A family member			
<b>3</b>	My child			
<b>4</b>	The store assistant			
<b>5</b>	I read by myself			

Are the following things true about clothing labels?



**NO**



**YES**

		<b>NO</b>	<b>YES</b>
<b>6</b>	Do you read clothing labels?		
<b>7</b>	Is it difficult to read clothing labels?		
<b>8</b>	Do you like to read the clothing labels?		
<b>9</b>	Do you read the price on the clothing label?		
<b>10</b>	Do you read the size on the clothing label?		
<b>11</b>	Do you read how to wash the blouse on the clothing label?		
<b>12</b>	Is it easy to read the size of the letters on the labels?		

Please tell me the following on the clothing label: (SHOW CARD 1)

		Answer	
13	The price on the label		
14	The size on the label		
15	The wash instructions on the label		
16	From which shop is this label		
17	The material on the label		
18	From which country is the clothing product of this label		

Do you do the following things when you buy clothes?



**NEVER**



**SOMETIMES**



**ALWAYS**

		NEVER	SOMETIMES	ALWAYS
19	Do you use the calculator on the cell phone to add up the price of two or more clothing products?			
20	Do you ask somebody to help you to calculate the total cost of two or more clothing products?			
21	Do you calculate the total cost of two or more clothing products in your mind?			
22	Do you pay the pieces of clothing one at a time if you buy many pieces of clothing?			
23	Do you check if the money in your purse is enough for all the clothing products you want to buy?			

Please work out the following: (SHOW CARD 2)

		Answer	
24	The total price of two blouses, R35 and R45 each		
25	The price of the shirt is R90.00 and the label says 50% off. What does it cost now?		
26	Three pairs of socks cost R45. What is the price of one pair?		

Please answer the following questions: (SHOW CARD 3)

		ANSWER	
		A	B
27	You need a Large size, but the Medium size is cheaper. Which one will you buy?		
28	Three pairs of socks in packet A cost R60, and one pair alone in packet B costs R25, which pair works out the cheapest?		
29	If a blouse costs R49.99, is the price closer to R49 or closer to R50?		

Can you identify the following shops? (SHOW CARD 4)

	Answer	
30		
31		
32		
33		
34		
35		
36		
37		
38		

### SECTION C: PRODUCT-RELATED CHALLENGES

Can you understand the following information on a clothing label? (SHOW CARD 5)



NO











YES

		NO	YES
39	Size in letters: S, M, L, XL, XXL		
40	Size in numbers: 10,12,14,16,18, 20		
41	Size in numbers: 34,36,38,40,42,44		
42	Brand name (e.g. Adidas, Nike)		

43. Which label will be the easiest to read the size Medium? (SHOW CARD 6)

A	
B	
C	
D	
E	

44. Please tell me the meaning of the following care instructions?

		Answer	
44.1			
44.2			
44.3			
44.4			
44.5			
44.6			
44.7			
44.8			

Please tell me when do you use these symbols that you just explained?



**NO**



**YES**

		<b>NO</b>	<b>YES</b>
<b>45</b>	In the shop		
<b>46</b>	At home		

Do the following things tell you something about the **QUALITY** of the clothes?



**NO**




**YES**

		<b>NO</b>	<b>YES</b>
<b>47</b>	Type of material (e.g. cotton, polyester, nylon)		
<b>48</b>	Beauty of the dress		
<b>49</b>	Dress will last long (strong)		
<b>50</b>	Easy to wash		
<b>51</b>	Easy to iron		
<b>52</b>	Price		
<b>53</b>	Brand name (e.g. Adidas, Nike)		
<b>54</b>	The store where you buy (Pep, Jet, Edgars, Woolworths, Ackermans)		



## **Appendix 7**

### **Show Cards for Questionnaire**



**Show Card 1**

		Label A	Label B
13	Price	 <p>82%VISCOSE 16%NYLON 2%LYCRA MADE IN CHINA 41833</p> <p>☰ ☒ ☑ ☒</p> <p>GENTLE HAND WASH IN COLD WATER DO NOT SOAK DO NOT RUB OR WRING COLD RINSE RESHAPE WHILE DAMP DRY FLAT AWAY FROM DIRECT SUNLIGHT DO NOT BLEACH DO NOT TUMBLE DRY WASH DARK COLOURS SEPARATELY W09 89952</p>	 <p>Mr Price X Large CREAM</p> <p>1010811000213</p> <p>1151215957006</p> <p>Our Price <b>69.99</b>      Vat Incl.</p> <p>www.mrprice.co.za www.mrpriceintheloop.com</p>
14	Size		
15	How to wash		
16	Name of the shop		
17	Material		
18	Country made in		


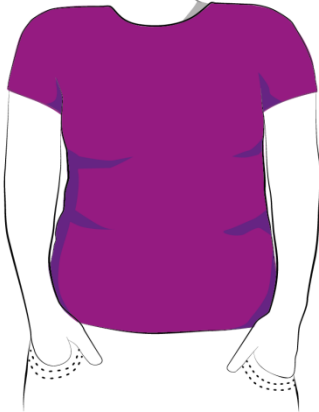
## SHOW CARD 2



24	 <b>BLOUSE: R35.00</b>	+	 <b>BLOUSE: R45.00</b>
<b>TOTAL PRICE = ?</b>			

25	 <b>Shirt = R90</b>
<b>50% off. PRICE = ?</b>	

26		
	<b>3 Pairs = R45.00</b>	<b>Price per pair = ?</b>

# SHOW CARD 3

27	<b>A</b>	<b>B</b>
		
	<b>MEDIUM: R25,00</b>	<b>LARGE: R30,00</b>

28	<b>Packet A</b>	<b>Packet B</b>
		
	<b>3 pairs for R60.00</b>	<b>1 pair for R25.00</b>

29		
	<b>BLOUSE: R49.99</b>	
	<b>A</b>	<b>B</b>
	<b>R49?</b>	<b>R50?</b>

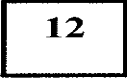
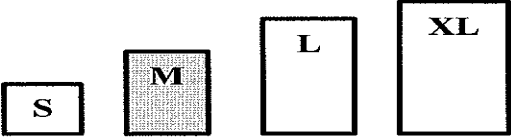

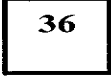




**SHOW CARD 4**

30	
31	
32	
33	MORE STYLE LESS PRICE
34	
35	
36	
37	
38	

## SHOW CARD 5

		Labels
39	Size in <b>letters:</b> S,M,L,XL,XXL	<p>SIZE M White PRICE R 99.00 GS1452A</p>  <p>101072600154279999</p>
40	Size in <b>numbers:</b> 12,14,16,18	 <p>12 boot leg regular rise V VOGELWITTE</p>
41	Size in <b>numbers:</b> 36.38.40.42	<p>98% COTTON 2% SPANDEX</p>  <p>34 HIP 95cm</p>
42	<b>Brand name</b>	 <p>adidas®</p>

## SHOW CARD 6

<b>A</b>				
<b>B</b>				
<b>C</b>				
<b>D</b>				
<b>E</b>				
	<b>S</b>	<b>M</b>	<b>L</b>	<b>XL</b>

## **Appendix 8**

### **Tables for descriptive statistics**

#### **Correlations**

#### **ANOVA's**

**1 DESCRIPTIVE ANALYSIS FOR ALL QUESTIONS IN THE QUESTIONNAIRE  
PRESENTED IN TABLES 1-14**

**Table 1 Frequency of shopping at various types of clothing stores (Question A7)**

A.7	Shops where buy	N		NEVER (1)	SOMETIMES (2)	ALWAYS (3)	Mean	St Dev	Ranking order
A.7.1	Ackermans	449	n	77	134	238	2.36	0.758	4
			%	17.1	29.8	53			
A.7.2	Checkers Hyper	438	n	206	164	68	1.68	0.726	7
			%	47	37.4	15.5			
A.7.3	Clothing City	431	n	277	74	80	1.54	0.788	10
			%	64.3	17.2	18.6			
A.7.4	Edgars	439	n	151	160	128	1.95	0.796	5
			%	34.4	36.4	29.2			
A.7.5	Fashion Express	435	n	260	105	70	1.56	0.754	8
			%	59.8	24.1	16.1			
A.7.6	Foschini	433	n	266	95	72	1.55	0.762	9
			%	61.4	21.9	16.6			
A.7.7	Jet	439	n	25	71	343	2.72	0.561	1
			%	5.7	16.2	78.1			
A.7.8	Makro	437	n	314	102	21	1.33	0.564	13
			%	71.9	23.3	4.8			
A.7.9	Meltz	437	n	381	50	6	1.14	0.387	14
			%	87.2	11.4	1.4			
A.7.10	Miladys	436	n	308	88	40	1.39	0.649	12
			%	70.6	20.2	9.2			
A.7.11	Mr Price	436	n	55	110	271	2.50	0.710	3
			%	12.6	25.2	62.2			
A.7.12	Pep Stores	436	n	22	90	324	2.69	0.561	2
			%	5	20.6	74.3			
A.7.13	Pick 'n Pay Hyper	435	n	151	183	101	1.89	0.753	6
			%	34.7	42.1	23.2			
A.7.14	Truworths	441	n	292	96	53	1.46	0.700	11
			%	66.2	21.8	12			
A.7.15	Woolworths	442	n	271	103	68	1.54	0.747	10
			%	61.3	23.3	15.4			

**Table 2 Method used to pay for clothing purchases (Question A8.1- 8.3))**

A.8	Payment method	N		NEVER (1)	SOMETIMES (2)	ALWAYS (3)	Mean	St Dev	Ranking order
A.8.1	Cash	444	n	16	75	353	2.76	0.506	1
			%	3.6	16.9	80			
A.8.2	Lay-by	444	n	106	142	196	2.20	0.800	2
			%	23.9	32	44.1			
A.8.3	Store account	446	n	214	72	160	1.88	0.909	3
			%	48	16.1	35.9			

**Table 3 Potential assistance with reading of clothing labels (Question B1-5)**

	Help to read	N		NEVER (1)	SOMETIMES (2)	OFTEN (3)	Mean	St Dev	Ranking order
B.1	A friend	444	n	258	133	53	1.54	0.699	5
			%	58.1	30	11.9			
B.2	A family member	446	n	149	161	136	1.97	0.800	4
			%	33.4	36.1	30.5			
B.3	My child	444	n	152	103	189	2.08	0.873	3
			%	34.2	23.2	42.6			
B.4	The store assistant	444	n	80	132	232	2.34	0.766	2
			%	18	29.7	52.3			
B.5	I read by myself	445	n	81	82	282	2.45	0.783	1
			%	18.2	18.4	63.4			

**Table 4 Reality of reading clothing labels (Question B6-12)**

	Truth about reading clothing labels	N		No (0)	Yes (1)	Mean	St Dev	Ranking order
B.6	Do you read clothing labels?	448	n	197	251	0.56	0.497	4
			%	44	56			
B.7	Do you find it difficult to read clothing labels?	447	n	226	221	0.49	0.501	5
			%	50.6	49.4			
B.8	Do you like to read clothing labels?	442	n	277	165	0.37	0.484	7
			%	62.7	37.3			
B.9	Do you read the price on clothing labels?	447	n	46	40	0.90	0.304	2
			%	10.3	89.7			
B.10	Do you read the size on clothing labels?	445	n	36	409	0.92	0.273	1
			%	8.1	91.9			
B.11	Do you read how to wash the blouse on clothing labels?	447	n	234	213	0.48	0.500	6
			%	52.3	47.7			
B.12	Is the size of the letters on clothing labels easy to read?	447	n	128	319	0.71	0.453	3
			%	28.6	71.4			

**Table 5 Identification and comprehension of clothing label information (Question B13-18)**

	Identification and comprehension of information on labels	N		No (0)	Yes (1)	Mean	St Dev	Ranking order
B.13	Price	447	n	97	350	0.78	0.412	3
			%	21.7	78.3			
B.14	Size	447	n	92	355	0.80	0.404	2
			%	20.4	78.9			
B.15	Washing instructions	446	n	213	233	0.52	0.500	5
			%	47.8	52.2			
B.16	Name of the shop	446	n	71	375	0.84	0.365	1
			%	15.9	84.1			
B.17	Material	446	n	231	215	0.49	0.500	6
			%	51.8	48.2			
B.18	Country of origin	446	n	149	297	0.67	0.471	4
			%	33.4	66.6			

**Table 6 Procedures regarding calculations when buying clothes (Question B19-23)**

	Calculation of the prices of two or more clothing items	N		NEVER (1)	SOMETIMES (2)	OFTEN (3)	Mean	St Dev	Ranking order
B.19	Do you use the calculator on your cell phone to calculate the price?	449	n	230	69	150	1.82	0.904	3
			%	51.2	15.3	33.4			
B.20	Do you ask somebody to help you add- the total cost of more than one items?	450	n	198	136	116	1.82	0.816	3
			%	44	30.2	25.8			
B.21	Do you calculate the total cost of two or more items in your mind?	448	n	115	112	221	2.24	0.834	2
			%	25.7	25	49.3			
B.22	Do you pay the items one at a time when you buy more than one clothing item?	447	n	211	106	130	1.82	0.855	3
			%	47.2	23.7	29.1			
B.23	Do you check if the money in your purse is enough for all the items you want to buy?	448	n	22	66	360	2.75	0.533	1
			%	4.9	14.7	80.4			

**Table 7 Computation of the cost of clothing items under various circumstances (Question B24-26)**

	Calculations	N		No (0)	Yes (1)	Mean	St Dev	Ranking order
B.24	What is the total price of two blouses, if one costs R35 and the second one R45?	450	n	118	332	0.74	0.440	1
			%	26.2	73.8			
B.25	The price of a shirt is R90 and the label indicates 50% discount. What does it cost now?	450	n	259	191	0.42	0.495	3
			%	57.6	42.4			
B.26	A packet containing three pairs of socks costs R45. What is the price of one pair?	450	n	135	315	0.70	0.459	2
			%	30	70			

**Table 8 The judiciousness of clothing decisions (Question B27-29)**

	Clothing decisions	N		Wrong (0)	Right (1)	Mean	St Dev	Ranking order
B.27	You need a large size, but the medium size is cheaper. Which one will you buy?	435	n	155	280	0.64	0.479	2
			%	35.6	64.4			
B.28	Three pairs of socks in packet A cost R60, and one pair alone in packet B costs R25. Which single pair works out the cheapest?	435	n	177	258	0.59	0.492	3
			%	40.7	59.3			
B.29	If a blouse costs R49.99, is the price closer to R49 or closer to R50?	435	n	121	314	0.72	0.449	1
			%	27.8	72.2			

**Table 9: Ability to recognise store logos (Question B30-38)**

	Store which they had to identify	N		Wrong (0)	Right (1)	Mean	St Dev	Ranking order
B.30	Pep	442	n	99	343	0.77	.420	5
			%	22.4	77.6			
B.31	Jet	441	n	40	401	0.90	.301	1
			%	9.1	90.9			
B.32	Pet	441	n	263	178	0.40	.490	7
			%	59.6	40.4			
B.33	Jet	440	n	402	38	0.08	.279	8
			%	91.4	8.6			
B.34	Woolworths	441	n	70	371	0.83	.374	4
			%	15.9	84.1			
B.35	Mr Price	441	n	72	369	0.83	.376	4
			%	16.3	83.7			
B.36	Ackermans	440	n	65	375	0.84	.363	3
			%	14.8	85.2			
B.37	Mr Price	441	n	219	222	0.50	.501	6
			%	49.7	50.3			
B.38	Edgars	441	n	51	390	0.88	.329	2
			%	11.6	88.4			









**Table 10: Understanding different forms of clothing label information (Question B39-42)**

	Clothing label information	N		No (0)	Yes (1)	Mean	St Dev	Ranking order
B.39	Size in letters (S,M,L)	445	n	43	402	0.90	0.296	1
			%	9.7	90.3			
B.40	Size in numbers (10, 12, 14)	446	n	176	270	0.61	0.489	4
			%	39.5	60.5			
B.41	Size in numbers (34,36,38)	446	n	76	370	0.83	0.376	2
			%	17	83.0			
B.42	Brand name (e.g.Adidas, Nike)	445	n	103	342	0.77	0.422	3
			%	23.1	76.9			

**Table 11: Preference for presenting a size indication on clothing labels (Question C43A-E)**

	Forms of presenting Size Medium	N		Preference	Ranking order
C.43.A	Numeric format: '12'	450	n	45	5
			%	8.4	
C.43.B	Pictographic format S, M, L, XL in various sizes	450	n	163	1
			%	34.9	
C.43.C	Non-informative 'M'	450	n	131	2
			%	27.8	
C.43.D	Numeric format: '36'	450	n	69	4
			%	13.8	
C.43.E	Pictographic format: body types in various sizes	450	n	74	3
			%	15.1	

**Table 12 Knowledge of the meaning of care symbols (Question C44.1-44.8)**

	Care label	N		Wrong (0)	Right (1)	Mean	St Dev	Ranking order
C.44.1	Hand Wash 	450	n	282	168	0.63	0.484	3
			%	62.7	37.3			
C.44.2	Machine wash 	450	n	108	342	0.24	0.428	4
			%	24	76			
C.44.3	Iron 	450	n	420	30	0.93	0.250	1
			%	93.3	6.7			
C.44.4	Do not iron 	450	n	404	46	0.90	0.303	2
			%	89.8	10.2			
C.44.5	Dry-Clean 	450	n	53	397	0.12	0.323	6
			%	11.8	88.2			
C.44.6	Bleach 	450	n	94	356	0.21	0.407	5
			%	20.9	79.1			
C.44.7	Dry flat 	450	n	13	437	0.03	0.168	7
			%	2.9	97.1			
C.44.8	Hang dry 	450	n	15	435	0.03	0.180	7
			%	3.3	96.7			

**Table 13 Stage during which care labels are used (Question 45-46)**

	Post purchase	N		No (1)	Yes (0)	Mean	St Dev	Ranking order
C.45	In the shop	444	n	259	185	0.42	0.494	2
			%	57.6	41.7			
C.46	At home	446	n	126	320	0.72	0.451	1
			%	28.3	71.7			

**Table 14 Criteria for clothing quality (Question C47-54)**

	Criteria for quality	N		No (0)	Yes (1)	Mean	St Dev	Ranking order
C.47	Material	447	n	82	365	0.82	0.387	1
			%	18.3	81.7			
C.48	Beauty of dress	447	n	136	311	0.70	0.461	5
			%	30.4	69.6			
C.49	Durability (last long)	449	n	80	369	0.82	0.383	1
			%	17.8	82.2			
C.50	Easy to wash	449	n	135	314	0.70	0.459	5
			%	30.1	69.9			
C.51	Easy to iron	448	n	140	308	0.69	0.464	6
			%	31.3	68.8			
C.52	Price	444	n	90	354	0.80	0.402	2
			%	20.3	79.7			
C.53	Brand name	447	n	130	317	0.71	0.455	4
			%	29.1	70.9			
C.54	Store where bought	448	n	98	350	0.78	0.414	3
			%	21.9	78.1			

**2. CORRELATIONS BETWEEN DEMOGRAPHIC VARIABLES, STORE-CHOICE, METHOD OF PAYMENT, PERSONAL AND PRODUCT-RELATED CHALLENGES TABLES 15-19**

**Table 15 Correlation between demographical characteristics and literacy (Reading and numeracy)**

Literacy: Reading		Demographic Characteristics									
		School qualification	Income	Read with assistance	Read self	Difficult to read	Reading of labels:	Read Price and size	Ability to identify label information	Numeracy: Use calculator	Numeracy: Calculations skills
Age	r	-0.361	0.131	0.229	-0.173	-0.211	-0.212	0.194	-0.289	-0.266	-0.206
School qualification	r	1.0	0.090	-0.138	0.320	0.255	0.193	0.267	0.212	-0.105	0.268

**Table 16 Correlations between various aspects of reading, numeracy and understanding of labels**

Literacy: Reading, numeracy		Reading			
		Read self	Ability to identify label information	Numeracy: Calculations skills	Understanding of size and brand
Difficult to read	r	0.231	-0.137	-0.137	-0.107
Read	r	-0.207	0.205	0.129	0.284
Read Price and size	r	-0.269	0.156	0.275	0.124
Ability to identify label information	r	-0.246	1.000	0.437	0.232

**Table 17 Correlation between pictographic thinking, demographic variables, reading and understanding of information on clothing labels**

Literacy: Age, Reading, understanding		Age	Ability to identify label information	Understanding of size and brand
Letter type, colour and shape changes:	r	-0.056	0.393	0.139
Factor 10:				
Store: logo, tagline:	r	-0.230	0.241	0.294
Factor 11				

**Table 18 Correlation between payment-methods and income, store-types and numeracy**

Income, store types, numeracy		Income	Upper class stores	Discount stores	Hyper stores	Store Account
Cash	r	0.031	0.093	0.047	-0.039	-0.258
Lay-by	r	0.078	0.075	0.294	0.000	-0.111
Store account	r	0.214	0.360	0.148	0.215	1.000

**Table 19. Correlation between understanding of label information and literacy**

Literacy understanding		Reading of labels ( Factor 6)	Ability to identify information (Factor 8)	Numeracy (Factor 9)	Well known labels (Factor 13)
Understanding size and brand: Factor 12	r	.284	.232	.201	.201

### 3 ANALYSIS OF VARIANCE (ANOVA) BETWEEN RESPONDENTS' OCCUPATIONS AND STORE-CHOICE, METHOD OF PAYMENT, PERSONAL AND PRODUCT-RELATED CHALLENGES TABLES 20-24

**Table 20 The differences between occupation and shops purchased at**

Type of shop		Occupation	Mean	St Dev	Clerical with:
Upper class store: Factor 1	1	Unemployed	1.54	0.552	0.67*
	2	Cleaner	1.58	0.511	0.60*
	3	Domestic worker	1.67	0.628	0.47*
	4	Sales person	1.61	0.525	0.56*
	5	Clerical	1.99	0.666	0.00
	6	Pensioner	1.45	0.443	0.80**
Hyper stores: Factor 3	1	Unemployed	1.57	0.541	0.88**
	2	Cleaner	1.52	0.485	1.10**
	3	Domestic worker	1.70	0.505	0.70*
	4	Sales person	1.75	0.551	0.54*
	5	Clerical	2.05	0.506	0.00
	6	Pensioner	1.60	0.482	0.89**

\* = Medium effect ; \*\* = Large effect      Never = 1, Sometimes = 2, Always = 3

**Table 21 The differences between occupation and the truth about reading clothing labels**

Read		Occupation	Mean	St Dev	Pensioner with
Reading of labels (Factor 6)	1	Unemployed	0.495	0.409	0.44*
	2	Cleaner	0.559	0.386	0.63*
	3	Domestic worker	0.440	0.386	0.32
	4	Sales person	0.451	0.384	0.35
	5	Clerical work	0.590	0.389	0.71*
	6	Pensioner	0.316	0.344	0.00
Price and size on labels (Factor 7)	1	Unemployed	0.914	0.247	0.30
	2	Cleaner	0.934	0.221	0.36
	3	Domestic worker	0.940	0.198	0.38
	4	Sales person	0.892	0.258	0.24
	5	Clerical work	1.000	0.000	0.57*
	6	Pensioner	0.816	0.325	0.00

\* = Medium effect ; \*\* = Large effect      \*\*No = 0, Yes = 1

**Table 22 The differences between occupation, the ability to recognise information on clothing labels and numeracy skills**

Read		Occupation	Mean	St Dev	Pensioner with
Ability to identify label information (Factor 11)	1	Unemployed	0.690	0.275	0.55*
	2	Cleaner	0.733	0.257	0.68*
	3	Domestic worker	0.714	0.293	0.62*
	4	Sales person	0.682	0.293	0.52*
	5	Clerical work	0.744	0.222	0.71*
	6	Pensioner	0.513	0.324	0.00
Numeracy skills (Factor 12)	1	Unemployed	.619	.319	0.40*
	2	Cleaner	.658	.308	0.51*
	3	Domestic worker	.651	.337	0.49*
	4	Sales person	.672	.351	0.54*
	5	Clerical work	.692	.253	0.60*
	6	Pensioner	.469	.374	0.00

\* = Medium effect ; \*\* = Large effect

\*\*\*Wrong =0, Correct = 1

**Table 23 The differences between occupation and the evaluation of clothing product quality**

Quality		Occupation	Mean	St Dev	P-Value	Clerical with
Concrete Assessment of clothing quality (Factor 16)	1	Unemployed	.78	.293	.003	0.63*
	2	Cleaner	.69	.345		0.79**
	3	Domestic worker	.66	.36132		0.83**
	4	Sales person	.63	.33651		0.98**
	5	Clerical work	.96	.09388		0.00
	6	Pensioner	.69	.36485		0.74*

\* = Medium effect ; \*\* = Large effect

\*\*No = 0, Yes = 1

**Table 24 differences between occupation and the difficulty to read clothing labels and the size of letters on the label**

Read	Effect	Mean	St Dev	P-Value	Pensioner with
Separate Items: Difficulty of reading labels	1 Unemployed	.48	.501	.036	0.37
	2 Cleaner	.49	.503		0.34
	3 Domestic worker	.57	.501		0.17
	4 Sales person	.43	.499		0.46*
	5 Clerical work	.31	.480		0.73*
	6 Pensioner	.66	.48		0.00
Separate Items: Ease of reading letter size	1 Unemployed	.74	.440	.000	0.51*
	2 Cleaner	.75	.436		0.52*
	3 Domestic worker	.69	.468		0.40*
	4 Sales person	.77	.425		0.56*
	5 Clerical work	.92	.277		0.87**
	6 Pensioner	.49	.503		0.00

\* = Medium effect ; \*\* = Large effect

\*\*No = 0, Yes = 1