

UNIVERSITY OF EDUCATION, WINNEBA
COLLEGE OF TECHNOLOGY EDUCATION, KUMASI

CONSUMERS' PERCEPTIONS ABOUT SUSTAINABLE CLOTHING IN
GHANA: THE CASE OF ACCRA METROPOLIS



SALLY ASANTE AMANKWAAH

DECEMBER, 2016

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CASE IN THE ACCRA METROPOLIS

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A Dissertation in the Department of Fashion Design and Textiles Education, Faculty of Vocational Education, submitted to the School of Graduate Studies, University of Education, Winneba in partial fulfillment of the requirements for the award of Master of Technology (Fashion Design and Textiles Education) degree.

DECEMBER, 2016

DECLARATION

STUDENT'S DECLARATION

I, **SALLY ASANTE AMANKWAAH**, declare that this Dissertation with the exception of quotations and references contained in published works which have all been identified and duly acknowledged, is entirely my own original work, and it has not been submitted, either in part or whole, for another degree elsewhere.

SIGNATURE:

DATE:



SUPERVISOR'S DECLARATION

I hereby declare that the preparation and presentation of this work was supervised in accordance with the guidelines for supervision of Dissertation as laid down by the University of Education, Winneba.

NAME OF SUPERVISOR: **DR DANIEL K. DANSO**

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DATE:

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DEDICATION

This dissertation is dedicated to my husband and lovely children



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ABSTRACT

The study sought to evaluate consumers' perceptions about sustainable clothing in Ghana using the Accra Metropolis as a case study. The study was a descriptive survey employing the quantitative approach to data collection and analysis. The main instrument for data collection was a questionnaire. A sample of 425 consumers of clothing was selected from the Central Business District of Accra using the convenience sampling technique. The study revealed that consumers of clothing perceived sustainable clothing to be clothes that make them feel comfortable when they wear them, express their identity, and clearly show the individual's body shapes when they wear them. It was found that sustainable issues are an integral part of consumers' everyday life and consumers demonstrate an immense interest and awareness in sustainable issues. Among the factors that influence consumers' buying decisions were price and quality. The majority of the respondents showed interest in a more stylish range of sustainable clothing and mostly looked out for clothes with special features. It was suggested that clothing manufacturers should consider using more natural fibres in garment production and their production activities should be carried out with quiet consciousness bearing in mind their social responsibility to the society. Apart from price and quality which were hitherto the major factors that influenced consumer clothing buying decisions, in recent times consumers buying decisions are influenced by other sustainable factors such as pleasant material, eco-certification of the clothing item, use of non-toxic or non-harmful materials and so forth.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

It has been observed that clothing manufacturers, fashion designers, and other players in the fashion and textiles industry are more interested in the volume of sales and production but not the ecological effect or sustainability of the clothing produced for consumption. As a result of this developing trend in the fashion industry, the issue of sustainable fashion and consumption is seen merely as leading to reduced volumes and decreasing profitability in production, not as an opportunity for a new kind of green business (Allwood, Laursen, Russell, Malvido de Rodrigues & Bocken, 2008).

According to Berglin (2013), clothing of today are materials with applications in almost all our activities, for instance, we wear clothes all the time and we are surrounded by clothes in almost all our environments. She therefore, contends that the integration of multifunctional values in such a common material has become a special area of interest in recent years. For examples, Fibres, yarns, fabric and other structures with added-value functionality have been developed for a range of applications and therefore textile materials and techniques have become an important platform for high-tech innovations (Berglin, 2013). In this regard, Ulasewicz (2008) argues that fashion is about change, and if sustainable design and development are our goals, then let us thoughtfully and intelligently engage as we participate in changing what is considered fashionable. Hethorn and Ulasewicz (2008) suggest that through individual introspection, followed by collective action, we will create sustainable futures together.

Eifler and Diekamp (2013) claim that, in the last decade, certain aspects of sustainable development have garnered much attention in respect of everyday life and has become an acceptable part of lifestyle choice. They assert that since clothing is a part of our basic needs, sustainable clothing with fashionable design and innovative solutions has generated a debate, although it has yet to become an integral part of the market. They further avow that the concept of sustainability is interdisciplinary. In their view, when dealing with this field of research, one will be facing a confusion of discourses. To them, this is because we use the terms 'ecological' in the sense of the environmental movement during the 1960s and 1970s when clothing was supposed to be produced 'naturally' and environmentally friendly and to present an alternative to the mass production of clothes. On the other hand, we use the term 'sustainable' in the sense that clothing is fairly produced and traded, with no danger to consumers' health and the environment. However, conventional producers of ecological ranges are characterized as those who report only certain aspects of the production chain as ecological (Eifler & Diekamp, 2013).

Aakko and Koskennurmi-Sivonen (2013) maintain that sustainable fashion is an endeavour that draws together sustainable development and fashion. Until recently, these two concepts together were an oxymoron. They concur with Clark (2008) that today, it is vital to make this pair a promise for the future. Aakko and Koskennurmi-Sivonen define sustainable development as development that meets the needs of the present without compromising the ability of future generations to meet their own needs. They claim that progress towards sustainable forms of production and consumption has been modest. Therefore, while many complain that 'sustainable development' is difficult to define, our knowledge of what 'sustainability' means has considerably increased. In fact, it is

‘development’ that is more difficult to define and not sustainability (Sneddon & Howarth, 2006). Aakko and Koskennurmi-Sivonen postulate that if we replace ‘development’ with ‘fashion’, the task becomes even harder because fashion can be defined in a rather abstract way.

For example, Kawamura (2005) argued that fashion and clothing are distinct concepts; and even though the two may be used interchangeably in some instances, fashion is immaterial, while clothing is material. Aakko and Koskennurmi-Sivonen (2013) opine that it makes sense especially in our time when fashion imagery may present a fantasy world. According to them, this perception of fashion does not seem problematic in the context of sustainability however, we must admit the fact that fashion drives changes in the clothing itself.

Moisander and Markkula (as cited in Eifler & Diekamp, 2013) lament the discursive confusion that arises from a simultaneous existence of multiple, continuously changing and partly clashing discourses of sustainable consumption as well as the associated discursive struggle that consumers need to deal with when trying to make sense of their roles and responsibilities in sustainable development. For instance, besides the difficulties in production orientation, consumers often feel that sustainable consumption is stressful and time-consuming (Valor, 2008). Therefore, though designers and design theorists in other fields of consumer products have long been concerned with sustainability (Aakko & Koskennurmi-Sivonen, 2013), Thomas (2008) aver that ironically, fashion, which is commonly considered innovative, is desperately behind in sustainability research. For example, in a study conducted by Niinimaki and Hassi (2011) on consumers’ perspectives

on environmental issues in the textile and apparel industry, they were only interested in how likely consumers were to engage in the environmentally friendly design strategies that emerged, such as slow fashion, customized clothing, and co-creation, to mention just a few. Therefore, it is recommended that apparel companies undertake the mission of sustainable design (i.e., systems that support human well-being and are compatible with sustaining natural environmental systems) focusing on the planning stage of the supply chain - the design phase - because that is where most decisions are made that potentially impact the entire life cycle of the product (Bhamra & Lofthouse, 2007).

Therefore, while the aim of sustainability in fashion may be rather clear, the methods of reaching sustainability are not clear (Aakko & Koskennurmi-Sivonen, 2013). This is because sustainable fashion is a complex effort, including a lot of idealism, but its many elements have to be taken into consideration on a practical level. Hence, by analyzing the various development and trends in modern fashion and textiles, the researcher aims to conduct an empirical study that will confront the complexity of the issues that surround sustainability, particularly from the consumer's point of view.

1.2 Statement of the Problem

Despite the increasing attention with regard to sustainable fashion and textiles in recent times, no research study has been conducted in Ghana in the area to the best of the knowledge of the researcher. Eifler and Diekamp (2013) maintain that, although textile production has developed considerably in recent times, the opacity of sustainable clothing remains. Consequently, consumers feel that their growing needs for sustainable clothing are not fully satisfied and that forms a barrier to the development of a positive image of

sustainable clothing. According to them, this situation is further aggravated by under-representation of the concept of fashion and textile sustainability. They claim that while the textile and ecological side of sustainable clothing has developed in recent years, the same cannot be said of its cultural pattern. This is because, although sustainable clothing is increasingly relevant for fashion designers, fashion magazines, and major fashion shows, it is still unable to break into the mainstream fashion which can be attributed to the fact that sustainable clothing creates a range of new questions such as sustainable consumption, social conditions of production, justice, and health in the realm of fashion. These values have to be associated with the prevalent fashion stereotypes (i.e. ‘beauty and attractiveness’) and thus constitute a new cultural pattern of sustainable clothing. As our modern society undergoes changes in material culture, fashion plays an important role. Therefore sustainable fashion does not mean ‘fast fashion’, but rather slow trends, which imply modern and pleasant clothes with long-lasting value and compelling design. From the foregoing, the researcher deems it necessary to conduct this study with the aim of assessing consumer perceptions of sustainable fashion and textiles in the Accra Metropolis of the Greater Accra Region.

1.3 Purpose of the Study

The purpose of the study was to assess consumers’ perceptions about sustainable clothing in Ghana using the Accra Metropolis as a case.

1.4 Objectives of the Study

The objectives set for the study are as follows:

1. To identify consumers' perceptions about sustainable clothing in the Accra Metropolis.
2. To find out the factors that consumers consider when purchasing clothing items for use.
3. To find out the most appropriate factors that fashion designers need to consider when producing sustainable clothing items for consumers.

1.5 Research Questions

The following research questions were formulated for the study based on the objectives of the study:

1. What do consumers in Accra Metropolis consider as sustainable clothing items?
2. Which factors do the consumers in the Accra Metropolis consider when purchasing clothing items?
3. What best factors should fashion designers consider when producing sustainable clothing items for consumers in Ghana?

1.6 Delimitation

The study focused mainly on consumer perspectives towards sustainable fashion in the Accra Metropolis of the Greater Accra Region. The sample size for the study was made up of consumers who were available and ready to answer the questionnaire. In addition, the content of the research work focused on three thematic areas based on the objectives of the study namely: consumer perceptions of sustainable clothing, factors consumers

consider when purchasing clothing items, and the factors associated with sustainable clothing.

1.7 Limitations

Despite the fact that the research work was carried out in the Accra Metropolis, only consumers of clothing within the Central Business District of Accra were used as the respondents of the study. The researcher could not cover many areas and diverse group of people in the metropolis due to time and financial constraints. Therefore, since the research work was focused on one particular area, the sample size could not be deemed an adequate representation of fashion consumers in the Greater Accra Region to warrant a generalization of the findings of the study.

1.8 Significance of the Study

The research work will be beneficial to fashion designers in the sense that, it will provide them with a fair knowledge of consumers' expectations about clothing when making their purchasing decisions. Therefore, fashion designers can capitalize on these consumers' expectations and produce clothing that meets their consumer needs. In addition, by approaching textile and clothing design based on consumer insights this study will contribute to the field of sustainable clothing design. In addition, the theoretical contribution of this study will help to identify the various themes from consumption, person-product relationships and values, with sustainable design. Again, the study will help fashion designers to identify the factors that are associated with sustainable clothing so that such factors will be taken into considerations when designing clothing to meet the sustainability needs of consumers. In addition, the study will make recommendations to

specific issues in the fashion design that designers, given a mandate for sustainability, are confronting with. Furthermore, the findings in this study will contribute knowledge to the debate on sustainable fashion and apparel. Finally, the study will be beneficial to the researcher in the sense that it is undertaken in partial fulfillment of the requirements for the award of Master of Technology degree in Fashion Design and Textiles Education.

1.9 Definition of Terms

Fashion – It is defined as a process/product or a cultural industry that establishes the aesthetic and practical dimensions of our clothing habits.

Sustainable fashion – It is a system that supports human well-being and is compatible with sustaining natural environmental systems.

Sustainable development – It is defined as the development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

Sustainable consumption – It is defined as consumption that supports the ability of current and future generations to meet their material and other needs, without causing irreversible damage to the environment or loss of function in natural systems.

1.10 Organization of the Study

The dissertation is presented in five chapters. Chapter One is devoted to the introductory section of the study. It comprises the background of the study, statement of the problem, the purpose of the study, objectives of the study, research questions, significance of the study, limitations of the study, delimitations of the study, the definition of terms and the organization of the study. Chapter Two presents a review of relevant literature related to

sustainable issues in fashion. Chapter Three focuses on the research methodology employed for the study. This includes the research design, population, sample and sampling technique, data collection instruments, a pilot test of instruments, validity, and reliability of the instruments used, data collection procedures, and data analysis. In Chapter Four, the findings of the study are presented and analyzed. It also presents the discussion of the major findings of the study, and how these findings confirm or contrast that of previous related studies as found in the literature review. This chapter discusses the findings according to the three pertinent research questions. Finally, Chapter Five contains the summary of the findings of the study and the conclusions deduced from the findings as well as the implications of the study. In addition, the chapter includes recommendations made for further actions and suggestions for future research.

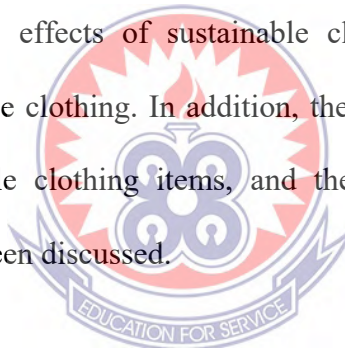


CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

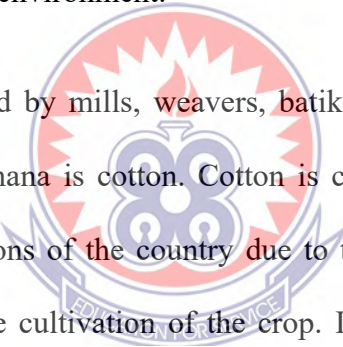
Given the complexities that exist in the clothing and textiles industry and the importance of sustainable clothing, the chapter presents a review of relevant literature related to sustainable clothing geared towards justifying the specific objectives of the study. It gives the overview of the clothing and textiles industry in Ghana and the background of clothing and textiles. The chapter presents the concept of sustainable clothing, consumers' perceptions about sustainable clothing, factors consumers consider when purchasing sustainable clothing items, effects of sustainable clothing, and product development considerations in sustainable clothing. In addition, the factors fashion designers consider when producing sustainable clothing items, and the challenges facing the design of sustainable clothing have been discussed.



2.2 Overview of the Clothing and Textiles Industry in Ghana

Clothing and textiles manufacturing in Ghana is an industry consisting of ginneries and textile mills producing batik, wax cloth, fancy printed cloth and Kente cloth (<http://www.gipcghana.com>). Firms operating in the industry serve local and regional markets with printed African patterned fabrics. In recent years, the industry has shown signs of significant growth, promoting high-quality traditionally designed fabrics as "Made in Ghana" to niche markets. By mid-1970s about 16 large and medium sized textiles companies had been established in Ghana. The garment industry also had some 138 medium and large-scale garment manufacturing companies during that time. The

Ghanaian clothing and textiles industry include vertically integrated mills, horizontal weaving factories, and the traditional textile manufacturing firms involved in spinning, hand-weaving and fabric processing. However, Quartey (2006) claims that inconsistent government policies over the years have contributed greatly to the decline in the subsector's activity levels. He reports that, as at 2002, the four major companies that survived the turbulence in the sub-sector are the Ghana Textile Manufacturing Company (GTMC), Akosombo Textile Limited (ATL), Ghana Textile Printing (GTP), and Printex with GTP maintaining the lead in the industry. Most of the Ghanaian textile companies prefer to locate within designated industrial areas to take advantage of Ghana's free zone regime and stable operating environment.



The basic raw material used by mills, weavers, batik, and tie-dye manufacturers in the production of textiles in Ghana is cotton. Cotton is cultivated in commercial quantities mostly in the northern regions of the country due to the dry climatic condition in these areas, which is ideal for the cultivation of the crop. In recent times, there is a growing number of fashion designers, fashion design institutions and fashion houses in Ghana. Generally, the Ghanaian clothing and textiles industry is mainly concerned with the production of fabrics for use by the garment industry and also for the export market. The sub-sector is predominantly cotton-based although the production of man-made fibres is also undertaken on a small scale (Quartey, 2006). The main cotton-based textile products include African prints (wax, java, fancy, bed sheets, and school uniforms) and household fabrics (curtain materials, kitchen napkins, diapers, and towels). These products form the core of the sub-sector. The main products of the man-made fibres (synthetics) and their blends include uniforms, knitted blouses, socks etc. These are made from polyester, acryl,

and other synthetics. There are also a number of small firms which handprint their own designs onto bleached cotton fabrics, also known as tie and dye or batik cloth. In addition, traditional or indigenous textiles such as Kente cloth (traditional woven fabric), Adinkra cloth (traditional hand printed fabric) and other types of woven fabrics used for various purposes such as smock making etc. are proposed.

Ghana's textile industry imports many of its raw material inputs for its operations, and finished goods. Imports of raw materials are mainly from the Netherlands, China, India, the United States, the European Union, Nigeria, Thailand to mention but a few. Textile imports into the country comprise of dye stuff and chemicals, calico, khaki fabric, prints and finished textiles and garments of a various kind like new dresses, bed sheets, used textile goods like blankets clothing curtains, accessories, like zippers, fasteners etc. Machinery, equipment and spare parts are imported for use in the sub-sector. Whereas raw material imports such as cotton are complementary to local production, imported African prints from Nigeria, Côte d'Ivoire, and South-East Asia tend to crowd out local production. These finished products often bear the patent designs, logo, and trademarks of local textile industries, which are sold on the local market at a very cheap price.

Textiles exports from the industry include cotton yarn, cotton fabric, printed fabric, polyester fabric, etc. The main export destination for made-in-Ghana textiles as at 2004 includes EU countries (55%), the USA (25%), and ECOWAS (15%) whilst the remaining 5% percent exported to other countries, mostly Southern and East African states mainly South Africa, Zimbabwe, Namibia, Ethiopia etc. (Quartey, 2006). Clothing and textiles exports from Ghana comprise of indigenous textile products like Kente, Adinkra (hand-prints), smock as well as another category of clothing such as fancy prints, wax prints,

Java prints, ladies dresses, men's wear, etc. Apart from the aforementioned clothing products, Batik or tie and dye fabrics are also used to produce all kinds of products for the exports market. These products include a unique brand of carefully crafted handbags, casual wear for ladies and gents, shirts, dresses, napkins, cushion covers, bedspreads, chair backs, curtains, toys and many others.

Whilst the clothing segment of the industry is labour intensive and therefore serves of a major source of employment, the textiles segment is more capital intensive which requires significant investment and plant and machinery and building infrastructure. The clothing and textiles industry in Ghana is faced with some challenges that hinder its effective operations. Some of these challenges include the loss of domestic market share to imports, unreliable provision of electricity, importation of low-priced textile and textile products mostly china, high rate of piracy, importation of counterfeit textile products, and low level of investment in hi-tech plant and equipment. Other factors include stiff competition from finished imported textile prints, regional trade barriers, poor packaging of products, high of importing raw materials, the inability of some manufacturers to meet export orders on schedule, high tariffs charged in some export destinations of Ghanaian textile, etc. In view of these challenges, the government has initiated various policies aimed at restructuring and improving the textiles industry. These include an increase of employment opportunities for the growing population, expansion, and diversification of the economy, promotion of both domestic and foreign investment.

2.3 Background of Clothing and Textiles

In an attempt to define clothing, Kaiser (1990), explains that clothing is a material production that fulfills our physical needs for protection and functionality. McCracken

(1990) postulates that clothing is an expressive medium that can be understood as a language or at least as a communication medium. In other words, clothing is the material thing that gives fashion a contextual vision in society (Cataldi, Dickson & Grover, 2010). However, Niinimäki (2011) defines clothing to mean an embodied experience that is socially constituted and situated: i.e. the dress, the body and the self in the social context are perceived simultaneously.

According to Adu-Akwaboa (2010), clothing which is made from textiles, is one of the three necessities of man, alongside food and shelter. Agyemang (2001) posits that although clothing is usually prioritized second to food, one can go unnoticed without food or shelter for a moment, but without clothing, he or she may be perceived in a civilized world as insane or a mad person. Kaiser (1990) claims that clothing can be understood through its temporal, fashion and aesthetic aspects, i.e. its cultural context, and through connections to group affiliation, social situation, immediate body space, personal characteristics, kinetic interaction and garment/body interaction. In agreement with the social context of clothing portrayed by Kaiser, Malcom (2002) contends that social structural traits such as social identity, ethnic identity and “gender”, can be manifested through clothing as a form of non-verbal communication. Also, Niinimäki (2010) states that clothing is strongly related to emotions and can be transformed into energy and stimulation for its wearer. Niinimäki avers that along with this intimate relationship, there is another important social function of clothing, thus clothing helps individuals to aesthetically position themselves as part of a community. Therefore, Eifler and Diekamp (2013) conclude that the recognition of the social meaning of clothing is part of our cultural experience and belongs to the cultural memory of society.

The Oxford Advanced Learners Dictionary (2010) defines textiles as the type of cloth made by weaving or knitting. According to Berglin (2013), textiles of today are materials with applications in almost all our activities, this is because since we wear clothes all the time and we are surrounded with textiles in almost all our environments. Therefore, Berglin avers that the integration of multifunctional values in such a common material has become a special area of interest in recent years. According to him, textile materials and techniques have become an important platform for high-tech innovations with the development of fibre yarns, fabric and other structures with added-value functionality for a range of applications.

The Retail Forum for Sustainability (2013), reports that the clothing and textile industry is the world's oldest branch of consumer goods manufacturing. It is a diverse and heterogeneous sector which covers the entire production chain of transforming natural and chemical fibres (such as cotton, wool, and oil) into end-user goods, including garments, household goods, and industrial textiles (RFS, 2013). Similarly, the European Commission (as cited in Gardetti & Torres, 2013) describes the clothing and textile industry as a diverse and heterogeneous industry covering a large range of activities from the transformation of fibres to yarns and fabrics and from these to clothing, which may be either fashion or non-fashion clothes.

The clothing and textiles industry in terms of intensity of trade is the world's second-biggest economic activity (\$353 billion in 2001) and account for 7% of world exports (RFS, 2013). RFS claims that while hundred years ago, the majority of textile production was concentrated in Europe and North America, today, the bulk of textiles and clothing is

manufactured in Asia, particularly in China and India. Despite this shift, the clothing and textile sector remains an important part of the European manufacturing industry and accounts for 3% of total manufacturing value added in Europe. RFS further asserts that according to the latest structural data available, in 2006 there were 220,000 companies employing 2.5 million people and with a turnover of €190 billion.

It must be emphasized that clothing and textiles are heavily intertwined with environmental, social and governance issues. Though in the past, efforts of producers and retailers have primarily focused on improving the social aspects of textiles e.g. establishing fair working conditions, setting social standards, establishing minimum wages, ensuring occupational safety, imposing a ban on child and forced labour, etc. Over the years, however, there has been growing concern about the environmental impacts of clothing and textiles (RFS, 2013).

In a study on the environmental impact of products (EIPRO) by the EU (as cited in RFS, 2013), clothing alone is responsible for 2 to 10 % of the EU's lifecycle environmental impacts. Whilst textiles come fourth in the ranking of a product category which causes the greatest environmental impact, just after food and drinks, transport and housing. However, the study found that the precise environmental impact of textiles varies significantly depending on the type of fibre the garment is made from.

2.4 The Concept of Sustainability

According to the World Commission on Environment and Development (1987), sustainability is defined as the “development that meets the needs of the present without compromising the ability of future generations to meet their needs”. According to

Kermath (n.d), sustainability is a condition with environmental integrity and social justice. Kermath further explains environmental integrity as the ability of the whole environment to function as natural as possible, to do so without compromising the ability of the ecosphere from supporting all life forms on the planet, and to maintain its inherent evolutionary potential. Social justice, on the other hand, refers to fair and equitable access to and distribution of essential resources and power.

With growing awareness, sustainability gained impetus in the clothing and textile industry in 1994 and today it is becoming even more important. Dickson and Eckman (2006) assert that several sustainability issues relate to sourcing, production, manufacturing, packaging, marketing, and consumption. They posit that there are two choices in dealing with sustainability issues: 1) either we can ignore them or 2) we can become the agents of change. However, in recent times many individuals and companies have chosen to be the agents of change. Since the 1990s, there has been an emerging concept of sustainability that is referred to as the “Triple Bottom Line” introduced by John Elkington (Elkington, 1998). This concept describes sustainability as the balance between three elements: social equity (or human wellbeing), environment and economy. Thus, it consists of social, environmental and economic performance aspects. The Sustainability Society Foundation (SSF) describes the concept of “Triple Bottom Line” to mean human well-being - which includes basic needs, personal development, well-balanced society; environmental wellbeing that includes healthy environment, climate and energy, and natural resources; and economic wellbeing that is related to the preparation for future and economy (Shen et al., 2014). However, Gilding (2000) argues that much of the ‘complexity’ of sustainability is lost when considering only the three mentioned aspects.

At the individual level, Suzuki and Dressel (2002) define sustainability as the assessment of all human behaviours with the vision of reformulating those that contradict the development of a sustainable future. Similarly, Fletcher (2008) refers to sustainability as a means of integrating human well-being with natural integrity. In addition, Joy, Sherry, Venkatesh, Wang and Chan (2012) define sustainability as involving complex and changing environmental dynamics that affect human livelihoods and well-being, with intersecting ecological, economic, and socio-political dimensions, both globally and locally. A careful review of the definitions of sustainability the various researchers as stated above will reveal that they all have traces of the “Triple Bottom Line” concept.

Since the concept of sustainability is interdisciplinary, Eifler and Diekamp (2013) indicate that when dealing with this field of research, one will be facing a confusion of discourses. Therefore, they recommend the use of the term “ecological” in the sense of the environmental movement during the 1960s and 1970s when clothing was supposed to be produced ‘naturally’ and environmentally friendly and to present an alternative to the mass production of clothes. On the other hand, the term “sustainable” refers to the situation where clothing is produced and traded with no danger to consumers’ health and the environment. With this distinction, it is recommended that conventional producers of ecological ranges’ are characterized as those who report only certain aspects of the production chain as ecological (Eifler & Diekamp, 2013).

According to Anderson (2008), since the inception of the concept of sustainability, companies such as Interface, American Apparel, Gap, Nike, Unifi Inc., Under-the-Canopy, Kee-Ka, Under the Nile, Simply Fido, Timberland, and Patagonia have incorporated sustainable strategies in their supply chain. Anderson reports that recycling is

one of the major strategies followed by at least 1,000 textile and apparel companies in their promoting their sustainability agenda. In addition, other companies that use textile products in their products like Ford Motor Company use recycled fabric for upholstery in cars and trucks (Anderson, 2008). Furthermore, many companies have incorporated greener packaging and others are considering using recycled materials, less material, and reusable packaging while some companies have chosen to abide by Oeko-Tex Certification that certifies them safe for people and the planet while lean manufacturing is a growing trend (Anderson, 2008).

In order to properly appreciate the concept of sustainability, few researchers have outlined some principles of sustainability in their studies. In their study on characterizing undergraduate engineering students' understanding of sustainability, Carew and Mitchell (2002) compiled some principles of sustainability from mainly engineering literature where sustainability is presented as an end and a means. The sustainability principles compiled by Carew and Mitchell (2002) include:

- i. Recognition and respect for the limits of nature's capacity for regeneration, and limits to society and the economy of economic systems to support and guide transactions emanating from human activity;
- ii. Recognition of interdependence and intradependence of ecosystem, socio-system, and economy between human and non-human entities;
- iii. Intergenerational equity, in other words, the right of future generation to inherit a healthy and ecologically balanced environment from present generations;

- iv. Intragenerational equity, for example, redistribution of wealth, power, and opportunity with a view to reducing current interpersonal and international disparity;
- v. Respect for social and cultural freedom, with concomitant acceptance of the responsibilities inherent in cultural and social freedom;
- vi. Meaningful involvement of stakeholders in the decision-making process, including the public and private sectors, international and local representatives, and non-human agents. The more extreme position is a call for equal distribution of power amongst all stakeholders in decision-making;
- vii. Equal representation of economic, environmental and social priorities in decision-making; and
- viii. Recognition of the unique contextual factors in each decision-making situation taking responsibility for the impacts resulting from one's decisions.

In addition, Langenwater (2009) outlines the following as some of the essential principles guiding the sustainable policy for organizations: respect for people (at all levels of the organization) including the community, and its supply chain; respect for the planet by recognizing that resources are finite; and generating profits that arise from adhering to the two aforementioned principles. It necessary for organizations to adhere to these principles because organizations are embedded in society, and reflect the value they offer society, which raises profound issues such as sustainability.

2.5 Sustainability of Clothing and Textiles

In recent times, sustainability in the clothing and textiles industry has become a topical issue receiving a wide attention from both researchers and clothing and textiles manufacturers. Eifler and Diekamp (2013) aver that lately, sustainability of clothing has garnered much attention in respect of everyday life and has become an acceptable part of lifestyle choice. They claim that because of this development, sustainable or ecological clothing has been sought after as such because clothing is a part of our basic needs.

However, according to Pasricha (2010), sustainability, just like any other major concept, has been a difficult one to define in the context of clothing and textiles. Anderson (2008) states that sustainable apparel includes the following:

- i. Use of certified organic natural fibres (wool, cotton, or linen);
- ii. Use of highly renewable fibers (bamboo, soy);
- iii. Use of low impact synthetic or recycled fibres;
- iv. Use of non-toxic or reduced toxicity fiber processes and treatments;
- v. Use of low-impact or natural dyes;
- vi. Design and colour choices aimed at longevity rather than planned obsolescence;
- vii. Fair trade, ethical labour practices, and elimination of child labour and other exploitation;
- viii. Reduced energy use throughout the product life cycle; and
- ix. Minimal or environmentally appropriate packaging.

Kadolph (2010) argues that not all individuals agree that all these characteristics must be presented before a product is deemed to have passed the sustainability test.

In order to pass the sustainability test, clothing and textiles manufacturers produce so many clothes nowadays that are accompanied by detailed attention to fashion trends and corresponding discourses about clothing and fashion (Eifler & Diekamp, 2013). However, though sustainable clothing with fashionable design and innovative solutions has raised many related issues for discussions, sustainability of clothing and textiles is yet to become an integral part of the market.

Aakko and Koskenurmi-Sivonen (2013) portray sustainable clothing as an endeavour that draws together sustainable development and fashion. According to Reiley and DeLong (2011), establishing sustainability in the fashion industry requires transformative changes by all involved, including designers, manufacturers, marketers, and consumers. Reiley and DeLong opine that the various stakeholders in the industry must feel that consumers need a vision for sustainable fashion practice, and therefore examined how fashion practices of vintage and new clothing wearers are related to a consumer's desire for a unique appearance and sources of clothing acquisition. Therefore, Vennström (2012) suggests that various actors in the industry, brands, designer labels, fashion magazines and other media sources, as well as consumers, must all contribute to the issue of sustainability.

In promoting sustainability in the clothing and textiles industry, stakeholders have focused on using eco-materials and more resource efficient production, however, the scale of production and consumption has increased to levels where the benefits of technical

improvements are reduced (McGrath, 2012). Therefore, McGrath contends that to create true sustainability in the clothing and textiles industry requires reducing the material flow of clothing and addressing both sustainable production and consumption. He states that clothing producers must shift the focus of their operations from exchange value to use value, which offers opportunities to increase garment quality and reduce quantity demanded through encouraging consumers to engage in fashion through wearing, not just purchasing clothes. This is because the success of sustainable clothing depends on designing clothes able to satisfy both the functional and emotional values of consumers (McGrath, 2012).

LeBlanc (2012) reports that in time past, the clothing and textiles industry has faced intensifying criticisms about its environmental footprint and has once again reacted both on a brand level, with many brands establishing their own sustainability commitments and strategies, as well as on an industry-wide scale with several initiatives. However, the good news is that slowly but surely, the fashion industry is catching on to corporate social responsibility and sustainability (LeBlanc, 2012). For instance, LeBlanc posits that since the anti-fur campaigns of the 1980s and 1990s, many clothing brands and retailers have since eliminated the use of fur in their products or taken measures to ensure good animal welfare conditions in their fur supply chains. In addition, the numerous sweatshop scandals in the beginning of the late 1990s pressured fashion brands and retailers to implement factory compliance monitoring programmes. Moreover, LeBlanc states that more recently, sustainability leaders in the clothing and textiles industry have begun moving beyond their initial reactive response toward proactively addressing environmental concerns at the beginning of the value chain when garments are designed.

Since sustainable design in fashion has so far been largely focused on materials selection, nowadays several brands have developed or are in the process of developing indices that will help their designers and product development teams choose materials based on environmental impacts throughout the clothing life cycle (LeBlanc, 2012). LeBlanc gives examples of such indices as NIKE Inc.'s Materials Sustainability Index and Timberland's Green Index, which inspired the broader-reaching Outdoor Industry Association's Eco-Index. She adds that both NIKE's index and the Eco-Index have also been incorporated into the Sustainable Apparel Coalition's Higg Index, which is currently endorsed by almost 50 industry-leading brands, retailers, and suppliers.

In a related development, LeBlanc (2012) admonishes that though the initial progress towards sustainability of clothing at the design stage should be commended and further fostered, however, there is a caveat. Thus, while materials selection can have an influence on the environment throughout the clothing life cycle and is, therefore, a priority, brands and retailers should be careful not to equate sustainable design with simply plugging materials information into a computerized tool. Hence, the sustainable design requires a more holistic perspective that takes into account not only how fashion is produced, but also how it is consumed (LeBlanc, 2012). This is because, after all, sustainable materials will have limited impact if the low quality or poorly designed garments are worn only a few times before they end up in a landfill.

From the foregoing, we can establish that as apparel companies undertake the mission of sustainable design (i.e., systems that support human well-being and are compatible with sustaining natural environmental systems) they are focusing on the planning stage of the

supply chain in the design phase because that is where most decisions are made that potentially impact the entire life cycle of the product (Bhamra & Lofthouse, 2007).

2.6 Fashion and Clothing Sustainability

According to Kaiser (1990), fashion is a symbolic product, which differs from clothing in the sense that while clothing is a material production that fulfills our physical needs for protection and functionality, fashion is connected to the user's emotional needs. Fashion connects consumers' inner individual personality to external symbols for example brands, status items, uniqueness, appropriateness, and beauty. Miller (1992) explains that fashion means that the product is able to signify the present. Fashion is defined as the discarding of clothes that are fully functional for purely semiotic or symbolic reasons (Koefoed & Skov, n.d).

Nevertheless, basically, fashion is the way in which our clothes reflect and communicate our individual vision within society, linking us to time and space (Fletcher 2008). Similar to the idea of Fletcher, Gardetti, and Torres (2013) perceive fashion as something that always changes, while its meaning remains unaltered. They explain fashion as a deep cultural expression that aims directly at who we are and how we connect to other people, frequently suggesting a passing trend, something transient and superficial.

Welters (2008), in her work 'The Fashion of Sustainability', presents the connection points between sustainability as understood today and fashion since the year 1600. Welters highlights that sustainability is not a new concept in the history of fashion but it has been part of its repertoire. According to Hethorn and Ulasewicz (2008), fashion is a process, which can be expressed and worn by people. Hence as a material object, fashion

has a direct link with the environment because it is embedded in everyday life. Hethorn and Ulasewicz (2008) explain sustainability within fashion to mean that through the development and use of a thing or a process, there is no harm done to the people or the planet, and that thing or process, once put into action, can enhance the well-being of the people who interact with it and the environment it is developed and used within.

In linking up fashion and sustainability of clothing, Walker (2006) points out that though fashion may have some negative connotations, however, these connotations pertain only to the way in which it is manifested and used. For instance, the fact that the production and use of clothing may generate a great amount of waste, should not make it necessarily appear as an impediment for sustainability. Because sustainability should be viewed from the long-term perspective. Therefore, beyond these contradictions, fashion should not necessarily come into conflict with sustainable principles (Gardetti & Torres, 2013). Rather fashion should have a role in the promotion and achievement of sustainability and this may even be a key element in working towards more sustainable ways of living (Walker 2006).

2.7 Consumers' Perceptions about Sustainable Clothing

It must be emphasized that consumers have expectations about the pleasures and goals a particular product will offer them, and these expectations can result in satisfaction or dissatisfaction (Niinimaki, 2011). Therefore, consumers place a high value on satisfaction when choosing between different products based on consumption behaviour and patterns. Hence, products are often purchased to reach the expected value related goal (Solomon, Bamossy & Askegaard, 2002).

Eifler and Diekamp (2013) found that the participants perceived clothes to be something that should make them feel comfortable and believe that they are crucial to the expression of one's own identity. In addition, clothes should be able to show the individual's shape clearly to others when worn. The study revealed that to dress oneself is a self-evident part of every-day routines, which should be exercised playfully and linked with the explicit idea of 'looking good'. The majority of the people who were interviewed in the study considered sustainable issues as an integral part of their everyday life. Furthermore, Eifler and Diekamp found that consumers demonstrate an immense interest in and awareness of sustainable issues and obtain information from the following media sources: newspapers, television, political journals, internet, radio, relatives and friends, environmental organizations, consumer protection organizations, and fashion magazines.

2.8 Consumers' Knowledge of Sustainable Clothing

Eifler and Diekamp (2013) state that sustainable clothing furthers the complexity of modern fashion and makes the impact of our consumption culture. They aver that the transformation of purchasing habits takes place in the dominant market of unsustainable clothing. In the clothing and textiles industry, sustainable consumption demands rational decisions, which consumer should meet despite conflicting sources of information (Moisander & Markkula, 2011). Consumers must be able to tell which products are sustainably produced, and knowledgeable about the production of sustainable clothing and its certification. This is because the global clothing industry turns out to be less transparent than the other facets of sustainable production such as food (Niinimäki, 2010). Again, Valor (2008) observes that besides the difficulties in production orientation, consumers often feel that sustainable consumption is stressful and time-consuming.

2.9 Consideration of Design Strategies and its Impact on Product Sustainability

Curwen, Park, and Sarkar (2012) contend that the design stages of the product development process have a direct influence on the final product as this is where the most critical decisions are made, including cost, appearance, materials selection, innovation, performance, sustainability, and quality (Bhamra & Lofthouse, 2007). Therefore, the designer must evaluate the needs of all stakeholders to determine how to proceed with a design concept and make choices according to the risks and benefits (Howarth & Hadfield, 2006). A sustainable product development process of a closed-loop nature requires modifications from the traditional linear process that does not consider sustainability. Design choices are made about product components to be disassembled and reused as well as materials that can be processed into new products (Curwen, Park & Sarkar, 2012).

In considering the choice of a particular design strategy for the production of sustainable products, Mugge, Schoormans & Schifferstein (2005) opines that it may be wise to combine different strategies to promote sustainable consumption. In terms of clothing, this may mean for example combining slow fashion with local production and perhaps even with customization to achieve high quality and sustainable value (Niinimäki & Hassi, 2011). However, Niinimäki and Hassi, (2011) assert that clothing design must be combined with multiple life cycle strategies such as reverse logistics that benefit the consumer. In addition, the inclusion of a garment exchange system may lower the environmental burden of this clothing and textiles industry.

Niinimäki and Hassi (2011) contend that when consumers are active partners in the design or manufacturing process itself, it is possible to increase the uniqueness and personalization of the product. For instance, a study by Mugge et al., (2005) has shown that these aspects symbolize an accomplishment to the consumer and therefore deepen the product attachment, and this emotional bonding may postpone product replacement. Hence, according to Niinimäki and Hassi, (2011), strategies that offer opportunities to better meet an individual customer's needs, create deep product satisfaction and thereby offer the opportunity to decrease consumption in the clothing and textile industry include halfway products, modular structures, customization, co-creation and design services.

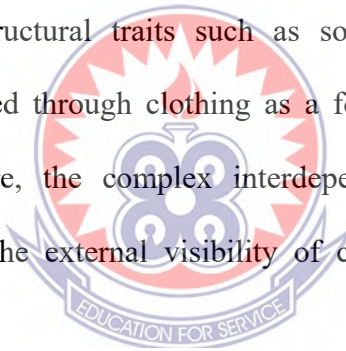
2.10 Effects of Sustainable Clothing

Eifler and Diekamp (2013) perceive clothing as a complex phenomenon among other consumer goods. They opine that clothing has an elevated significance that arises from the interweaving of functional, social and cultural aspects. Therefore, in the view of Eifler and Diekamp, clothing can have protective, warming, cooling and, as a second skin, decorating functions. Hence, one can say that clothing has an intimate contact with the body which means that to feel comfortable one must perceive clothes as an integral part of the body, but not merely as an external part (Eifler & Diekamp, 2013).

However, the position of Eifler and Diekamp (2013) that clothing should not be merely perceived as an external part partly contradicts an earlier assertion by Levy-Bruhl (1966) where he explains that some products such as clothing can be defined to be the extenders of identity, since it is so fundamentally deeply associated with an individual and also very intimate since it exposes and hides simultaneously. He adds that appearance and clothing express the wearer's inner self, moods and identity and as a result, clothing is usually

connected to social class, status, gender and age of the wearer. Woodward (2005) concurs with Levy-Bruhl when he asserts that clothing plays a very significant role with regard to a person's identity, sexuality, and sociality, and hence clothing choices externalize the inner self in social contexts. In this direction, Woodward contends that clothing is very intimate, close to our body, but also very closely connected to our external social roles and simultaneously our inner self, our identity.

In the view of Niinimäki (2010), clothing is strongly related to emotions and can be transformed into energy and stimulation for its wearer. Along with this intimate relationship, Niinimäki states that there is one more important social function thus social structural traits. Social structural traits such as social identity, ethnic identity and “gender”, can be manifested through clothing as a form of non-verbal communication (Malcom, 2002). Therefore, the complex interdependencies between the individual intimate relationship and the external visibility of clothing constitute its peculiarities (Eifler & Diekamp, 2013).



2.11 Product Development Considerations in Sustainable Clothing

The process of clothing production and fashion design begins with market research and ends only when the company has manufactured and sold the last garment. However, the product development lifecycle according to Fletcher (2008), consists of the fibre production phase, the production phase (yarn, fabric, product), then the product is transported and enters the use phase, before entering the disposal phase where the garment may or may not be recycled.

In the fibre production phase the areas of greatest impact include: large quantities of water and pesticides required for growing cotton, emissions to air and water arising from producing synthetic and cellulosic fibres, adverse impacts on water linked to natural fibre production, and significant use of energy and non-renewable resources for synthetics (Fletcher 2008). However, largely, fibre production is limited to a narrow range of materials, largely dominated by cotton with an exponential demand for manufactured fibres like polyester (Rebel, 2011). More generally, the process of recording and assessing impacts involves looking at resources consumed (energy, water, chemicals, and land) and waste and emissions produced (to air, water and land).

However, key sustainability issues in fibre production are different for different materials. For instance, the environmental impact of this initial process largely depends on the fibre in question (Rebel, 2011). Sustainability issues associated with fibres are also complex which makes it difficult to interpret findings (Vennström, 2012). Vennström (2012) asserts that the process of reviewing and comparing fibres makes opportunities to reduce impact more visible. These include, for example, the development of better practices in the production of conventional fibres as well as the introduction of a group of different and inherently lower-impact fibres. According to Vennström, some of these changes could be brought about by a move to alternative systems of agriculture that are already well established (integrated pest management or organic cultivation methods, for example), while others are more challenging and need technical development. Also, it must be emphasized that the environmental and social impacts of producing textiles are varied and even affect design choices, therefore, Fletcher (2008) finds it important that the complexity is acknowledged and that expertise on sustainable fibres is sought after. She

finds that fibres should be chosen for their appropriateness to product and user where issues such as diversity, ethics, and consumption are considered.

According to Fletcher (2008), the production phase, meaning the phase where the fibre becomes a garment, can be modified to more sustainable approaches as well. Individual production processes can be improved by minimizing energy, resource use, and waste, and the completely underlying industrial system can be transformed to a more sustainable system. The process improvements can include technology-based innovation and innovation driven by legislation, as well as the practice in fibre and fabric processing. Technology can be blamed for environmental and ethical issues, but at the same time technology can also provide opportunities for these issues. Technology requires energy and creates waste, but innovation in this sector can also help reduce these negative impacts. As Scaturro (2008) states: balancing the dismay regarding the role current technologies play in the fast fashion system is an alternative belief that the right technologies, when selectively developed and applied, can play an integral role in the growth of sustainable fashion. However, also changes in usage, disposal, and reuse or recycling alternatives are needed.

The end part of a product's lifecycle is the use phase. This phase of the production process is often neglected in terms of sustainability (Vennström, 2012). The use phase of clothing is usually the one with the most impact on the environment. Fletcher (2008) posits that a typical clothing is washed and dried around 20 times in its life, and most of its environmental impact comes from laundering and not from growing, processing and producing the fabric or disposing of it at the end of its life. Concurring with Fletcher,

Beard (2008) asserts that, it is the aftercare aspect of clothing that has the most demonstrable negative impact on the environment as a whole.

According to Curwen et al. (2012), all materials used in the production of a product determine its environmental impact (Huang, Liu, Zhang, & Sutherland, 2009). For instance, approximately 80 % of clothing's impact is determined at the design stage (European Commission, 2011), making material choices crucial when sustainability is being considered. Materials for clothing include fibres and trims that have been cultivated, manufactured, processed, dyed, and finished. Therefore, in analyzing the life cycle of a full range of clothing and textiles for environmental impacts, Chen and Burns (2006) concluded that virtually all negatively affect the environment. As a result, MacPherson (2004) recommends the use of fewer materials to foster creativity and resourcefulness. Consideration of garment and textile care during the design process can drastically alter the environmental impact of apparel maintenance (Allwood et al., 2008) since the most significant environmental impacts arise from use and maintenance rather than manufacture (Bhamra, 2007).

2.12 Factors Fashion Designers consider when producing Sustainable Clothing Items

LeBlanc (2012) claims that sustainable fashion design is a nascent concept at the forefront of the industry's decades-long progression toward sustainability. She avers that while niche-market sustainable brands, such as Goodone, have long made sustainable design a core element of their brand identity, mass market retailers such as Marks and Spencer are only just beginning to experiment with sustainably designed concept garments. She contends that the cutting edge of sustainable design in the fashion industry is currently

focused on selecting more sustainable materials. However, while materials selection is undoubtedly a priority, brands and retailers must eventually move beyond materials selection indices toward a broader definition of sustainable design. She opines that responding to increasing consumer demand for more thoughtfully designed, higher quality products will require a more systematic approach to sustainable design, one that takes into account not only how fashion is produced, but also how it is consumed.

2.13 Challenges facing the design of Sustainable Clothing

In studying the current challenges the apparel industry experiences in developing sustainable apparel, Curwen et al. (2012) identified five challenges the case company encountered with respect to maintaining product value, quality, and aesthetics, meeting needs of suppliers, and coping with higher material and labour costs. Five solutions were put into place supporting sustainability objectives, which highlight the practice of innovation in design, optimizing timing and resources, gathering and diffusing information, relationship management, and making trade-offs for cost and value. They concluded that for apparel companies in overcoming challenges of sustainable product development, it begins with a clear mission, strong company mandate, and like-minded supply partners.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

The chapter presents the methods of data collection and analysis. It gives a description of the research design, population, sample and sampling techniques, and the data collection instruments. Also, the chapter includes the methods adopted to ensure the validity and reliability of the questionnaire and shows how the results off the stud were analyzed.

3.2 Research Design

This study concentrates on consumers' perceptions about sustainable clothing in Ghana using the Accra Metropolis as a case. Therefore based on the nature of the study, the researcher employs the descriptive survey research which is quantitative approach in nature. Descriptive survey research is the process of describing, recording, analyzing, and interpreting conditions as they exist. It is a means of investigating conditions that exist, practices that prevail, beliefs and attitudes that are held, processes that are ongoing and trends that are developing (Agyedu, Donkor & Obeng, 2013). A survey research was deemed appropriate in assessing the perceptions of consumers about sustainable clothing in the Accra Metropolis for making generalizations.

3.3 Population

Population of a study refers to the complete set of individuals (subjects or events) having common characteristics in which the researcher is interested (Fraenkel & Warren, 2002).

The population for the study involved consumers of clothing in the Accra Metropolis.

3.4 Sample and Sampling Techniques

Considering the large nature of the population involved in study, it is very difficult if not impossible to reach every subject in the population. Therefore, through the process of sampling, a section of the population was selected to form the focus of the study. This was referred to as the sample. Sample is a fraction of the population which is representative of the population to the extent that it exhibits the same characteristics as the population (Arthur, 2012). A sample of 425 consumers of clothing products selected from among consumers of clothing was selected from among consumers who patronize clothing items in shops within the central business area of Accra (Makola). Because of the scattered nature of the shops and the fact that consumers were busy with their shopping activities during the time of data collection, the convenience sampling techniques was used to select consumers who were willing and available to participate in the study.

3.5 Data Collection Instruments

In line with the quantitative approach to data collection and analysis, the main tool for data collection was the questionnaire. The questionnaire was selected because over time it has proven to be an effective instrument for securing information about practices and conditions of which respondents are presumed to have knowledge and opinions on (Cohen, Manion & Morrison, 2005). Also, in terms of gathering quantitative data relating to the views, attitudes or behaviours of the respondents on particular subject, the questionnaire was deemed most appropriate (Fraenkel & Wallen, 2000).

The questionnaire was developed based on the specific objectives of the study. It involved four sections namely Section A, B, C, and D. The Section A part of the questionnaire

captured the demographic data of the respondents. The Section B comprised response items concerning consumers' perceptions about sustainable clothing. The Section C focused on the factors consumers consider when purchasing clothing items. Finally, the section D focused on factors to consider when producing sustainable clothing items. While the Section A involved dichotomous response items, the remaining sections of the questionnaire were closed-ended questions with a three-point Likert Scale category of rating. The scale range was as follows: 1 – Disagree, 2 – Not sure, and 3 – Agree.

3.6 Data Collection Procedures and Pilot Test

In order to ensure that the research instruments were appropriate in terms of measuring what they purport to measure (validity) as well as capable of reproducing data in a consistent manner on repeated trials with just small margin of error (reliability), it was necessary to pre-test the instruments. The pilot test was used to measure the face validity of the survey questionnaire to ensure that the items are suitable for the constructs assessed (Saunders, Lewis, & Thornhill (2009)). After designing the questionnaire, a draft was submitted to the researcher's supervisor for perusal and comments. Afterwards, 80 respondents were selected from three clothing shops at Makola to pre-test the questionnaire. The questionnaire was administered to them and retrieved on the spot. Based on the responses of the consumers, the questionnaire was modified before it was finally administered to the target respondents. The final questionnaire was self-administered by researcher to 425 consumers of clothing with the central business area of Accra. The period for data collection lasted for one month.

3.7 Data Analysis

Based on the data collection instrument adopted thus the questionnaire method, the analysis of data was done quantitatively. Firstly, data collected through the questionnaire were edited in order to help identify omissions and to correct errors where necessary. Afterward, the questionnaire items were coded and processed by using Statistical Package for Social Sciences (SPSS – version 19) for the quantitative analysis. Data obtained from the SPSS were presented in accordance with the specific research question they sought to answer using tables with appropriate headings. Frequency counts of each category were done and presented in tabular forms showing frequency and percentage distributions.



CHAPTER FOUR

PRESENTATION AND DISCUSSION OF FINDINGS

4.1 Introduction

The chapter involves the presentation and analysis of the results of the study under each specific objective. It includes discussion of results with reference to other previous and recent-related research findings to come up with reliable conclusions.

4.2 Demographic Characteristics of Respondents

In the survey of consumers of clothing items selected from clothing shops within the Central Business District of Accra, the researcher administered a questionnaire to 425 consumers at the entrance of the clothing shops with 10 days. The respondents were asked to answer the questionnaire on the spot after which they were collected. Out the 425 questionnaires retrieved, 25 were answered wrongly and could not be used for any meaning analysis. Therefore, 94.1% (400) of the questionnaires were used for the final analysis. Table 4.1 presents the demographic characteristics of the respondents as follows:

Table 4.1 Demographic Characteristics of Respondents

Characteristics	f	%
Gender		
Male	115	28.8
Females	285	71.2
Age		
Below 25 years	98	24.5
25 – 34 years	272	68.0
35 – 44 years	21	5.3
45 years and above	9	2.3
Level of Education		
Basic	24	6.0
Secondary	185	46.2
Tertiary	191	47.8

Source: Researcher's Field Data (2015)

The gender distribution of the respondents showed that 115 of them representing 28.8% were males and 285 were females representing 71.2%. Over half, 68.0% of the respondents were within the 25 – 34 years bracket. Slightly below one-quarter, 24.5% of the respondents were below 25 years. The age distribution of the respondents implies that young adults are interested in shopping for clothing items and are more fashion savvy than older people are. About the educational level of the respondents, the majority (47.8%) of them had attained tertiary education whilst 46.2% had attained secondary education. The data on education level indicates that major of the respondent were literates who could read and understand the questionnaire in order to provide better responses.

4.3 Analysis of Results

The results of the study as obtained from the main data were presented in the form of tables under suitable headings based on the pertinent research questions.

4.4.1 Consumers' Perceptions about Sustainable Clothing

The data in Table 4.2 shows the responses of consumers concerning how they perceive sustainable clothing.

Table 4.2 Consumer Perception about Sustainable Clothing

Consumer Perception about Sustainable Clothing	1		2		3	
	f	%	f	%	f	%
Clothes should make me feel comfortable	4	1.0	35	8.8	361	90.3
Clothes are crucial in expressing of one's own identity	64	16.0	30	7.5	306	76.5
I wear clothes that show my bodily shapes when I dress	75	18.8	118	29.5	207	51.8
Sustainable clothing issues are an integral part of our everyday life	47	11.8	89	22.3	264	66.0
I have an immense interest in and awareness of sustainable issues	101	25.3	94	23.5	205	51.3
I usually obtain information on sustainable issues from friends, fashion magazines, and other media sources	67	16.8	24	6.0	309	77.3
I wear sustainable clothing for ecological reasons	19	4.8	60	15.0	321	80.3
Sustainable clothes like any other ecological products are presumably important to aspects of everyday life	32	8.0	82	20.5	286	71.5

Key: Disagree – 1, Not sure – 2, Agree – 3

Source: Researcher's Field Data (2015)

The perceptions of consumers concerning sustainable clothing imply that a clothing item meets the sustainability test if it makes the wearer feel comfortable as indicated by 90.3% of the respondents. Sustainable clothes should be able to express one's own identity and make the wearer easily identifiable if he/she wears such clothing item as asserted by slightly over three-quarter, 76.5% of the respondents. To satisfy their fashion needs, the majority, 51.8% of the respondents indicated that the clothes they wear should clearly show individual bodily shapes and make them look nice. However, 18.8% of the respondents were not convinced that the mere fact that a particular cloth shows one's bodily shapes makes such clothe sustainable. In recent times, it has been posited that sustainable clothing issues are an integral part of our everyday life and this assertion was confirmed by the majority, 66.0% of the respondents though 11.8% disagreed. As the issue of sustainability of clothing items begins to gain much attention in the clothing and textile industry, slightly over half, 51.0% of the respondents indicated that they have great interest and awareness in issues pertaining to sustainable clothing. However, one-quarter, 25.3% of them indicated that they do not have an interest in ascertaining whether or not a clothing item meets the sustainability test. For consumers who care to know about the concept of sustainability in clothing, the majority of them representing 77.3% revealed that they usually obtain information on sustainable issues from friends, fashion magazines, and other media sources. Over one-tenth, 16.8 of them did not actually bother to search for such information from any of the available sources. Most often, as found in prior literature, sustainability was partly associated with ecological friendliness and this was confirmed by over three-quarter, 80.3% of the respondents that they wear clothes perceived to be sustainable for ecological reasons. Whilst 71.5% of the respondents

believed that sustainable clothes like any other ecological products were presumably important to aspects of everyday life, 20.5% of them were indifferent in their responses.

The findings of the study were consistent with that of a similar study conducted by Eifler and Diekamp (2013). The study confirmed the findings of Eifler and Diekamp that consumers perceive clothes to be something that should make them feel comfortable and believe that they are crucial to the expression of one's own identity. The findings corroborate the position of Eifler and Diekamp that clothes should be able to show the individual's shape clearly to others when worn, sustainable issues as an integral part of their everyday life, and the fact that consumers should demonstrate an immense interest in and awareness of sustainable issues. Also, the study affirmed the assertion that consumers of clothing obtain information on sustainability from friends and media sources.

4.4.2 Factors Consumers Consider when Purchasing Clothing Items

In making their buying decisions, consumers are usually interrupted by internal impulse and external environment during the purchasing process. Hence, consumers of clothing items may consider a number of factors either internal or external in their clothing buying decisions. Table 4.2 depicts consumers' responses concerning the factors that influence their clothing buying decisions.

Table 4.3 Factors that influence Consumers Buying Decisions

Factors that influence Consumers buying decisions	1		2		3	
	f	%	f	%	f	%
Price	2	0.5	20	5.0	378	94.5
Pleasant material	10	2.5	81	20.3	309	77.3
Special features of clothing	82	20.5	75	18.8	243	60.8
Quality	0	0	12	3.0	388	97.0
Useful life of clothing	46	11.5	34	8.5	320	80.0
No harmful substances	0	0	8	2.0	392	98.0
Stylish chic	13	3.5	69	17.3	318	79.5
Eco-certification	88	22.0	216	54.0	96	24.0

Key: Disagree – 1, Not sure – 2, Agree – 3

Source: Researcher's Field Data (2015)

Though consumers may consider many factors before making a decision to buy or not to buy a particular clothing, the study revealed that majority of consumers of clothing make their buying decisions based on the price of the item as confirmed by 94.5% of the respondents. Since clothing items are worn on the body, slightly over three-quarter, 77.3% of the respondents indicated that they are interested in and tend to buy clothing items make of pleasant material. Over half, 60.8% of the respondents indicated that when buying clothing items they look out for the special features of the clothing item. Most often than not, consumers tend to appreciate quality goods and are prepared to pay high prices for goods if their quality can be guaranteed. Consumers of clothing are no different

when it comes to quality of products, and as observed in Table 4.2, the majority of the respondents representing 97.0% indicated that they buy clothing items based on the quality of such item. Whilst looking out for the quality products, consumers are always mindful of the fact that quality should go hand in hand with longevity. Hence, over three-quarter, 80.0% of the respondents laid emphasis on the useful life of the clothing item when making their buying decisions though slightly over one-tenth, 11.5% seem not to bother about the useful life of the clothing items they buy. Clothing items are mostly made from fabrics which may contain some of the amount of chemicals which may be harmful to the human body. Therefore, almost all the respondent, thus 98.0% of them indicated that they were very much concerned about the fact that the clothing items they buy were not made of any harmful materials. In line with fashion, consumers are interested in clothing items with stylish chic and will consider this feature when making buying decisions as confirmed by 79.5% of the respondents. However, 3.5% of them indicated that they did not lay emphasis on this feature when buying clothes. To certify that a particular clothing item meets the entire ecological or otherwise sustainability requirement for human consumption, some clothing items are embossed with Eco-certification stamp or identity. However, the study revealed that majority (54.0%) of the consumers of clothing items do not necessarily bother about whether the clothes they buy are eco-certified or not. Moreover, 22.0% of the respondents did not even consider eco-certification an important factor in their buying decisions.

The study established that the buying process is not an end in itself but rather is subjected to some other factors which actually influence consumer decisions. Some of these factors are price, pleasant material, quality, and stylish chic. The study affirms the assertion of

Niinimäki (2010) that clothing helps individuals to aesthetically position themselves as part of a community and therefore will buy clothes with stylish chic and special features. It was revealed that consumers of clothing items were much particular about the harmful substances used to produce some clothing items and therefore refrain from buying such items. This confirms the assertion of Anderson (2008) that manufacturers of clothing items should use non-toxic or reduced toxicity fiber processes and treatments. Furthermore, the findings corroborate the position of Woodward (2005) consumers consider various factors when making their clothing buying decisions because clothing plays a very significant role with regard to a person's identity, sexuality, and sociality, and hence clothing choices externalize the inner self in social contexts.

4.4.3 Factors to Consider when Producing Sustainable Clothing Items

In recent times, the concept of sustainability has received some amount of attention in the clothing and textiles industry. The data in Table 4.4 presents the perceptions of consumers concerning the factors that manufacturers need to consider when producing sustainable clothing.

Table 4.4 Factors to consider when making Sustainable Clothes

Factors to consider when making Sustainable Clothes	1		2		3	
	f	%	f	%	f	%
Natural fibres	53	13.3	68	17.0	279	69.8
Social responsibility	156	39.0	105	26.3	139	34.8
Quiet conscience	93	23.3	63	15.8	244	61.0
Fairness	29	7.3	103	25.8	268	67.0
Political act	192	48.0	174	43.5	34	8.5
Specific milieu	109	27.3	102	25.5	189	47.3
Pallid colours	191	47.8	147	36.8	62	15.5
Wide-cut	233	58.3	98	24.5	69	17.3
Muesli-image	222	55.5	76	19.0	102	25.5
Niche product	256	64.0	106	26.5	38	9.5
Big sizes	200	50.0	143	35.8	57	14.3
Out of fashion	325	81.3	61	15.3	14	3.5



Key: Disagree – 1, Not sure – 2, Agree – 3

Source: Researcher's Field Data (2015)

The majority of the consumers who took part in the survey revealed that sustainable clothing should exhibit some characteristics which make them ecological friendly. Over half (69.8%) of the respondents indicated that manufacturers of sustainable clothing should use natural fibres in the production of their clothing items though 13.3% disagreed with this assertion. Manufacturers of clothing should be mindful of the impact of their

activities on the society and therefore endeavour to be socially responsible as indicated by 34.8% of the respondents. However, the majority of the respondents (39.0%) indicated otherwise. Production of sustainable clothing should be characterized by the absence of turbulent motion and disturbances. Thus, the production environment should exhibit quiet consciousness as confirmed by 61.0% of the respondents though 23.3% of them disagreed. Over half (67.0%) of the respondents indicated that there should be fairness in the production of sustainable clothing. Whilst majority of the respondents representing 48.0% disagreed with the assertion that sustainable clothing should exhibit political act, 43.5% were rather indifferent. In producing sustainable clothing, almost half (47.3%) of the respondents indicated that manufacturers should consider the specific milieu of their consumers though 27.3% disagreed with this assertion. The majority (47.8%) of the respondents opposed the use of pallid colours in the production of clothing items whilst 36.8% of them were indifferent in their responses. Over half (58.3%) disagreed that clothing should have wide-cuts since this tend to expose the bodily parts of the wearer. Whilst one-quarter (25.5%) of the respondents supported the use of muesli-image in the production of sustainable clothing, over half (55.5%) of them disagreed. Though clothing manufacturers may tend to produce clothing that meets the sustainable needs of consumers, this should not necessarily lead to the production of a niche product as indicated by 64.0% of the respondents. It was revealed that consumers of clothing do not prefer clothes with big sizes as indicated by 50.0% of the respondents. Moreover, 81.3% of the respondents raised concerns about the production of out-of-fashion clothes.

The study reveals that in recent times consumers of clothing were concerned about the environmental effects of the clothing they wear and therefore tend to look out for

sustainable clothing. The majority of the consumers who took part in the survey had the suggested that manufacturers of sustainable clothing should use more of natural fibres in their production. This is consistent with the position of LeBlanc (2012) that sustainable design in fashion has so far been largely focused on materials selection. To this end, Anderson (2008) emphasizes that clothing manufacturers now use more of certified organic natural fibres such wool, cotton, and linen in their production. Also, it was revealed that manufacturers of clothing should ensure that their production methods enhance their social responsibility status. This affirms the assertion of Kermath (n.d), sustainability should be a condition with environmental integrity and social justice.



CHAPTER FIVE

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

5.1 Introduction

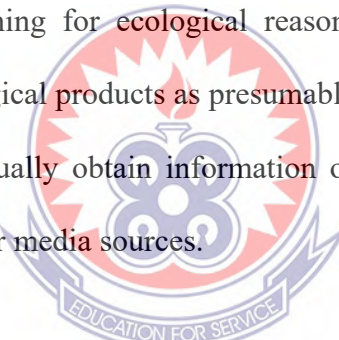
The summary of the finding and the conclusions of the study were presented in this chapter. In addition, the chapter contains relevant recommendations made based on the findings of the study.

5.2 Summary

The study sought to find out consumers' perceptions about sustainable clothing in Ghana using the Accra Metropolis as a case study. Specifically, the study focused on consumers' perceptions about sustainable clothing, factors that consumers consider when purchasing clothing items, and factors to consider when producing sustainable clothing items. The descriptive survey research design using the quantitative approach was employed in the study. The target population for the study comprised all consumers of clothing products within the Central Business District (CBD) of Accra in the Accra Metropolis. The sample for the study comprised 425 consumers of clothing products selected from among consumers of major clothing shops within the CBD using the convenience sampling technique. The questionnaire was used as the main instrument for collecting primary data from the respondents. The responses from the questionnaire were edited, classified, and categorized under suitable themes with regard to the specific research questions they sought to answer. Subsequently, the questionnaire items were coded and entered into SPSS to generate frequency counts and percentages which were presented in tabular forms showing frequency and percentage distributions of responses.

The major findings of the study have been summarized under suitable subheadings developed from the respective research questions as follows:

Consumer Perception about Sustainable Clothing: It was revealed that consumers perceived sustainable clothing as something that will make them feel comfortable when it is worn. They were of the view that sustainable clothes were crucial to the expression of one's own identity. It was indicated that the individual shape should be shown clearly to others through dressing. The consumers who responded to the survey considered sustainable issues as an integral part of their everyday life and demonstrates an immense interest in and awareness of sustainable issues. The majority of respondents stated that they wear sustainable clothing for ecological reasons and they perceived sustainable clothes like any other ecological products as presumably important to everyday life. It was revealed that consumers usually obtain information on sustainable issues from friends, fashion magazines, and other media sources.



Factors Consumers consider when Purchasing Clothing Items: Among the factors that influence consumer-buying decisions, price and quality play a crucial role in purchase decisions. The majority of the respondents showed interest in a more stylish range of sustainable clothing and mostly looked out for clothes with special features. Consumers expected to see that the clothing they bought were made with pleasant and colourful materials and such materials had no harmful substances. Consumers were willing to buy clothes with a guaranteed long useful life span. In making sure they bought ecological friendly clothes, consumers usually purchased clothes which were eco-certified.

Factors to consider when making Sustainable Clothes: Majority (69.8%) of the respondents were of the view that clothing manufacturers should consider using more natural fibres in garment production and their production activities should be carried out with quiet consciousness bearing in mind their social responsibility to the society. Production of sustainable clothing should be within a specific milieu but do not necessarily have to translate into the production of niche products. To meet the sustainability requirements, the respondents indicated the clothes should not have wide cuts or big in sizes. Neither should they be out of fashion but should demonstrate the feature of political act.

5.3 Conclusions

Though the concept of sustainability of clothing is recent in Ghana and has not been fully embraced by both clothing manufacturers and consumers alike, it was evident that consumers were interested in gaining awareness of the concept. Despite the fact that consumers have not been exposed to sustainable clothing and cannot even identify shops which specialize in sustainable clothing if any, yet they are beginning to develop an interest in the consumption of clothing items perceived to exhibit some sustainable features. Apart from price and quality that were hitherto the major factors that influence consumer clothing buying decisions, in recent times consumers buying decisions are influenced by other sustainable factors such as pleasant material, eco-certification of the clothing item, use of non-toxic or non-harmful materials and so forth. This clearly shows that a shift has occurred in consumers' perception about sustainable clothing and their consumption style. However, it must be emphasized that although sustainable clothing represents a benefit for consumers and somehow influence their buying decisions, it has

still not taken the place of price and quality as the major factors the influence consumer buying decisions.

5.4 Recommendations

The following recommendations were suggested based on the findings of the study to help improve the current situation:

- i. Manufacturers of clothing should stop the production of out of fashion clothing but rather produce clothing with stylish clothes with special features. This is because the majority of the consumers of clothing are young adults who are more fashion savvy and tend to consume clothes that are fashion trendy.
- ii. The production of big sized clothes with wide-cuts and pallid colours should not be encouraged because consumers of today do not fancy such kind of clothes.
- iii. Clothing manufacturers should focus on the production of clothing with guaranteed long useful life using pleasant materials such as natural fibres.
- iv. Sustainable clothes should be produced with a specific milieu in mind but not necessarily produced as niche products.

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APPENDIX

UNIVERSITY OF EDUCATION, WINNEBA

COLLEGE OF TECHNOLOGY EDUCATION, KUMASI

QUESTIONNAIRE FOR CONSUMERS

You are kindly requested to fill this questionnaire on consumers' perceptions about sustainable clothing in Ghana using the Accra Metropolis as a case. You are being informed that your responses will be kept confidential and used for academic work only. Please, you are required to remain anonymous and therefore do not write your name anywhere on this paper.

Instruction: Please tick (✓) the rank the best explains your position and state where necessary.



SECTION A: Demographic Characteristics of Participants

1. Gender

Male [] Female []

2. Age

Below 25 years [] 25 – 34 years []

35 – 44 years [] 55 years and above []

3. Which of the following best describes the highest level of your educational attainment?

Basic []

Secondary []

Tertiary []

Section B: Consumers' Perceptions about Sustainable Clothing

4. To what extent do you agree or disagree with the following perceptions about sustainable clothing? Please rank your responses on a scale of: *Disagree* (1), *Not sure* (2), *Agree* (3).

Consumer Perception about Sustainable Clothing	1	2	3
Clothes should make me feel comfortable			
Clothes are crucial to the expression of one's own identity			
The clothes I wear should clearly show my individual shapes when I dress			
Sustainable clothing issues are an integral part of our everyday life			
I have an immense interest in and awareness of sustainable issues			
I usually obtain information on sustainable issues from relatives/friends, fashion magazines, and other media sources			
I wear sustainable clothing for ecological reasons			
Sustainable clothes like any other ecological products are presumably important to aspects of everyday life			

Section C: Factors Consumers Consider when Purchasing Clothing Items

5. To what extent do you agree or disagree with the following as factors that you consider when purchasing clothing items for use? Please rank your responses on a scale of *Disagree* (1), *Not sure* (2), *Agree* (3).

Factors Consumers consider when purchasing Clothing Items	1	2	3
Price			
Pleasant material			
Special items			
Cherished product			
Self-reward			
Fair trade			
No harmful substances			
Stylish chic			
Eco-certification			

Section D: Factors to Consider when Producing Sustainable Clothing Items

6. To what extent do you agree or disagree with the following as factors that fashion designers need to consider when producing sustainable clothing items for consumers? Please rank your responses on a scale of *Disagree* (1), *Not sure* (2), *Agree* (3).

Factors to consider when producing Sustainable Clothing Items	1	2	3
Natural fibres			
Social responsibility			
Quiet conscience			
Fairness			
Political act			
Specific milieu			
Naturalness			
Pallid colours			
Wide-cut			
Eco-frumpy-look			
Innovation			
Muesli-image			
Integrity			
Niche product			
Big sizes			
Out of fashion			

