University of the Witwatersrand

Social Influence, Eco-literacy's and Perceived Benefit impact on Attitude and Purchase Intention of Herbal Cosmetics by Generation Y Cohort

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Master of Commerce

In the discipline of

MARKETING

In the

SCHOOL OF ECONOMIC AND BUSINESS SCIENCES

At the

UNIVERSITY OF THE WITWATERSRAND

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2016

DECLARATION

I Rudo Cynthia Christine Chinomona, do hereby declare that, this research report is my own unaided work. It is submitted in fulfilment of the requirements for the degree of Master of Commerce in Marketing at the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in this or any other university.

DEDICATION

This work is dedicated to my loving late mother: Miss Tsitsi Mukusa, who has always wanted to see the best in my self and my father – Professor Richard Chinomona who has always supported me in my academic journey against all odds. Thank you, mother, for taking care of me in my early childhood. Thank you, dad, for believing in me and trusting that I can make it in the academic arena.

ACKNOWLEDGEMENTS

I wish to express my heartfelt and deepest appreciation to my dissertation supervisor, Dr Norman Chiliya for his unwavering support, encouragement and constructive criticism – which has enabled me to complete this desertation in the shortest possible time. I would also like to thank Miss Rukudzo Pamacheche for being my Co-supervisor. I also want to thank Mrs Rejoice Mamina for her inspiring motivation. Finally, I want to thank the Marketing Division staff members at the University of the Witwatersrand for your guidance – especially during my Research Proposal defense.

ABSTRACT

In today's knowledge society, the promotion of herbal products and the subsequent consumer purchase of herbal products has been on the rise recently. This is mostly attributed to the growing believe that organic or natural products are safer to use and promote a health life style. In the same vein, the understanding of consumer motivations, attitudes and the purchase behaviour of herbal cosmetics purchase has attracted attention worldwide from both academicians and business practioners – especially marketing managers in the herbal cosmetic industry. The current study is one of the few studies in African context to investigate the predictors of consumer purchase intentions of herbal cosmetics in South Africa. This study sought to examine the effects of social influence, perceived benefits of herbal cosmetics on consumer attitude towards herbal cosmetics and their purchase intention. In total seven hypotheses were postulated and to empirically test these hypotheses a data set of 246 collected from Generation Y female cohort at the University of the Witwatersrand was used for the purpose. A structural equation modelling approach using AMOS 23 statistical software was used to empirically test the proposed seven hypotheses using the collected data set. The research findings supported all the proposed hypotheses in a significant way except one hypothesis H5 (eco-literacy and purchase intention relationship) which although positive - was insignificant. However, the results also indicated that eco-literacy has a significant influence on purchase intention via its effects on consumer attitude towards herbal cosmetics. Based on the current study findings, both academic and practical managerial contributions are made. On the academic front, new literature on a rarely researched subject of herbal cosmetics purchase intention predictors - in an oftenmost neglected research context – Africa context is generated. On the managerial front, recommendations on the possible strategies that can be adopted by marketing managers in the herbal cosmetic industry are provided based on the research findings. Finally, future research avenues are also proposed.

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CHAPTER ONE (I): OVERVIEW OF THE STUDY

INTRODUCTION

There is a general recognition in the extant literature that the use natural product – in particular, herbal products worldwide have been on the increase. According to Narayanaswamy and Ismail (2015) herbal products are defined as products that are made from plant exact, plant roots and have not been manufactured in the laboratory. This means that the products will occur by nature and are not man made. On the contrary, cosmetics are described as 'personal products' (Liao et cetera, 2008), used to improve the outlook (Guthrie et cetera, 2008). As noted by Winter (2009), cosmetics' list includes among others, many forms of products including those used as makeup, and products used on the face, body, and hair. According to the literature, many reasons are attributed to the increased use of herbal/natural products (Kim & Chung, 2011; Ismaila, & Mokhtara, 2016). Firstly, awareness of healthy lifestyle (Karim, Nasouddin, Othman, Mohd Adzahan, & Hussin, 2011) is noted as one of the important factor. More so, the change in lifestyle which is a result of modernisation processes and health problems (Ismaila, & Mokhtara, 2016), has necessitated the desire to look for alternative healthier cosmetics. Furthermore, it is noted that the increasing numbers of individuals who care about their health are now striving to maintain a healthy life by using products that are beneficial to their overall health and general well-being (Kim & Chung, 2011). As a result of this increased interest, evidence from Europe, Asia and the USA indicates that world market value of the herbal industry has gradually increased from 2010-2015 with the annual return from USD29.5 to USD35.7 million, with Asia Pacific on the lead (USD21.1 million), followed by USA (USD4.6 million) and Eastern Europe (USD1.2 million) respectively.

Regardless of this positive growth trend in the world, the herbal cosmetics market is still an under-researched area. For instance, it is noted in the existing body of literature on herbal cosmetics that there is a paucity of empirical endeavors specifically focusing on among others, knowledge, customer retention and purchase intention (Rezai, Zahran, & Mohamed, 2013) of herbal cosmetics. Furthermore, a cross examination of the spate of literature, shows a void in empirical studies that investigate the role played by social influence, eco-literacy, perceived benefits and attitude towards use of herbal cosmetics as antecedents of purchase intention of

herbal cosmetics – particularly amongst the Generation Y female students at a tertiary institution in an African emerging economy such as South Africa.

Drawing from this identified lacuna, the current study first and foremost seeks to investigate the impact of social influence, eco-literacy and perceived benefits on purchase intention of Generation Y female students at the University of the Witwatersrand. In the South African context and in the case of this study, Generation Y is represented by those people born between the year 1980s to 1995 (Bakewell & Mitchell, 2003). In addition to that, the study will endeavor to examine the mediating role of attitude towards use of herbal cosmetics in the social influence, eco-literacy, perceived benefits and purchase intention relationship. In a nutshell, the current study identifies social influence, eco-literacy, perceived benefits and attitude towards use of herbal cosmetics as potential predictors of Generation Y females' motivations to intend to purchase herbal cosmetics – and thus deserving empirical scrutiny in a neglected research context (tertiary institutions in South Africa). Furthermore, this study will attempt to ground and apply some theories adopted from the psychology and social anthropology disciplines in a marketing field. There are many theories that been used in explaining purchase intention of a product by consumers. In particular, the Theory of Planned Behaviour (TPB) and Theory of Consumption Value (TCV) will be utilised in the current study.

The remainder of the chapter will be structured as follows: First, a research background is provided and this is followed by problem statement. The purpose of the study, research objectives, research questions, justification of the study, scope of the study, proposed structure of dissertations and summary of the chapter.

1.2. *Research Background*

1.2 ***Theoretical Grounding: Theory of Planned Behaviour (TPB) & Theory of Consumption Value (TCV)***

Environmental awareness among consumers becomes the major topic, which pledges the scholars and researchers to focalize the research on green purchase intention and behavior. Different theories have been used to explain what influences the purchase intention of a product by consumers. These theories include social comparison theory, self-discrepancy theory, theory of reasoned action, consumption value theory and the theory of planned behaviour. Social Comparison Theory according to Festinger's (1954) states that people have a drive to evaluate themselves objectively in comparison to others they regard highly. The Self-

Discrepancy theory was first originated by Higgins in 1987. The theory expresses some specific affective states that occur because of self-divergences. Higgins (1987) notes that, self-discrepancies, occur when there is a mismatch, or inconsistency, between aspects of the self. The theory of reasoned action was developed by Fishbein and Ajzen in 1967. The theory aims to explain the relationship between attitudes and behaviors within human action. The theory of reasoned action is used to predict how individuals will behave based on their pre-existing attitudes and behavioral intentions. In line with this, the theories like the Theory of Reasoned Action (TRA), Theory of Planned Behavior (TPB), Self- Discrepancy theory and Social Comparison Theory are utilised by the researchers in the field of green consumerism to investigate the green purchase intention (Chan, 2001; Moe, 2007; Samarasinghe, 2012).

Two essential theories are identified and utilised to ground the current study. These are the Theory of Planned Behaviour (TPB) and the Theory of Consumption Value (TCV). Below are the two theories explained in detail and related to the current study.

1.3. Problem statement

Perhaps largely driven by better awareness of harmful chemicals in cosmetics (Gondal, Seddigi, Nasr & Gondal, 2010), consumer preference for herbal cosmetic products continues to grow around the world (Girotto, 2013). Interesting to note is the fact that, according to the American Consulate General, (2011), herbal skin care products hold the highest market share of all herbal cosmetic products, and this trend is expected to continue as noted by Euro-monitor (2011). However, there is a paucity in the empirical literature of studies that focus on numerous consumer motivations of herbal cosmetics purchase intention (Rezai, Zahran, & Mohamed, 2013). For instance, a few studies have identified change in lifestyle – with consumers opting for healthier lifestyle as the main driver of herbal cosmetics purchase intention (Saokaew, Suwankesawong, Permsuwan, & Chaiyakunapruk, 2011; Girotto, 2013). In the same vein, some limited previous studies have indicated that the belief that herbal cosmetics contain less synthetic chemicals, compared with conventional products (Kim & Chung, 2011; Girotto, 2013) is an important motivation for some consumers to intend to purchase herbal cosmetics. In addition to that, few studies have identified environmental concerns to be playing a key role in the desire to purchase herbal cosmetics (Girotto, 2013; Nagasawa & Kizu, 2013).

All this said, one can hardly find in the academic literature numerous studies that have identified social influence, eco-literacy and perceived benefits as key drivers of herbal cosmetics purchase intention. More so, the extent to which consumers' attitude towards use of

herbal cosmetics as a result of their desire to live a healthier lifestyle – mediate the social influence, eco-literacy, perceived benefits and purchase intention of herbal cosmetics relationship, has rarely been interrogated academically. More disturbing too, is the fact that most of the studies on purchase intention of herbal cosmetics have largely been from Europe, the USA and Asia. To find studies on the same, from the African continent in the extant literature, remains a difficult task. Since Africa and South Africa in particular – as an emerging market is still at its early stage, most of the businesses in the herbal cosmetic industry, are yet to explore information about the consumer motivations towards use of herbal cosmetics. Therefore, understanding the consumer motivations to purchase herbal cosmetics will be vital for marketing practitioners in cosmetics industry to develop appropriate business strategies in this neglected research context. In addition to that, the Generation Y cohort has been identified as one of the profitable market segments especially for female related cosmetic products (Nguyen, 2014). Yet still, a focus on the determining factors affecting the purchase intention of herbal cosmetics within such a profitable market segment in South Africa remain shortcoming.

1.3.1 ***Main Problem***

There is a lack of understanding of the factors that influence the purchase intention of herbal cosmetics by Generation Y female Cohort in South Africa.

1.4. **Purpose of the study**

Premised on the research problem aforementioned and the identified research gaps, this study aims to explore the determining factors affecting the purchase intention of herbal cosmetic products. Particularly, the independent variables include social influences and personal values such as eco-literacy and perceived benefits. In addition to that, this study also is interested in investigating the mediating role of attitude towards use of herbal cosmetics on the relationship between social influences, eco-literacy, perceived benefits and purchase intention of herbal cosmetics. In particular, the scope of the study is limited to female students at the University of the Witwatersrand deemed to belong to the Generation Y cohort.

1.5. Research Objectives

Research objectives are two-fold. There theoretical and empirical objectives.

1.5.1. Theoretical objectives

The following theoretical objectives were developed:

- To review literature on:
    - Social Influence
    - Eco-literacy
    - Perceived benefits of herbal cosmetics
    - Attitude towards use of herbal cosmetics
    - Purchase intention of herbal cosmetics

1.5.2. Empirical objectives

Given the purpose of the study, the following empirical objectives were developed:

- To determine the impact of social influence on attitude towards use of herbal cosmetics by Generation Y cohort female students at a tertiary institution in Gauteng Province.
- To examine the influence of individuals' eco-literacy on attitude towards use of herbal cosmetics by Generation Y cohort female students at a tertiary institution in Gauteng Province.
- To investigate the impact of perceived benefits on attitude towards use of herbal cosmetics by Generation Y cohort female students at a tertiary institution in Gauteng Province.
- To examine the impact of attitude towards use of herbal cosmetics on purchase intention by Generation Y cohort female students at a tertiary institution in Gauteng Province.

1.6. *Research Questions*

- Does social influence impact attitude towards use of herbal cosmetics of Generation Y cohort female students at a tertiary institution in Gauteng Province?
- Does eco-literacy influence attitude towards use of herbal of Generation Y cohort female students at a tertiary institution in Gauteng Province?
- Does perceived benefits influence attitude towards use of herbal cosmetics of Generation Y cohort female students at a tertiary institution in Gauteng Province?
- Does attitude towards use of herbal cosmetics influence purchase intention of Generation Y cohort female students at a tertiary institution in Gauteng Province?

1.7. Research Gap, Justification and Contributions of the Study

It is noticeable among the Generation Y cohorts, that the desire to live a healthier lifestyle has increased amongst others including the use of herbal cosmetic products which has grown to be a great trend in recent years (Saokaew, Suwankesawong, Permsuwan, & Chaiyakunapruk, 2011; Girotto, 2013). While consumer motivations towards organic products, especially food products, have been examined in academic research, little has been published on the predictors or consumer motivations towards purchase intentions of herbal cosmetics. Despite the fact that social/interpersonal relationships are prominent to play a crucial role in consumer purchase decision making process and that consumers are increasingly becoming more conscious of environmental issues and benefits of herbal cosmetic products, an academic scrutiny of the impact of social influences, eco-literacy and perceived benefits on consumer attitudes towards use and purchase intention of herbal cosmetic products is still lacking in the extant literature. Equally worrying too is the fact that, academic studies on herbal cosmetics in general in Africa and South Africa in particular, are difficult to find. Most of the previous studies on herbal/ natural cosmetics are mainly from Europe, USA and Asia. Therefore, it is still doubtful whether research findings from these parts of the world would be applicable in the context of herbal cosmetic product consumption in South Africa. In addition, there is limited evidence of prior studies that focus on female consumers in Generation Y cohort – a market segment that is deemed to be profitable in the cosmetic industry (Stovel, 2007). Based on these identified research gaps, it is justifiable that a study of this nature is indeed long overdue.

A research undertaking of this nature can be expected to have both academic and practical contributions. On the academic side, this study can be expected to contribute considerably new literature to the existing body of literature on antecedents of purchase intention of herbal cosmetics at institutions of higher learning in South Africa's Gauteng Province. Moreover, the fact that this study specifically focuses on the Generation Y cohort female students at a tertiary institution's herbal cosmetics purchase intentions in a newly developed country – a neglected research context, can imply that new insights on antecedents of purchase intention of herbal cosmetics can be expected. Besides, this study is also expected to have practical implications and relevance to managers of herbal cosmetics in South Africa's cosmetics industry. By providing a clear picture of the determining factors influencing consumer purchase intention of herbal cosmetics, this study's findings and recommendations can assist businesses to improve their marketing strategies aimed at directly encourage consumers' purchase intention of herbal cosmetic products in South Africa.

1.8. Scope of the Study

The scope of the study is limited to female students at the University of the Witwatersrand deemed to belong to the Generation Y cohort in the School of Economics and Business Sciences. The choice of the scope was decided based on a number of reasons. University of the Witwatersrand is one of the best and largest institutions of higher learning situated in Johannesburg – the economic hub of Gauteng Province in particular and South Africa at large. As a result of its reputation, University of the Witwatersrand happen to draw students from all walks of life, especially those from the affluent class in South Africa and beyond. It is therefore expected that the class of the students at University of the Witwatersrand are likely to afford herbal cosmetics which also happen to be relatively expensive. Perhaps too, it can be assumed that the female students at University of the Witwatersrand are likely to be more knowledgeable of herbal cosmetic products. Nevertheless, it is also expected that a sizeable number of the female students at University of the Witwatersrand belong to the Generation Y cohort – based on a cursory survey done by the researcher.

1.9. *Definition of Key Constructs*

1. Cosmetic Products

   Cosmetics are described as 'personal products' (Liao et cetera, 2008), used to improve the outlook (Guthrie et cetera, 2008)

2. Herbal cosmetics

   Herbal products are products that are made from plant exact, plant roots and have not been manufactured in the laboratory

3. Social Influence

   The effect of acting to convince, persuade or influence other people for the purpose of having specific outcome (Arcury; Grzywacz., Bell., Neiberg, Lang, & Quandt, 2007)

4. Perceived benefits

   Consumers perceived preference for valuable products (Padel & Foster, 2005)

5. Eco-literacy

   The general knowledge of facts, concepts & relationship concerning the natural environment and its major eco-system (Fryxell and Lo, 2003)

6. Attitude

   The degree to which a person has favorable/unfavourable evaluation of the behaviour in question (Ajzen, 1991)

7. Purchase Intention

   A plan to purchase a particular brand with a considerable attention (Chang & Liu, 2009)

8. Generation Y

   Generation Y is represented by those people born between the year 1980s to 1995 (Bakewell & Mitchell, 2003).

1.10. Organisation of the Dissertation

The following is an outline of the organisation of the dissertation:

- **Chapter 1: Overview of the Study**
  Chapter one will cover the overview of the entire study which included the introduction, problem statement, the purpose of the study, research objectives and research questions, contribution and justification of the study, scope of the study, ethical considerations, the research flow of the study as well as the outline of the study.

- **Chapter 2: Literature Review**
  Chapter two will focus on reviewing literature concerning the research context of the study, theoretical grounding and the research variables in the conceptual model.

- **Chapter 3: Conceptual model and hypothesis development**
  Chapter three will be concerned with conceptualising the research model as well as developing hypotheses.

- **Chapter 4: Research Methodology and Design**
  Chapter four will provide the research methodology and design of the study
- **Chapter 5: Data Analysis, Results and Findings**
  Chapter five will involve data analysis as well as the interpretation of the results.

- **Chapter 6: Conclusion and Recommendations**
  Chapter six will encompass a discussion of the findings, concluding remarks as well as a share of recommendations.

1.11. Summary of the Chapter

This chapter provided an overview of the overall study. The chapter begins with an introduction which is subsequently followed by the background of the study. The next section states the identified problem – which informs the pursuit of this study. The purpose of the study, research objectives, research questions are also provided and followed by research gap, justification and contribution of the study and scope of the study. The definition of key constructs, the proposed structure of dissertations and summary of the chapter follow thereafter. Below is Table 1.1, providing a diagrammatic illustration of the chapter summary. The Literature Review chapter will follow after this chapter.

Table 1.1. Summary of the chapter one *(1)*

CHAPTER II: RESEARCH CONTEXT: COSMETIC INDUSTRY

2.0. *Introduction*

This chapter mainly focused on the research context – cosmetic industry. I order to cover adequate information on cosmetics, a "global to specific approach" was used. The cosmetic industry is reviewed from a global perspective before the cosmetic industry in South Africa is attended to. However, a review of the definitions of what cosmetics in general and herbal cosmetics – in particular, are done first before the discussion of the cosmetic industry world and in South Africa.

2.1. *What are cosmetics?*

Several definitions of what cosmetics have been put forward. This could be because of the fact that the cosmetics industry is heavily segmented and is generally divided into hair care, skin care, makeup and colour cosmetics, perfumes and fragrances, oral hygiene, bath and shower, deodorants, men's toiletries, children and baby care and sun care (Weber & de Villebonne, 2002). Similarly, Kumar (2005) classified the "cosmetic, toiletry and fragrance" industry into skin care, hair care, fragrance, personal hygiene, and makeup (which comprises of face makeup, lipstick, eye makeup and nail products). Other academics have discussed differing categories such as the inclusion of hair removal, anti-aging and even weight loss products, as well as distinguishing between colour cosmetics and nail enamel (Gupta, 2013; Hansen, Reed, & Waters, 1986). The U.S. Food and Drug Administration, a regulatory body in the cosmetics industry, defines cosmetics as products "applied to the human body for cleansing, beautifying, promoting attractiveness or altering the appearance" (U.S. F.D.A, n.d.).

Despite the F.D.A's inclusive definition, both literature and society often use the terms 'cosmetics' and 'makeup' interchangeably, implying the exclusion of products such as deodorants, bath and shower products and sun care from the common operationalisation of 'cosmetics'. The use of the terms cosmetics and makeup interchangeably is consistent with the Cash Cosmetics Use Inventory (CCUI), which evaluates cosmetic use for ten different cosmetic

products; foundation, face powder, concealer, mascara, eye liner, eye shadow, eyebrow pencil, lipstick, lip gloss, lip liner and blush (CCUI Cash & Cash, 1982; Cash et cetera ., 1985). A further source of confusion is cosmeceuticals, which are an emerging intersection of the cosmetics and medicinal industries (Kumar, 2005; Meng & Pan, 2012). Currently, the term cosmeceutical is not recognised by law (U.S. F.D.A, n.d.) but refers to cosmetics with medicinal or drug like benefits, including those with 'functional ingredients' (Kumar, 2005).

According to Saraf Swarnlata and Saraf Shailendra (2008), cosmetics are substances meant for applying on external parts of the body in order to color, cover, soften, cleanse, nourish, wave, set, mollify, preserve, remove and protect, for the purpose of beautifying, promoting attractiveness or altering the appearance. Another researcher defines cosmetics in a more passive perspective by using transitive verbs indicating the action of users; that is, cosmetics are items that can be rubbed, poured, sprinkled or sprayed on, introduced into skin, face, hair, nails, and even elsewhere so that the appeal is enhanced. Acknowledging that the former provided by Saraf and Saraf (2008) fully clarifies functions and purposes of cosmetics products, as well as the variety of existing beauty products in markets, the current study adopts the definition and develops arguments based on it. A study would fall critically short of validity if it fails to allocate the cornerstone of the research problem, which in this case is to understand the market and the variety of products that are available in the market. According to the definition, cosmetics are, therefore, not just coloring products like mascara, lipsticks and foundations, but also basic cleansing products that are required for daily use, such as shampoos, soaps, toothpaste, shower gel, deodorants, shaving creams and moisturisers. The list goes on with products for other special purposes, for instance anti-acne creams, anti-inflammatory lotions, anti-lice shampoos and healing creams. Even though the latter products are likely to be considered more as pharmaceutical products, it is sensible to conclude that cosmetic products do not serve just the vanity needs of consumers but also the basic needs of hygiene and cleanliness.

The current study focusses on facial colour cosmetics, such as those listed in the Cash Cosmetics Use Inventory (CCUI Cash & Cash, 1982). For simplicity and in order to maintain consistency with much of the extant research, this study uses the terms cosmetics or cosmetic products to refer to this makeup or colour cosmetics segment of the overall cosmetics industry. This study does not include cosmeceutical products as they differ from conventional cosmetic products (Meng & Pan, 2012).

2.3. *The history of cosmetics*

Draelos (2001) noted that "the history of cosmetics is an important part of how color is used to adorn the body in modern society". According to Draelos (2001), the use of eyelid cosmetics was recorded as early as 4000 BC. Green powder made from malachite was heavily applied to both the upper and lower eyelids, accompanied by dark kohl eyeliner paste composed of powdered antimony, burnt almonds, black copper oxide, and brown clay ocher. Draelos (2001) also noted that the cosmetic pastes were put in a pot and mixed with saliva. In Japan, lipstick was made of crushed petals of safflower which was used to paint the eyebrows and edges of women's eyes and lips (Chaudhri & Jain, 2009). Also, rice powder was used for coloring of the face and back. In the traditional culture of Japan, women having whitened skin was common.

In the ancient Egyptian period, cosmetics such as face paints, oils, solids, and fats (ointments) all were considered as cosmetics for the skin (Lucas, 1930). The ancient Egyptians took great pride in their appearance and in cleanliness (Chaudhri & Jain, 2009). Throughout past centuries, cosmetics were applied as part of a variety of ceremonies and rituals. For instance, during the Middle Ages in Europe, economic status determined how much time a person had to spend outdoors. People in the lower classes had to work outdoors, whereas those in the upper classes had more leisure time and stayed indoors more, which kept their skin pale and unexposed to the sun (Chaudhri & Jain, 2009). Thus, European American men and women used white powder on their body to appear more aristocratic (Chaudhri & Jain, 2009).

According to Wells and Lubowe (1964), the first true facial foundation was developed in 1936 by Max Factor as a cake makeup that was widely used by women. This product added facial color as well as a velvety look. Since that time, vast arrays of cosmetics lines have been expanded tremendously. According to Draelos (2001), facial foundation is a popular facial cosmetic with the greatest impact on the health of the skin (p. 176).

2.4. *Cosmetics, female cohort and self esteem*

Several researchers have investigated cosmetic use and found numerous reasons for the purchase and application of such products (Nash et cetera. 2006). Bloch and Richins (1992) discussed the use of adornments such as cosmetics to fulfil goals of improved attractiveness. Cosmetic use reflects pride in one's appearance (Cash et cetera ., 1985) and these products are applied as a means of controlling physical appearance (Apaolaza-Ibáñez et cetera ., 2011), self-expression (Davies, 2013; Guthrie et cetera ., 2008), aesthetic self-enhancement (Cash et cetera ., 1985; Richins, 1991), self-investigation (Nash et cetera ., 2006), and in order to achieve self-presentation goals (Guthrie et cetera ., 2008). Women wear makeup for both physical and psychological reasons, citing, liking the way it made them look (48 percent of women), 'hiding flaws' (44 percent of women) and 'making themselves feel good' (32 percent) as the main reasons for cosmetic use (The Renfrew Center Foundation, 2012). Gender roles and societal expectations have been identified as part of the motivation behind women's cosmetic use (Bloch & Richins, 1992; Cash et cetera., 1985; Kelson, Kearney-Cooke, & Lansky, 1990).

Although the notion of applying possible selves to the consumption of products is not new (Morgan, 1993), there is extremely limited literature exploring goal related possible selves in regard to cosmetics. Some cosmetics authors have touched on motivations of cosmetic usage, (Cash & Cash, 1982; Dickman, 2010; Solomon et cetera., 2009). Sobh (2011) explored how different appearance goals impacted on the intention to use a variety of anti-aging products including facial crèmes and anti-aging serums. Liu et cetera. (2012) identified the role of what they referred to as 'contradictory selves' when discussing cosmetic use in the case study of Martha.

Some researchers have identified personality traits and individual characteristics which play a role in women's cosmetic use. Logically, how women feel about their appearance has been linked to their use of cosmetic products, specifically dissatisfaction with physical appearance (Cash & Cash, 1982) and facial appearance (Guthrie et cetera. 2008). Women who are publicly self-conscious are found to use more cosmetics (Cash & Cash, 1982; Cash et cetera., 1985) and an internal locus of control has been linked to situational cosmetics use (Cash et cetera., 1985). Some studies explore cosmetics use as function of self-esteem (Bloch & Richins, 1992; Cash & Cash, 1982; Robertson et cetera., 2008) however, domains of self-concept are often masked by self-esteem and several self-esteem measures overlook aspects of female self-esteem (Knox, Funk, Elliot, & Bush, 1998). In contrast, Britton (2012) found no correlation between self-

esteem and cosmetic usage, however self-monitoring did have an impact. A model produced by Robertson et cetera. (2008) indicates social confidence, emotional stability, self-esteem and physical attractiveness are negatively associated with cosmetic use, while anxiety, conformity and self-presentation all positively correlated with cosmetic use. Taken together, many of these results suggest an individual's characteristics influence the strength and direction of appearance goals, thus impacting on their cosmetics use. The current research considers several of these personality constructs in the covariates section of the following chapter.

Several researchers have reported cosmetic use can positively influence the users themselves. When wearing cosmetics women report feeling more attractive (Apaolaza-Ibáñez et cetera., 2011; Bloch & Richins, 1992; Richins, 1991) and can even enhance one's feelings of overall well-being (Bloch & Richins, 1992; Nash et cetera., 2006). Women also experience higher self-confidence when wearing cosmetic products (Nash et cetera, 2006), and it is possible that this feeling of increased confidence reinforces the continued and even increased use of cosmetic products (Guthrie et cetera. 2008). This notion is consistent with the self-regulation feedback loop described in concept theory (Carver & Scheier, 1981, 1982), which is addressed in the following goal orientation section. Interestingly, some men also experience improved confidence when using cosmetics (Souiden & Diagne, 2009). Several researchers postulate that cosmetics not only influence user's feelings but that increased self-esteem and attractiveness might be reflected in a person's outward appearance (Mulhern et cetera ., 2003; Nash et cetera ., 2006).

In addition to influencing how the user thinks and behaves, cosmetics can also influence the thoughts and behaviours of others. Several studies have suggested cosmetics can influence the perception of a woman. Cosmetic use significantly enhances the impression of a woman's femininity (Cox & Glick, 1986; Workman & Johnson, 1991) and consequently female faces are consistently judged more attractive when wearing cosmetics (Cash et cetera., 1989; Mulhern et cetera, 2003; Nash et cetera, 2006). Not only do cosmetics have beautifying effects on women's faces, they also affect perceptions of health, confidence, professional competency and earning potential (Nash et cetera ., 2006), however there is some slightly contradictory evidence of cosmetic application negatively impacting on expected performance in gender-typed careers (Cox & Glick, 1986). Even behaviour can be influenced by cosmetics, as several studies have reported waitresses' cosmetic use enhances tipping behaviour from male customers (Guéguen & Jacob, 2012; Jacob, Guéguen, Boulbry, & Ardiccioni, 2010).

2.5. *Female appearance ideals*

Many explanations have been discussed as contributing factors for gender differences and appearance ideals. Women go through immense physical changes during adolescence (Bell & Dittmar, 2011), whilst childbearing (Chrisler & Ghiz, 1993) and again in older adulthood (Roy & Payette, 2012), all of which are significant body image triggers (Chrisler & Ghiz, 1993). Furthermore, a women's appearance has traditionally been an important basis for evaluation (Thompson et cetera, 1999) as culture considers the female body a symbol for personal success or failure (Dakanalis & Riva, 2013).

The Western appearance ideal consists of big round eyes, tiny waists, large breasts, blond hair and blue eyes (Solomon et cetera., 2009) which is conveyed and reinforced by many societal influences (Levine & Murnen, 2009; Thompson & Stice, 2001), however the most vociferous purveyor of appearance ideals is the mass media (Groesz et cetera., 2002), which is saturated with pervasive, indoctrinating messages (Levine & Murnen, 2009). Women are more objectified than men in the media (Diedrichs, Lee, & Kelly, 2011) and there is widespread use of excessive make-up, lighting techniques, airbrushing and digital manipulation, resulting in images which differ from what is possible in real life (Hunter, 2011; Thompson et cetera., 1999; Thompson & Stice, 2001). Additionally concerning, "is the fact consumers are often unable to distinguish a real image from a manipulated image" (Hunter, 2011, p. 111). Furthermore, it is common for media images to visually dismember women, eliminating their heads and focusing on their bodies (Fredrickson & Roberts, 1997). These techniques create a large discrepancy between the average woman and how the media portrays women (Dakanalis & Riva, 2013; Groesz et cetera., 2002; Thompson et cetera., 1999), and the images in the media represent largely unattainable ideals (Grabe et cetera. 2008; Want, 2009). Because of this, several authors have called for the regulation of digitally altered images (Hunter, 2011; Rea, 2012).

Authors generally agree there is significant pressure on women to appear consistent with these largely unattainable ideals (Dittmar & Howard, 2004; Engeln–Maddox, 2005; Richins, 1991), which results in a large discrepancy between a women's body image and their appearance ideal. This discrepancy is often referred to as body dissatisfaction (Cash & Henry, 1995). Studies show approximately 50 percent of girls and young women report dissatisfaction with their bodies (Bearman et cetera., 2006; Mccabe, 1997). Body dissatisfaction has been linked to a variety of behaviours such as cosmetic surgery, diets, fasting, laxative abuse and other eating disorder symptomologies (Grogan, 2008). Further adding to the discrepancy between media

and reality, attractive people are often associated with success, health, happiness and self-esteem (Dakanalis & Riva, 2013; Stice, 1994; Thompson et cetera., 1999), which has been referred to as the 'what is beautiful is good' stereotype (Dion et cetera., 1972), although there are some suggestions this phenomenon is not as strong or as straightforward as previously thought (Eagly, Ashmore, Makhijani, & Longo, 1991).

2.6. Cosmetics and self-esteem

The existing literature considers cosmetics usage from varied angles. Robertson, Fieldman, and Hussey (2008) looked at how women's personality traits predicted their use of cosmetics. The aim of the study was to understand the psychological motivations of why women used cosmetics. Robertson et cetera. (2008) found that the use of cosmetics was positively associated with traits such as self-perception, self-awareness, conformity, and introversion and negatively associated with self-confidence, self-esteem, physical attractiveness, and emotional stability. Furthermore, Robertson et cetera. (2008) suggested that some traits make women more aware of an interest in their physical appearance which results in the desire to manipulate appearance according to an image that is ideal and more conforming to social preferences and expectations.

Cosmetics companies produce products to help consumers produce the ideal face. Many women use makeup to meet societal standards and to gain attention from the opposite sex but also to receive compliments from other women (Kelson et cetera., 1990; Scott, 2007). Cosmetics offer the promise of change toward the ideal image (Bloch & Richins, 1992). Scott (2007) stated that "cosmetics are a quick means of improvement versus more long-term, laborious work such as diet and exercise" (p. 3). For example, an online study reported a survey of 1,292 women in which 44 percent of women were dependent on cosmetics for self-esteem (Renfrew Center Foundation for Eating Disorders, 2012). Most of the women had negative feelings when they were not wearing makeup, which made them feel unattractive (Renfrew, 2012). The study was conducted on behalf of the Renfrew Center Foundation (a nonprofit organisation) to show that increasing dependency on cosmetics products is boosting self-esteem and attractiveness. In the study women were asked what their reasons were for wearing makeup. Among respondents, 16 percent of women felt unattractive when not wearing cosmetics, 14 percent felt selfconscious without makeup, 14 percent felt naked without makeup, and 3 percent of women felt more attractive without makeup. Moreover, 27 percent of the women reported wearing makeup since they were 13 years old (Renfrew, 2012), the age

at which young adolescents tend to start maturing physically and become more aware of their appearance. This data indicated that the vast majority of women feel that wearing makeup enhances their appearance and that it is normal and accepted in society to change one's self. However, Adrienne Ressler, the Renfrew Center's national training director and body image expert, stated that "there is concern, however, when makeup no longer becomes a tool for enhancement but, rather a security blanket, which conceals negative feelings about one's self, self-image and selfesteem" (Renfrew, 2012, para. 3).

2.7. Cosmetics and success

Many women feel that physical attractiveness and beauty are important and that attractive women have more opportunities to succeed in their professional and social endeavors if they are attractive (Etcoff, Orbach, Scott, & D'Agostino, 2004). In addition, individuals who appear more physically attractive often gain higher status and social rank due to the stereotype that what is beautiful is good and, subsequently, what is not beautiful is bad or not so good (Dion, Berscheid, & Walster, 1972). Due to these widely held assumptions, most people believe that putting one's best face forward will help one succeed in life. Cosmetics help in shaping an appearance that fits attractiveness norms, so they are enlisted to literally put the best face forward.

In a recent study, described in an article by Catherine Saint Louis (2011) in the New York Times, women wear makeup to increase other people's perceptions of their likeability, competence, and trustworthiness (para. 1). That study, designed and conducted by researchers from Boston University and the Dana-Farber Cancer Institute, used photographs of 25 women between 20 and 50 years of age from different ethnic backgrounds (European American, African American, and Hispanic), each of whom were photographed barefaced and also with varying amounts of makeup applied (Saint Louis, 2011, para. 4). Both the 149 adults who looked at the photos for 250 milliseconds and the 119 different adults who looked at the photos for a longer period judged the women wearing makeup as more competent than bare-faced women (Saint Louis, 2011, para. 5).

Furthermore, Nancy Etcoff, assistant professor of psychology at Harvard University, stated that "there is evidence that women feel more confident when wearing makeup, a kind of placebo effect" (Saint Louis, 2011, para. 2). Women wear makeup to feel more appealing and boost

their self-esteem, which may help in their confidence and, hence, performance when applying for jobs and on the job. Indeed, research has shown that external appearance and frequent cosmetics use affect professional success positively (Hamermesh & Biddle, 1994; Marlowe, Schneider, & Nelson, 1996), indicating that there is some role of beauty in the labor market. Furthermore, (Hamermesh & Biddle, 1994) found that people with below average salaries tended to be less attractive and had lower salaries than did average-looking workers; workers with higher salaries tended to be more attractive-looking individuals. The labor market tends to place more attractive people into better paying occupations in which their looks may add to their productivity (p. 1192).

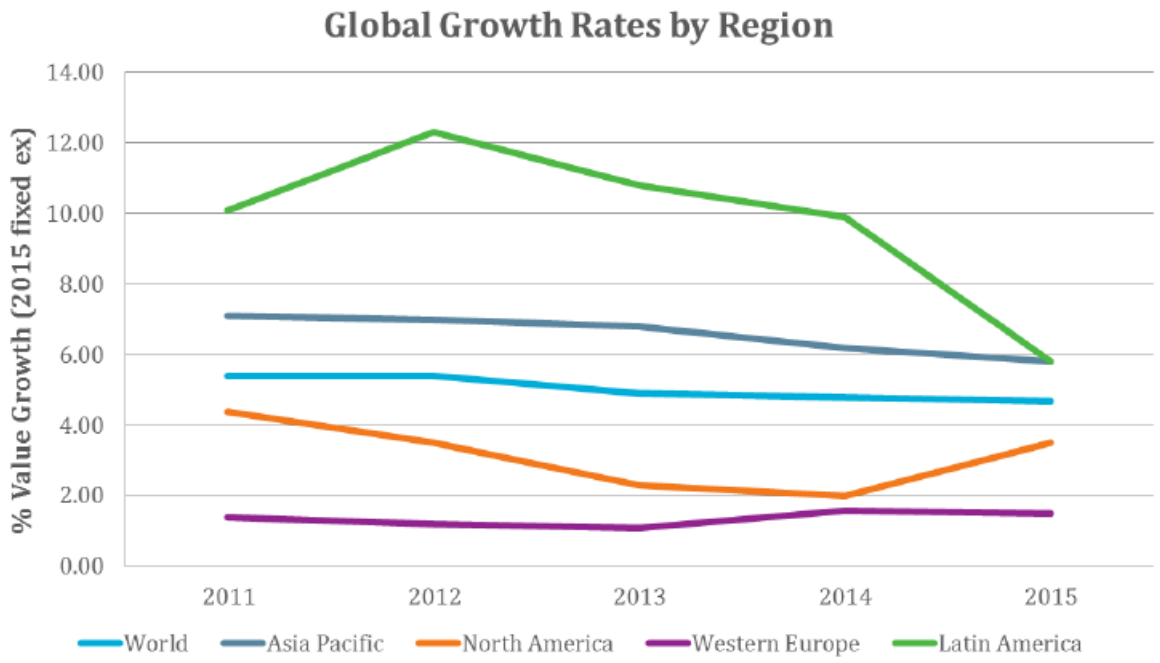
Ligget (2012) looked at how the recent economic recession influenced college-aged women, who were found to purchase more cosmetics to attract a mate, presumably to bolster their chances for economic support in the future. Other literature has shown that women who were waitresses and wore cosmetics received better tips than did waitresses who did not wear cosmetics (Gueguen & Jacob, 2010). Altogether, these studies show that cosmetics use by women enhance the perception of physical attractiveness and positive traits, perhaps leading to gains in self-esteem and confidence which enhance work and economic success.

2.8. Cosmetic industry – A world view

Beauty industry plays an important role in the global economy, growing from a $25 billion global industry in 1982 to a $330 billion industry by 2008 (Geoffrey 2010). Today consumers around the world spend $330 billion a year on fragrances, cosmetics, and toiletries. Within the European cosmetics market, Germany had the greatest volume in 2014, with the value of approximately $13 billion, followed by France and the United Kingdom at $10.6 billion and $10.4 billion respectively (The Statistics Portal 2015). In China, the total sales volume for cosmetic prod-ucts had reached about 163 billion yuan in 2013 (The Statistics Portal 2014). Fin-land yielded $0.89 billion in 2014 for cosmetic products. Since the beginning of the twentieth century, the cosmetics competition around the world has been con-trolled by a handful of multi-national corporations. Leading companies in the global cosmetics market are, to name a few, L'Oréal, Unilever, P&G, Colgate-Palmolive, and Estée Lauder (Beauty Packaging, 2015). The global cosmetic companies must compete for shelf space in retail stores, not only with rival companies offering well-known and trusted brands but also less expensive copycat brands providing similar unbranded products. In terms of market share among the product groups, the cosmetic industry is broken down into six main categories; skincare was

the largest one out of them all, accounting for 35,3 percent of the global market in 2014.

However, cosmetics is a highly fragmented industry, including several types of products for different parts of the body, types of skin, purposes, consumer gender and age. As mentioned in the previous section, cosmetics are classified by their target part of human body, thus, different product lines are developed for body skin, facial skin, hair care, nail care, and so on. As for function, there are products for the purpose of makeup, also called color cosmetics, moisturising, sanitary, and other specific purposes. Talking about facial skin, the industry has also been introducing plenty of products satisfying different types of skin, i.e. normal, dry, oily, combination, sensitive skin, and so on. The variety does not stop there, but evolves through time with different genders, groups of age, ethnic groups, cultures, and so on. Consumers' beauty rituals and product priorities are shaped by ethnic and cultural diversity. The right cosmetic products for specific target users that are women, men, kids, or the elderly have been available for a while on the market shelves all over the world.



For a long time, it was true that adult female audience remained the sole target market. Since the 1990s, the industry embarked upon exploring ways to sell cosmetics to male consumers. By the next century, US sales of cosmetic products for men were estimated at $4 billion, when men's skin care alone represented $500 million (Thompson 2005). Asian markets, in comparison with Western countries, were generating more sales in terms of cosmetic products

for men. Particularly, the Japanese and the South Korean markets have witnessed a considerable group of male consumers spending money on cosmetic products in order to appear deli-cate and pretty (Guy Montague-Jones 2007). According to Euromonitor, South

Korean male consumers stand at the world's top per-capita for skincare products, four times larger than of runner-up Denmark (CNN Money 2015). In the mean-time, men consumers in India are showing a noticeable demand for creams and fragrances. Due to their tradition, most of Indian men, no exception for the poorest persons, use those products on a regular basis. There have been some marketers who made attempts to eliminate the differences between genders in perfume category by introducing unisex product lines, i.e. Calvin Klein in 1994 (Geoffrey 2010, 335). However, Calvin Klein's success could not trigger a trend, even though other major players attempted to introduce androgynous products.

Younger female consumers have gained more and more attention from marketers. An increasing number of cosmetic companies are competing for consumption from teenage girls. To captivate this segment, companies have been developing their so-called light-based products for younger consumers, who are undergoing delicate adolescent age. For example, a female teenage consumer culture had al-ready developed in the United States during the interwar period. It was anticipated to make up one-fifth of total American beauty market by year 2000 (Geoffrey 2010, 335).

Now that the markets for younger female consumers have been spotted, consumers in their later years of life are also in the target. Life expectancy is rising glob-ally, as a result, an increase in snowy-haired population is becoming more and more expectable. Since mature people are still engaged in keeping up their appearance, they are likely to spend more money and time on cosmetics products, such as hair dye products, volumising hair mousse, anti-wrinkle and anti-aging creams, et cetera (Drug and Cosmetic Industry, 1998)

Growing environmental awareness has caused a shift in consumers behavior, de-sire and attitudes toward natural cosmetic products in most countries in the world. Despite the crippling global economic recession, the green trend in cosmetic industry has gained momentum over the past years. The Organic Market Report 2016 released on February 23 showed that the organic market was continuing to grow steadily at the rate 5 percent since 2015, which marked the third consecutive year of growth for the UK organic sector (GCI Magazine 2016). The leading distribution channels for organic beauty products are beauty specialist salons and department stores. In ASEAN (The Association of Southeast Asian Nations) markets, beauty

salons' sales are expected to account for 23 percent of the total revenue by 2020, while sales of organic beauty product of department stores account for 18,7percent by the close of the period (GCI Magazine 2015).

2.8.1. Cosmetic industry in Europe

Table 1 represents the size of the cosmetics market in Europe and the share of that market in each country. In 2006, the EU27 countries consumed $63 billion worth of cosmetics, with the five major EU countries – France, Germany, Italy, Spain, and the U.K. – making up approximately 70 percent of the total market at retail sales prices.

It is interesting to note that the cosmetics market of the 12 new members of the European Union (EU12) represents only about 9 percent of the EU27 total, although it covers 21 percent of the population – which indicates that most likely the new member states should be viewed as the most promising markets.

Table 2: 2006 Cosmetics Market size and share

Table 1- 2006 Country Market Sizes and their Shares of the Total; Retail Sales Prices, Millions of €

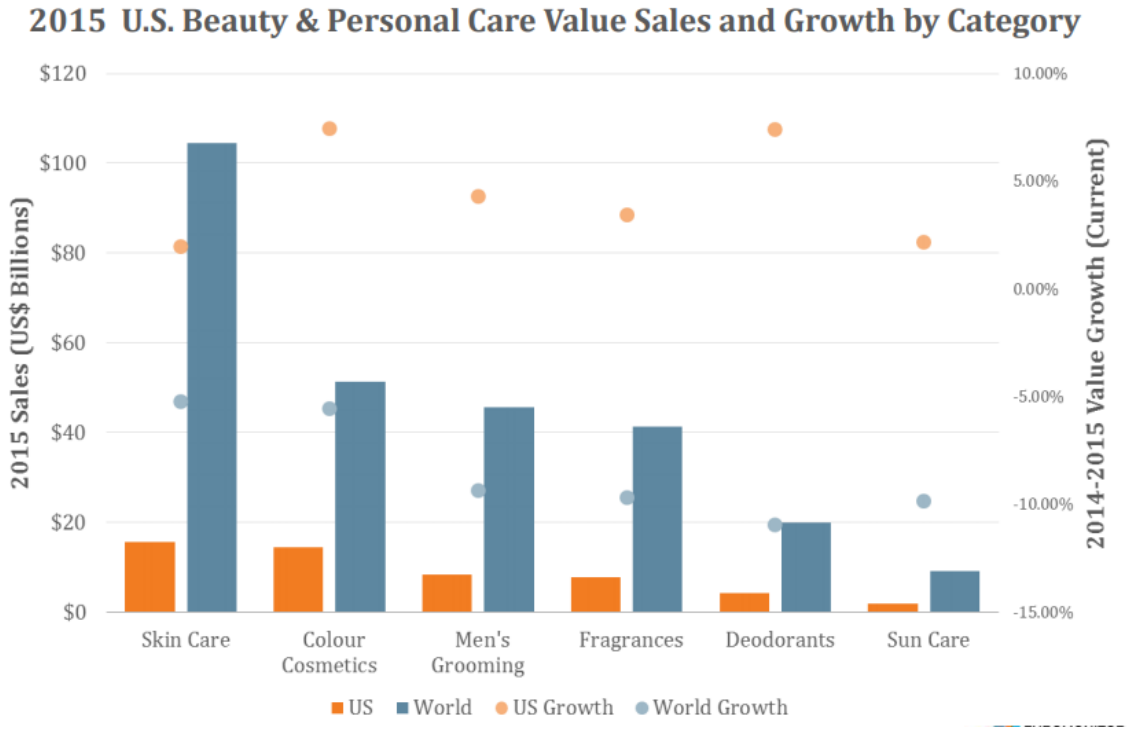
2006 Country Market Sizes and their Shares of the Total; Retail Sales Prices, Millions of €					
Country	**Market size**	**Share of Total**	**Country**	**Market size**	**Share of Total**
EU15	**57,586**	**90.7%**	Denmark	928	1.5%
EU12	**5,889**	**9.3%**	Czech Republic	840	1.3%
EU27	**63,475**		Finland	758	1.2%
			Romania	655	1.0%
Germany	11,713	18.5%	Hungary	630	1.0%
France	10,440	16.4%	Ireland	567	0.9%
United Kingdom	9,993	15.7%	Slovakia	423	0.7%
Italy	8,793	13.9%	Cyprus	179	0.3%
Spain	7,442	11.7%	Lithuania	177	0.3%
Netherlands	2,437	3.8%	Bulgaria	172	0.3%
Poland	2,416	3.8%	Slovenia	162	0.3%
Belgium/ Luxembourg	1,720	2.7%	Latvia	93	0.1%
Sweden	1,552	2.4%	Estonia	85	0.1%
Greece	1,344	2.1%	Malta	59	0.1%
Austria	1,291	2.0%	Switzerland	1568	
Portugal	1,105	1.7%	Norway	1,022	

Source: Euromonitor, COLIPA Statistics Working Group

2.8.2. Cosmetic industry in United States of America

Use of cosmetic products to enhance or change one's appearance is a longstanding human behaviour. Varying types and applications of cosmetic products are present in almost every society in human history (Cash, Rissi, & Chapman, 1985; Gupta, 2013; Khraim, 2011; Kumar, 2005). Today, the reported revenue of the cosmetics industry in the United States is $56.63 billion dollars (statista.com, 2014). Reportedly 91.4 percent of women use at least some cosmetic products regularly (Dickman, 2010) and this phenomenon has been described as a 'beauty obsession' (Britton, 2012). Furthermore, the landscape of the cosmetics industry is changing; the market is becoming increasingly globalised (Kumar, 2005) and Western appearance ideals are affecting more cultures (Bakhshi, 2011). As cosmetic brands globalise, so does their advertising (Kumar, 2005), which typically features highly attractive females advertising the products (Apaolaza-Ibáñez, Hartmann, Diehl, & Terlutter, 2011). In the United States alone, the beauty industry spends approximately $3.59 billion USD on advertising (statista.com, 2013) and every day we are exposed to numerous advertisements in magazines, on television, via the Internet and in the streets (Wanke, 2008).

Figure 3: 2015 U.S Beauty & Personal Care Values Growth



Considering the size of the cosmetics industry, the advertising spend and prevalence of cosmetic product use there is a surprising lack of literature exploring cosmetics advertising and cosmetics users. The aim of this research is to understand how a persons' goal oriented salient possible selves' impact on their perception of cosmetics advertising and resulting purchase intention. The two aspects of cosmetic advertising considered are the appearance ideal depicted and the message frame of the appeal.

2.8.3. Cosmetic industry in Asia

The countries in the Asia report represent some of the largest and high potential markets for export-led growth for the U.S. Personal Care and Cosmetics industries. Comprising over 20 percent of U.S. global exports in the sector, the Asia countries offer the industry over 3 billion potential consumers in the fastest growing global markets. This base includes consumers in well-established markets for U.S. products such as Japan, Australia and South Korea, which together accounted for more than $1 billion in U.S. personal care and cosmetics exports in 2015—to China, which at an estimated $500 to $600 million in U.S. exports that same year, is predicted to become the largest global market for cosmetics in the next two to three years.1 In addition, the countries included in the Asia Personal Care and Cosmetics Guide provide access to some of the highest potential future markets—including the growing middle class in countries spanning from Indonesia to Vietnam to Malaysia. These consumers aspire to the quality and sophistication for which U.S. products are known. Currently these markets source most of their basic personal care products such as shampoos, soaps and other grooming products from mass market U.S. companies including Procter and Gamble, Johnson and Johnson and Colgate-Palmolive. Increasingly these consumers are moving beyond the basics to premium skin and hair care as well as color cosmetics opening the door to a wide variety of U.S. - based cosmetics exporters. Table 1 summarizes three years of U.S. exports to these markets, which have grown across the region by an average annual rate of 6 percent over the last five years, even during the global downturn of 2011-2012. Stunningly, in some countries U.S. exports have grown by as much as 62 percent over the past three years in high potential markets such as Indonesia, Vietnam and China and this growth is predicted to continue.

Figure 4: Three years of U.S. exports

	2013	2014	2015	5 Yr CAGR	3 Yr Growth
Hong Kong	$528,831,000	$521,959,000	$516,669,000	NA	-2%
Japan	$568,489,269	$519,891,675	$491,176,604	-1%	14%
South Korean	$424,921,167	$489,771,533	$487,148,249	4%	15%
China	$324,183,216	$336,578,269	$392,606,007	15%	21%
Singapore	$313,969,980	$324,815,120	$340,553,935	6%	8%
Thailand	$75,207,022	$86,657,330	$80,417,978	2%	7%
Malaysia	$63,298,633	$71,122,679	$78,917,998	9%	25%
Philippines	$52,876,097	$60,813,319	$56,935,354	8%	8%
Vietnam	$40,108,841	$52,840,162	$53,481,224	11%	33%
India	$49,084,035	$55,636,277	$53,771,347	0%	10%
Australia	$19,414,099	$29,362,407	$31,398,239	9%	62%
Total	$2,051,018,946	$2,157,192,939	$2,197,349,243	6%	7%

Source: Trade Policy Information System (TPIS)

2.8.4. Cosmetic industry in South Africa

According to Anelich and Korsten (1996), the cosmetic industry is a multi-billion Rand enterprise and cosmetic companies established in South Africa by overseas manufacturers follow the mother company's regulations very closely. Glenn (2008) notes that the use of skin lighteners has been increasing among modernised and cosmopolitan African women. A South African newspaper reported that whereas in the 1970s, typical skin lightener users in South Africa were rural and poor, currently, it is upwardly mobile Black women, those with technical diplomas or university degrees and well-paid jobs, who are driving the market in skin lighteners. A recent study by Mictert Marketing Research found that 1 in 13 upwardly mobile Black women aged 25 to 35 used skin lighteners. It is possible that this is an underestimation, since there is some shame attached to admitting to using skin lighteners (Ntshingila 2005).

These upwardly mobile women turn to expensive imported products from India and Europe rather than cheaper, locally made products. They also go to doctors to get prescriptions for imported lighteners containing corticosteroids, which are intended for short-term use to treat

blemishes. They continue using them for long periods beyond the prescribed duration, thus risking damage (Ntshingila 2005). This recent rise in the use of skin lighteners cannot be seen as simply a legacy of colonialism but rather is a consequence of the penetration of multinational capital and Western consumer culture. The practice therefore is likely to continue to increase as the influence of these forces grows.

Research estimated the value of the South African cosmetic market in 2007 at over 2.47 billion $ and they predicted a growth of 15-20 percent. Euromonitor confirmed a double-digit growth in South Africa for the beauty and personal care market in 2009. Mintel says South Africa continues to account for the majority (67%) of launches in the Middle East & Africa, followed by Egypt (17%) and Israel (9%). A press release from Shiseido in 2010 indicated that they calculate that South Africans spend 220 million $ for top of the range cosmetic products. These figures show that the total Southern African market definitely has a value of over 3 billion $. Based on a predicted double-digit growth, it could easily reach a market size comparable to one of the major markets in Europe, like Germany, France or the UK.

According to DTI Report (2012), South African cosmetic and personal care industry is vibrant and dynamic, comprising an interesting mix of multinational giants, entrepreneurial companies, and small, medium and large local brands. The total size of the South African cosmetics and personal care products marketfor 2010 was estimated at R25.3 billion at retail level and contributes 1,0 percent to the gross domestic product (GDP). The following have been identified as the top five trade categories in 2010 in South Africa: fragrances, hair care, skin care, deodorants, and bath and shower, accounting for nearly two-thirds of the total market. The total exports amounted to R2.8 billion, equivalent to 0.53 percent of total exports, while imports amounted to R4 billion, equivalent to 0.63 percent of total imports. The major export categories for 2011 were:

HS Code	Categories	Percentage
330499:	Other - creams, sunscreens	28,2%
330590:	Haircare – Other	11,6%
340111:	Toilet soap	11,1%
330510:	Haircare - Other	8,5%

2.8.4.1. *Cosmetic industry and South Africa's Department of Trade and Industry*

According to DTI (SA), South Africa's beauty market was worth R10bn/$1.55bn in 2003. Some 17 percent of this was selective products, compared with a global average of 30 percent. Rising disposable income means many consumers are trading up to prestige cosmetics. The cosmetics and toiletries market in South Africa are expected to see a surge of growth (Euromonitor, 2003). This was partly due to middle-income consumers purchasing premium products. Metropolitain Cosmetics' founders are convinced the Johannesburg store's offer fills a gap in the market. Many brands, including Chantal Thomass, Aquolina, Lulu Guiness, Détaille 1905 and T Leclerc, came to South Africa as exclusives. The stores also indicate brands such as Alexander McQueen, Lolita Lempicka and Annick Goutal, are in limited distribution in South Africa. Some 60 percent of the Art Nouveau-style space is dedicated to fragrance, with 30% for skincare and the remainder for makeup.

L'Oréal South Africa continue to lead hair care with a value share of 25 percent in 2014, followed by Procter & Gamble, Amka Products and Unilever South Africa, with shares ranging from 14 percent to 16 percent. Other players include Tiger Consumer Brands and Avon Justine. Unilever South Africa continued to lead skin care in 2014, with a value share of 24 percent, followed by Avon Justine and Beiersdorf Consumer Products, with shares of 12 percent and 11 percent respectively. Other players in the category include Tiger Consumer Brands, Johnson & Johnson, L'Oréal South Africa, Procter & Gamble and Amka Products.

2.8.4.2. Constraints of cosmetic industry in South Africa

The cosmetics industry has had challenges with compliance with the regulatory aspects of the legislation. These are being resolved by DEA, which is tasked to address these challenges. Major constraints that have been identified as a hindrance to companies in cosmetics, toiletries and personal care industry are:

- Tax policies, specifically Ad-valorem;
- Market access, both locally and internationally;
- Rising inputs costs;
- Inflow of cheap imports and counterfeit goods;
- Critical skills deficit;
- Technology intensity;

- Poor productivity and onerous labour legislation; and
- Capital finance access.

2.9. Cosmetic products safety and regulations

2.9.1 European union

European regulations of the safety of PCP/cosmetics were introduced in 1976 by the EU Cosmetic Directive which has been periodically updated (EU, 2007). According to the EU definition, cosmetics are any substance or preparation intended to be placed in contact with various external parts of the human body (epidermis, hair system, nails, lips, and external genitals) and with the teeth or mucous membranes of the oral cavity with a view exclusively or mainly to cleaning them, perfuming them, changing their appearance and/or for protecting them or keeping them in a good condition. In the EU, cosmetic products do not require a pre-marketing clearance; the safety of cosmetics and their ingredients is the responsibility of the manufacturer. However, certain ingredients, such as UV filters (Annex VII of the Directive), preservatives (Annex VI), colorants (Annex IV) and, most recently, hair dyes require approval of their safety prior to marketing. Similarly, banned ingredients are listed in Annex II of the Directive, whereas substances are concentration-limited and are listed in the Annex III of the Directive. In the EU, the approval process includes submission of a safety dossier to the EU Scientific Committee of Consumer Products/Safety (SCCP, former SCC, SCCNFP and recently re-named SCCS) that issues Opinions on the safety of the ingredient. In the EU, manufacturers or importers of PCP are required to generate safety dossier on each cosmetic product, including composition, specifications and a product safety assessment on the final product as well as its ingredients; the safety assessment has to be performed by a qualified expert. (Pauwels and Rogiers, 2004; Pauwels et cetera, 2009; Pauwels and Rogiers, 2010)

2.9.2. United States

The U.S. Food, Drug and Cosmetic Act of 1938 designated the U.S Food and Drug Administration as the agency responsible for the safety of PCP/cosmetics. The provisions of this act ensure the proper labeling and purity of cosmetics marketed in the United States. The U.S. definition of PCP/cosmetics is somewhat narrower than that in the EU, i.e. articles to be rubbed, poured, sprinkled or otherwise applied to the human body or any part thereof for cleansing, beautifying, promoting attractiveness, or altering the appearance, and articles intended for use as a component of any such articles, except that such term shall not include

soap (US FDA, 2007). Certain products regarded in the EU as cosmetics have been classified by the US FDA as Over–the-Counter (OTC) drugs, including sunscreen products, anticavity toothpastes, antiperspirants, antidandruff preparations, skin protectants and hair restorers (Federal Food, Drug and Cosmetic Act, 2004). OTC drugs are regulated under a Monograph system for each claimed indication.

The active ingredients in the respective monographs are evaluated by the agency for safety and efficacy. Those deemed to be safe and effective can be used in products within specified concentration ranges. Sunscreens and antiperspirants require additional clinical testing to demonstrate efficacy. Cosmetic colorants, but not hair dyes, are also regulated under US law and require FDA approval, including certified colors and permitted colors. Hair dyes are exempted under the regulations provided that certain warnings and pre-use testing conditions (testing for sensitiSation) are included in the product labeling. The safety of all other cosmetic/ PCP and their ingredients is the responsibility of the manufacturer. If a cosmetic has not been evaluated for safety by the manufacturer it must bear a warning label indicating that the safety has not been substantiated. How a product must be substantiated is not prescribed by the agency.

The FDA operates a Voluntary Cosmetic Reporting Program (VCRP) which allows industry to file the formulas of their products. Information on cosmetic formulations in the VCRP is available through Freedom of Information (FOI) requests to the agency. The FDA also collects consumer complaint data from the public and from physicians. This information can be relayed to the manufacturer and/or can be used to initiate investigations. In 1976, the Cosmetic, Toiletry and Fragrance Association (CTFA, now the Personal Care Products Council or PCPC) established the Cosmetic Ingredient Review (CIR) which provides a mechanism for voluntary self-regulation of the industry. The CIR provides an independent Expert Panel to review relevant data on cosmetic ingredients and to decide whether they are safe under their current conditions of use (CIR, 2007). The Panel consists of Toxicologists, Dermatologists, and Chemists from academic institutions that serve as voting members. Non-voting members of the panel include representatives from FDA, Consumer Groups, and Industry (PCPC) representatives.

Current minimal data requirements of the CIR for a cosmetic ingredient are the following (Corbett et cetera., 1999):

• Concentration of use

• Chemistry data, including manufacture and impurities

• Skin irritation and –sensitiSation

• Dermal absorption data; if significant dermal absorption occurs, repeated-dose dermal toxicity and developmental toxicity

• Genetic toxicity, if positive a 2-year dermal carcinogenicity assay is required Additional data may be requested based on the nature and use of the ingredients.

Safety evaluations on each ingredient reviewed by the Expert Panel conclude that the material is either:

• Safe Under the Current Conditions of Use (based on the FDA VCRP and industry survey)

• Safe with Qualification (of concentration, application site, et cetera)

• Insufficient Data—missing data was requested but not supplied

• Unsafe

There are six principles to the CCCas follows:

(1) A company should market cosmetic products only after ensuring that every ingredient and finished product has been substantiated for safety. The decision that an ingredient has been substantiated for safety may be based on a finding by the Cosmetic Ingredient Review Expert Panel that such ingredient is safe for the use intended by the company or on other appropriate data and information.

(2) When marketing a cosmetic product containing an ingredient that exceeds limits on concentration or product type established by the Cosmetic Ingredient Review Expert Panel, a company should possess information sufficient to substantiate the safety of the ingredient for its intended use in such a product and be willing to make that information available for inspection by the Food and Drug Administration.

(3) When marketing a cosmetic product containing an ingredient for which the Cosmetic Ingredient Review Expert Panel has found insufficient data to determine safety, a company

should possess information sufficient to substantiate the safety of the ingredient for its intended use in such product and be willing to make that information available for inspection by the Food and Drug Administration.

(4) A company should participate in the applicable parts of the FDA Voluntary Cosmetic Reporting Program set forth in 21 CFR Parts 710 and 720 for products marketed in the United States, and file timely reports regarding its manufacturing establishments and ingredient usage.

(5) Although adverse events that are both serious and unexpected are extremely rare for cosmetic products, a company should notify the Food and Drug Administration of any known serious and unexpected adverse event as a result of the use of any of its cosmetic products marketed and used in the United States.

2.9.3. East Asia

Japanese regulations of the safety of cosmetics and cosmetic ingredients are amongst the most stringent of all industrialised nations. Whereas the definition of cosmetics categories resembles that of the U.S., Japanese regulations specify additional product categories, so-called quasi-drugs. This product class, which includes hair dyes, skin bleaching agents, hair growing and anti-hair loss agents is subject to a registration process, including evidence for efficacy and safety. Details of registration requirements, which resemble those required for drugs may be found at the web site of the Ministry of Health, Labor and Welfare (MHLW, 2007). In addition, only approved cosmetic ingredients, i.e. those included in an official positive list (CLS=comprehensive licensing standards of cosmetics by category) and corresponding to official specifications, may be used in cosmetic articles. During recent years, other Asian countries, such as China, South-Korea, Taiwan and others, have introduced cosmetic regulations similar to the Japanese model. Although international regulatory schemes on PCP/cosmetics share the same objective, i.e. consumer safety, there are major differences in their approach, in particular the classification of certain products as quasi-drugs in Japan or OTC drugs in the US, whereas most of these products are classified as cosmetics in the EU. In addition, the recommended hazard assessment (oral or dermal toxicity studies, use of alternative or in vitro tests) is not always consistent.

2.10. Herbal cosmetics

2.11. *Definition of herbal cosmetics*

The term organic or herbal are currently used to describe various sustainable agricultural and food items, cosmetics, bath and body care products, beverages, toys, furniture, textiles, mattresses and many other products. In the most basic of definitions, according to the Merriam-Webster's dictionary, organic means "relating to, or derived from living organisms" (http://www.merriam-webster.com/dictionary/organic). According to Essoussi and Zahaf (2008), the term organic is rooted in "bio" from Greek "bios" which means life or way of living. Scientifically, organic means any substance that contains carbon. But when we refer organic with respect to consumer goods, the meaning is different. When it comes to food, the definition of organic is totally clear, thanks to the USDA's (United States Department of Agriculture) National Organic Program standards that define how organic food is grown, raised, processed and sold. However, when it comes to cosmetics, body care, or personal care products, the definitions are not so clear since FDA (U.S. Food and Drug Administration) does not define or regulate the term organic (http://usdaorganicskincare.com). Organic or herbal cosmetics can be defined as cosmetic products that are made with organic ingredients, without the use of harsh chemicals like pesticides, fungicides, herbicides, and fertilisers (http://green.wikia.com/wiki/Organic_cosmetics). According to the Merriam-Webster's dictionary, "organic produce" refers to products produced by using feed or fertiliser of plant or animal origin without the use of chemically formulated fertilisers, growth stimulants, antibiotics or pesticides (http://www.merriam-webster.com/dictionary/organic).

According to the EU regulations natural cosmetics should contain 95-100 percent natural ingredients. That means that synthetic ingredients, fragrances and colors, synthetic oils, petroleum and derivatives are forbidden. An original organic product should be verified by an organic certifier. However, many times, it is difficult for products to reach 95 percent of organic requirements because minerals, such as titanium dioxide or iron oxides, which are used to promote color, absorb 5 percent of allowable non-organic ingredients. (Definition of Organic - Hangzhou Decn Trade Co., Ltd., no date). The same organic standards refer also to organic foods. An organic cosmetic product should also contain plant ingredients that come from organically farmed procedures. Furthermore, severe rules that encompass all these guidelines refer also to animal protection where any kind of violation is prohib-ited and the general treatment of the environment is in the center of attention (Faraco, 2013).

In the current study herbal cosmetics are defined according to the definition of Merriam-Webster's dictionary.

2.12. History of herbal cosmetics

Organic cosmetics have a very long history since they were used in ancient times. There is mention of cosmetics in the Bible. Traditions from ancient times prove that people of various cultures knew the usefulness of organic cosmetic ingredients. Egyptians believed in the adage "cleanliness is next to godliness", so they came up with various products and cosmetics not just to keep clean but also to look good. The Egyptians during Queen Cleopatra's time were experts in organic makeup products.

Additionally, most of these products had a therapeutic, antiseptic and medical value to them. Juice, seeds, flowers and plants, olive oil, honey, eggs, myrrh, incense, frankincense could be found in the extensive list of organic ingredients for ancient cosmetics (http://www.natural-organic-cosmetics.com). However, history has recorded a multitude of cases wherein very popular and widely used beauty products contained harmful substances and dangerous chemicals such as arsenic, formaldehyde, mercury and lead. Even after all the research that proves these substances are dangerous, they are still used to a small degree in modern mainstream cosmetics. Furthermore, the modern cosmetics industry uses a wide range of other chemicals such as parabens, petrochemicals, sodium lauryl sulphate, artificial colours and preservatives. There is no doubt that long-term exposure to such chemicals may cause many health-related problems like cancer, dermatitis and other allergies (http://www.naturallysafe.com). This created the need of an alternative, which led to the creation of cosmetics that used only natural, herbal and organic ingredients. People have become conscious of the dangerous chemicals being used in the ordinary cosmetics and turn to organic products. Gradually organic cosmetics seem to win more and more fans over their conventional counterparts, thus the organic cosmetic market has grown considerably.

2.13. Herbal Cosmetic Industry

The usage of herbal products has increased tremendously worldwide due to the consciousness of natural product compare to modern medicine (Ab Karim et cetera, 2011; Abdullah & Salleh, 2010; Jamal, 2006; Ismail and Mokhtar, 2016). Previous study reported that there are a few factors that contributed to this experience for example, ineffective modern medicine that can contribute to side effect or other problem, the impression that of herbal products are safe and nontoxic, longing for self-medication and low-price (Raghavendra et cetera ., 2009; Saokaew et cetera ., 2011). Beside that herbal products also have been associated with health care solution in treating and preventing diseases such as HIV/AIDS (WHO, 2011). Due to these growing interests of herbal products, the market value of the world herbal industry has increase with an annual return from USD29.3 million to USD35.7 million in 2015 (Ismaila and Mokhtara, 2016; Karim, Nasouddin, Othman, Adzahan, & Hussin, 2011).

Meanwhile the sales of herbal product in the United State has reach USD4.6 million, Eastern Europe, USD1.2 million and in Asia Pacific is USD21.1 million (Euromonitor International, 2015).

	2010	2011	2012	2013	2014	2015
World	29,265.10	32525.6	33,654.40	35,184.80	36,376.50	35,788.90
USA	3,875.30	3,979.40	4,065.40	4,296.50	4,421.50	4,624.70
Eastern Europe	1,467.90	1,652.40	1,654.60	1,828.10	1,723.30	1,293.80
Asia Pacific	15,021.40	17,199.30	18,493.80	19,295.20	20,305.30	21,119.00

Source: (Euromonitor International, 2015)

Previous studies on herbal product was carried out by previous researchers relating to the use of herbal therapy (Ritho et cetera ., 2002),the frequency of using herbal supplements (Al-Naggar et cetera .,2011; Kelly et cetera ., 2005; Tangkiatkumjai et cetera ., 2013), the use of herbal medicine (CAM) (AlBraik et cetera ., 2008; Arcury et cetera ., 2007; Aziz & Tey, 2009), the use of herbal products (Abdullah & Salleh, 2010; Brown et cetera., 2009), herbal drink (Chelliah & Chin, 2011; Hassali et cetera ., 2009), the purchase of herbal cosmetics (Thanisorn et cetera ., 2012) and intention to use of functional food (Rezai et cetera., 2012).

2.14. Overview of herbal cosmetics regulation worldwide

According to Nohynek, Antignac, Re & Toutain (2010), millions of consumers use cosmetic/personal care products (PCP) and their ingredients on a daily basis. Although human external contact with a substance rarely results in its penetration through the skin and significant systemic exposure, PCP produce local (skin, eye) exposure and are used in the oral cavity, on the face, lips, eyes and mucosa. Therefore, human systemic exposure to their ingredients can rarely be completely excluded. In addition, natural and synthetic substances may produce local effects in human skin, such as irritation, sensitisation or photoreactions. Given the significant and relatively uncontrolled human exposure to PCP, these products must be thoroughly evaluated for their safety prior to their marketing.

Although cosmetics prior to the 1960s had a good safety record, there are examples when this was not the case. For example, from the classical times through the middle ages up to the early 20th century, make-up dyes contained highly toxic heavy metals, such as lead, mercury and cadmium oxides. In the 1930s, thallium-containing depilatory products caused cases of severe and occasionally lethal intoxications (Malkey and Oehme, 1993). During 1958/1959 halogenated salicylanilide-containing cosmetics produced an epidemic of photo-allergic reactions in the UK and elsewhere (Horio, 1976), and, in the 1950/60s, zirconium-containing deodorants resulted in an outbreak of long-lasting allergic inflammatory skin reactions in consumers in Europe and the US (Shelley and Hurley, 1958; Kleinhans and Knoth, 1976).

During the past decades the safety of PCP and their ingredients has attracted increasing attention; thus, their toxicological safety evaluation is a relatively young discipline, which evolved in the second half of the 20th century. Up to the 1960s it was generally believed that PCP will always remain on the surface of the human body. Therefore, local effects were the primary safety concern. The first standardised in vivo tests for skin and eye irritation were developed in the 1940s by Draize (1944). Additional tools for the safety evaluation of PCP, such as in vivo sensitisation-, phototoxicity-, photosensitisation- animal and clinical safety tests, were developed in the 1960s and 1970s. During the past decades it was recognised that some topically applied substances may penetrate into or through human skin and produce human systemic exposure; this prompted the development of tests on the percutaneous penetration potential of PCP ingredients as well as investigation of their potential systemic toxicity (Corbett et cetera., 1999). Finally, during recent years, new alternative test methods were developed and are increasingly being applied to the safety assessment of PCP and their

ingredients; these methods may replace animal tests within the forthcoming years assuming their proper development, validation, and scientific understanding.

The growing market for organic products can be explained by the fact that the standard for organic cosmetics is higher than traditional ones. Organic cosmetics ingredients share the same regulations as organic food. One key advantage of using cosmetics is the reduction of unwanted exposure to preservatives, synthetic ingredients, hormones, bioengineering, and pesticide residues during ingredient and product production. Organic cosmetics are certified organic by the USDA and the National Organic Program (NOP), pending compliance with the USDA's Organic Foods Production Act of 1990 (OFPA) which sets organic standards for production, handling, processing, labeling of foods and cosmetics.

One area under federal regulations is in the labeling of products considered to be organic. Cosmetics that are certified organic through the USDA fall within 4 categories:

1. "100% Organic"- all ingredients being organically produced,
2. "Organic"- 95% of ingredients being organic,
3. "Made with Organic Ingredients"- 70% organic ingredients being organic, and
4. "Less than 70% Organic Ingredients"- the term "organic" is prohibited on the main label, but ingredients that are certified organic can be detailed within the ingredients panel.

The NOP also prohibits use of the USDA Organic's seal or claims of organic when the criteria under the OFPA have not been met. Federal regulation of the word "organic" was initiated due to products being sold as organic even though they were not; therefore, misleading consumers into paying more. Since marketing strategies are often used to boost sales, the next section will discuss about how the advertising of traditional cosmetics has shifted drastically to focus towards the promotion and the use of "natural", "pure", "herbal", and "healthy". Such strategies are executed by the using of words and images on the labels and through the advertisements on television or magazine. In both cases, the use of naturally-derived ingredients is emphasised and highlighted.

With the European Directive 2004/24/EC taking full effect on 30th April 2011, it is now illegal for companies to sell manufactured unlicensed herbal medicines within Europe without the appropriate license i.e. a Marketing Authorization (MA) or a Traditional Herbal Registration (THR). The UK differs slightly from the rest of Europe in that herbal practitioners are to be regulated as from April 2012 allowing for unlicensed manufactured herbal medicines to be

prescribed following a face-to-face consultation.

The main regulatory body is the European Medicines Agency (EMA) but each Member State also has their own regulatory agency e.g. The Medicines and Healthcare Products Regulatory Agency (MHRA) in the UK, and The Federal Institute for Drugs and Medical Devices (Bundesinstitut für Arzneimittel und Medizinprodukte, BfArM) in Germany. To date, there is no separate regulation for the registration of TCMs. Instead, there are several different routes to market for herbal products within Europe:

• Food (functional food, novel foods, dietary food for special medical purpose, foods for particular nutritional use – PARNUTS, food Supplement),

• Cosmetic,

• Traditional herbal medicinal product (THMP),

• Medicine for human use (Well Established Use, full Marketing Authorization), or

• Veterinary product.

It is important, therefore, to determine the classification of the herbal product. This may seem to be stating the obvious but many companies and researchers assume that if their product contains herbal actives, automatically it must be registered as a THMP but this is not always the case. The classification of herbal products can often be determined by the overall strategy of the company producing the remedy. For example, classification as a medical device (e.g. ear drops, skin patches) may be possible and more desirable: registration is generally quicker and therefore a company's investment will reach breakeven much sooner than via the 'traditional' route. For the purpose of this article, however, the authors have chosen to focus on the Traditional Herbal Registration Scheme as this has had the greatest impact on the European herbal industry in recent times.

2.15. Why Herbal Cosmetics

Environmental degradation and awareness of the destruction of natural resources are rising issues in the last decades. Surveys and opinion polls globally, reveal an increasing concern of people about environmental problems. Furthermore, consumers are becoming increasingly aware of the impact of consumption of everyday products on the environment. As a result, the issue of environmental protection has created eco-friendly consumption, called "green consumerism" (Moisander, 2007). Green consumerism can be described as being a multifaceted concept, including protection and preservation of the environment, pollution decrease, animal welfare, species preservation and responsible use of non-renewable resources (McEachern and McClean, 2002). As the issue of environmental protection has been raised, consumers have translated their environmental concern into actively demanding and purchasing green products. Evidence suggests that an increasing number of people are becoming more environmentally responsible in terms of their personal habits and lifestyles and are looking for green products (Stone et cetera., 1995; Starch, 1996). As a result of the growing number of green consumers, marketers are targeting the green market segment. From this global shift to green products, the cosmetics industry could not be excluded. More and more companies in the personal care products sector are turning to organic ingredients to win over environmentally conscious consumers. According to Camilla Kay, beauty director at IPC's In Style magazine, there's a growing number of environmentally conscious consumers who care about their lifestyle choices, from the food they eat to the beauty products they buy. Jennifer McKinley, president and co-founder of Cor, claims that the trend to use organic ingredients is here to stay since people care about what they put on their body, into their body and into their environment (Brand strategy, July 2008, p.p.14-15). D'Souza et cetera. (2006) suggest that consumers' environmental concern may be a key factor in the marketing of cosmetic products.

2.16. Herbal Cosmetic Industry in South Africa

South Africa has a wealth of indigenous plant species, ranked as the third largest bio diverse in the world. Global sales of natural cosmetics demonstrated an impressive increase from around R75.6 billion in 2010, to R332 billion in 2013. 45 percent (R150 billion) of the global natural cosmetics market stems from sales of certified natural cosmetic brands, while the rest (55%) is considered as 'near-natural' cosmetics.

According to Van Wyk (2011), a large number of medicinal plants are regularly sold as crude, unprocessed drugs on traditional markets in various parts of South. The volumes and market

value of these products are considerable. It has been estimated by Mander (1998) that the total volume of medicinal products traded annually in South Africa may exceed 20000 tonnes, with a turnover of approximately US$ 60 million per year.

There is a general trend to develop and brand these traditional products so that they resemble more closely those consumer products that are sold as over-the-counter medicines and herbal supplements (Africa (Cunningham, 1988; Williams et cetera, 1997; Mander, 1998; Von Ahlefeldt et cetera, 2003; Street et cetera, 2008). Some of the first products in these informal markets were produced by the company Impilo Drugs north of Durban (Van Wyk, 2011).

In contrast to the large diversity of products in informal markets, only a few indigenous plants have thus far been developed for the formal market (health shops and pharmacies). These products are available as processed and standardised materials in modern packaging and in various branded dosage forms such as teas, tinctures, tablets, capsules or ointments. According to Diederichs (2006), 16 South African traditional medicines that have been partly or fully developed as commercial crops and products are agathosma betulina, aloe ferox, artemisia afra, aspalathus linearis, bulbine frutescens, cyclopia genistoides, harpagophytum procumbens, hoodia gordonii, hypoxis hemerocallidea, lippia javanica, mesembryanthemum tortuosum sceletium tortuosum, pelargonium sidoides, saethiopicus, lessertia frutescens, warburgia salutaris and xysmalobium undulatum.

According to Momtaza, Mapunyaa, Houghtonb, Edgerlyb, Husseina, Naidooc, & Lall, (2008), the traditional use of plants against skin disease, and especially for cosmeticeutical purposes, is a common practice in the domestic medicine of many cultures in South Africa, and may provide leads for better anti-pigmentation compounds (Pieroni et cetera ., 2004). One such traditionally used plant for skin-lightening purposes is Sideroxylon inerme, a large, evergreen tree, commonly known as white milkwood in South Africa (Van Wyk et cetera., 1997). It occurs across a wide range in southern Africa. Zulus and Xhosas tribes in South Africa use the bark for several medicinal purposes (Watt and Breyer-Brandwijk, 1962). In the form of a paste, the bark is widely used as a skin lightener, particularly in KwaZulu—Natal province of South Africa (Van Wyk and Gerick, 2000). Extracts of the bark of Sideroxylon inerme were tested for tyrosinase inhibition to see if this could explain the traditional use as a skin lightener. In order to more quickly identify the compounds responsible for the effect, an in situ TLCspray reagent procedure was used similar to that described recently (Wangthong et cetera, 2007).

2.17. Success herbal cosmetics brands in South Africa

Growing consumer interest in natural "organic" cosmetics, pharmaceutical and food products is expected to help sustain the demand for natural ingredients in the coming years. Some of the commercialised natural products are:

• Marula

• Buchu

• Baobab

• Rose Geranium.

Figure 4: Below are some of the popular and successful herbal cosmetic brands in South Africa.

CHAPTER III: LITERATURE REVIEW

3.0. Introduction

The previous chapter (Chapter 2) provided the research context of the study. Chapter 3 was divided into two main sections; theoretical grounding and empirical literature review. The present study draws on literature from the following concepts, Theory of Reasoned Action (TRA), Theory of Planned Behavior (TPB), Self- Discrepancy theory and Social Comparison Theory, social influence, perceived benefits, eco-literacy; attitude towards use and purchase intention. Creswell (2013) posits that literature serves the purposes of sharing findings of other studies related to the study at hand, relating the study to a larger ongoing conversation in literature as well as fillings gaps and extending prior studies (Chenail, Cooper, & Desir, 2010; Marshall & Roseman, 2011).

3.1. Theoretical Grounding

Environmental awareness among consumers becomes the major topic, which pledges the scholars and researchers to focalise the research on green purchase intention and behavior. Different theories have been used to explain what influences the purchase intention of a product by consumers. These theories include social comparison theory, self-discrepancy theory, theory of reasoned action, consumption value theory and the theory of planned behaviour. Social Comparison Theory according to Festinger's (1954) states that people have a drive to evaluate themselves objectively in comparison to others they regard highly. The Self-Discrepancy theory, was first originated by Higgins in 1987. The theory expresses some specific affective states that occur as a result of self-divergences. Higgins (1987) notes that, self-discrepancies, occur when there is a mismatch, or inconsistency, between aspects of the self. The theory of reasoned action was developed by Fishbein and Ajzen in 1967. The theory aims to explain the relationship between attitudes and behaviors within human action. The theory of reasoned action is used to predict how individuals will behave based on their pre-existing attitudes and behavioral intentions. In line with this, the theories like the Theory of Reasoned Action (TRA), Theory of Planned Behavior (TPB), Self- Discrepancy theory and

Social Comparison Theory are utilised by the researchers in the field of green consumerism to investigate the green purchase intention (Chan, 2001; Moe, 2007; Samarasinghe, 2012).

Two essential theories are identified and utilised to ground the current study. These are the Theory of Planned Behaviour (TPB) and the Theory of Consumption Value (TCV). Below are the two theories explained in detail and related to the current study.

3.1.1. Theory of Reasoned Action (TRA),

According to the TRA, a person's intention is a function of two basic determinants, one personal in nature and the other reflecting social influence. The personal factor is the individual's positive or negative evaluation of performing the behavior. This factor is termed attitude toward the behavior (Ajzen and Fishbein, 1980). The second determinant of intention is the person's perception of the social pressure put on him/her to perform or not to perform the behavior in question. Since it deals with perceived prescriptions, this factor is termed subjective norm (Ajzen and Fishbein, 1980). According to the theory, attitudes are a function of beliefs. A person who believes that performing a given behavior will lead to mostly positive outcomes will hold a favourable attitude toward performing the behavior, while a person who believes that performing the behavior will lead to mostly negative outcomes will hold an unfavourable attitude. The beliefs that underlie a person's attitude toward the behaviour are termed behavioural beliefs (i.e. the act of consuming or buying herbal cosmetic products or non-herbal cosmetic products). Subjective norm is also a function of beliefs that specify individuals or groups to think whether he/she should or should not perform the behavior. These beliefs underlying a person's subjective norm are termed normative beliefs. A person who believes that most referents with whom s/he is motivated to comply think s/he should perform the behaviour will receive social pressure to do so.

Subjective norm is defined by normative guidance from relevant others such as family and friends, with regard to the behaviour in question. Given that normative guidance is subjective, the perception of norms can vary across consumers. Attitude relates to the extent to which a consumer perceives a certain behaviour, such as purchasing cosmetics without parabens, to be favourable or unfavourable. Behavioural intention is assumed to be influenced by the consumer's attitude towards the behaviour in question and subjective norm (Fishbein and Ajzen, 1975; Hansen, 2008). The current study argues, that the TRA model is a valuable approach for investigating consumers' intention to purchase herbal cosmetic by female consumers in South Africa among Generation Y cohort.

3.1.2. Theory of Planned Behaviour (TPB)

The Theory of Planned Behaviour (TPB) was proposed by Ajzen (1991) and was an extension of the well-known Theory of Reasoned Action (TRA) (Fishbein and Ajzen, 1975). Rivis and Sheeran. (2003) proposed that "the TPB is perhaps the most influential theory in the prediction of social and health behaviors." The TPB has been successfully applied to a field of ecological behavior (Chen, 2016; Han, Hsu & Sheu, 2010; Kim, Njite &Hancer., 2013; Yadav & Pathak, 2016). Within the TPB model, Ajzen (1985) argued that the subjective norm, perceived behavioral control, and attitude affect intention, which in turn affects real behavior.

Attitude can be defined as an individual's positive/negative evaluation of performance of the particular behavior (Ajzen and Fishbein, 1980). It is "the degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question" (Ajzen (1991), Attitude is the result of behavioral beliefs and outcome evaluations. Behavioral belief refers to the individual belief about the consequences of engaging in a particular behavior whereas outcome evaluation refers to the corresponding favorable or unfavorable judgment about the possible consequences of the behavior (Ajzen, 1991).

Subjective norm is defined as the perceived social pressure exerted on an individual to perform or not to perform the behaviour (Ajzen and Fishbein, 1980). Subjective norm is an outcome of normative belief and motivation to comply. Normative belief comply refers as an individual perception about how others (those who are significant to the individual) would like one to behave in a certain situation, whereas motivation to comply refers as the individual desire to comply with opinion of significant others (Ajzen, 1991).

Perceived behavioral control is defined as "the perceived ease or difficulty of performing the behavior" (Ajzen and Fishbein, 1980). Perceived behavioral control is an outcome of control beliefs and perceived power. Control belief can be defined as belief of the individual towards the presence of certain factors that may facilitate or impede the performance of a particular behavior (e.g. time, money & opportunity) whereas perceived power refers to personal evaluation of the impact of these factors in facilitating or impeding the particular behavior (Ajzen, 1991).

Behavioral intention is an indication of individual's readiness to perform a given behaviour and it is assumed to be an immediate antecedent of behavior (Ajzen, 2002). Thus, the more favorable the attitude towards behavior, more favourable the subjective norm, and greater the

perceived behavioral control, the stronger will be the individual's intention to perform the behavior. The TPB model has been used in several studies to measure the pro environmental intention as well as behavior. Steg and Vlek (2009) define pro-environmental behavior as 'behavior that harms the environment as little as possible or even benefits the environment'. Pro-environmental behaviors include the behavior towards the activities such as the use of green/environmental friendly products, the use of environmentally related goods and services, organic products and waste disposal management or recycling et cetera (Park and Ha, 2012). The present study deals with consumer intention and behavior towards purchasing green products. The past literature shows that TPB has been used in the wide range of eco-friendly products and services such as energy efficiency products (Ha and Jhanda, 2012), green hotels and restaurants (Chen and Tung, 2014; Chou et cetera ., 2012; Han et cetera ., 2010; Han and Kim, 2010; Kim et cetera ., 2013; Kim and Han, 2010; Kun- Shan and Teng, 2011) and green products (Chan and Lau, 2002; Liobikienė et cetera . 2016; Yadav and Pathak 2016a) and proved its robustness and predictability for measuring eco-friendly purchase intention and behavior. In most of the cases TPB fully supported (i.e. all the TPB variables; attitude, subjective norm and perceived behavioral control significantly influences consumers' green purchase intention) the consumer intention and behaviour to opt for eco-friendly products and services. However, in a few cases (Chou et cetera, 2012; Kim et cetera, 2013) TPB variables partially supported the consumers' intention and behavior. This shows that attitude, subjective norm and perceived behavioral control can play significant role in determining the consumers' purchase intention of herbal cosmetic products.

Accordingly, this study also uses the TPB model to explain how social influences, perceived eco-literacy and perceived benefits/value influences Generation Y female consumers' attitude towards herbal cosmetics – which in turn has positive impact on their purchase intention of herbal cosmetic products. Social norms depict the social influences on Generational Y cohort females to use herbal cosmetics. Perceived behavioural control is represented in this study by the easiness to which the Generation Y cohort females perceive the benefits derived from herbal cosmetics and the depth of eco-literacy. Attitude in the TPB is represented by the Generation Y females' attitude towards the herbal cosmetics, while behavioural intention stands for their purchase intention of herbal cosmetics.

3.1.3. Self- Discrepancy theory

Self-discrepancy theory, developed by Higgins in 1987, explains that specific affective states can occur as a result of self-discrepancies. Self-discrepancies, as described by the theory, occur when there is a mismatch, or inconsistency, between aspects of the self. Self-discrepancy theory defines the different aspects (comprised of both a domain of the self and a standpoint of viewing the self), the affective states which can result from discrepancies between the different aspects, as well as provides a specific framework for identifying when discrepancies exist, and which affective state will result (Higgins, 1987).

The domains of the self-identified in the theory are (1) the actual self, meaning, your concept of the traits you believe (or another believes) you actually possess, (2) the ideal self, that is, your concept of the traits you (or another) would ideally like for you to possess, and (3) the ought self, which is your concept of the traits that you (or another) believe you should possess (i.e., a representation of obligations or sense of duty) (Higgins, 1987). Each domain is then paired with a standpoint, "a point of view from which you can be judged that reflects a set of attitudes or values," (Higgins, 1987, p321) to comprise an aspect of the self. The standpoints defined by the theory are 1) your own point of view, and (2) the point of view of a significant other, e.g. the point of view of your mother, father, sibling, friend, et cetera, Self-discrepancy theory refers to these two standpoints as "own" and "other", respectively. Thus, in self-discrepancy theory, a discrepancy within the self is classified according to whether it is a discrepancy between the own or other self, and whether it is the actual, ideal, or ought self. For example, an actual/own versus ideal/own discrepancy refers to a discrepancy between the way you view yourself to actually be and the way you would ideally like to be.

According to self-discrepancy theory, individuals are motivated to reach a state where the different aspects of the self-match, or are consistent with one another (Higgins, 1987; Jung, Lennon, & Rudd, 2001). Self-discrepancy theory is relevant to the study of body image, attractiveness and self-esteem. The actual/own versus ideal/own discrepancy, is most often examined in studies of body image. When individuals are unable to reduce the discrepancies they perceive within themselves, body dissatisfaction and disordered eating may result (Strauman, Vookles, Berenstein, Chaiken, & Higgins 1991). Discrepancies between the attractiveness of the actual and the ideal self can lead to lower body image, and lower self-esteem (Jung et cetera ., 2001). These symptoms and problems are consistent with the negative affective state associated with an actual/own versus ideal/own (and also actual/own versus

ought/own) discrepancy as described by self-discrepancy theory (Higgins, 1987; Strauman et cetera, 1991).

Cultural standards of ideal beauty, which are often unrealistic and unattainable, encourage self-discrepancies when they are used as standards and criteria for evaluating one's appearance. After viewing images of attractive people, making discrepancies more pronounced (Jung et cetera, 2001), women are generally less satisfied with their physical appearance (Jacobi & Cash, 1994; Kenrick, Montello, Gutierres, & Trost, 1993; Richins, 1991). Self-discrepancy theory can be used to identify the motivations for herbal cosmetics usage. By applying herbal cosmetics, women may be attempting to close the gap between their actual and their ideal selves. In the current study, it is expected that the Generation Y cohort females might adopt the use of herbal cosmetics in order to achieve the ideal self-status.

3.1.4. Social Comparison Theory

Researchers have used a variety of theoretical paradigms for studying the process of how women view themselves and how their self-esteem is related to personal comparisons to other women. Festinger's (1954) social comparison theory is the most commonly used comparison theory (Botta, 2000; Irving, 1990). An important component of self-concept is how one compares the self to other individuals (Kaiser, 1997). Festinger (1954) noted that people typically evaluate themselves by comparing themselves with others who are somewhat more attractive or to others who are less attractive than the self. The speculation is that higher-valued individuals are typically those with whom one chooses to become familiar and who generally have more effect on one's self-esteem as an outcome of social comparison processes (Bunnk & Mussweiler, 2001). Social comparison can take place among people who are not involved in a certain group together or have no interaction with one another; for example, individuals may compare the self to a valued celebrity or fashion models.

The main research in social comparison theory has focused on two main types of social comparison: downward social comparison and upward social comparison. In downward social comparison people view others as less attractive or worse off than themselves to fortify the sense of self as better or valuable. In contrast, some women engage in upward comparison to feel better about themselves. Upward comparison allows some women to aspire to ideals presented by more attractive individuals; the upward comparing women in some cases feel better about the self when inspired by the ideal. More common, however, is that many women have great dissatisfaction with their own personal appearance after upward comparison, which

can lead to feeling substandard and needing to repair their imperfections. On average, women tend to make upward comparisons, which provide the opportunity for them to become displeased with their body and experience shame, dissatisfaction, weight anxiety, negative moods, and low self-esteem (Fredrickson & Roberts, 1997; Tiggemann & McGill, 2004).

Willis (1981) suggested that downward comparison occurs within "situations in which frustration or misfortune has occurred that is difficult to remedy through instrumental action" (p. 245). In essence, an individual's self, can be enhanced by comparing the self to others who are worse off. However, Willis (1981) also proposed that downward comparison can threaten individuals causing them to look for downward comparison in others. For instance, some women may feel threatened when another woman has on makeup and looks more attractive; the threatened woman may then look for flaws in the attractive woman to make herself feel better about her outward appearance. Social comparison theory is a useful framework for studying cosmetic use and provides a framework for understanding varied pathways of psychological functioning (Bunnk & Mussweiler, 2001). The importance of attractiveness to women increases their concern about their own appearance, which adds to the chances that they will compare themselves to others. Comparisons to others may provide information about trends and trigger motivation to use cosmetics. In Western culture not only do individuals desire to evaluate their abilities, but they also feel pressured to improve, which compels individuals to make efforts to become better in comparison to others (Wood, 1989). One way to improve after upward comparisons on the part of women who feel unattractive is to buy and apply more cosmetics and among them – herbal cosmetics which are regarded to be safer than the conventional cosmetics.

One study that applied the Social comparison theory is that by Lennon and Rudd in their 1994 study on appearance management behaviors. The authors described Festinger's 1954 theory in relation to body image research. Festinger's theory states that people "have a drive to evaluate themselves objectively or, if objective comparisons are unavailable, to evaluate themselves in comparison to others (Festinger, 1954, as cited in Lennon & Rudd, 1994, p96). Lennon and Rudd (1994) explained that because appearance is important in social contexts, "it is thus reasonable to expect people to be concerned with their own physical appearance and to compare themselves to others on that basis" (Lennon & Rudd, 1994, p96).

The authors went on to explain that social comparison has been linked with appearance and self-esteem, and that certain appearance features "that are distinctive in comparison to others

are centrally featured in our thoughts regarding the self and, thus, may serve as a basis for automatic social comparison" (Lennon & Rudd, 1994, p97). In addition to direct appearance comparisons made with others, we may also make comparisons with media images. The highly idealised nature of media images may lead to upward comparisons, i.e. to those we believe are more attractive, resulting in negative self-perceptions and lowered self-esteem (Lennon & Rudd, 1994).

Rudd and Lennon (1994) propose a model of self-image, social comparison and created appearances. The authors explain that social comparison affects "(a) specific appearance management behaviors employed as an individual creates her appearance and (b) the internalisation of appearance evaluations." (p 164). The basis of the model proposed by Lennon and Rudd is that the process of social comparison is used continually to assess our own aesthetics and those of others. Individuals are then motivated to engage in appearance management behaviors as a result of social comparisons, and evaluations of that appearance made by others are internalised (Rudd & Lennon, 1994). Social Comparison Theory was also used in a 1991 study by Richins, who states that this theory has direct applications to the idea that consumers compare themselves with the "often idealised" images presented in advertising. Richins explains that researchers have recognised that social comparison can take place across social groups and categories, and that models in advertising constitute a social category (Richins, 1991). Richins (1991) also notes that feelings of dissatisfaction can occur when the discrepancy between the object of comparison and the self is great. This would often be the case when individuals compare themselves with idealised media images. Richins (1991) posited the idea that comparisons may temporarily alter an individual's comparison standard.

In this study, Richins (1991) concluded that female college students do in fact compare themselves with models in ads, although subsequent feelings were often mixed. Richins (1991) suggested, however, that the negative correlation between comparison and reported satisfaction could mean that comparisons lead to dissatisfaction. This suggestion was validated by a third study reported in the article, which found that subjects exposed to ads with models were significantly more dissatisfied than subjects exposed to ads without models. The study also found that after viewing attractive models, subjects rated images of average attractiveness lower than they otherwise would have (Richins, 1991).

Social comparison theory is found to be relevant this study of herbal cosmetics uses by females in Generation Y cohort, as herbal cosmetics use may be determined and influenced by

comparisons made both with real people and with media images. This theory details why these comparisons are made and the manner in which they are made. Research regarding social comparison theory and the use of herbal cosmetic is important in as far as it can help to explain the motivation behind why other females in the Generation Y cohort can end up using herbal cosmetics.

3.1.5. Theory of Consumption Value (TCV)

One of the important factors that influence the consumer's choice is perceived value (Chen, 2008). Researchers used different terms to define the construct of perceive value, although most of them meant the same concept (Woodruff, 1997). The most commonly used marketing terms include perceive value (Dodds, Tseëlon & Weitkamp, 2008; Sánchez-Fernández & Iniesta-Bonillo, 2007), customer value (Dodds, Tseëlon & Weitkamp, 2008; Pandey, Ulkarni, Bhalke, Pande & Kendre 2014 and later Folwler, Woolervy-lioyd & Waldalt (2010) extended the concept of perceived value identified as consumption value. Drawing from TCV, the view that value is a "critical variable" in marketing has gained considerable acceptance amongst researchers and practitioners (Grönroos, 2006).

TCV is a theory that explains how consumers judge and use a specific product or service Sheth, Newman and Gross. (1991). TCV synthesises existing findings in economics, sociology, psychology, marketing, and consumer behaviour, and it is applicable to individual choices involving a full range of products and services, both tangible and intangible. In its essence, TCV posits that (1) consumer choice decision making is influenced by multiple consumption values, (2) the consumption values make differential contributions in any given choice situation, and (3) the consumption values are independent (Sheth et cetera ., 1991). TCV suggests that consumers attach different values to different products, which will ultimately have an influence on purchase motivation (Ramkissoon & Uysal., 2011). It is also important to note that one consumer can attach multiple interpretations to one "value" (Kamakura & Novak, 1992). The positive side of TCV theory is that it can identify the main value-adding elements in cosmetics product choice or primary drivers/motivators for choosing herbal cosmetics product. This view is supported by Yeonsoo, Jinwoo, Inseong and Hoyong (2002), who assert that TCV theory enables deeper explanations because it examines underlying reasons in the consumer decision-making process. This enables them to develop practical strategies that address real market conditions (Gimpel, 2011).

According to Lin and Huang (2012) the theory of consumption values has at its base three fundamental axiomatic propositions: the consumer's behavior is a function of various consumption values, the consumption values have different contributions in any purchase situation, and the consumption values are independent. Therefore, a decision can be influenced by any or all of the five consumption values (i.e. functional value, social value, emotional value, conditional value and epistemic value). Each of these values has a different contribution in specific buying situations, each relates additively, and each has an incremental contribution.

The functional value is what mainly causes the consumer's choice. This function refers to the perceived utility of a product or service to attain utilitarian or physical performances that results from attributes such as durability, reliability, and price (Sheth et cetera, 1991). Lin and Huang (2012) find that some consumers care enough about environmental degradation that they are willing to pay more for green products. In addition, a study by Bei and Simpson (1995) confirms that consumers ponder the price and quality when they buy recycled products. The functional value (price) influences the purchase of green products (Finch, 2005).

The social value refers to the perceived utility resulting from the product or service's association with one or more social groups, such as demographic, socioeconomic, and cultural (Sheth et cetera, 1991). The social value relates to approval and self-image improvement (Sweeney & Soutar, 2001) that influences the green consumer's behaviour (Finch, 2005).

The emotional value refers to the perceived utility that results from a product or service that provokes feelings or affective states. Bei and Simpson (1995) report that 89.1 percent of their study's respondent’s feel that they are preserving the environmentwhen they buy recycled products. This emotional value influences the green consumer's behaviour (Finch, 2005; Lin & Huang, 2012).

The conditional value refers to the perceived utility that a product or service has as a result of a situation or set of circumstances (e.g., organic food in pregnancy). The product or service attains this value due to the situation: the presence of physical or social contingencies increase the functional or social value (Sheth et cetera, 1991). When the value is strongly linked to the product or service's use in specific contexts, the conditional value arises (Wang, Liao, & Yang, 2013). The conditional value influences the green consumer's behaviour (Finch, 2005; Lin & Huang, 2012).

The epistemic value refers to the perceived utility resulting from a product or service that stimulates the desire for knowledge and offers novelty (Sheth et cetera, 1991). Knowledge is recognised in consumer research as a characteristic that influences all stages of the decision process (Laroche, Bergeron, & Forleo, 2001). A further explanation for seeking novelty relates to gaining the skills to solve problems (Lin & Huang, 2012). The green consumer's behavior is influenced by epistemic value (Lin & Huang, 2012).

The current study advances that the Generation Y cohort females are likely to be motivated too by the expected or perceived value they obtain from using herbal cosmetics – perhaps when compared to the use of conventional cosmetic products.

3.2. Empirical Literature

This section of the literature review focuses on the review of the empirical literature of the research variable. There are five research variables in the conceptualised model and these are – social influences; eco-literacy; perceived benefits; attitude and purchase intention.

3.2.1. Social Influence

Social influences also referred to by other researchers as interpersonal influence primarily consists of the effect of acting to convince, persuade or influence other people for the purpose of having a specific outcome (Arcury., Grzywacz., Bell., Neiberg, Lang, & Quandt, 2007). Buttressing the same notion, Peng, Yang, Cao, Yu, Xie, (2017) assert that, social influence refers to the case when individuals change their behaviors under the influence of others. A cross examination of literature on consumer behaviour seem to confirm the existence of social influence upon individual decision processes (Kassarjian & Robertson, 1981; Bandura, 2007). As noted by Bearden, Tian and Hunter (2001), an important determinant of one's behaviour is the influence of others. The use of attractive spokespersons or celebrities to endorse products bears testimony to this belief. Buttressing the same notion, Stafford and Cocanougher (2013) suggested that, in order to fully understand consumer behavior, consideration should be given to the effects of social influence on development of attitudes, values, norms, aspirations and purchase behaviour. According to Bandura (2007), verbal persuasion is widely used as a mode of influencing human attitude and behavior, because of its ease and ready availability. Deutsch and Gerard (2004) stated that interpersonal influence is expressed through either normative or informational influences. Normative influence can be defined as the tendency to conform to others' expectations (Burnkrant & Cousineau, 2005), while informational influence is defined

as the tendency to accept information from other people as evidence about reality (Deutsch & Gerard, 2004). Social environments like family, friends and peers (normative susceptibility) strongly affect purchasing decisions that involve green products such as herbal cosmetics. Social relationships between opinion leaders and professionals may have a substantial effect on similar attitudes toward green purchasing decisions (informational susceptibility) (Bandura, 2006).

According to Sewel, (2017), social influence is of importance in sociology, marketing, public health, political science, et cetera, because it can explain behaviors, opinions and beliefs exhibited by individuals. By analysing the influencing mode among users and the spreading mode of influence, many advantages can be obtained, such as being helpful to understand social behaviors of people from the angle of sociology; helpful to provide a theoretical basis for making public decision and public opinion guidance; and helpful to promote communication and dissemination of political, economic and cultural activities, as well as in other fields (Peng, Yang, Cao, Yu, Xie, 2017). A prodigious amount of research evaluating the effects of social influence on various attributes has been done by a number of scholars. For instance, Crandall, (1988) investigated the influence of social influence on binge eating, the influence of social influence on smoking and drinking behaviors of youth (Simons-Morton et cetera, 2001), investment decisions (Hoffmann and Broekhuizen, 2009), emotions (Hareli and Rafaeli, 2008), and transitioning from non-injecting heroine user to an injecting user (Neaigus et cetera, 2006).

According to Peng, Yang, Cao, Yu, Xie, (2017), the strength of social influence depends on the relation among individuals, network distances, timing, characteristics of networks and individuals, et cetera Viral marketing (Sun, 2013), online recommendation or advertising (Lee et cetera ., 2011), healthcare community (Xu, Li, Peng, Hsia, Huang & Wu, 2017), expert finding (Cheung et cetera ., 2014), and other applications benefit from social influence by qualitatively and quantitatively measuring the influence of individuals on others. Social influence analysis is a highly utilisable technology, which is attracting a large number of researchers. Modeling and analysis on social influence are becoming an important research field of social networks. By analysing the influencing mode among users and the spreading mode of influence, many advantages can be obtained, such as being helpful to understand social behaviors of people from the angle of sociology; helpful to provide a theoretical basis for making public decision and public opinion guidance; and helpful to promote communication and dissemination of political, economic and cultural activities, as well as in other fields.

Xu, Li, Peng, Hsia, Huang & Wu, (2017), note that the high-level goal in studying social influence analysis is to answer questions related to social influence, such as "Who can be influenced?", "Who can influence whom?", and "Who are the most influential users in a specific social relationship?" The main problems of social influence analysis are how to quantify the influence of each user, and how to identify the most influential users in social relationships. Social influence has great potential to help us understand the ways in which information, experiences, ideas, and innovations propagate across social relationships. Analysing social relations can provide new insights into how people interact with and influence each other, and into why their ideas and opinions on different subjects can propagate in social relationships.

Herd behavior and social influence

It has been widely acknowledged that people have the tendency to mimic each other resulting in herd behavior (Chen, 2008; Xu, Li, Peng, Hsia, Huang & Wu, 2017). This situation is very common in the online shopping environments, since the environments usually contain much more information and can result in information overload. Moreover, unlike the face-to-face retail environment, information asymmetry and ambiguity is more serious in the online environment (Brynjolfsson & Smith, 2000; Chen, 2008). Thus, people need extra knowledge, experience, effort and even money to accurately predict the value and quality of a product to purchase (Sun, 2013). Not surprisingly, individuals would like to imitate others' behavior and incorporate the information derived from others into their-own decision-making process to minimise risks, maximise the value, and comply with others' expectations (Bonabeau, 2004; Lee et cetera ., 2011). People tend to believe what most others believe (Xu, Li, Peng, Hsia, Huang & Wu, 2017), and believe that other people have better information than they themselves do (Bonabeau, 2004).

Deutsch & Gerard (1995) indicated that there are two influences derived from others, called informational influence and normative influence. Informational influence refers to the extent to which people accept the information obtained from others as evidence regarding a given reality (Deutsch & Gerard, 1995). Individuals can use the information to facilitate problem solving or coping with the environment (Lee et cetera, 2011). For example, the recommendation and review information for an online product (e.g. sales volume, star ratings, and customers' reviews) can influence consumers'decision-making (Chen, 2008). Normative influence is defined as the influence to conform to the positive expectations of others (Deutsch

& Gerard, 1995). Similarly, Venkatesh et cetera (2012) used the term social influence to represent normative influence. They argued the opinions or recommendations from important others will increase the credibility of the information and then influence people's actions. Accordingly, with two influences from others, the herd behavior emerges (Banerjee, 1992).

Social influence and consumer behavior

The other strategy to diminish decision uncertainty is to imitate the same decision that has been repeated by many different people (Bikhchandani et cetera, 1992; Sun 2013). Sun (2013) indicated that observing the actions of others is the primary condition under which herd behavior can occur. Others' behavior usually serves as a heuristic of social proof that significantly influences people's decision making (Lakin & Chartrand, 2003; Cheung et cetera, 2014). According to social learning theory (SLT) (Bandura, 1977), the behavior of people from an individual's reference groups significantly influences his/her own behavior (Akers & Lee, 1996; Elek et cetera, 2006). The social influences may be derived from significant others (e.g., peers, friends, partners, and families) in one's social network (Park et cetera, 2012), or the endorsers represented by celebrities, pop stars, fashion leaders, or familiar community members (Bikhchandani et cetera, 1992). Accordingly, social influence is defined as the extent to which people perceive that others in reference groups have participated in purchase activities. This study uses two reference groups (i.e., peers and endorsers) to examine their social influences on people's buying behavior.

Peer pressure and social influence

Peer imitation refers to the extent to which consumers feel the need to mimic their peers. An individual's behavior during buying is affected by the behaviors of their peers and other net-friends, since they learn from observations in this virtual social situation. According to prior studies based on SLT, when friends' behavior is aggregated in one certain platform that allows users to view and recall friends' actions, it makes the link more salient (Burke et cetera, 2009). In this study, people can easily perceive their peers' buying behaviors of herbal cosmetics. Through this observation, people are very likely to mimic their peers' behaviors and preferences (Bem, 1967). Moreover, according to the compensation-based herd rational, people would like to imitate peers' choices of herbal cosmetics, due to the risk-aversion strategy (Maug & Naik, 1996).

Celebrity endorsement and social influence

It is quite common that people will follow endorsers (Till & Busler, 1998), such as notable successful people (Bandura, 1986), reputable early adopters (Abrahamson, 1991), and fashion leaders (Bikhchandani et cetera, 1992). A three-stage meaning transfer model is proposed to explain the endorsement influence (McCracken, 1989). An endorser's credibility and expertise first transfer meaning to his or her public image. The endorser then transfers the meaning to the item being endorsed. Finally, the meaning is transferred to consumers. Celebrity endorsement enhances the perceived quality of the item, e.g. products, activities, brands, stores, and is correlated with intention-to-adopt (e.g., Kamins et cetera, 1989; Ohanian, 1991). Therefore, people would like to imitate the endorsers' behaviors, since they are believed to have better information and make correct decisions than the general public (Bandura, 1986). Endorsement influence refers to a variety of marketing events promoted by experts, celebrities and peers to motivate consumers' interest in herbal cosmetics products purchase (Chan et cetera ., 2013).

Endorsement influence refers to the extent to which people perceive that endorsers in their reference groups have conducted and promoted the herbal cosmetic purchase. Individuals usually take the process of internalisation and identification to adopt the herbal cosmetics purchase behaviors of endorsers (Kamins et cetera, 1989). Internalisation occurs when individuals conform to the attitudes or behavior of herbal cosmetics endorsers because these actions or beliefs are perceived to be credible.

Imitating the endorsers' herbal cosmetics purchase behaviors largely reduces the uncertainty of the decision. Identification occurs when an individual adopts the herbal cosmetics buying behaviors conducted by endorsers due to personal affection for the endorsers (Friedman & Washington, 1976), and the adoption of herbal cosmetic purchase behavior enhances the individual's self-image (Deutsch & Gerard, 1955). In this study, endorsement influence is defined as the extent to which people perceive that endorsers in their reference groups have conducted and promoted the herbal cosmetic purchase behavior

3.2.2. Eco-Literacy

According to Fryxell and Lo, (2003), eco-literacy or environmental knowledge can be defined as "a general knowedge of facts, concepts, and relationships concerning the natural environment and its major ecosystems." Environmental knowledge evolves in two forms: the first occurs while educating the consumer on the general impact of the product on the environment, and the other occurs when the consumer already knows that the product itself is produced in an environmentally friendly way (D'Souza, Taghian & Lamb., 2006). According to Rahbar and Wahid (2010), there are three stages of environmental knowledge or literacy: the first stage is nominal environmental literacy, which means that consumer is able to recognise many basic environmental terms but does not understand the issues in depth in order to cause specific purchase behavior. The second stage, functional environmental literacy, characterises consumers who understand the basic meaning of environmental issues and are able to use that knowledge while communicating with other people. Finally, operational environmental literacy is the third stage, where people can gather, interpret, evaluate and analyse data about environmental issues and take them into account in their purchasing behaviour. Eco-literacy was developed by Laroche, Bergeron and Barbaro-Forleo (2001) to measure the respondent's ability to identify or define a number of environmentally-related concepts, symbols and behaviours. It has been found to be correlated with some attitudes and behaviour toward the environment. According to their survey, an individual's knowledge about the environment plays a multiple role in influencing his/ her behaviour. It provides the subject with knowledge about issues and helps form attitudes and intentions through the belief system.

However, empirical findings for the influence of consumers' eco-literacy on their green purchase behaviour are contradictory. Studies such as those by Trivedi, Patel and Savalia (2015), Diamantopoulos, Schlegelmilch, Sinkovics, and Bohlen (2003), Rahbar and Wahid (2010) claim that it has little effect on environmentally friendly behaviour, while others report a positive association between environmental knowledge and ecological behaviour (Vining & Ebreo, 1990; Chan & Yam, 1995; Chan, 1999). Laroche et cetera. (2001) in their study on segmentation of consumers who were willing to pay more for environmentally friendly products concluded that eco-literacy was not a good predictor of consumers' willingness to pay more for environmentally friendly products. Davis (1993) has also concluded that knowledge of environmental issues can lead to positive ecological attitudes, while Synodinos (2000) proposed that "more positive attitudes may result by increasing knowledge about environmental issues". Consistent with the previews studies are the findings of Chan (2001),

indicating a positive relationship between knowledge and attitudes toward green purchases. More recently, Mostafa (2007), investigating the influence of values and psychological factors on the green purchase behaviour of Egyptian consumers, observed that perceived environmental knowledge was a good predictor of eco-friendly attitudes and behaviours. The positive and significant relationship between knowledge and green purchase attitudes supports previews research (Stern, 2002; Kensler, 2012). Finally, Cheah and Phau (2011) suggested that if an individual has eco-literacy promotes favourable attitudes toward green products.

Environmental concern and eco-literacy

Environmental concern denotes the general orientation of individuals toward the environment and their level of concern toward environmental issues (Choi and Kim, 2005). Attitude is a good predictor of intentions to act in environmentally concerned ways (Saribas, Teksoz, Ertepinar, 2014). It has generally been found that there is a positive correlation between environmental concern and environmentally friendly behavior (Alp, Ertepinar, Tekkaya, & Yilmaz, 2008). The more favorable consumer attitudes toward the environment are, the stronger their intentions to stop purchasing and hence make personal sacrifices of purchasing more environmentally friendly consumer products such as herbal cosmetics (Hampson, 2012). High levels of environmental activism were strongly linked to values that people rated as being of great importance in their lives (Gilg et cetera, 2005). Hampson, (2012) indicated what makes people more inclined to behave in environmentally friendly ways: an awareness of various environmental problems and the consequences of their behavior in response, being concerned with solutions, a conviction that individual efforts count in solutions, and a willingness to reallocate their resources (time, money, and attention) to make personal behavior more environmentally friendly. Therefore, consumers who are concerned more than is typical with the environment are more willing to make efforts to change from purchasing conventional cosmetics that are riddled with chemicals that pollute the environment to herbal cosmetics that environmental friendly.

Environmental literacy or eco-literacy refers to an individual's knowledge about and attitudes toward the ecological issues; skills and motivation to work toward the resolution of environmental problems and active involvement in working towards the maintenance of dynamic equilibrium between the quality of life and quality of environment (Hsu & Roth, 1998; Kheiry & Nakhaei, 2012). Most scholars believe that environmental literacy is the desired outcome of the process of environmental education that contains getting knowledge and

awareness of environmental issues and problems, and the skills to recognise and solve them, and above all, behave environmentally responsible (Moody & Hartel, 2007).

Environmental literacy is defined as ―basic functional education for all people, which provides them with the elementary knowledge, skills and motivates to cope with environmental needs and contribute to sustainable development‖ (Erdogan et cetera, 2009). Roth (1992) defines environmental literacy as―the capacity to perceive and interpret the relative health of environmental system and to take appropriate action to maintain, store, or improve the health of those systems. Therefore, environmental literacy is beyond the certain cognitive skills and basic definition of literacy and it is distinct from simple awareness or personal conduct knowledge because of its depth of information and the actual skills (thinking and doing) imparted (Roth, 1992; Tuncer, et cetera., 2009). In general, environmental literacy has different definitions, but commonly it has been described as comprising environmental knowledge, awareness and concern (Hares et cetera. 2006).

Components of environmental / eco-literacy

According Karimzadegan and Meiboudi, (2012) and Ramdasa, & Mohamed, (2014), there is a profound, but subtle, distinction between environmental education and environmental literacy. While environmental education is process based, the goals of environmental literacy are more outcome based. Environmental literacy is defined as the capacity to perceive and interpret the relative health of environmental systems and to take appropriate action to maintain, restore, or improve the health of those systems.

Environmental literacy is the understanding of the interactions between natural systems and human social systems (Hampson, 2012; Hollweg et cetera, 2011, Szell and Hallett, 2013). The working definition of an environmentally literate person is one who uses critical thinking, problem solving, and effective decision-making skills to weigh all sides of an environmental issue (Hampson, 2012; Ozdemir, Aydin, & Akar-Vural, 2009). A person is able to take responsible actions to resolve environmental issues because he/she has environmental literacy: knowledge, skills, affect, and behavior.

Roth believed that environmental literacy is based on ecological models, and that environmental literacy is the ability to understand environmental systems and the subtle action of conservation, amendment, and improving the health of these systems. In order to increase the understanding of this subject, we assumed that environmental literacy includes six original parts: Ecological Knowledge, Socio-Political Knowledge, Knowledge of Environmental

Issues, Affect, Cognitive Skills, and Environmentally Responsible Behaviors (Simmons, 1995).

Ecological Knowledge: The knowledge of major ecological concepts. It also refers to the knowledge and understanding of how natural systems work, as well as knowledge and understanding of how natural systems interface with social systems.

Socio-Political Knowledge: Understanding the relationship among beliefs, political systems, and environmental values of various cultures. It includes an understanding of how human cultural activities (e.g., religious, economic, political, social, and other) influence the environment from an ecological perspective. Also included within this category is knowledge related to citisen participation in issue resolution.

Knowledge of Environmental Issues: Understanding environmental issues resulting from human interaction with the environment. Also included within this category is knowledge related to alternative solutions to issues.

Cognitive Skills: Those abilities required to analyse, synthesise, and evaluate information about environmental issues and to evaluate a select issue based on evidence and personal values. This category also includes those abilities necessary for selecting appropriate action strategies, and for creating, evaluating, and implementing an action plan.

Affect: Factors within individuals which allow them to reflect on environmental issues at the intrapersonal level and to act on them if they judge the issue warrants action.

Additional Determinants of Environmentally Responsible Behavior: Such things as the assumption of personal responsibility and locus of control.

Environmentally Responsible Behaviors: Active and considered participation aimed at solving problems and resolving issues. Categories of environmentally responsible actions include persuasion, consumer action, eco management, political action, and legal action.

Contrary to Simmons, (1995), four components of environmental literacy: environmental knowledge, environmental attitudes, perception of environmental behavior, and environmental concern were identified by Saribas, Teksoz, Ertepinar, (2014). Using an instrument to assess 684 preservice teachers' environmental literacy, they examined the relationship between participants' environmental knowledge, attitude, and concerns. They found that environmental

knowledge was correlated with environmental concerns and perceptions of environmental behavior.

Their results also showed a high correlation between environmental attitudes and perceptions of environmental behavior. Additionally, they found small, but significant relationships between attitudes and concerns and between concerns and perceptions of behavior. Another study (Alp, Ertepinar, Tekkaya, & Yilmaz, 2008) showed that elementary students' environmental behaviors were independent of their knowledge of environmental issues. Affective variables seemed to have greater influence on their behaviors, emotional bonding, for example, and sensitivity toward nature, traits that may have influenced their environmental literacy.

Moseley (2000) divided the components of environmental literacy into three main levels which includes nominal, functional and operational literacy. Nominal cluster only looks at basic knowledge of the environment without much of the affective component of awareness and concern. Functional level is where the environmental knowledge is used for particular actions on the environmental issues and also communicated to third persons.

The main challenge in instilling environmental literacy involves the third level which is operational literacy (Price, 2003). Operational literacy involves where issues of the environment are constantly perceived and gathered which lead to position taking and actions that works towards building and sustaining environmental knowledge and skills (Stables and Bishop, 2001; Roth, 2002).

More recent literatures that have divided environment literacy in four important domains that assume nominal, functional and operational level of environmental literacy. These domains include knowledge, cognitive and affective dispositions (attitudes), competencies (skills) and environmentally responsible behaviour. (Hollweg et cetera, 2011; Ireland, 2013; McBeth et cetera, 2008; Moody and Hartel, 2007; Negev et cetera, 2008).

2.2.3. Perceived Benefits

Previous studies encounter that customer who uses herbal product as alternative in order to maintain good health and also that customers trust the benefit of using herbal product (Amin et cetera ., 2011; Vos & Brennan, 2010). Perceived benefit/value refers to the customer's perceived preference for an evaluation of those products attributes, attribute performances, and consequences arising from use that facilitate (or block) achieving the customer's goals and

purposes in use situations (Woodruff, 2007). In the context of cosmetics purchases, health conscious consumers may consider whether a product is safe for the body and skin. Therefore, a healthy lifestyle may be perceived as a benefit emanating from the use of herbal cosmetic products (Kim & Chung, 2011). According (Moe, 2007) to the relevant literature on natural cosmetics consumption, it appears that health consciousness influences attitudes toward buying natural cosmetics. An increasing number of studies highlights concerns for one's health as the predominant motive for explaining attitude, intention and purchase of natural cosmetics (Magnusson et cetera ., 2001; Padel & Foster, 2005; Chen, 2009; Banytė et cetera ., Chryssohoidis & Krystallis, (2010). Consumers have become more health conscious and healthiness has become an important criterion for natural cosmetics purchases (Magnusson et cetera, 2001). According to a recent study of Tsakiridou et cetera. (2008), aiming to identify consumers' attitudes and behavior toward natural cosmetic products in Greece, health consciousness is a strong motivating factor in natural cosmetics' perceptions, attitudes and consumption.

Perceived benefits and purchase decision

The rational choice theory postulates that consumers or firms are rational actors who evaluate the costs and benefits of a process before making decisions and taking action (Liu et cetera, 2012). Similarly, previous studies have shown that perceived benefits not only influence attitudes, but also determine behavioral intentions (Ajzen, 1991; Shah Alam & Mohamed Sayuti, 2011). Furthermore, empirical research suggested the positive effect of perceived benefits on attitudes and intention toward online self-disclosure (Cheung, Lee, & Chan, 2015). Attitude toward halal meat predicts the Muslims consumption behaviour in Belgium (Mukhtar & Mohsin, 2012).

Conceptualisation of perceived benefits

A review of previous research targeted at loyalty programs indicate that the perceived benefits consumers expect from joining loyalty programs consist of utilitarian benefits (monetary savings and convenience), hedonic benefits (exploration and entertainment), and symbolic benefits (recognition and social benefits) (Mimouni-Chaabane and Volle, 2010).

Utilitarian benefits

Utilitarian benefits, which are primarily instrumental, functional, and cognitive, provide consumer value by offering a means to some end. For example, people shop to accomplish the task of acquiring some object, among other reasons (Babin et cetera., 1994). Utilitarian benefits relate to basic motivations such as safety needs and usually correspond to a product's tangible attributes. Just as they might assess shopping or service encounters, customers judge the outcome of belonging to marketing programs according to the utilitarian value, which depends on how well the program accomplishes the intended task.

In loyalty programs, utilitarian value derives in part from financial advantages (Bolton et cetera., 2004; Johnson, 1999). Peterson (1995) suggests that saving money provides the major motivation for joining frequent flyer programs and book clubs. Monetary savings develop from cash-back offers and coupons that participants accumulate while regularly buying the same brand or shopping with the same retailer.

Convenience benefits lead to utilitarian value as well and encourage people to enroll in loyalty programs. Sheth and Parvatiyar (1995) claim that to minimise the difficulty of choosing among alternatives, consumers develop enduring relationships with firms. In turn, customers may appreciate loyalty programs because the programs help consumers automate their decision-making process and avoid complex evaluations of available alternatives (Berry, 1995; Bolton et cetera, 2000).

Hedonic benefits

Hedonic value derives from non-instrumental, experiential, emotional, and personally gratifying benefits (Hirshman and Holbrook, 1982) and may be associated with shopping, the use of media, and increased behavioral loyalty (Arnold and Reynolds, 2003; Babin and Attaway 2000; Babin et cetera, 1994; Jones et cetera, 2006; McQuail et cetera, 1972). Hedonic benefits may be relevant for loyalty programs through two dimensions: exploration and entertainment.

Trying new or innovative products, satisfying curiosity about events and promotional offers, or seeking information to keep up with new trends represent examples of exploratory behaviors (Arnold and Reynolds, 2003; Baumgartner and Steenkamp, 1996) that consumer magazines or direct mail, for example, can fulfill. Programs also enable customers to enjoy unique experiences that they would not have undertaken otherwise, because many organisations offer

pleasure providing incentives, such as getting to drive a Jaguar for a day or attending an opera. In addition, because activities can be intrinsically appealing (Hirshman and Holbrook, 1982; Tauber, 1972), a loyalty program can provide joy and be an end in itself. Johnson (1999) argues that loyalty programs attract consumers because of the pleasure associated with collecting and redeeming points. In this scenario, customers act like players and experience a feeling of entertainment.

Symbolic benefits

Symbolic benefits, the extrinsic advantages that products or services provide in relation to needs for personal expression, self-esteem, and social approval (Keller, 1993), result from intangible and often non–product-related attributes. Because they build customer knowledge, loyalty programs offer an opportunity to differentiate and discriminate among customers who likely perceive customised offers as a sign of respect or distinctiveness (Gordon et cetera, 1998). Consumers consequently may experience recognition benefits (Csikszentmmihalyi, 2000); they may feel like the firm and frontline personnel treat them better than they would treat non-members of the program (Beatty et cetera, 1996; Gwinner et cetera, 1998).

Loyalty programs further focus on not merely the product but also the experience of ownership and consumption (McAlexander et cetera, 2002). Consequently, the programs enhance perceptions of social benefits (Libermann, 1999), such that members consider themselves part of an exclusive group of privileged customers, identify with that group, and share values associated with the brand (Muniz and O'Guinn, 2001).

A study done Kuo and Feng, (2013) on perceived benefits of brand community identified four categories of perceived benefits. These are functional benefits (acquisition of knowl-edge and information for learning and higher decision-making efficiency), psychological benefits (sense of belonging and satis-faction of affective expectations), social benefits (having better communication and interaction with other members, and getting assistance and support from other members), and hedonic benefits (more leisure time, relaxation, and enjoyment).

A study by Nambisan & Baron, (2009) on perceived benefits derived by brand community members identified four categories of member benefits, that is, functional benefits (acquisition of knowledge and information for learning and higher decision-making efficiency), psychological benefits (sense of belonging and satisfaction of affective expectations), social benefits (having better communication and interaction with other members, and getting

assistance and support from other members), and hedonic benefits (more leisure time, relaxation, and enjoyment). Dholakia, Bagozzi, and Pearo (2004) proposed five values that members can derive from participation in online communities, including purposive benefits, self-discovery, maintaining interpersonal inter connectivity, social enhancement, and entertainment benefits. Furthermore, Yen, Hsu, and Huang (2011) proposed three categories of perceived benefits of participation in online communities, including self-enhancement, rewards, and problem-solving support. Sicilia and Palazon (2008) applied the uses and gratification approach to investigate consumer participation in a Coca Colathemed online community in Spain. Their findings suggested that functional, social, and entertainment values provided by the online community can induce user participation in the community. Nambisan and Baron (2009) also applied the uses and gratification framework to explore the perceived benefits of virtual customer environments. They classified benefits that individuals can derive from virtual customer environments into four categories, including cognitive or learning benefits (i.e., members can get information about the brand and its products and understand technical developments or research on related products), social integrative benefits (i.e., members have a larger interpersonal/social network, closer relationships with each other, and a sense of belonging), personal integrative benefits (i.e., members can share information or personal experiences related to specific products to increase their status in the community), and hedonic benefits (i.e., members feel comfortable in the community and are willing to spend their leisure time there).

Perceived benefits and green purchase

Based on egotism and utilitarianism theories, the benefits and avoidance of costs are important criteria when consumers evaluate a firm's ethical practice (Lin, Lobo, Leckie, 2017, Brunk, 2010). Consumers of green brands seek benefits from their purchase (Vitell et cetera, 2001). Papista and Krystallis (2013) focus on two types of benefits (utilitarian and psychological) when evaluating their influence on customer perceived value.

Utilitarian environmental benefits are regarded as an essential attribute of green brands, which outweighs the attributes of conventional alternatives. Consumers look for functional benefits when they consume products with environmentally sound attributes (Bech-Larsen, 1996; Sriram and Forman, 1993). These functional benefits reflect their perceived utility acquired from a brand's capacity to fulfil a functional, utilitarian or physical environmental performance (Sheth et cetera, 1991). Research suggests that there is a positive relationship between product

performance and customer perceived value (e.g., Baker et cetera, 2002; Dodds et cetera, 1991; Grewal et cetera, 1998; Sirohi et cetera, 1998; van der Lans, van Everdingen & Melnyk (2016))

3.2.1. Attitude

Social psychology underlines that attitude is a key determinant of intention in the decision-making process. Furthermore, the social psychology literature on behavioural research has established attitudes as important predictors of behaviour, behavioural intention and explanatory factors of variants in individual behaviour (Kotchen and Reiling, 2000). Attitude is not only "one of the most studied theoretical concepts of behavioral research" (Solomom, Bamossy, Askegaard & Hoggg, 2010:p.p 57-58) but also "the most distinctive and indispensable concept in contemporary social psychology" (All port, 2005). Moreover, according to Ajzen (1989) and Evans, Brauchle, Haq, Stecker, Wong and Shapiro, (2007) how a person perceives and feel about a specific object decides how he is likely to respond to this object. Thus, one is more likely to adopt a certain behavior when he/she has a positive attitude toward the behavior.

The theory of reasoned action (TRA), proposed by Fishbein and Ajzen (1980) shows a linkage between attitude and behavior. This theory has widely been used by research in the field of social behavior and intention, to predict the motivational impacts on behavior. TRA has been referenced to this study also due to its relevance to the corresponding content. Numerous studies have asserted the positive relationship between consumers' attitudes and intentions for green purchasing in multiple contexts (Roberts & Bacon, 2007; Beckford, Jacobs, Williams & Nahdee., 2010; Chan, 2001; Magnusson et cetera, 2001; Mostafa, 2007; Cheah & Phau, 2011). A recent study of Kim and Chung (2011) on the personal care context suggests that a positive attitude toward buying organic personal care products is significantly correlated with purchase intention.

Definition of attitude

According to Ajzen 1991, an attitude was defined as ''the degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question". Attitude toward a behavior can be defined as "combination of affective, behavioral and cognitive reactions toward an object," (Ibrahim, 2002: p. 532). Ivancevich et cetera. (2010) defined attitude as a mental state of readiness learned and organised through experience, exerting a specific influence on a person's response to the people, objects, and situations to which it is related.

As one of the three conceptually independent determinants of intention in TPB, attitude toward a behavior refers to the degree of one's favorable or unfavorable evaluation of the behaviour in question (Ajzen, 1991; Ha and Janda, 2012; Klockner, 2013). Wang et cetera. (2011) refers attitudes as "the degree of people awareness of performing electricity-saving behavior, which largely depends on the evaluation of preference to electricity savings and the information the individual holds towards such a behavior (p. 3551)." Greaves et cetera. (2013), in an echoing note, reiterated that attitude toward the behaviour represents one's overall evaluation of the behavior based upon a belief regarding whether the behavior will result in desirable outcomes.

In a psychological sense attitude is defined as a "tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor" (Eagly and Chaiken, 1993, p. 1). In a consumer behavior approach, Solomon et cetera. (2010, p. 643) defined the attitude as "a lasting, general evaluation of people (including oneself) objects or issues." The AMA defines it also as "a cognitive process involving positive or negative valences, feelings, or emotions" (marketngpower.com).

Customers' attitudes toward restaurants in psychology-related research, an attitude is viewed as "a stable disposition to respond in a consistently favorable or unfavourable manner to a psychological object" (Ajzen and Fishbein, 2000). Ajzen and Fishbein (2000) argued that an attitude can be referred to as the "evaluation" of an object, concept, or behavior along a dimension of favor or disfavor, good or bad, like or dislike. It is also considered a strong criterion constructfor understanding one's evaluation of an object and behavioral intentions (Ajzen and Fishbein, 2000; Fishbein and Ajzen, 1975; Kwun, 2011; Jeonga, Janga, Daya, Ha, 2014).

In expectancy—value theory, people's attitudes toward an object are determined by accessible beliefs about the object, where a belief is defined as the subjective probability that the object has a certain attribute (Fishbein and Ajzen, 1975). In addition, attitudes are formed as subjective values of certain attributes linked to an object (Ajzen and Fishbein, 2000).

Using Ajzen and Fishbein's (2000) findings, customers' overall attitudes toward a restaurant can be referred to as customers' evaluations of a particular restaurant in general, expressed as a dimension of favor or disfavor (good or bad). Such attitudes are determined by customers' subjective values or beliefs regarding a restaurant. Subjective values and beliefs regarding a restaurant are structured by a restaurant's core attributes, such as food, service, and atmosphere, and supplementary attributes, such as environmental practices (Ajzen and Fishbein, 2000;

Fishbein and Ajzen, 1975; Manaktola and Jauhari, 2007). Although environmental practices are considered to be secondary attributes in the restaurant industry, considering the current social climate in which customers have ecological concerns and demand products and services designed to be less harmful to the environment, green attributes could have a significant effect in structuring customers' values and beliefs (overall attitude) toward a restaurant.

In a study by Chinomona (2013), student attitude towards mobile gaming refers to his/her confidence or assertiveness resulting from possession of resource (e.g. mobile phone) and requisite skills to play mobile games. Previous studies have indicated that availability of resources and skills influence a player's attitude towards computer games (e.g. Klimmt & Hartmann, 2006; Gist & Mitchell, 1992; Kilduff & Krackhardt 1994).

Chun-Hsin Zhang (1986) defined attitude as an individual's persistent and consistent tendency toward people, matters or surrounding conditions, which can be predicted by individuals' explicit behavior. Ajzen and Fishbein (1980) stated that attitude is a certain observation of a subject's like-or-dislike evaluation and state, views based on the cognitive appraisal of matters or a lasting and stable evaluation and preferences. Ajzen and Fishbein (1980) further classified attitude with two concepts: "attitude toward the behavior" and "attitude toward the object". The former refers to an individual's attitude toward behavior; for example, helping others is the right thing. The latter refers to an individual's attitude toward people, matters or issues, such as the opinion that goods for sale online are cheaper. Attitude may directly affect purchase intention, and also affect purchase behavior through other people's viewpoints and the external environment. If a consumer's attitude toward advertising and a product is positive, coupled with the customer's demand for the product, the purchase intention may then come into being (Wu & Lee. 2012).

Attitude and green purchase

Environmental attitude is defined as a learned predisposition to respond consistently favorable or unfavorable manner with respect to the environment (Nik Ramli Nik Abdul Rashid, 2009). Overall, there has been consistent empirical evidence supporting a positive association between environmental attitude and behavior. These studies have also indicated that even if people have little knowledge about the environment they would still exhibit strong emotional attachment to environmental wellbeing (Ling-yee, 1997). Attitude, as opposed to knowledge and behavior, is the most significant predictor of consumers' willingness to pay more for ecologically favorable products (Laroche et. al., 2001). Some studies have also indicated that even though

people have little knowledge about the environment they still exhibit strong emotional attachment to environmental wellbeing (Dispoto, 1997; Li Ling-yee, 1997). This study follows earlier studies in conceptualising attitude toward environmental protection as a unidimensional construct (Noe and Snow, 1990; Minton and Rose, 1997; Sharifah et cetera, 2005).

Many studies have specifically focused on the relationship between environmental attitudes and environmentally related behaviours (Mostafa, 2006). These studies include investigations of environmental attitudes and political participation (Mohai, 1990, 1992), choice of recreational activities (Luzar et cetera, 1995) and willingness to modify behaviour (Walsh and McGuire, 1992). Consumer attitudes have also been used in past studies to predict energy conservation and ecologically conscious purchase and use of products. Kassarjian (1971) studied consumers' reaction towards a gasoline that reduced air pollution and found that attitude towards air pollution was the most important variable in determining consumers' behaviour towards the product.

In a study conducted in Germany, Balderjahn (1988) found that a positive attitude towards ecologically conscious living resulted in ecologically responsible buying and using of products, including the use of automobiles. It also prompted consumers to publicly show environmental concern by signing ecologically relevant petitions and supporting or joining an anti-pollution organisation.

The usual findings reveal a strong association between environmental attitude and ecological behaviour (e.g. Lynne and Rola, 1988). However, a number of studies have found either a moderate relationship between environmental attitude and ecological behaviour (e.g. Axelrod and Lehman, 1993; Smith et cetera, 1994) or a weak relationship (e.g. Berger and Corbin, 1992).

Many studies have shown gender differences in environmental attitudes. Brown and Harris (1992) found statistically significant differences between men and women in environmental attitudes and their opinion about forest policy preferences. Tikka et cetera. (2000) found significant differences in environmental attitude index scores between the two genders with men having more negative attitudes towards the environment compared with women.

Extant research also indicates that consumer attitudes are among the most relevant predictors of green purchasing decisions and various ecological behavioural intentions (e.g., Ha and

Janda, 2012; Greaves et cetera, 2013; López-Mosquera et cetera, 2014; Olsen et cetera, 2010; Wang et cetera, 2015).

Greaves et cetera. (2013), who conducted a study on a random sample of 2000 employees in a target organisation in the UK using the theory of planned behavior, found that attitudes together with the other two TPB components account for a substantial amount of variance in employee intentions to engage in environmental behaviors, including saving energy by switching off computers. Extant research also indicates that consumer attitudes are among the most relevant predictors of green purchasing decisions and various ecological behavioural intentions (e.g., Ha and Janda, 2012; Greaves et cetera, 2013; López-Mosquera et cetera, 2014; Olsen et cetera, 2010; Wang et cetera, 2015).

3.2.2. Purchase Intention

"Purchase intention" is a significant concept in marketing (Morrison, 2009). Marketers have to concern about the prediction of customers' purchase behavior in order to do market forecasts, strategic decisions and other for both existing products and new products (Tirtiroglu & Elbeck, 2008). The simplest definition of purchase intention: "what they think they will buy" (Park, 2002). For Daneshvary and Schower (2000), purchase intention has a relationship with demographic factors such as genders, age, education and profession. Fishbein & Ajzen (1975) defined that purchase intention is well represented as a subjective propensity toward a product and can be a significant index to predict consumer behavior. Hellier Geursen, Carr and Rickard, 2003) proved that purchase intention is the likelihood that a consumer will buy a particular product resulting from the interaction of his or her need for it, also from attitude towards, perceptions and from the company which produces it. According to Chang & Liu, 2009, purchase intention was a plan to purchase a particular brand with a considerable attention. Purchase intention is considered to use for the purpose of predicting the purchase behavior in academic research (Schlosser, 2003 as cited in Morwitz, Steckel & Gupta, 2006). In the academic research, purchase intention may be measured in terms of "desire", "plan" and "will try" with the probability estimates like "unlikely" and "likely", which have been widely applied in social science (Armitage & Conner, 2001).

Purchase intention is defined by Ajzen (1991) as the "indications, of how hard people are willing to try, or how much an effort they are planning to exert, in order to perform the

behaviour". Additionally, much research has explored the notion that if consumers have a greater intention to purchase, then they are more likely to be willing to pay premium prices for the same product (De Pelsmacker et cetera, 2005; Thomas, 2007). This concept of purchase intention leading to actual behaviour has been further accentuated by previous researchers who have suggested that purchase intentions are the best predictors of consumers actually making the purchase (Fishbein and Ajzen, 1975; Hart, Teah, & Butcher, 2016). As a result, this has led many firms to use purchase intention as a means of predicting future sales (Kim and Ko, 2010).

The consumer intention to purchase shows the consumer's plan to buy the product or service (Weisberg, Te'eni & Arman, 2011; Chinomona, 2013). According to Gao et cetera. (2010), the intention by consumers to purchase reflects their interest in the product and hence is willing to buy the product or service. For Noor, Screenivasan and Ismail (2013), the purchase intention of consumers indicates what consumers think they would buy in future in order to satisfy their needs. The authors suggest that marketers need to find effective ways to appeal to potential consumers in order to develop positive perception about the products or services. This study adopts Gao et cetera. (2010) definition stipulating that the consumer intention to purchase shows how consumers are receptive and want to buy, use and repurchase herbal cosmetic products. To measure the consumer intention to purchase construct, Kim, Gupta and Koh (2011) used the items such as the probability of a consumer considering buying the product, the consumer's willingness to and the likelihood of consumer's purchase behaviour. Similarly, Kin and Kang (2011) measured the consumer intention to purchase by using the following items: the chances that consumers would definitely purchase, the likelihood that consumers would definitely consider buying, the probability that consumers would definitely accept to buy and the possibility that consumers would definitely plan to buy. This shows that the consumers' purchase intention reflects their interest and hence they plan to buy or are willing to accept to buy the products or services.

Consumer decision making and purchase intention

Explaining consumers' buying decision in all its complexity is a difficult task. Not surprisingly, researchers have studied this aspect of consumer behaviour from different angles, and the literature has been supported by much empirical evidence over time. Consumers' shopping attitude and intention to purchase, rather than their purchasing behaviour, are considered in this study. Purchase intention can be classified as one of the components of consumers' cognitive behaviour regarding how they intend to buy a specific product (Keller, 2001), and it measures

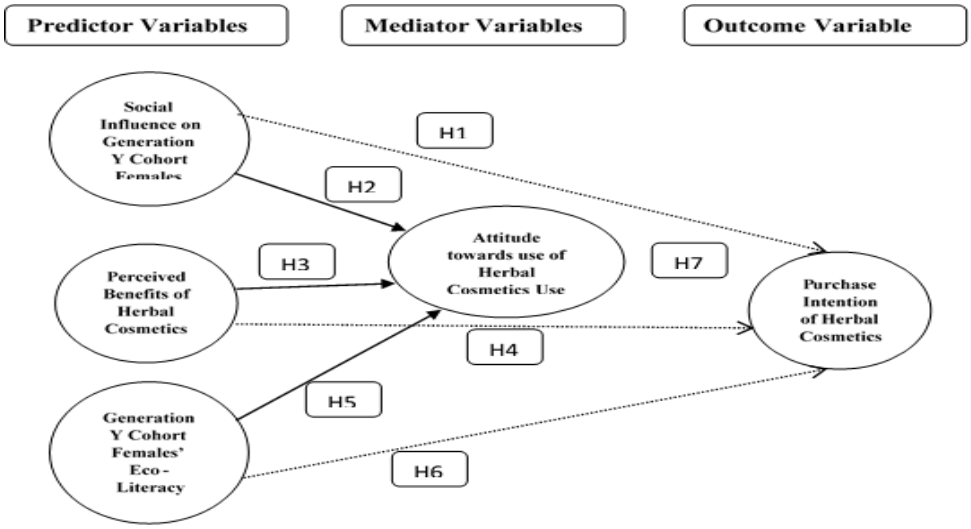
the probability that consumers will plan or be willing to buy a certain product (Ghosh, 1990). Shopping attitude, in turn, is another key in determining the future behaviour of consumers in making, or not making, a purchase decision (Hidayat and Diwasasri, 2013; Warayuanti and Suyanto, 2015). A multi-attribute attitude model suggests that consumers' attitude toward a specific product is determined by product attributes that influence consumers' purchasing decisions (Madahi and Sukati, 2012). In other words, consumers' attitude, which includes trust in the product, familiarity and perceived economic situation (Chaniotakis et cetera., 2010), is an important factor in indirectly influencing consumers' behaviour through intentions as a purposeful response (Hung et cetera ., 2016). Shopping attitude is a result of cognitive, emotional and affective reactions in the minds of consumers.

Positive attitudes have been seen to arise due to good experiences with GD use (Dunne and Dunne, 2015; Skaltsas and Vasileiou, 2015), positive perceived quality (Himmel et cetera, 2005; Quintal and Mendes, 2012) or health provider recommendation (Gill et cetera, 2010; Shrank et cetera, 2009). Moreover, for pharmaceutical products that have greater consumer involvement, consumers would spend more energy on consumption-related activities and hence make decisions that are more rational. These behaviours may reflect consumer price consciousness (Kaytaz and Gul, 2014). In times of economic crisis, GDs can be an excellent alternative for price conscious consumers. Thus, we project that, in a recessionary period, consumers have a more favourable shopping attitude toward GDs and consequently demonstrate a strong purchase intention. Therefore, we propose the following hypothesis:

3.3. CONCEPTUAL MODEL AND HYPOTHESIS DEVELOPMENT

Figure 1 depicts this conceptualised research model. Drawing from the literature reviewed, the research model in Figure 1 has been developed. The conceptual model is a representation of the constructs and their relationships with one another. In this conceptual model, social influence on generation Y cohort females, Generation Y cohort females' eco-literacy and perceived benefits of herbal cosmetics as predictor variables while attitude towards use of herbal cosmetics as mediating variable. Purchase intention of herbal cosmetics is the sole outcome variable. The hypothesized relationships between the research constructs will be highlighted.

Figure 1.1: Proposed research model



3.4. Hypothesis Development

3.4.1. Social Influence and Purchase Intention of Herbal Cosmetics

The influence of interpersonal relations on consumer behaviour – particulary purchase intention has attracted attention of researchers in the past decades (Sheth et cetera., 1991). Of late some researchers have focused on factors influencing purchase intention herbal cosmetics. Among them are Gupchup et cetera. (2006), Alkhateeb et cetera. (2006), and Mohamed Omar et cetera. (2012) who researched on the social influence on herbal medicine purchase and use; and herbal cosmetics purchase intention. It has been argued in the consumer behaviour literature that there is growing evidence that family, friends, colleagues and peer groups influence behavioural or purchase intention (Pavlou and Chai, 2002; Mohamed Omar et cetera., 2012; Mohd Zahran et cetera., 2012; Al-Shafi & Weerakkody, 2010; Esmaili et cetera., 2011; Maldonado et cetera., 2011; Rimal et cetera., 2006; Sok Foon & Chan Yin Fah, 2011). It is also expected in the current studies that interpersonal influence from relatives and friends will influence the purchase intention of herbal cosmetics by Genration Y female students at institutions of higher learning such as Wits University. Gathering from the abovementioned discussion, it can therefore be postulated that:

H1: Social influence has a positive impact on purchase intention of herbal cosmetics among Generation Y cohort female students at Wits University.

3.4.2. Social Influence and Attitude towards use of Herbal Cosmetics

In the TPB model, a second determinant of purchase intention is social influence also referred to as subjective norms. Social influence is usually related to the trust that a person has on a person's feelings and behaviours (Chow, Chen, Yeow, & Wong, 2012). Social influence has been examined by researchers (Conner, Kirk, Cade, & Barrett, 2003; Pawlak, Brown, Kay, Connell, Yadrick & Blackwell, 2008) and more specifically in the marketing and consumer behaviour (Budiman, 2012; Haque, Rahman & Haque, 2011). The results from the above studies affirm the ability of social influence in explaining attitude towards use of a products and hence consequently leading behavioural intention. Furthermore, in a study done by Gupchup, Abhyankar, Worley, Raisch, Marfatia, & Namdar (2006), focus on the use of herbal medicine - they found that social influence does affect the attitude towards a product and the usage of the product. Based on the above positions on the relationship between social influence and attitude towards product use, the following hypothesis is posited:

H2: Social influence has a positive impact on attitude towards use of herbal cosmetics among Generation Y cohort female students at Wits University.

3.4.3. Perceived Benefits and Attitude towards use of Herbal Cosmetics

Previous studies encounter that customer who uses herbal product as alternative in order to maintain good health and also trust the benefit of the product (Amin et cetera, 2011; Vos & Brennan, 2010). Furthermore, past studies revealed that customers who are confident with the product supremacy develop a positive mindset or attitude and are more likely to use it (O'Connor & White, 2009; Goldstein, Lee, Ballard-Barbash, & Brown, 2008). Meanwhile other studies found that perceived personal value also noted by other studies as perceived benefits – has been found to have a positive impact on attitude and purchase intention of products (O'Connor & White, 2009; Goldstein, Lee, Ballard-Barbash, & Brown, 2008). The same sentiments are echoed in the Theory of Consumption Value which indicates that the expected value influences attitude and purchase intention. Based on the Theory of Consumption Value (TCV) and the foregoing discussion, this study therefore, hypothesises that:

H3: Perceived benefits of herbal cosmetics has a positive impact on attitude towards use of herbal cosmetics among Generation Y cohort female students at Wits University.

3.4.4. Perceived Benefits and Purchase Intention of Herbal Cosmetics

The theory of Consumption Value (TCV), is a theory that explains how consumers purchase products or services which they regard to be of vital use to them. (Sheth et cetera. (1991).This theory also suggest that the level of value attached to a product or service by consumer is indicative of their possible purchase intention (Ramkissoon et cetera, 2009). A study by Yang and Peterson, (2004) notes that perceived benefits as an intellectual concept influence the purchase intention. This finding is buttressed by Kardes et cetera, (2004) who confirms that perceived benefits attributes to the perception of a product's value, therefore it might have a positive or negative effect in the buying behavior. Based on the above discussion and arguments on perceived benefits and purchase intention relationship, the following hypothesis is posited:

H4: Perceive benefits have a positive impact on purchase intention of herbal cosmetics among Generation Y cohort female students at Wits University.

3.4.5. Eco-Literacy and Attitude towards use of Herbal Cosmetics

Eco-literacy or environmental consciousness represents one's knowledge or degree of emotional attachment to environmental issues (Benton, 2004). Schultz (2000) suggested that environmental concerns involve three correlated factors: concern for the self (egoistic), concern for other people (altruistic) and for the biosphere (biospheric). Eco-literacy guides people to make buying decisions that are eco-friendlier (Peattie, 2001). Eco-literate people are willing to change their purchasing behaviors in order to improve the environment (Chase, 2001). According to Prothero and McDonagh (2012), the cosmetics and toiletries industry has developed organic products produced without the use of pesticides, synthetic chemicals, or animal testing, in order to face consumers' increasing concerns regarding environmental destruction from harmful substances and animal testing of ingredients and products. Eco-literacy exerts a strong influence on consumers' attitudes and behavior toward green products (Roberts & Bacon, 2007; Straughan & Roberts, 2009; Chan, 2001; Paladino, 2005, Mostafa, 2007; Essoussi & Zahaf, 2008; Ishaswini & Datta, 2011). In a number of studies environmental

consciousness is a strong motive for consumers and seems to affect attitude towards natural cosmetic purchases (Wandel & Bugge, 2007; Schifferstein & Oude-Ophuis, 2008; Tsakiridou, et cetera, 2008; Chen, 2009). In the context of personal care products, Kim and Chung (2011) found that eco-literacy is an important factor in predicting consumers' attitudes toward organic products. Translating these results into the context of herbal cosmetics, these findings would suggest that eco-literacy is a determinant of attitudes toward herbal cosmetics (Tsakiridou, et cetera, 2008). Thus, deducing from the foregoing discussion, it can therefore be postulated that:

H5: Eco-literacy has a positive influence on attitude towards use of herbal cosmetics among Generation Y cohort female students at Wits University.

3.4.6. Eco-Literacy and Purchase Intention of Herbal Cosmetics

Environmental literacy is defined as the individual's general knowledge/level towards the environmental issues. Eco-literacy is acknowledged as one of the useful predictor of environmentally conscious behavior (Kim & Choi, 2005; Lee, 2008; Kaufmann et cetera, 2012 and Wahid et cetera, 2011). The consumers' literacy towards green purchase can influence their purchase intention of green products. In this way, consumers who are environmental concerned are more likely to buy products that are environmental friendly as a result of their environmental assertions than those who are less concerned about the environmental issues. Thus, it is hypothesised that:

H6: Eco-literacy has a positive influence on purchase intention of herbal cosmetics among Generation Y cohort female students at Wits University.

3.4.7. Attitude towards use of Herbal Cosmetics and Purchase Intention

As defined previously, attitude toward behaviour refers to "the degree to which a person has a favourable or unfavourable evaluation of the behaviour in question" (Ajzen, 1991). Basically, the key role of attitude in making certain positive or negative assessment of behaviour and actual purchase has been noted in previous research (Ajzen & Fishbein, 1980). A study done by Ramayah, Lee, and Mohamad, (2010) and Haque, Rahman and Haque (2011), buttressed the notion held in the Theory of Planned Behaviour (TPB) that attitude has a positive effect on behavioral intention. In line with the above positions, a myriad of studies have been done with findings suggesting that attitude influences behaviour directly (Hashjin, VakilaRoaia, & Hemati, 2014). In addition to that, a study on herbal products done by Marinac, Buchinger,

Godfrey, Wooten, Sun, and Willsie (2007), found that attitude influenced the purchase intention and use of herbal products. In light of the above, the following hypothesis is therefore posited:

H7: Attitude towards use of herbal cosmetics has a positive impact on purchase intention of herbal cosmetics among Generation Y cohort female students at Wits University.

CHAPTER IV: RESEARCH DESIGN AND METHODOLOGY.

Introduction

This Chapter provides the research philosophy and design. A good research design is premised on an identified appropriate research philosophy. The underlying philosophical assumptions about what constitutes a valid research are assumed to determine an appropriate development of knowledge in a given study. Therefore, for a researcher to conduct any research, it is essential to understand the philosophical assumptions informing the study. This chapter discusses the philosophical suppositions and the design strategies underpinning this research study. Four main sections are covered in this chapter. These are ontology, epistemology, methodology, and research methods/design. The ontology section focused on both objective and subjective ontologies while the epistemology will focus on the positivist, interpretivist and critical realist philosophical paradigms. Methodology section focused on three key types of research – i.e. quantitative (use of deductive approach), qualitative (use of inductive approach) and mixed method approach (use of abstractive approach). Finally, the last part of this chapter focused on the research design of this current study. However, the current study adopted an objective ontological perspective, a positivist approach, a quatitative – diductive approach design that utilises self administered questionnaire as tool to collect data.

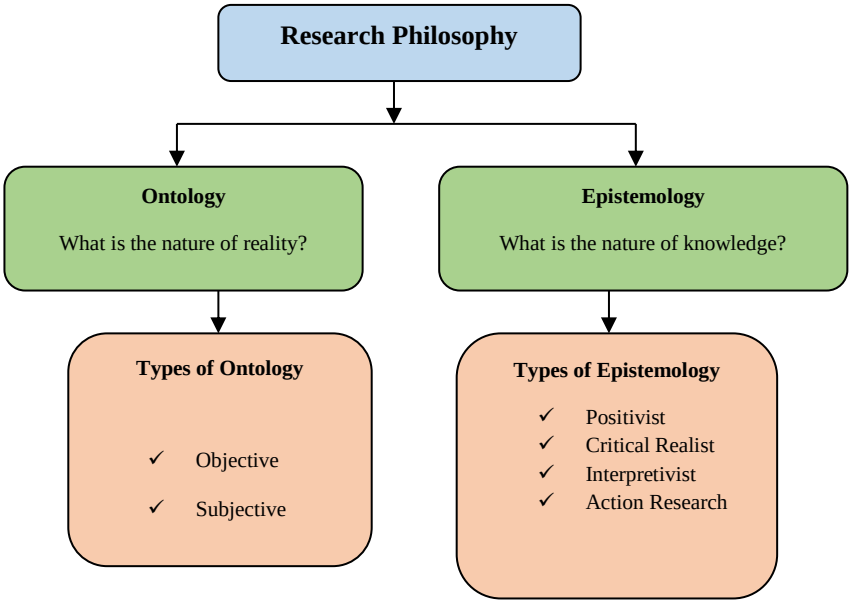
4.0. Research Paradigm

According to him, the term paradigm refers to a research culture with a set of beliefs, values, and assumptions that a community of researchers has in common regarding the nature and conduct of that a community of researchers has in common regarding the nature and conduct of research (Kuhn, 1977). A paradigm hence implies a pattern, structure and framework or system of scientific and academic ideas, values and assumptions (Olsen, Lodwick & Dunlop, 1992:16). Easterby-Smith et cetera. (2004) highlighted some of the benefits of knowing different philosophical paradigms:

- The research design process becomes clearer
- The researcher becomes more capable of predicting which research design may work and which one may not, given the study objectives
- It helps the researcher to identify and generate research designs that may be unknown
- Also, it aids the investigator in developing a research identity.

According to Meredith, Raturi, Amoako-Gyampah and Kaplan (1989), two philosophical dimensions – the existential or rational dimension defines whether there is only one reality that is distinct from the researcher or this reality socially constructed and subjective. This is what constitutes the researcher's ontology – the nature of reality. Also important to the researcher are the assumptions regarding the appropriate way of investigating this nature reality in the world – epistemology (nature of knowledge). Figure 4.1, provided below is a graphical representation of what constitute ontology and epistemology. Both ontology and epistemology are linked are linked to the research methods the researchers using in the field work. Figure 4.2; indicate the link between a selected ontology to the appropriate research methods.

Figure 4.1: Graphical Demonstration of the Research Philosophy

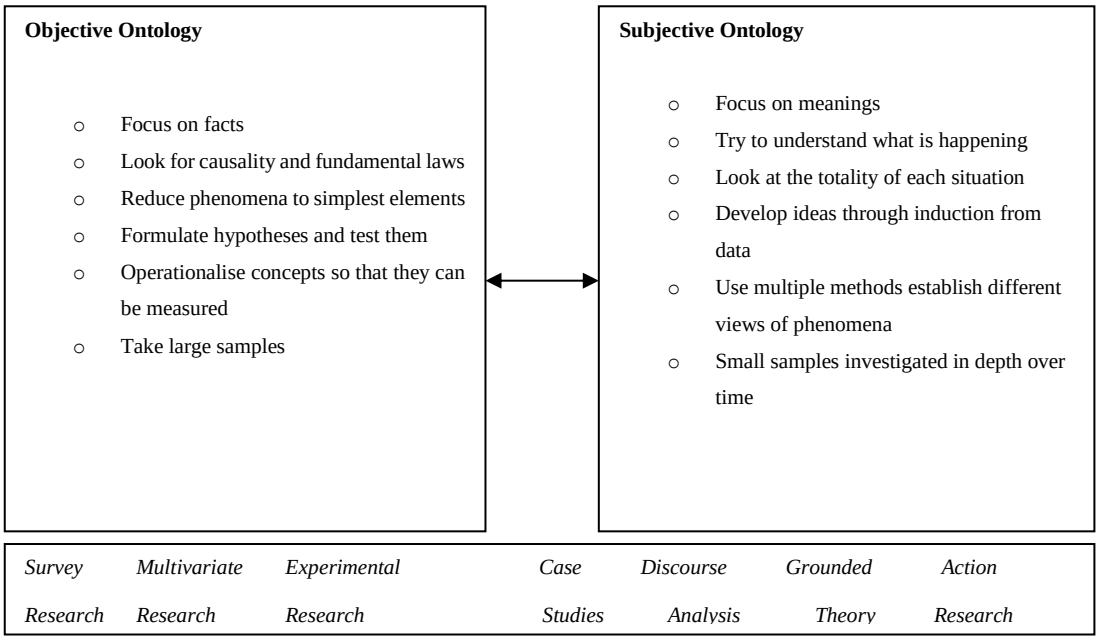


Source: This Study

4.1.1. Ontology

A researcher's ontology (i.e. either claims or assumptions) depicts his or her view about the nature of truth or reality, and precisely – an objective reality that truly exists, or only a subjective reality, shaped in the researcher' mind (Easterby-Smith et cetera ., 2004; Hatch & Cunliffe, 2006; Flowers, 2009). Any researcher is expected to have a number of deeply ingrained ontological assumptions which invariably influence his or her views on what is true (Flowers, 2009). Depending on whether these underlying assumptions are not well-defined and reflected upon, the researcher may possibly draw biased conclusions on specific facets of the study. For instance, a researcher's pre-conceived notions may defeat the whole purpose of conducting a research (Flowers, 2009). According to Beech (2005), Easterby-Smith et cetera. (2004) and Scholarios (2005), the two main ontologies can be represented in Figure 4.2. Figure 4.2 below indicates the differences between the two ontologies, as proposed by Beech (2005). Drawing from Figure 4.2., the current study adopts a case study approach. This implies that the researcher adopted subjective ontological perspective. Since the current study is exploratory in nature, a case study approach was found befitting the purpose this study. Interviews were used to collect the data from four entrepreneurs and four case studies developed for analysis purposes from the collected data.

Figure 4.2: Research Methods Linked to Ontology

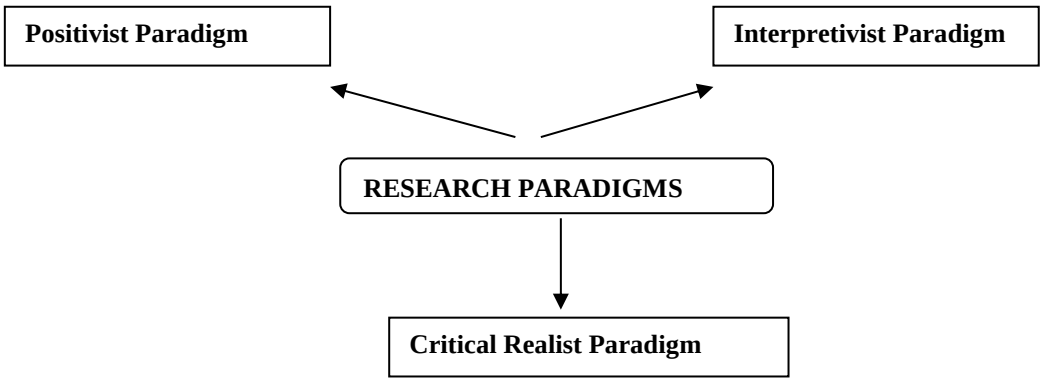


Source: Beech (2005)

4.1.2. *Epistemology*

According to Easterby-Smith et cetera, (2008), epistemology is about a general set of assumptions regarding the most appropriate way of investigating the nature reality in the world. Epistemology also represents 'what knowledge is and highlights the sources and limits of knowledge' (Eriksson & Kovalainen, 2008:57). Buttressing the same notion, Blaikie (1993:89) and Flowers (2009) assert that epistemology is 'the theory or science of the method or grounds of knowledge' growing this into a set of assumptions concerning the methods that are likely to improve knowledge about reality. As argued by Flowers (2009), the specific ontological assumptions that can be held by a researcher may perhaps affect the resulting epistemological conclusions. Basically three epistemological paradigms – positivist, interpretivist and critical realist paradigms have tended to be associated with the objective and subjective ontological perspectives in research. The table below summarises the major differences between positivist, critical realist and interpretivist paradigms with regards to the nature of truth and the general approach to conducting research. As indicated in Table 4.1, critical realist epistemology is the mid-view of the pure positivism and interpretivism epistemologies.

Figure 4.3: A Depiction of the Research Paradigms



Source: Ates (2008)

The following section endeavours to define the unique features of each paradigm. Paradigm in this context is a theoretical framework, through which this research was directed (Beech, 2005). The table below provides a summary of the differences between the key paradigms:

Table 4.1: Differences between the Research Paradigms

Elements	Positivism	Critical Realism	Interpretivism
Truth	Is determined through verification of predictions	Requires consensus between different viewpoints	Depends on who establishes it
Facts	Concrete	Concrete but cannot be accessed directly	All human creations
Aims	Discovery	Exposure	Invention
Starting Points	Formulation of explicit hypotheses which guide research	Suppositions/ Research Questions	Meanings/ Research questions
Research Position (Goal Investigation)	Prescriptive, causal, theory confirming, deductive, Ungrounded	Exploratory, descriptive, theory building, inductive, analytical	Descriptive
Direction of research inquiry	Measurement and analysis of causal relationships between variables that are generalisable across contexts	Development of idiographic knowledge based social experiences such as human ideas, beliefs, perceptions, values et cetera	Development of idiographic knowledge based social experiences such as human ideas, beliefs, perceptions, values et cetera

Designs	Experiment, survey	Triangulation, case study, convergent interviewing	Reflexivity, interviews, participant observation
Methodology	Outcome oriented, verification oriented	Process oriented, discovery oriented	Observation, process oriented
Techniques	Measurement	Survey	Conversation
Sample Size	Large	Small	Very small
Data collection	Structured	Semi-structured, Unstructured	Unstructured
Hardware and software	Questionnaires, statistical software programs	Tape recorders, interview guides, transcripts, qualitative software programs, visual methods	Tape recorders, interview guides, transcripts, qualitative software programs, visual methods
Type of data gathered	Replicable, discrete elements, statistical	Information-rich, contextual, non-statistical	Information-rich, contextual, non-statistical, somewhat subjective reality
Interview questions	Mainly closed with limited probing	Open with probing	Very open
Interaction of interviewer and phenomenon	Independent and value-free, a one way mirror	Mutually interactive but controlled by triangulating data, an open window	Passionate participant, transformative intellectual

Respondents' perspective	Emphasis on outsider's perspective and being distanced from data	Emphasis on the insider's Perspective	Emphasis on outsider's perspective and being distanced from data
Information per respondent	Varies (specific to question)	Extensive (broader question)	Extensive
Analysis/ Interpretation	Verification/ Falsification	Probability	Sense-making
Type of data Analysis	Objective, value-free, statistical methods	Non-statistical, triangulation	Value-loaded, non-statistical
Causality	Cause-effect relations	Causal tendencies, generative mechanisms	Not addressed
Outcomes	Causality	Correlation	Understanding
Judgement of research quality	External validity and reliability are critical	Construct validity is important	Credibility, transferability, dependability, and confirmability

Source: Denzin & Lincoln (2000); Easterby-Smith et cetera. (2004)

4.1.3. Positivist Paradigm

Henning, Van Rensburg and Smit, (2004, p. 17) assert that, the positivist paradigm of exploring social reality is based on the philosophical ideas of the French Philosopher August Comte. According to him, observation and reason are the best means of understanding human behaviour; true knowledge is based on experience of senses and can be obtained by observation and experiment. At the ontological level, positivists assume that the reality is objectively given and is measurable using properties which are independent of the researcher and his or her instruments; in other words, knowledge is objective and quantifiable. In other words, the positivist paradigm stems from natural science and hypothesis testing through the

quantification of apparent social realities is their main characteristics. This feature makes positivist epistemology to be deductive in nature (Flowers, 2009).

Positivistic thinkers adopt scientific methods and systematise the knowledge generation process with the help of quantification to enhance precision in the description of parameters and the relationship among them. Essentially, positivism places a lot of emphasis on facts that can be evaluated empirically through the utilisation of quantitative methods – experiments and surveys designs, from which the gathered data gets analysed statistically (Blaikie, 1993; Hatch & Cunliffe, 2006; Saunders, Lewis & Thornhill, 2007; Easterby-Smith et cetera, 2008; Eriksson & Kovalainen, 2008). In addition, this perspective advocates that it is possible to formulate models that are generalisable (Ates, 2008). Such models can effectively explain cause and effect associations, and can be useful in forecasting outcomes.

Positivism is concerned with uncovering truth and presenting it by empirical means (Henning, Van Rensburg and Smit, 2004, p. 17). It is grounded on values of reason, truth and validity. According to Walsham (1995b) the positivist position maintains that scientific knowledge consists of facts while its ontology considers the reality as independent of social construction. If the research study consists of a stable and unchanging reality, then the researcher can adopt an 'objectivist' perspective: a realist ontology - a belief in an objective, real world - and detached epistemological stance based on a belief that people's perceptions and statements are either true or false, right or wrong, a belief based on a view of knowledge as hard, real and acquirable; they can employ methodology that relies on control and manipulation of reality. Positivism regards human behaviour as passive, controlled and determined by external environment. Thus, this perspective claims that the world exists externally and objectively, that knowledge is functional only if it is constructed from accounts of this external realism. It also assumes that universal laws do exist in real world (Bryman, 2004).

4.1.4. Interpretivist Paradigm

Interpretive researchers believe that the reality to consists of people's subjective experiences of the external world; thus, they may adopt an inter-subjective epistemology and the ontological belief that reality is socially constructed. This perspective was defined as post-positivist by Blaikie (1993) and as anti-positivist by Hatch and Cunliffe (2006). According to Willis (1995) interpretivists are anti-foundationalists, who believe there is no single correct route or particular method to knowledge. The argument here is that individuals and/or groups

understand the state of affairs on the basis of their expectations, experience and memories (Flowers, 2009). An open-minded approach is embraced and the starting point is data instead of a literature-based theory or developing hypotheses to be verified (Easterby-Smith et cetera, 2004). The aim is to gain a deeper comprehension of meanings in data analysis as opposed to aiming to generalise the results. Meaning is therefore constructed and is continuously re-constructed over time through experience ensuing from a number of differing perspectives. In general, interpretivist researchers use methods like discourse analysis, ethnography, hermeneutics and phenomenology, with the intention of generating qualitative data (Ates, 2008). Data analysis includes the use of analysis of text, in-depth interviews and observations (Beech, 2005). Reeves and Hedberg (2003, p. 32) note that the "interpretivist" paradigm stresses the need to put analysis in context. The interpretive paradigm is concerned with understanding the world as it is from subjective experiences of individuals. They use meaning (versus measurement) oriented methodologies, such as interviewing or participant observation, that rely on a subjective relationship between the researcher and subjects. Interpretive research does not predefine dependent and independent variables but focuses on the full complexity of human sense making as the situation emerges (Kaplan and Maxwell, 1994). This is the interpretive approach, which aims to explain the subjective reasons and meanings that lie behind social action.

This study is situated in the interpretivist paradigm. Table 4.2 displays the characteristics of interpretivism, as used in this study, categorised into the purpose of the research, the nature of reality (ontology), nature of knowledge and the relationship between the inquirer and the inquired-into (epistemology) and the methodology used (Cantrell, 2001).

Table 4.2: **Characteristics of interpretivism**

Feature	Description
Purpose of research	Understand and interpret students' and teachers' perspectives on the factors that could impact the successful use of elearning and face-to-face instructional approaches in a manner that they complement each other.
Ontology	➢ There are multiple realities. ➢ Reality can be explored, and constructed through human interactions, and meaningful actions. ➢ Discover how people make sense of their social worlds in the natural setting by means of daily routines, conversations and writings while interacting with others around them. These writings could be text and visual pictures. ➢ Many social realities exist due to varying human experience, including people's knowledge, views, interpretations and experiences.
Epistemology	➢ Events are understood through the mental processes of interpretation that is influenced by interaction with social contexts. ➢ Those active in the research process socially construct knowledge by experiencing the real life or natural settings. ➢ Inquirer and the inquired-into are interlocked in an interactive process of talking and listening, reading and writing. ➢ More personal, interactive mode of data collection.
Methodology	➢ Processes of data collected by text messages, interviews, and reflective sessions; ➢ Research is a product of the values of the researcher.

Source: Cantrell (2001)

The key words pertaining to this methodology are participation, collaboration and engagement (Henning, van Rensburg, and Smit, 2004). In the interpretive approach the researcher does not stand above or outside, but is a participant observer (Carr and Kemmis, 1986, p. 88) who engages in the activities and discerns the meanings of actions as they are expressed within specific social contexts.

4.1.5. Critical Realist Paradigm

This paradigm was a result of the critiques of positivism – i.e. being considered as over-deterministic, with little room for choice and interpretivism. It was regarded as completely relativist – i.e. being viewed as highly contextual (Hughes & Sharrock, 1997). Critical researchers assume that social reality is historically constituted and that it is produced and reproduced by people (Myers, 2009). Although people can consciously act to change their social and economic circumstances, critical researchers recognise that their ability to do so is

constrained by various forms of social, cultural and political domination. Despite the fact that the critical realist paradigm has its own weaknesses, it can be 'seen as useful compromise which can combine the strengths and avoid the limitations of positivist and interpretivist paradigms' (Easterby-Smith et cetera., 2004: 42). It often uses conventional positivist and interpretivist methods; thus, rather than methodological differences it is a commitment to dialectical analysis and to critical/postmodern theory which most clearly differentiates critical postmodern research from positivism and interpretivism (Gephart, 1999).

Methodology

Methodology aspect of research has often most been discussed in terms of the differing and competing views of quantitative and qualitative research types and the with mixed method approach as the middle of the road compromise. The discussion of qualitative vs quantitative as opposing research paradigms has a long tradition that can be exhausted. However, according to Naderer and Blazer (2017), the opposing views are summed up as equal academic and recognised, under the condition that research is conducted systematically and follows established rules. In other words, what differs is the degree of abstraction of data which is increasing as one is moving towards quantitative data (see Table 4.3)

Table 4.3: **The academic status of qualitative and quantitative research**

Degree of Abstraction	**Form of Data**	**Characteristics**	**Academic Status**
Abstraction increasing	Quantitative data	Abstracts qualities on the basis of qualitatively grouped data, systematically and following established rules	Academic/Scientific
	Qualitative data	Abstracts qualities on the basis of daily data, systematically and following established rules	Academic/Scientific
	Daily Data	Spontaneous, based on situations, changeable, unsystematically, not following any established rules.	Academic/Scientific

Source: Naderer & Balzer (2007)

As alluded earlier on, there appears to be a never-ending debate between qualitative and quantitative proponents. Table 4.4 highlights some of the features of quantitative and qualitative research designs. Some of these features may help in stimulating a debate between the two methodologies, for example, the quotations from Fred Kerlinger that, "There's no such thing as qualitative data. Everything is either 1 or 0" and David Campbell who opined that, "All research ultimately has a qualitative grounding" (Miles & Huberman, 1994). Advocates for each method may feel threatened by these assertions and such a feeling tends to create a heated academic tension, which stimulates more research.

Moreover, other researchers argue that one method is more scientific or better than the other. This argument tends emphasise the superiority of quantitative over qualitative method and thus threatens to overthrow the Ajasin Varsity school of thought. Despite the fact that the two methodologies are distinct from each other, it is possible that quantitative data may use both numbers and words while qualitative data may use words and numbers (Aluko, 2006). Consequently, a researcher can still use words to explain the numbers (as numbers alone are just meaningless), while it is still possible to code qualitative data. Therefore, other scholars (e.g., Creswell, 1994) have emphasised that researchers should consider both methods and apply them *in tandem* – i.e., a mixed method.

The main argument for an *ecclectic approach* (i.e., using quantitative and qualitative methods in conjunction with each other) is that it provides more strength to the investigator, and may improve the overall quality of the research findings (Aluko, 2006). When using this approach, the researcher seeks to reach the state where *"blending qualitative and quantitative methods of research can produce a final product which can highlight the significant contributions of both"* (Nau, 1995:1), and also a situation where *"qualitative data can support and explicate the meaning of quantitative research"* (Jayaratne, 1993:117).

From the above discussion, it is apparent that each method is unique but both methods are interdependent. A blend of the two methods may be a good idea, so that quantitative may complement qualitative analysis (Ghauri & Gronhaug, 2002). The debate between these methods may be necessary in making researchers make an informed decision, but Miles and Huberman (1994) believes that this back and forth 'mockery' amongst quantitative and qualitative researchers is "essentially unproductive".

Table 4.4: **Features of Qualitative & Quantitative Methodologies**

Qualitative Methodology	**Quantitative Methodology**
• "All research ultimately has a qualitative grounding" – Donald Campbell. • The aim of qualitative analysis is a complete, detailed description. • Recommended during earlier phases of research projects. • Researcher may only know roughly in advance what he/she is looking for. • The design emerges as the study unfolds. • Researcher is the data gathering instrument. • Data is in the form of words, pictures or objects. • Qualitative data is more 'rich', time consuming, and less able to be generalised. • Researcher tends to become subjectively immersed in the subject matter.	• "There's no such thing as qualitative data. Everything is either 1 or 0" – Fred Kerlinger. • In quantitative research features are classified, counted, and statistical models are constructed in an attempt to explain what is observed. • Recommended during latter phases of research projects. • Researcher knows clearly in advance what he/she is looking for. • All aspects of the study are carefully designed before data is collected. • Researcher uses tools, such as questionnaires or equipment to collect numerical data. • Data is in the form of numbers and statistics. • Quantitative data is more efficient, able to test hypotheses, but may miss contextual detail. • Researcher tends to remain objectively separated from the subject matter.

Source: Miles and Huberman (1994:40)

4.1. Main differences between qualitative and quantitative methodologies

Qualitative research is naturalistic; it attempts to study the everyday life of different groups of people and communities in their natural setting. Due to the fact that qualitative research involves an interpretive, naturalistic approach to its subject matter; it attempts to make sense of, or to interpret, phenomena in terms of the meaning people bring to them (Denzin and Lincoln, 2003) – it befits the purpose of this study. According to Domegan and Fleming (2007), "Qualitative research aims to explore and to discover issues about the problem on hand, because very little is known about the problem. There is usually uncertainty about dimensions and characteristics of problem. It uses 'soft' data and gets 'rich' data'". (p. 24). According to Myers (2009), qualitative research is designed to help researchers understand people, and the social and cultural contexts within which they live. Such studies allow the complexities and differences of worlds-under-study to be explored and represented (Philip, 1998, p. 267).

In qualitative research, different knowledge claims, enquiry strategies, and data collection methods and analysis are employed (Creswell, 2003). Qualitative data sources include observation and participant observation (fieldwork), interviews and questionnaires, documents and texts, and the researcher's impressions and reactions (Myers, 2009). Data is derived from direct observation of behaviours, from interviews, from written opinions, or from public documents (Sprinthall, Schmutte, and Surois, 1991, p. 101). Written descriptions of people, events, opinions, attitudes and environments, or combinations of these can also be sources of data.

An obvious basic distinction between qualitative and quantitative research is the form of data collection, analysis and presentation. While quantitative research presents statistical results represented by numerical or statistical data, qualitative research presents data as descriptive narration with words and attempts to understand phenomena in "natural settings". This means that qualitative researchers study things in their natural settings, attempting to make sense of, or to interpret, phenomena in terms of the meanings people bring to them" (Denzin and Lincoln, 2000, p. 3).

Quantitative research makes use of questionnaires, surveys and experiments to gather data that is revised and tabulated in numbers, which allows the data to be characterised by the use of statistical analysis (Hittleman and Simon, 1997, p. 31). Quantitative researchers measure variables on a sample of subjects and express the relationship between variables using effect statistics such as correlations, relative frequencies, or differences between means; their focus

is to a large extent on the testing of theory.

Stake (1995) describes three major differences in qualitative and quantitative emphasis, noting a distinction between: explanation and understanding as the purpose of the inquiry; the personal and impersonal role of the researcher; and knowledge discovered and knowledge constructed. Table 4.2 below shows a summary of major differences between quantitative and qualitative approaches to research.

Table 4.5: **Differences between quantitative and qualitative**

Orientation	Quantitative	Qualitative
Assumption about the world	A single reality, i.e., can be measured by an instrument.	Multiple realities
Research purpose	Establish relationships between measured variables	Understanding a social situation from participants' perspectives
Research methods and processes	- procedures are established before study begins; - a hypothesis is formulated before research can begin; - deductive in nature.	- flexible, changing strategies; - design emerges as data are collected; - a hypothesis is not needed to begin research; - inductive in nature.
Researcher's role	The researcher is ideally an objective observer who neither participates in nor influences what is being studied.	The researcher participates and becomes immersed in the research/social setting.
Generalisability	Universal context-free generalizations	Detailed context-based generalizations

Stainback and Stainback (1988) list three basic purposes of quantitative research as: to describe, to compare and to attribute causality (p. 317). Maxwell (1998) enumerates five research purposes for which qualitative studies are particularly useful:

- ✓ Understanding the meaning that participants in a study give to the events, situations and actions that they are involved with; and of the accounts they give of their lives and experiences;
- ✓ Understanding the particular context within which the participants act, and the influence this context has on their actions;
- ✓ Identifying unanticipated phenomena and influences, and generating new, grounded theories about them;
- ✓ Understanding the process by which events and actions take place; and
- ✓ Developing causal explanations. (p. 66)

Merriam (1998) states that qualitative case studies in education are often framed with concepts, models and theories (pp.11, 19). An inductive method is then used to support or challenge theoretical assumptions. Although the research process in qualitative research is inductive, Merriam (ibid: 49) notes that most qualitative research inherently moulds or changes existing theory in that:

- ✓ Data are analysed and interpreted in light of the concepts of a particular theoretical orientation;
- ✓ Findings are usually discussed in relation to existing knowledge (some of which is theory) with the aim of demonstrating how the present study has contributed to expanding the knowledge base.

However, Lincoln and Guba (1985) caution that qualitative research, which is an approach that acknowledges the researcher's subjectivity, requires that the "biases, motivations, interests or perspectives of the inquirer" are identified and made explicit throughout the study (p. 290). Given below are some other disadvantages of qualitative research. These points are useful to the researcher such that he / she can try to minimise their effects during the course of the study. Researcher bias can bias the design of a study.

- ✓ Researcher bias can enter into data collection.
- ✓ Sources or subjects may not all be equally credible.
- ✓ Some subjects may be previously influenced and affect the outcome of the study.
- ✓ Background information may be missing.

Study group may not be representative of the larger population.

- ✓ Analysis of observations can be biased.
- ✓ Any group that is studied is altered to some degree by the very presence of the researcher. Therefore, any data collected is somewhat skewed. (Heisenburg Uncertainty Principle)
- ✓ It takes time to build trust with participants that facilitates full and honest self-representation. Short term observational studies are at a particular disadvantage where trust building is concerned.

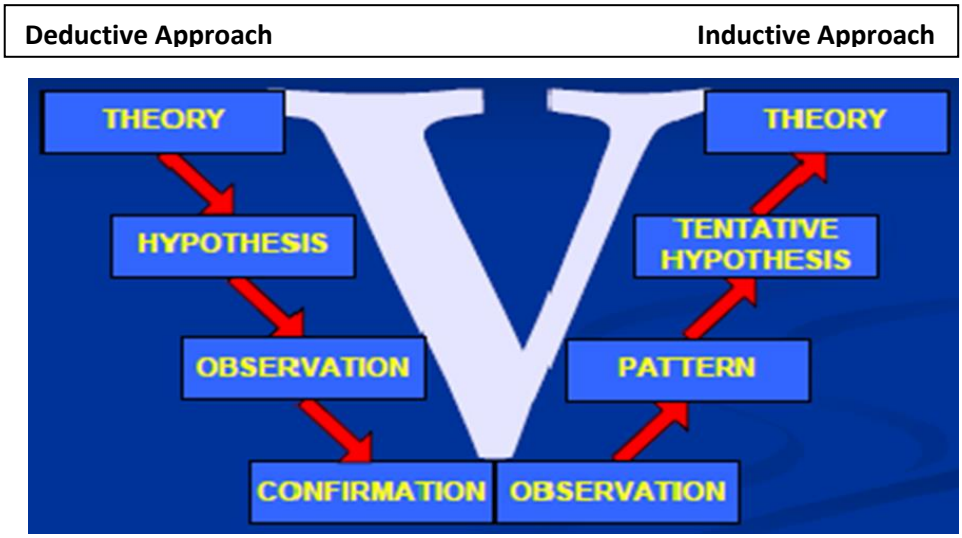
In defence of qualitative research, Merriam (1985) states that most writers suggest judgement

should focus on whether the research is "credible and confirmable" rather than imposing statistical, quantitative ideas of generalisability on qualitative research.

4.2. Deductive vs Inductive Approaches

Another major difference between the two is that qualitative research is inductive and quantitative research is deductive. In qualitative research, a hypothesis is not needed to begin research. It employs inductive data analysis to provide a better understanding of the interaction of "mutually shaping influences" and to explicate the interacting realities and experiences of researcher and participant (Lincoln and Guba, 1985). It allows for a design to evolve rather than having a complete design in the beginning of the study because it is difficult if not impossible to predict the outcome of interactions due to the diverse perspectives and values systems of the researcher and participants, and their influence on the interpretation of reality and the outcome of the study. However, all quantitative research requires a hypothesis before research can begin.

Figure 4.4: Deductive and inductive approach



Deductive reasoning works from the more general to the more specific. Conclusion follows logically from premises – available facts. Inductive reasoning works the other way – moving from specific observations to broader generations and theories. Conclusion is likely based on premises and involves a degree of uncertainty.

4.3. Justification for choosing quantitative approach in this study

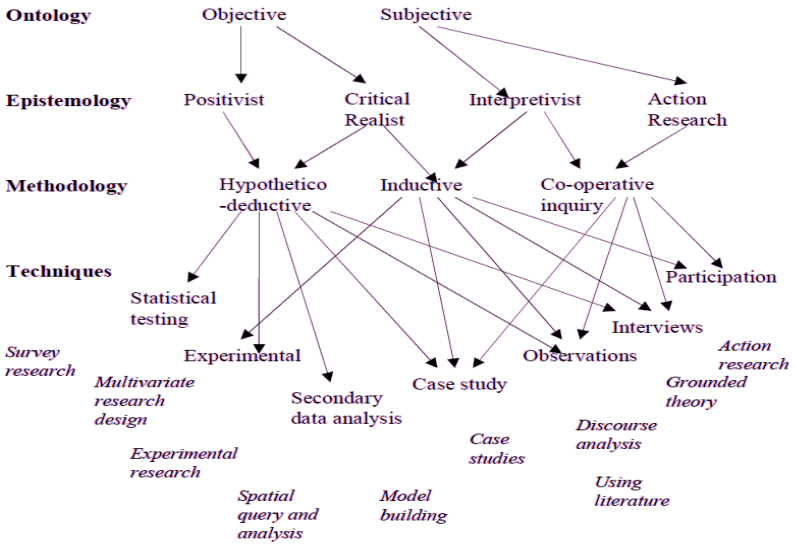
The pragmatic justification for choosing a quantitative approach was that the empirical research objectives and hypotheses of this study could not be answered by using a qualitative method.

In other words, this study was first and for most largely assessing the causal relationships between and among variable in the conceptual model. In addition to that, this study sought to gain a general insight into the relationships between predictor variables and mediating variables and between mediating variables and the outcome variable. More so, the testing of the hypotheses in the conceptual model could be best achieved through a survey questionnaire that has predetermined answer categories as used in quantitative research. In a nutshell, the purpose of this study was to measure or test the causal relationship between the variables of interest as provided in the research conceptual model.

4.4 Research Design

Research design can be thought of as the logic or master plan of a research that throws light on how the study is to be conducted (Yin, 2003). It shows how all of the major parts of the research study– the samples or groups, measures, treatments or programs, etc–work together in an attempt to address the research questions. The research design can be seen as actualisation of logic in a set of procedures that optimises the validity of data for a given research problem. According to Mouton (1996, p. 175) the research design serves to "plan, structure and execute" the research to maximise the "validity of the findings". It gives directions from the underlying philosophical assumptions to research design, and data collection. adds further that "colloquially a research design is an action plan for getting from here to there, where 'here' may be defined as the initial set of questions to be answered and 'there' is some set of (conclusions) answers" (p. 19). In this study, the research design mainly focused on four aspects. These are the sampling design, instrument design, data collection technique, and data analysis approach.

Figure 4.6: Research Design Map

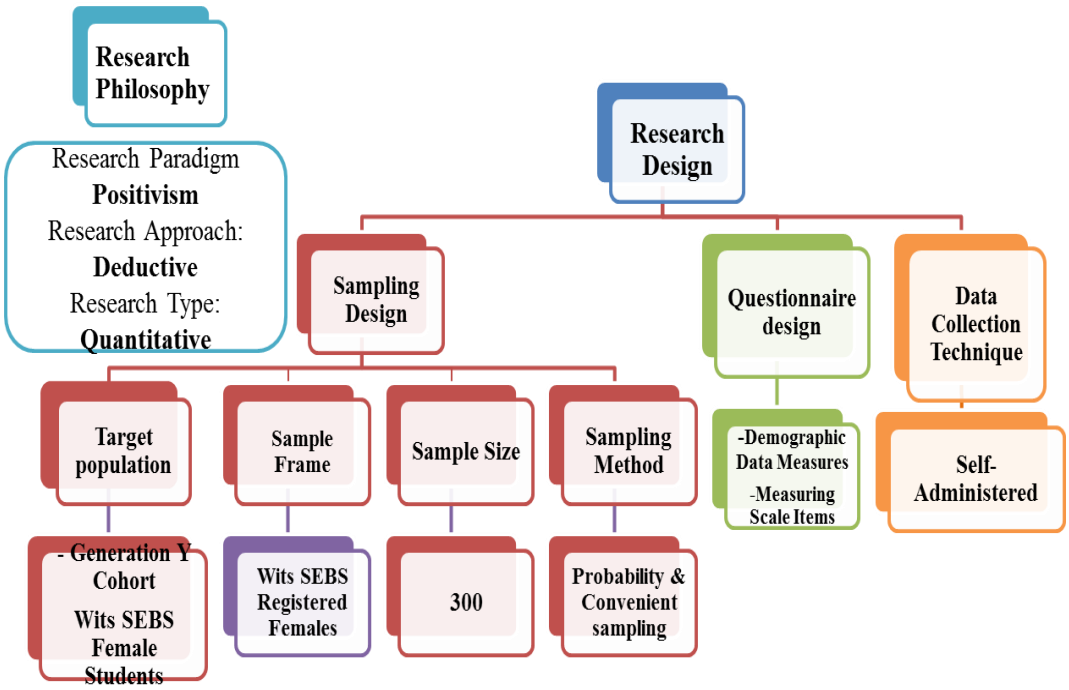


Source: Beech (2005)

The research design map above provides a research scope that can be used in choosing between ontology and epistemology, the relevant methodology and appropriate techniques or methods as displayed in Figure 4.8 below. These basic concepts are important in making a research to be academically believable. Consistent with Beech (2005)'s research design map, it can be said that the current study applied an objective ontology, made use of a positivist epistemology, used a deductive methodology. Hence, a qualitative method was applied through the use of a survey questionnaire.

4.4. Current study design

This section of the study mainly comprises of the research philosophy and the research design. The research design section consists of the sampling design, questionnaire/instrument design, data collection technique and data analysis approach. The research philosophy section mainly focused on the positivist paradigm since the current study is quantitative in nature. The diagram in Figure 4.1, below provides an outline of the Research Methodology Chapter.



4.5. Sampling design

When preparing a sampling design, it is important to determine to what extent the design influenced the reliability of the results and whether this was enough to warrant concern over the dependability of the work or whether the results are still regarded as significant (Santy & Kneale, 2008). This analysis is important since an entirely inaccurate sampling design may lead to the acquisition of inconsistent results pursued by wrongful interpretation which may produce disastrous consequences. A sampling design should be easy to implement, well-organised and have large entropy to be generally applicable (Grafström, Lundström and Schelin, 2012). It should also be exact and any existing supporting information about the population must be considered since the information may have to be used to significantly adjust if not to create **a** more appropriate design (Grafstrom et cetera, 2012). In this study the sampling design focused on four aspects – target population, sampling design, sample size and sampling method.

4.5.1. Target population

The target population refers to the entire group under study (Burns & Bush 2002; Sin, Cheung & Lee, 2009). The identification of the study population is necessary for the setup and running of a theoretical test (Kristal, Darke, Morris, Tangen, Goodman, Thompson, Meyskens, Goodman, Minasian, Parnes & Lippman, 2014). When defining a target population, a researcher should indicate clearly the characteristics of the target population that apply directly to the study. In this study the target population is comprised of Generation Y cohort females at an institution of higher learning in Gauteng Province, South Africa – and Wits University form the unit of analysis. The University of the Witwatersrand is home to local and international students. It can be assumed that the findings obtained while studying this research context may to some degree be representative of the tertiary institutions in South Africa.

4.5.2. Sample Frame

A sample frame is defined as "a selection of subjects from an overall population group that has been clearly defined" (Santy & Kneale, 2008). It refers to the researched environment (Pedhazur & Schmelkin, 2001) and the subjects used in a study (Yang *et cetera,* 2006). Registered female students at University of the Witwatersrand in the School of Economics and Business Science were targeted and the database was used as the sample frame for the current study. The University of the Witwatersrand is deemed to provide a sizable required sample size in Gauteng Province.

4.5.3. Sample size

The sample size refers to the number of elements to be included in the study. A good sample has two properties: representativeness and adequacy (Singh, 2006). When attempting to draw a sample, it is important to identify the most favourable point between the costs and sufficiency of the sample size (Niu, Zhang and Yang, 2007). According to Randall and Gibson (2010) the adequacy of the sample size is determined by certain aspects of the study such as the manner in which respondents are selected, the constructs under study, the rationale behind the research as well as the intended processes of data analysis. The sample size influences the accuracy of estimation (Pincus and Schmelkin, 2003) but in general however a large sample size can help minimise sampling errors and improve generalisability of research findings (Niu, et cetera ., 2007).

Determining the sample size is known to be an important part of any empirical research (Kunene 2008). Morrison, Rabellotti and Zirulia (2013) asserts that the quality of a study is determined by not only the suitability of the methodology and instrumentation but also by the appropriateness of the sampling approach that has been adopted. In this current study, an online sample calculator was used to calculate the sample size. Using an approximate target population of 1300 female students in the School of Economic and Business Sciences (SEBS) belonging to the Generation Y cohort - that was provided by the Faculty of Commerce, Law and Management, the researcher utilised a final sample size of 246, with a confidence level of 95% and confidence interval of 5. Also, such a sample was deemed appropriate given that sophisticated statistics were to be employed and that it increased chances of reliability (Cohen *et cetera,* 2007).

4.5.4. Sampling method

Research objectives and questions often determine the sampling frame as to who or what to sample, leading to two different sampling techniques i.e. probability and non-probability sampling (Palys, 2007). According to Santy *et cetera.* (2008) the purpose of any sampling method is to extract a sample from the population in order to generalise the results back to the population. In probability sampling, the rules of selection ensure that the researcher can relate findings to the entire population from which the sample was drawn (Tansey, 2007). Hence, the approach is useful when the researcher seeks to make generalisations as it attempts to make the sample representative of the wider population (Cohen *et cetera,* 2007; Johnson, 2001). Probability sampling has been identified as comprising of six types i.e. simple random sampling, systematic sampling, stratified sampling, cluster sampling, stage sampling and multiphase sampling (Cohen *et cetera .,* 2007).

In the current study, random probability sampling was used in conjunction with convenience sampling technique. This is because random samples are said to provide a good estimation of the population and often provide a better warrant against sampling bias: therefore are more representative than non-probability samples (Service, 2009). However, since a complete sample frame might be difficult come up with, convenience sampling was employed too in order to identify and select the research participants who constitute the final sample.

4.9 Questionnaire design

In any research study, the theoretical constructs that are measured are the determining factors for the choice of measurement methodology (Fagarasanu & Kumar, 2002). Given the nature of this study, it seemed to be appropriate to employ a self-administered questionnaire as a method of collecting data (Fagarasanu & Kumar, 2002). Although these are intricate measurement instruments, they are advantageous in that they allow control over the expression of questions, ensure confidentiality and provide a quick and easy way of collecting data (Fagarasanu & Kumar, 2002).

In designing a questionnaire, it is important to ensure that it is subject sensitive, well organised and utilised in conditions that are suitable since these factors influence a respondent's behaviour and cooperation and through this, the results (Fagarasanu & Kumar, 2002). The strength of the study is influenced by the measurement items that are employed (Fagarasanu & Kumar, 2002). According to Scholtes, Terwee and Poolman (2011) the prominence of a measurement item is demonstrated by three factors, namely reliability, validity and responsiveness. However, even when a measurement item appears to be superior in terms of the aforementioned factors, it may not be applicable or practical to use in every study (Verhoef, Lemon, Parasuraman, Roggeveen, Tsiros and Schlesinger, 2009).

The employed measurement instrument consists of 5 sections of which 4 involve measuring each of the 4 constructs respectively. Section A require that respondents fill in their background information. Section B, C, D, and E focused on social influence, eco-literacy, perceived benefits, attitude towards use and purchase intention respectively. The research constructs were operationalised in accordance with previous works. Proper modifications were made in order to fit the current research context and purpose (Fagarasanu & Kumar, 2002). A five-item scale was adopted from Velnampy, Achchuthan and Kajananthan, (2013) to measure 'social influence' and a five-item scale was adopted from Ellen, Eroglu, and Webb, (1997) to measure 'eco-literacy'. A ten-item scale was adopted from Lee, (2009) to measure 'perceived benefits', while six measurement items adapted from Conner, Kirk, Cade and Barrett, (2001) was used to measure 'attitude'. Finally, 'purchase intention', was measured using four instruments adapted from Conner, Kirk, Cade and Barrett, (2001). All scale items were measured on a 5-point Likert scale which were anchored by 1=strongly disagree to 5= strongly agree to express the degree of agreement.

Table 5.1: Adapted and original measurement items

Research constructs		Adapted measurement items	Original measurement items
Social Influence	SI1	My friend(s) advise me to purchase herbal cosmetics.	
	SI2	My family member(s) advise me to purchase herbal cosmetics.	
	SI3	My doctor(s)/ Dermatologist(s) advise me to purchase herbal cosmetics.	
	SI4	Daily Newspaper(s) and magasine(s) influence me to purchase herbal cosmetics.	
	SI5	Mass Media(s) like television / radio channels influence me to purchase.	
	Source: Li, Ragu-Nathan, Ragu-Nathan and Rao, (2006)		
	PBHC1	Herbal cosmetics can improve skin elasticity and reduce wrinkles.	
	PBHC2	Herbal cosmetics have a moisturising effect.	
	PBHC3	Herbal cosmetics can protect my skin.	
	PBHC4	Herbal cosmetics can cover freckles, dark spots, and other blemishes.	
	PBHC5	Herbal cosmetics can display my aesthetic taste.	
	PBHC6	Herbal cosmetics suit my fashion sense	

Perceived Benefits	PBHC7	Herbal cosmetics can make me look more attractive	
	PBHC8	Herbal cosmetics help me to look brighter	
	PBHC9	Herbal cosmetics help me to look confident	
	PBHC10	Herbal cosmetics can improve skin elasticity and reduce wrinkles.	
			Source: Green, Whitten and Inman, (2012)
Eco-Literacy	EL1	I know that I buy products and packages that are environmentally safe.	
	EL2	I know more about recycling than the average person.	
	EL3	I know how to select products and packages that reduce the amount of waste ending up in landfills.	
	EL4	I understand the environmental phrases and symbols on product package.	
	EL5	I am very knowledgeable about environmental issues.	
			Source: Ryu, Kabadayi and Chung, (2007)
Attitude towards Use	ATU1	Herbal cosmetics are safe.	
	ATU2	Herbal cosmetics improve my appearance.	
	ATU3	Herbal cosmetics prevent my skin aging signs.	
	ATU4	Herbal cosmetics protect me from	

		skin allergic.	
	ATU5	Using herbal cosmetics help me to decrease the skin cancer capability.	
Purchase Intention	PIHC1	I want to purchase organic cosmetics.	
	PIHC2	I have intention to purchase organic cosmetics.	
	PIHC3	I will purchase organic cosmetics as soon as possible.	
	PIHC4	In near future, I would like to buy herbal cosmetics.	**Source:** Green, Whitten and Inman, (2012)

4.10. Data collection technique

When conducting a study, it is vital to obtain truthful and reliable information about the phenomena being studied. It is important that all data collection methods, from the simplest to the most complex be taken care of with diligence and respect. Questions, observation sessions and other activities must be designed meticulously to ensure that the data to be collected is significant (Lethbridge, Sim & Singer, 2005). According to Lethbridge *et cetera*, (2005) the choice of the data collection technique should be done in the context of the research objective or question. It is said that three issues should be well thought-out when selecting a technique i.e. the degree of access to data collection available to the researcher, quantity of data required and the type of research question (Lethbridge *et cetera* ., 2005). The choice of method must be carefully thought out as it will influence the answers that are to be acquired (Tourangeau & Smith, 2006).

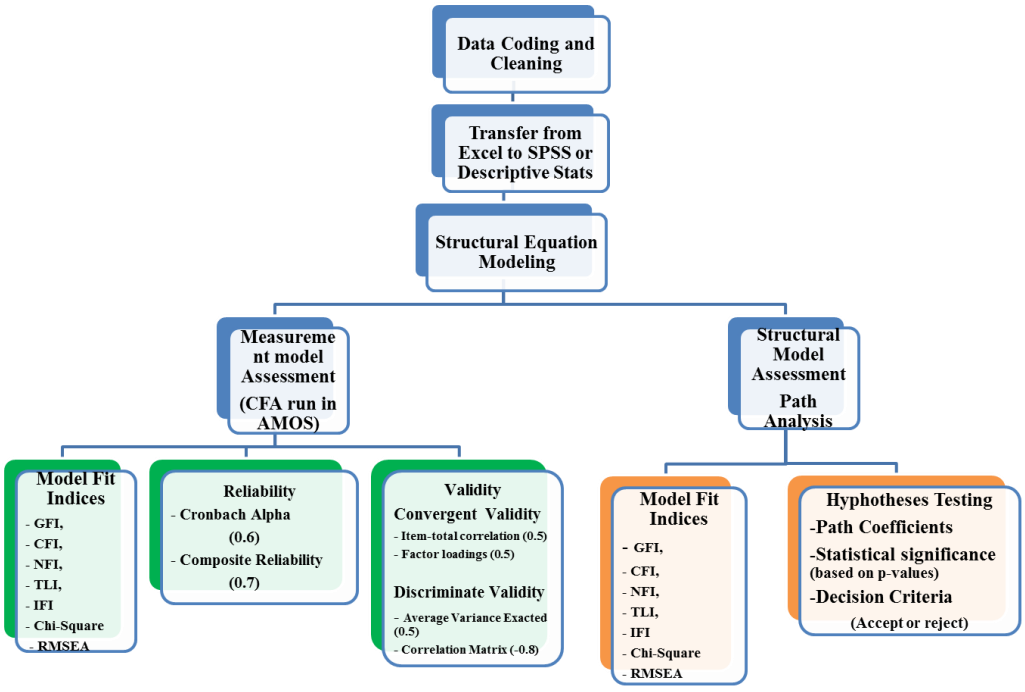
The survey method of data collection (questionnaire) was adopted in the current study and a self-administered questionnaire was designed and employed. The method was selected owing to the advantages. According to Cohen *et cetera.* (2007) there are two types of self-

administered questionnaire: those that are completed in the company of the researcher and those that are attended to when the researcher is not present. In this study, the latter approach was adopted. Assistants were employed for the task of collecting data. While the questionnaires were completed without the presence of the researcher, assistants were given proper training and instruction prior to collecting the data.

4.11. Data analysis approach

Figure 5.1 below represent the outline of the Data Analysis section. Each section is explained thereafter. Briefly the diagram indicates that after the data is collected, it is coded and corrected for errors. Descriptive statistics usingStatistical Package of Social Science (SPSS) statistical software is performed and thereafter the structural equation modelling is done in order to assess the model fit, reliability and validity of the measurement instruments before the path analysis performed in order to test the proposed hypotheses.

Figure 5.1: **Data Analysis Procedure**



4.12. Structural Equation Modelling (SEM)

Structural equation modelling (SEM) was employed in the current study for the purpose of analysing data. Structural equation modelling has become an admired statistical technique to test theory in several fields of knowledge (Hair, Anderson, Tatham & Black 2008; Schumacker & Lomax 2004). Qureshi and Kang (2014) describe SEM as "a multivariate, statistical technique largely employed for studying relationships between latent variables (or constructs) and observed variables that constitute a model". Additionally, it is according to Bollen (2009), Mitchell (2004), Hoyle (1995), Malaeb, Summers and Pugesek (2000) Reckhow, Arhonditsis, Kenny, Hauser, Tribo, Wu, Elcock, Steinberg, Stow and Mcbrid (2005) and Grace (2006) a statistical method with which a researcher can create theoretical concepts and validate proposed causal relationships through two or more structural equations. It is recognised as being like regression analysis but more predominant in that it assesses the casual relationships among constructs while concurrently accounting for measurement error (He, Gai, Wu & Wan 2012; Sarstedt, Ringle, Smith, Reams & Hair, 2014). SEM's ability to address numerous modelling difficulties, the endogeneity among constructs and composite underlying data structures found in various phenomena (Washington, Karlaftis & Mannering, 2003) can be assumed to be part of the reason for its popularity.

SEM is fundamentally a framework that involves concurrently solving systems of linear equations and includes procedures such as regression, factor analysis and path analysis (Beran & Violato, 2010; Stein, Morris & Nock, 2012). According to Anderson and Gerbing (2008), Hair *et cetera.* (1998) structural equation modelling is carried out in a two-staged approach: the first phase is conducted to evaluate the satisfactoriness of the measurement model. In this stage, both construct reliability and item reliability are examined (Nusair & Hua, 2010). Once the reliability of the scale has been ensured, the construct validity using convergent validity and discriminant validity is inspected prior to measurement model assessment and finalisation. In the second stage, the structural model is examined. The general model fit in both measurement and structural model is examined using goodness-of-fit indices including c/dfratio, CFI, NFI, TLI, RFI, IFI and RMSEA (Stokburger-Sauer, Ratneshwar & Sen, 2012.; Hair *et cetera* ., 2008; Joreskog & Sorbom, 2003; Schumacker *et cetera* ., 2004). The first stage is identified as incorporating a procedure known as Confirmatory Factor Analysis (CFA) while stage two is known to include multiple regression and path analysis (Chen, Zhang, Liu & Mo, 2011). The function of CFA is to evaluate how well the latent variables are measured by the

observed variables (Chen *et cetera*, 2011) while that of path analysis is to investigate causal relationships among unobserved variables (Nusair *et cetera*, 2010).

4.13. Data analysis procedure

The purpose of this section is to illustrate the process with which the data collected was analysed. The section describes all phases from coding data to analysing the causal relationships. A detailed account of the entire data analysis procedure is provided in Figure 5.1.

4.14. Data coding using Excel spreadsheet

Firstly, the collected data was coded in Excel spreadsheet before analysis. Data is said to mean a collection of information (McLeod, 2001). It denotes 'pieces' of information that are a direct reflection of the phenomenon understudy, autonomous from those who gathered it (Polkinghorne, 2005). Coding entails allocating a number to each answer of a survey question (Cohen *et cetera*, 2007). It is a process which was undertaken in the current study for the purpose of condensing data into a comprehensible format (Lethbridge *et cetera*, 2005). Hereafter, the coded data was subjected to a quantitative assessment (Lethbridge *et cetera*, 2005).

4.15. Descriptive analysis using Statistical Package for the Social Sciences (SPSS)

To gain an understanding of the aspects of each variable, descriptive statistics analysis were utilised which is shown by the mean and standard deviation of each factor. This procedure was undertaken with the use of software known as SPSS. SPSS is a 'wrap up' of programs for manipulating, examining and displaying data (Landau & Everitt, 2004). The program performs a broad variety of both univariate and multivariate procedures (Landau *et cetera*, 2004). An advantage for the study in utilising the program is that it allows for the score and assessment of the data in a very swift manner, in several different ways (Bryman & Cramer, 2003). Once descriptive statistics of data is generated, the next procedure involve assessing the reliability and validity of the measurement scales.

4.16. Measurement Model Assessment

4.16.1. Reliability and Validity tests of measurement scales using Statistical Package for the Social Sciences (SPSS

Both reliability and validity relate to the logic and accuracy of a test (Wilckens, 2010). Reliability requires better comparable experiments, while validity asks the question if the experiment is tailored to appropriately answer the questions being asked; i.e. if the experiment is valid in logical terms (Wilckens, 2010). According to Fornell and Larcker (2001) and Hair *et cetera.* (2008) reliability is measured at two levels: item reliability and construct reliability. Item reliability conveys ‘‘the amount of variance in an item due to underlying construct rather than to error and can be obtained by squaring the factor loadings’’ (Chau 2007). Construct reliability relates to the extent to which a measurement scale reflects an underlying factor (Nusair *et cetera,* 2010).

The current study examined construct reliability in particular through conducting a Cronbach alpha test. Cronbach alpha is conceived to be an SPSS tool for assessing the reliability of an observed instrument intended to measure a construct (Bryman *et cetera,* 2003). A general rule to increasing reliability when it is not satisfactory is to eliminate one item or more from the scale (Bryman *et cetera.* 2003). Having made certain that the observed instrument meets the needed level of reliability, the next step was to assess the measurement scale’s validity. Validity refers to the degree to which a set of measurement items truly reflects the concept of interest (Hair *et cetera,* 2008). There are various types of validity (Nusair *et cetera,* 2010) however the current study placed the focus on convergent and discriminant validity. Convergent validity was examined by observing the inter-correlation between measurement items and the research construct. Discriminant validity was examined by observing the construct correlation matrix.

4.16.2. Measurement Model Assessment: Confirmatory Factor Analysis (CFA) with AMOS Statistical Software

Confirmatory factor analysis is an analytical tool that allows the investigator to explore hypotheses about what constructs the test in question is measuring and it provides an empirical basis for scientific interpretation (Burton, Ryan, Axelrod, Schellenberger & Richards, 2003). In CFA, the researcher specifies a number of constructs which are correlated and observed variables measuring each construct (Schumacker *et cetera,* 2004). Accordingly in the data

analysis conducted in the current study, model specification is carried out as the first procedure in CFA. This procedure entailed identifying the set of relationships intended to be tested and determined how to specify constructs within the model (Nusair *et cetera,* 2010). Having specified the model, the next step is model modification (Chen *et cetera,* 2011). This implies that if the variance-covariance matrix approximated by the model did not sufficiently replicate the sample variance-covariance matrix, the model would have to have been improved and re-examined on the condition that the model is made to be identifiable (Nusair *et cetera* ., 2010). From here forth, the model fit was evaluated. The purpose of this procedure is to assess the degree to which the proposed theoretical model was validated by the sampled data (Nusair *et cetera,* 2010). Model fit is evaluated by examining the model fit indicators such as Chi-square/degrees of freedom (Chen & Lin, 2010) and Goodness of Fit Index (GFI), Augmented Goodness of Fit Index (AGFI), Normed Fit Index (NFI), Incremental Fit Index (IFI), Tucker-Lewis Index (TLI), Composite Fit Index (CFI) and the Random Measure of Standard Error Approximation (RMSEA) as recommended by Hair et cetera., (2008).

4.16.3. Reliability and Validity tests in CFA

Once an appropriate overall fit is established, the following step is to assess Bone *et cetera.* (1989) reliability and validity, under the guide of previous literature (Byrne, 2014; Chau & Lai, 2003; Fornell *et cetera,* 2001; Gerbing & Anderson, 2008; Hair *et cetera,* 2008). In the current study, the standardised regression weights generated using the AMOS statistical software was used to generate the Composite Reliability values. A provided formula was used to calculate the Composite Reliability for each construct using standardise regression weights. Discriminant validity was assessed using the Average Variance Extracted (AVE) values for each constructed compared to the shared variance. Again, the standardised regression weights were used to calculate AVE using a formula provided.

4.17. Structural /Path Modelling

The next phase of data analysis using SEM involve path analysis (Beran and Violato, 2010; Stein, 2016). Path modelling describes the relationships between observed or measured variables and theoretical constructs (Roche, Duffield & White, 2011) and tests the structural paths of the conceptualised research model (Anderson *et cetera.*, 1988). This SEM procedure is carried out in order to demonstrate and test the theoretical underpinnings of the study and the significance of the relationships between models constructs (Jenatabadi and Ismail, 2014). The study's structural model is evaluated by examining the p-values as well as standardised

regression coefficients (Matzler & Renzl, 2006). In conducting path modelling, a particular responsibility is to explain standardised regression coefficients as well as predictive ability (Wu, 2010).

4.18. Ethical Considerations

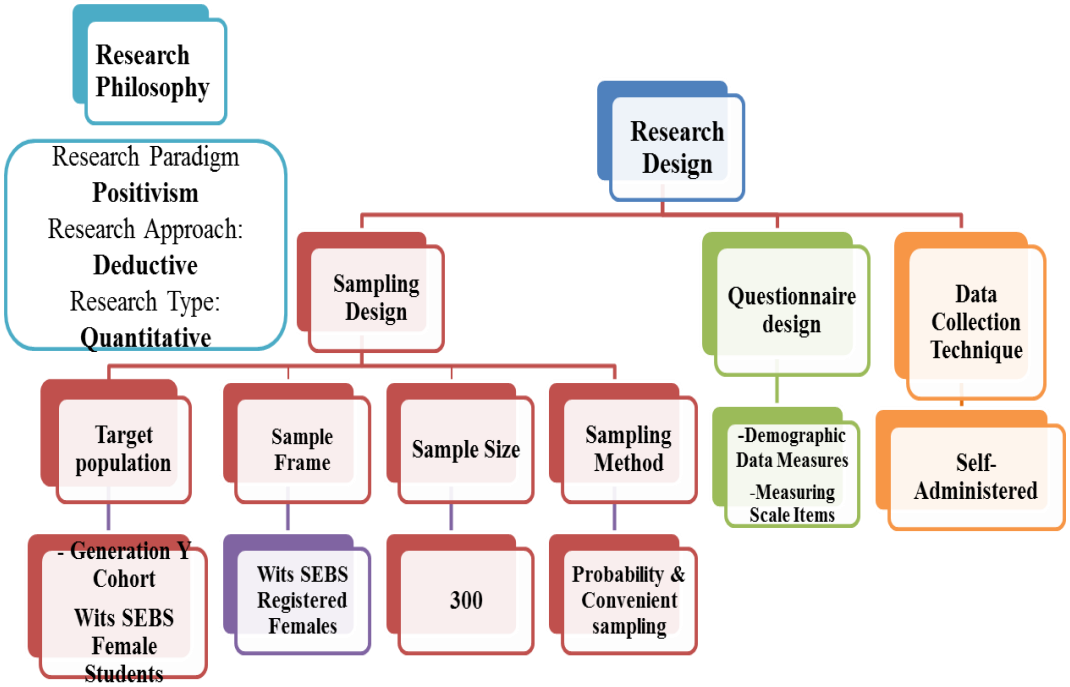
Ethical consideration refers to the protection of the participants' rights, obtaining informed consent and the institutional review process of the ethical approval (Klopper, 2008). Protection of human rights of the respondents entails the right to privacy, the right to self-determination, the right to fair treatment, right to autonomy and confidentiality, the right to protection from discomfort and harm as well as acting in good faith by explaining to respondents all information that is relevant. The researcher obtained voluntary informed consent from the respondents where a consent form were used.

Moreover, the researcher explained the purpose of the research and participants responded voluntarily and anonymously to protect their identity. Respondents were not expected to put any form of identification so as to protect their identity and the collected data was kept safe and not given to any unauthorised individuals. It is mandatory that approval to do a research is granted by the people or entities on which the research was conducted. For this reason, the researcher obtained the necessary ethics clearance from the School's Ethics Committee as well as the necessary authorisation from any relevant authorities (that is, University of the Witwatersrand - where the research was conducted). Below is a summary of the ethical considerations:

- ✓ Informed consent (Do participants have full knowledge of what is involved?)
- ✓ Harm and risk (Can the study hurt participants?)
- ✓ Honesty and trust (Is the researcher being truthful in presenting data?)
- ✓ Privacy, confidentiality, and anonymity (Will the study intrude too much into group behaviours?)
- ✓ Intervention and advocacy (What should researchers do if participants display harmful or illegal behaviour?)

4.19. Summary of Chapter Four (4)

The chapter described the methodology adopted in the current study. The chapter was structured with three main headings i.e. research philosophy, research methodology and design and data analysis. Firstly, research philosophies were described as well as that which was adopted in the current study. Thereafter a detailed explanation of the methodology and design applied as well as the sampling design was given. The method to be employed for data analysis including the approach in which data was analysed was highlighted under data analysis. In the next chapter the results and findings elicited through data analysis are presented. Below is a diagrammatic representation of the chapter summary.



CHAPTER V: DATA ANALYSIS AND RESULTS INTERPRETATION

5.0. INTRODUCTION

Chapter 5 discussed the methods and techniques that were used to obtain the findings that are presented in this chapter. This chapter presents and discusses the findings that were obtained through empirical research. This chapter presents statistical analysis of data that was acquired through the data collection tool (research questionnaire). To analyse the data, the SPSS 23 and AMOS 23 was utilised. In this chapter, descriptive statistics were discussed, and the reliability of all the constructs in the model used to develop the questionnaire was also discussed. Structural Equation Modeling was also conducted, where Confirmatory Factor Analysis and Path Modeling were conducted. Confirmatory Factor Analysis (CFA) was conducted so as to check for Model Fit, Reliability and Validity of the scales used in the research questionnaire. To check the validity of the scales, shared variance was compared to average variance extracted (AVE). Path Modeling (PM) was conducted to check for model fit, and to test the hypothesis of the study.

5.1 *Descriptive Statistics*

Kneale and Santy (1999) have stated that any study should commence by explaining the demographic or descriptive traits of the sampled population, and that it ought to present this in a comprehensible way. The purpose of descriptive statistics is to search for patterns, to put together and present a set of data describing the characteristics of the sample so as to make comparisons (Hsu & Shine, 2007). Descriptive statistics involve simple summaries about the samples and the dimensions of the data. The descriptive statistics could take the form of pie charts or tables, showing the basic data of the main components of the study for example demographic or biographical data.

6.4.1 *Demographic* Statistics

This study made use of demographic statistics in order to better profile the respondents in terms of their use of herbal products. Other elements of the data collected such as the number of male or female, as well as response of each question.

Figure 5.1: Age Distribution

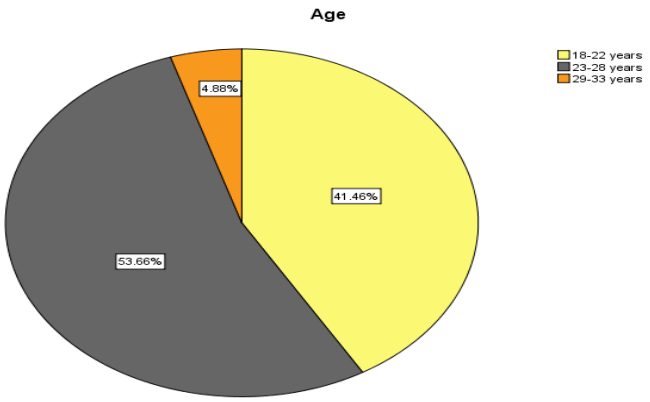


Table above present the age distribution of all the participants of the study. Most of the participants were between the ages of 23-28 years presented by 53%. This was followed by those female who were between the ages 18-22 years presenting 41% of the total participants. The smallest group was those females who were between the ages of 29-33 years presented by 4% of the total sample. Based on the results one can conclude that herbal products are mostly used by those female who are at their mid-twenties.

Figure 5.2: Study Level

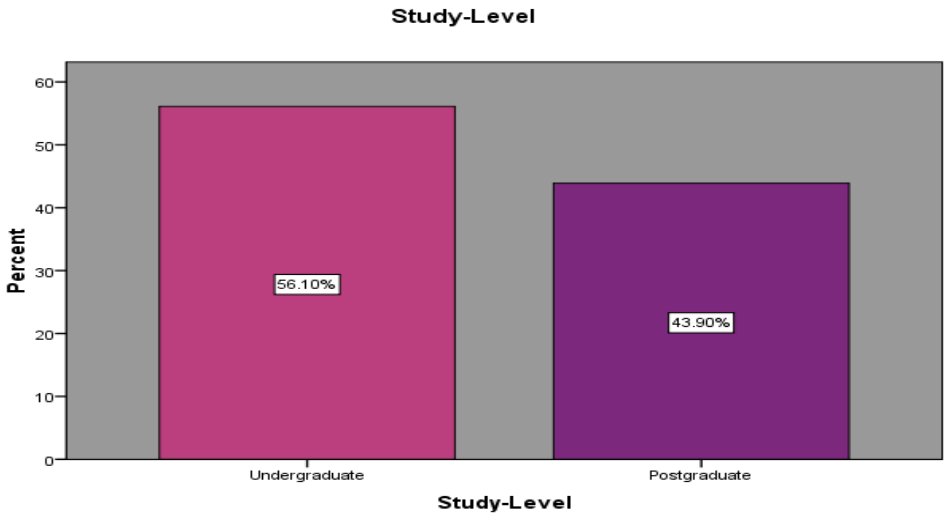
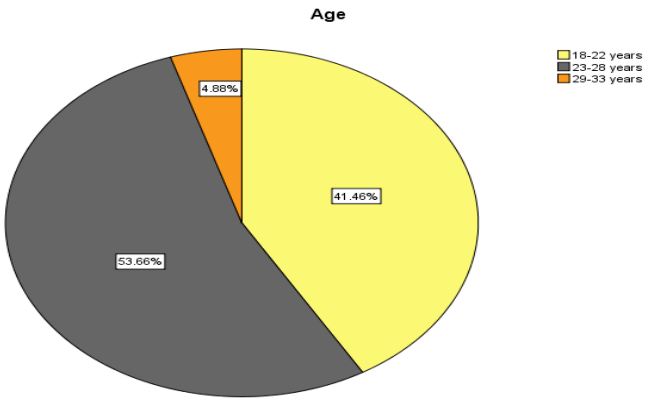


Figure 5.3 above illustrates level of study of participants in the study level/qualification. The majority were females who were undergraduate indicated by 56% which accounted for 138 of the total 246 participants. The remaining 43% represented those who had postgraduate representing 108 of the total 246 participants.

Figure 5.1: Age Distribution



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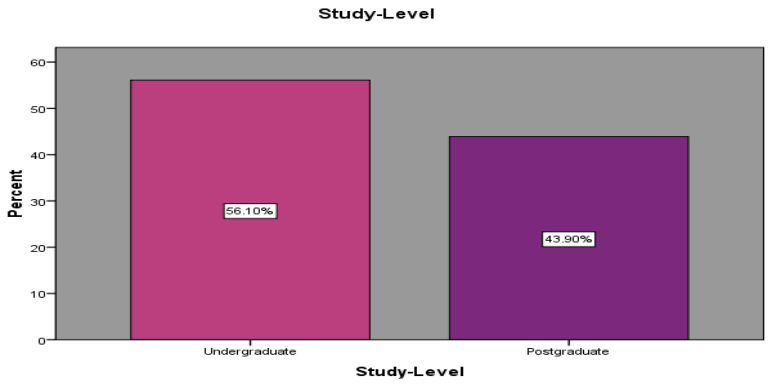
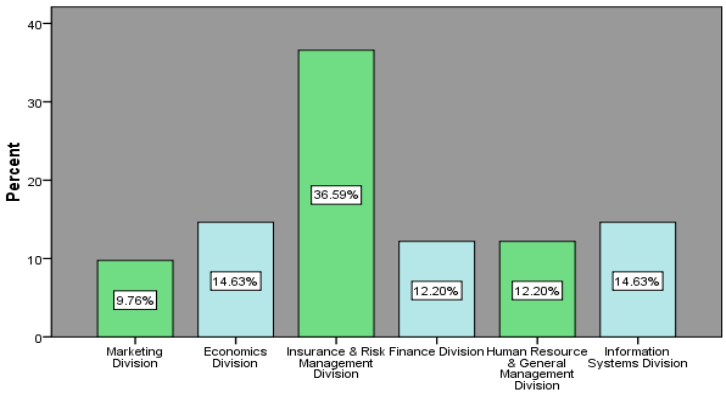


Figure 5.2 above illustrates level of study of participants in the study level/qualification. The majority were females who were undergraduate indicated by 56% which accounted for 138 of the total 246 participants. The remaining 43% represented those who had postgraduate representing 108 of the total 246 participants.

Figure 5.3: Division



As observed in figure 5.3 above the division of the participants. The majority of the participants were form the Insurance & Risk management division represented by 36.5%. This was followed by those who belonged to economics division and Information system division indicated by 14.6%, followed by both those who belonged to finance division and human resource &general management division represented by 12%. Finally those who belonged to marketing division representing 9% of the total sample.

Table 5.4: My friend (s) advise me to purchase herbal cosmetics

My friend(s) advise me to purchase herbal cosmetics.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	3	1.2	1.2	1.2
	Disagree	60	24.4	24.4	25.6
	Moderately agree	29	11.8	11.8	37.4
	Agree	91	37.0	37.0	74.4
	Strongly agree	63	25.6	25.6	100.0
	Total	246	100.0	100.0	

The table above indicate that 36% of the participants have their friends advising them to purchase herbal products. This was followed by those who has friends who strongly advise them to purchase herbal products representing 25%, those who had friends who disagree with purchasing herbal products represented by 24%, this was followed by those who moderately agreed with the statement representing 11% and finally those who disagreed with the statement representing 1% of the total sample.

Table 5.5: My family members advise me to purchase herbal cosmetics.

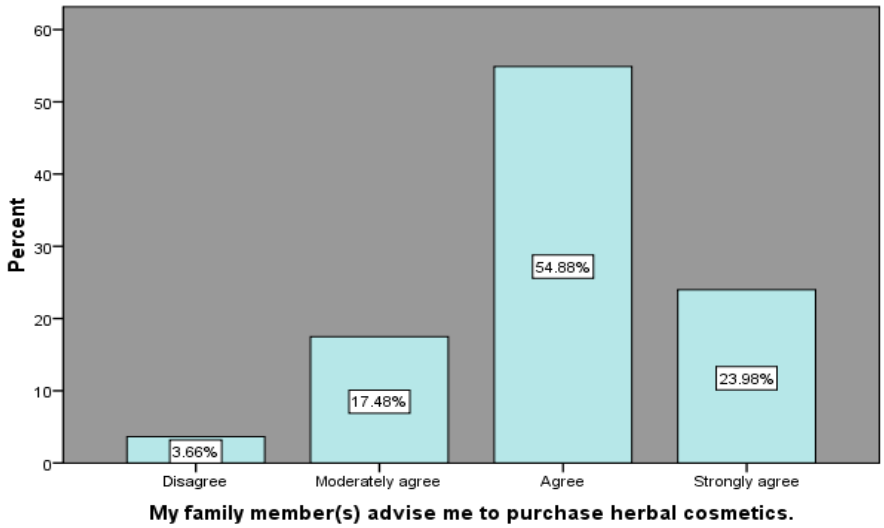


Table above illustrate the statement: My family members advise me to purchase herbal cosmetics. Most of the participants agreed with the statement representing 54% of the sample. This was followed by those who strongly agreed with the statement represented by 23%, those who moderately agreed with the statement representing 17% and finally those who do not have family members who advise them to purchase herbal products representing 3% of the total sample.

Table 5.6: My doctor (s)/Dermatologists advise me to purchase herbal cosmetics

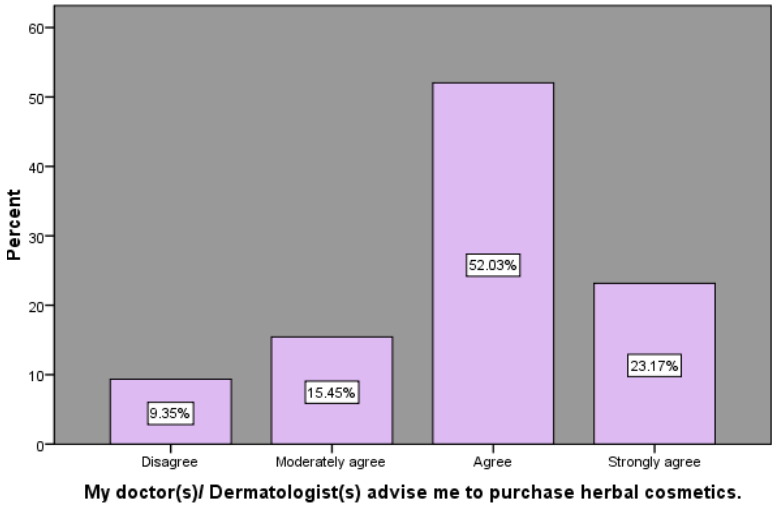


Table 5.6 illustrate the statement: My doctor(s)/Dermatologist advise me to purchase herbal cosmetics. 52% of the participants have doctor (s)/Dermatologist (s) who advise them to purchase herbal cosmetics. This was followed by those who strongly agree with the statement represented by 23%, those who moderately agree with the statement represented by 15% and the remaining 9% have no doctors/ dermatologists who advise them to purchase herbal cosmetics.

Table 1: Daily Newspaper (s) and magazine (s) influence me to purchase herbal cosmetics.

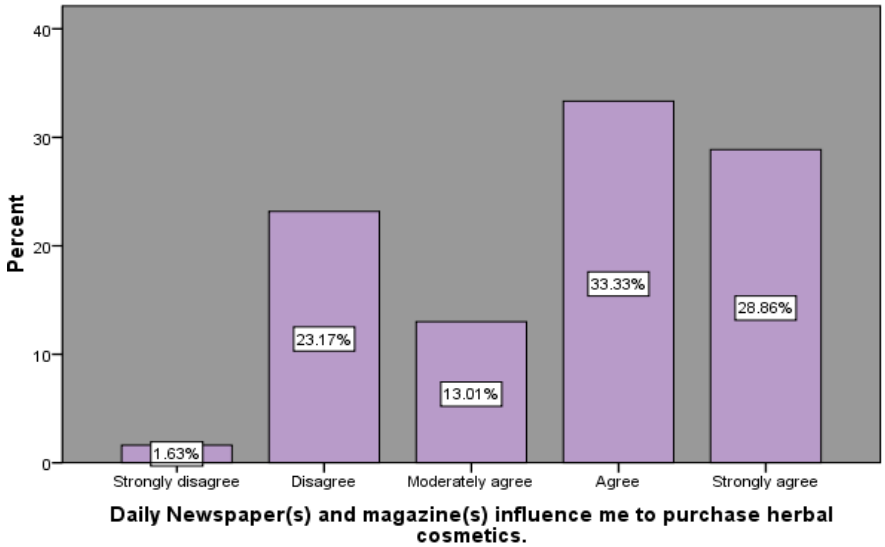
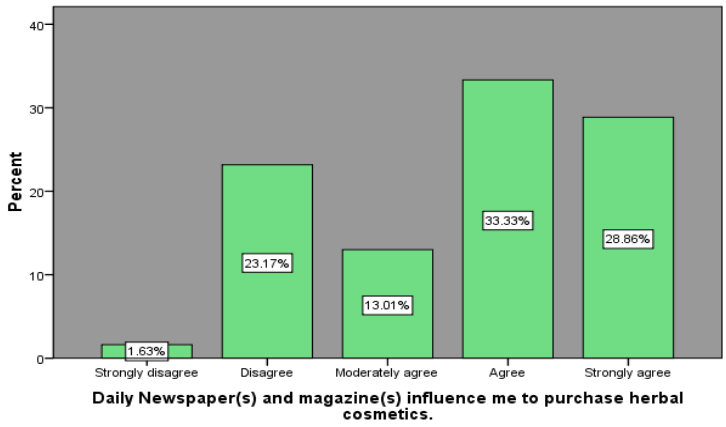


Table 5.7 above illustrate the statement: Daily Newspaper (s) and magazine (s) influence me to purchase herbal cosmetics. The majority agreed with the statement represented by 33%. This

was followed by those who strongly influenced by daily newspaper and magazines to purchase herbal cosmetics represented by 28%. This was followed by those who disagreed with the statement represented by 23%, those who moderately agreed with the statement represented by 13% and finally those who strongly disagree with the statement represented by 1% of the total sample.

Table 2: Mass Media(s) like television/ radio channels influence me to purchase herbal cosmetics.

Mass Media(s) like television / radio channels influence me to purchase herbal cosmetics.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	12	4.9	4.9	4.9
	Moderately agree	40	16.3	16.3	21.1
	Agree	149	60.6	60.6	81.7
	Strongly agree	45	18.3	18.3	100.0
	Total	246	100.0	100.0	



The table above illustrate the statement*:* Mass Media(s) like television/ radio channels influence me to purchase herbal cosmetics. Most of the participants agreed that they are influenced by mass media channels to purchase herbal cosmetics representing 60%. This was followed by 18% of those were strongly influenced by mass media channels to purchase herbal cosmetics, this was followed by those who moderately agree with the statement representing 16% and finally those who were not influenced by mass media channels to purchase herbal cosmetics representing 4% of the total sample.

Table 3: I know that I buy herbal cosmetic products and packages that are environmentally safe

I know that I buy herbal cosmetic products and packages that are environmentally safe.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	59	24.0	24.0	24.0
	Moderately agree	30	12.2	12.2	36.2
	Agree	105	42.7	42.7	78.9
	Strongly agree	52	21.1	21.1	100.0
	Total	246	100.0	100.0	

Table 5.9 illustrate the statement: I know that I buy herbal cosmetic products and packages that are environmentally safe. 42% of the participant agreed with the statement. This was followed by those who disagreed with the statement representing 24%, those who strongly agreed with the statement represented by 21% and finally those who moderately agreed with the statement represented by 12% of the total sample.

Table 5.10: I know more about recycling of used herbal cosmetics packages/containers than the average person

I know more about recycling of used herbal cosmetic packages/containers than the average person.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	22	8.9	8.9	8.9
	Moderately agree	36	14.6	14.6	23.6
	Agree	141	57.3	57.3	80.9
	Strongly agree	47	19.1	19.1	100.0
	Total	246	100.0	100.0	

Table 5.10 above illustrate the statement: I know more about recycling of used herbal cosmetics packages/containers than the average person. Majority of the participants agreed with the statement representing 57%. This was followed by those who strongly agreed with the statement representing 19%, those who moderately agree with the statement representing 14% and finally those who disagreed with the statement representing 8% of the total sample.

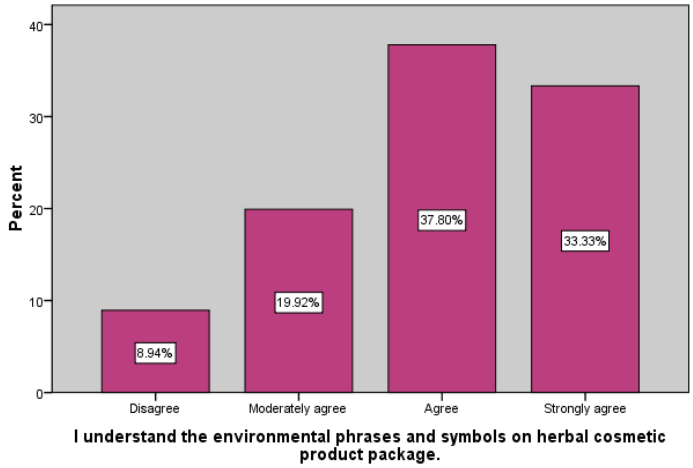
Table 4: I know how to select herbal cosmetic products and packages that reduce the amount of waste ending up in landfills.

I know how to select herbal cosmetic products and packages that reduce the amount of waste ending up in landfills.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	2	.8	.8	.8
	Disagree	53	21.5	21.5	22.4
	Moderately agree	11	4.5	4.5	26.8
	Agree	91	37.0	37.0	63.8
	Strongly agree	89	36.2	36.2	100.0
	Total	246	100.0	100.0	

Table 5.11 above illustrate the statement: I know how to select herbal cosmetic products and packages that reduce the amount of waste ending up in landfills. 37% of the participants agreed with the statement. This was followed by those strongly agreed with the statement represented by 36%, those who disagreed representing 21%, those who moderately agreed with the statement and finally those who strongly disagreed with the statement rpresenting0.8% of the total sample.

Table 5: I understand the environmental phrases and symbols on herbal cosmetic product package.

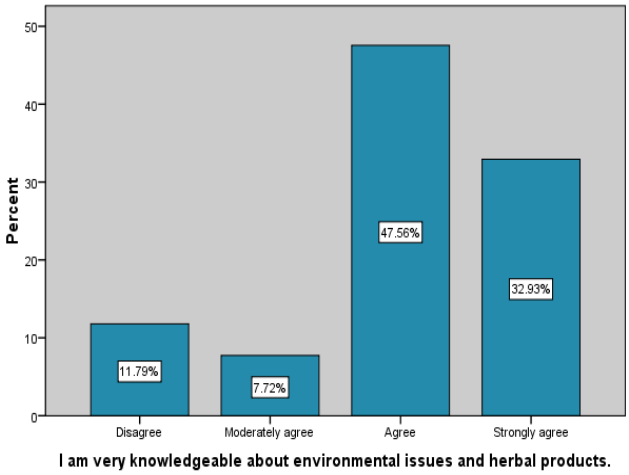
I understand the environmental phrases and symbols on herbal cosmetic product package.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	22	8.9	8.9	8.9
	Moderately agree	49	19.9	19.9	28.9
	Agree	93	37.8	37.8	66.7
	Strongly agree	82	33.3	33.3	100.0
	Total	246	100.0	100.0	



As presented in table 5.12 most of the participants understand the environmental phrases/symbols on herbal cosmetics packaging, represented by 37%. This was followed by those who strongly agreed with the statement representing 33%, those who moderately agreed with the statement represented by 19% and finally those who disagreed with the statement representing 8% of the total sample.

Table 5.13: I am very knowledge about environmental issues and herbal products.

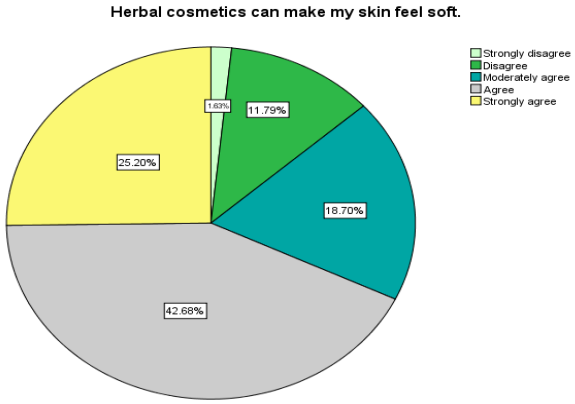
I am very knowledgeable about environmental issues and herbal products.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	29	11.8	11.8	11.8
	Moderately agree	19	7.7	7.7	19.5
	Agree	117	47.6	47.6	67.1
	Strongly agree	81	32.9	32.9	100.0
	Total	246	100.0	100.0	



The table above illustrate the statement: I am very knowledge about environmental issues and herbal products. Most of the participants agreed with the statement representing 47%. This was followed by those who strongly agree with the statement representing 32%, those who disagreed with the statement representing 11% and finally those who moderately agree with the statement representing 7% of the total sample.

Table 5.14: Herbal cosmetics can make my skin feel soft.

Herbal cosmetics can make my skin feel soft.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	4	1.6	1.6	1.6
	Disagree	29	11.8	11.8	13.4
	Moderately agree	46	18.7	18.7	32.1
	Agree	105	42.7	42.7	74.8
	Strongly agree	62	25.2	25.2	100.0
	Total	246	100.0	100.0	



The table above illustrate the statement: Herbal cosmetics can make my skin feel soft. Most of the participants agree that they skin feel soft when use herbal cosmetics, represented by 42%. This was followed by those who strongly agree that herbal products makes their skin soft, those who moderately agree with the statement 18%, those who disagree with the statement representing 11% and finally those who strongly disagree that herbal products makes their skis soft represented by 1% of the total sample.

Table 5.15: Herbal cosmetics can improve skin elasticity and reduce wrinkles.

Herbal cosmetics can improve skin elasticity and reduce wrinkles.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	2	.8	.8	.8
	Disagree	79	32.1	32.1	32.9
	Moderately agree	15	6.1	6.1	39.0
	Agree	65	26.4	26.4	65.4
	Strongly agree	85	34.6	34.6	100.0
	Total	246	100.0	100.0	

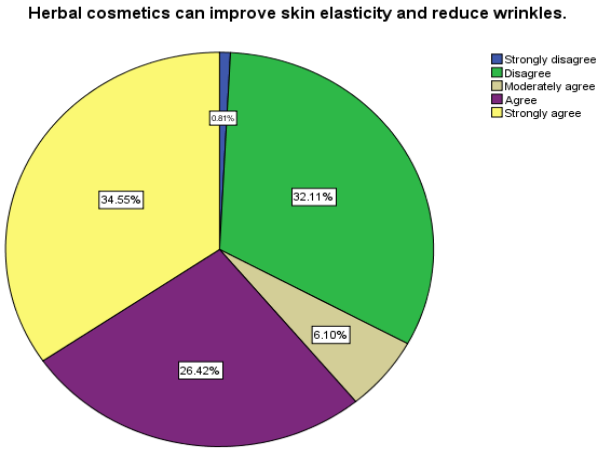
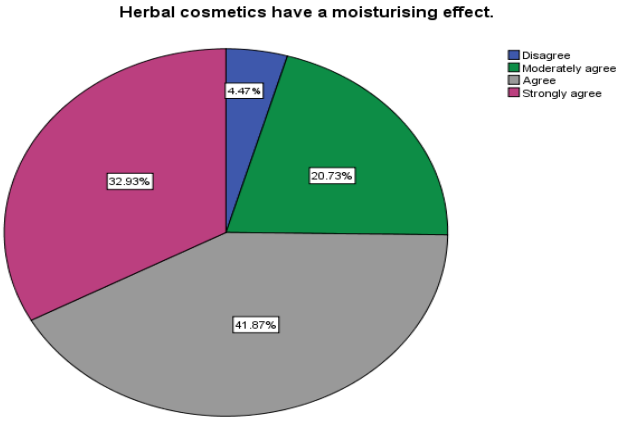


Table above illustrate the statement: Herbal cosmetics can improve skin elasticity and reduce wrinkles. Most of the participant strongly agree that herbal products improve skin elasticity and reduce wrinkles representing 34%. This was followed by those who disagreed with the statement represented by 32%, those who agreed with the statement representing 26%, those who moderately agreed 6% and the remaining 0.8% strongly disagreed with the statement.

Table 5.16: herbal cosmetics have a moisturising effect

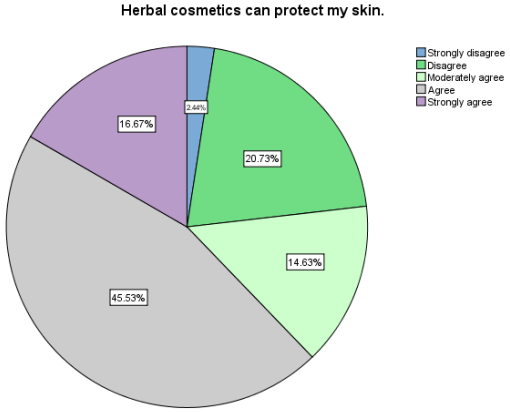
Herbal cosmetics have a moisturising effect.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	11	4.5	4.5	4.5
	Moderately agree	51	20.7	20.7	25.2
	Agree	103	41.9	41.9	67.1
	Strongly agree	81	32.9	32.9	100.0
	Total	246	100.0	100.0	



Most of the participants agree that herbal cosmetics have moisturising effect representing 41%. This was followed by those who strongly agree that herbal cosmetics have moisturising effect representing 32%, those who moderately agree with the statement 20% and finally those who disagree that herbal cosmetics have moisturising effect representing 4% of the total sample.

Table 5.17: Herbal cosmetics can protect my skin.

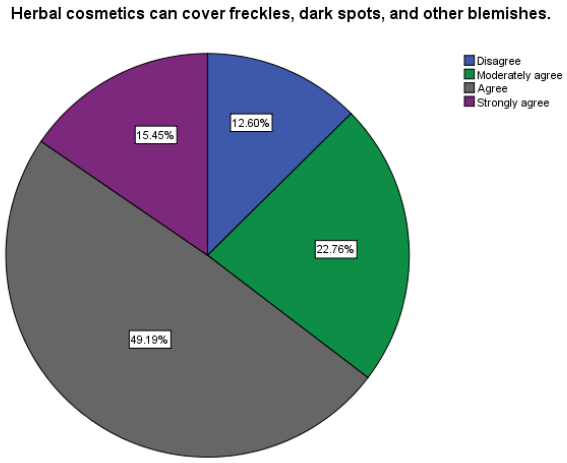
Herbal cosmetics can protect my skin.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	6	2.4	2.4	2.4
	Disagree	51	20.7	20.7	23.2
	Moderately agree	36	14.6	14.6	37.8
	Agree	112	45.5	45.5	83.3
	Strongly agree	41	16.7	16.7	100.0
	Total	246	100.0	100.0	



The majority agreed that herbal cosmetics can protect their skin by 45%. This was followed by those who disagree with the statement represented by 20%, those who strongly agree with the statement representing 16%, those who moderately agree 14% and lastly those who strongly disagree represented by 2% of the total sample.

Table 5.18: Herbal cosmetics can cover freckles, dark spot and other blemishes.

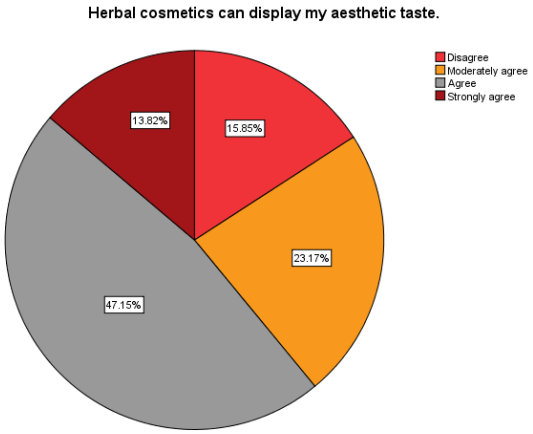
Herbal cosmetics can cover freckles, dark spots, and other blemishes.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	31	12.6	12.6	12.6
	Moderately agree	56	22.8	22.8	35.4
	Agree	121	49.2	49.2	84.6
	Strongly agree	38	15.4	15.4	100.0
	Total	246	100.0	100.0	



The table above illustrate the statement: Herbal cosmetics can cover freckles, dark spot and other blemishes. Most of the participants (49%) agree that herbal product can cover freckles, darks spot and blemishes. This was followed by those who moderately agree with the statement representing 22%, those who strongly agree with the statement by 15% and lastly those who disagree with the statement represented by 12% of the total sample.

Table 5.19: Herbal cosmetics can display my aesthetic taste.

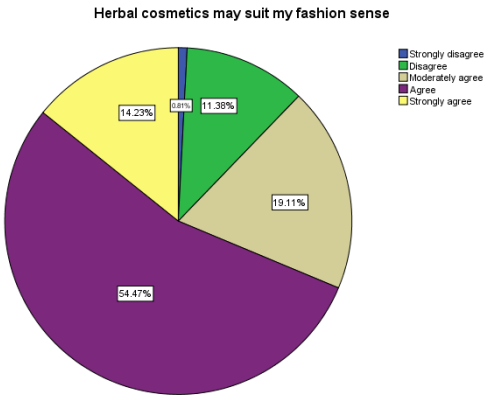
Herbal cosmetics can display my aesthetic taste.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	39	15.9	15.9	15.9
	Moderately agree	57	23.2	23.2	39.0
	Agree	116	47.2	47.2	86.2
	Strongly agree	34	13.8	13.8	100.0
	Total	246	100.0	100.0	



For the statement: Herbal cosmetics can display my aesthetic taste, 47% of the participants agree with the statement. This was followed by 23% of participants who moderately agree, 15% disagreed with the statement and the remaining 13% strongly agreed with the statement.

Table 5.20: Herbal cosmetics may suit my fashion sense.

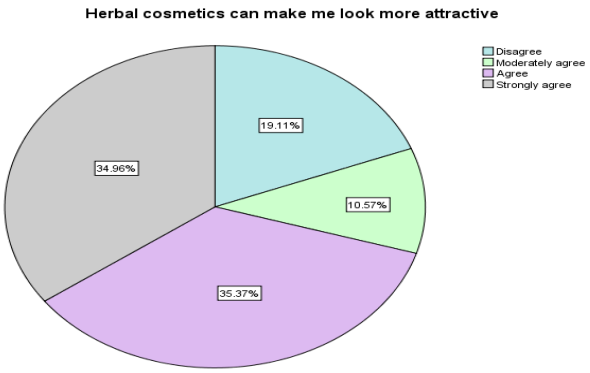
Herbal cosmetics may suit my fashion sense					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	2	.8	.8	.8
	Disagree	28	11.4	11.4	12.2
	Moderately agree	47	19.1	19.1	31.3
	Agree	134	54.5	54.5	85.8
	Strongly agree	35	14.2	14.2	100.0
	Total	246	100.0	100.0	



54% of the participants agree with the statement: herbal cosmetics may suit my fashion sense. This was followed by the 19% who moderately agree with the statement, 14% strongly agreed that it may suit their fashion sense, 11% disagreed with the statement and the remaining 0.8% strongly disagreed with the statement.

Table 5.21: Herbal cosmetics can make me look more attractive

Herbal cosmetics can make me look more attractive					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	47	19.1	19.1	19.1
	Moderately agree	26	10.6	10.6	29.7
	Agree	87	35.4	35.4	65.0
	Strongly agree	86	35.0	35.0	100.0
	Total	246	100.0	100.0	



The table above illustrate the statement: Herbal cosmetics can make me look more attractive. The majority agreed with the statement representing 35%. Followed by the group who strongly agree that herbal cosmetics make them look more attractive, 34%, those who disagree with the

statement representing 19% and finally those who moderately agree with the statement representing 10% of the total sample.

Table 5.22: Herbal cosmetics can help me to look brighter.

Herbal cosmetics can help me to look brighter					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	2	.8	.8	.8
	Disagree	29	11.8	11.8	12.6
	Moderately agree	34	13.8	13.8	26.4
	Agree	93	37.8	37.8	64.2
	Strongly agree	88	35.8	35.8	100.0
	Total	246	100.0	100.0	

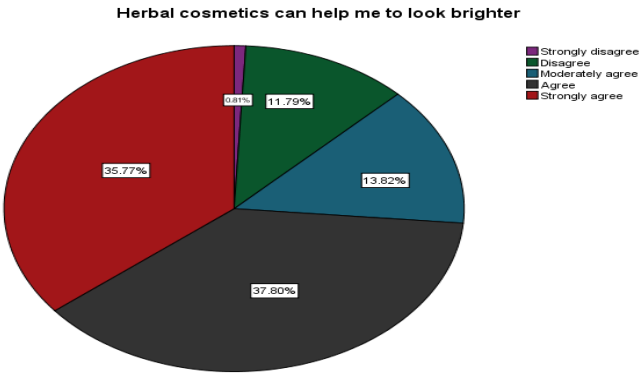
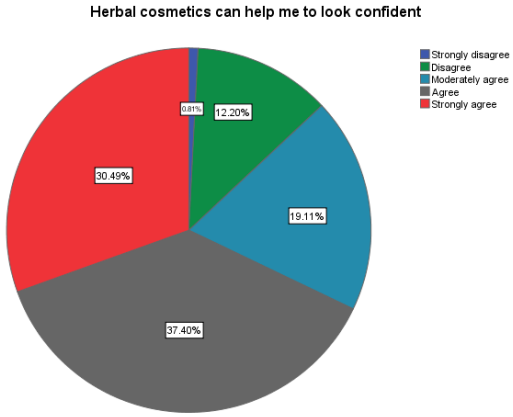


Table 5.22 above illustrate: herbal cosmetics can help me to look brighter. Most of the participants agreed with the statement represented by 37%. This was followed by those who strongly agreed with the statement 35%, those who moderately agree with the statement 13%, those who disagreed with the statement 11% and lastly those who strongly disagreed with the statement representing 0.8% of the total sample.

Table 5.23: Herbal cosmetics can help me look confident

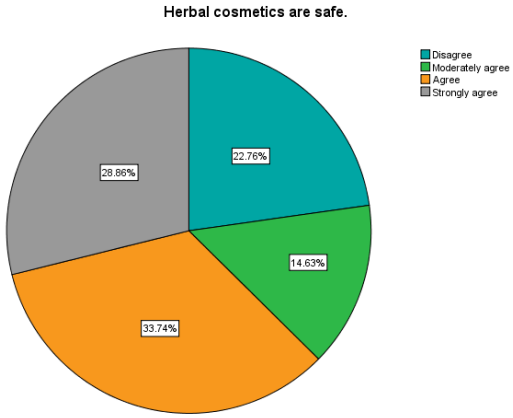
Herbal cosmetics can help me to look confident					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	2	.8	.8	.8
	Disagree	30	12.2	12.2	13.0
	Moderately agree	47	19.1	19.1	32.1
	Agree	92	37.4	37.4	69.5
	Strongly agree	75	30.5	30.5	100.0
	Total	246	100.0	100.0	



As shown on the pie chart above most of the participants agreed that herbal cosmetics makes them look confident represented by 37%. This was followed by those who strongly agreed to looking confident after using herbal cosmetic by 30%, those who disagreed with the statement represented by 12% and finally those who strongly disagreed with the statement by 0.8% of the total sample.

Table 5.24: Herbal cosmetics are safe

Herbal cosmetics are safe.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	56	22.8	22.8	22.8
	Moderately agree	36	14.6	14.6	37.4
	Agree	83	33.7	33.7	71.1
	Strongly agree	71	28.9	28.9	100.0
	Total	246	100.0	100.0	

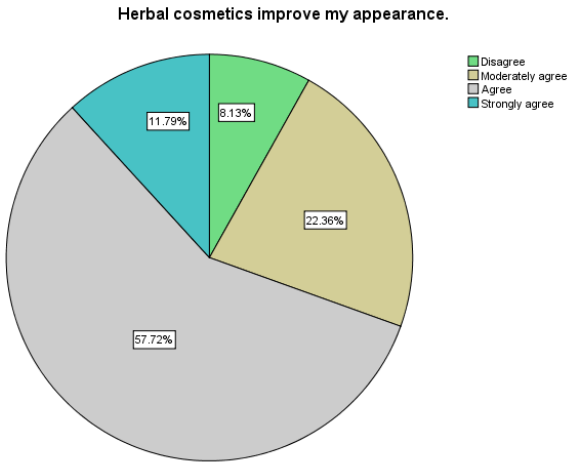


The majority of the participants agree that herbal cosmetics are safe representing 33%. This

was followed by those strongly agree that herbal cosmetics are safe represented by 28%, those who disagreed with the statement 22% and the remaining 14% moderately agree with the statement.

Table 5.25: Herbal cosmetics improve my appearance

Herbal cosmetics improve my appearance.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	20	8.1	8.1	8.1
	Moderately agree	55	22.4	22.4	30.5
	Agree	142	57.7	57.7	88.2
	Strongly agree	29	11.8	11.8	100.0
	Total	246	100.0	100.0	

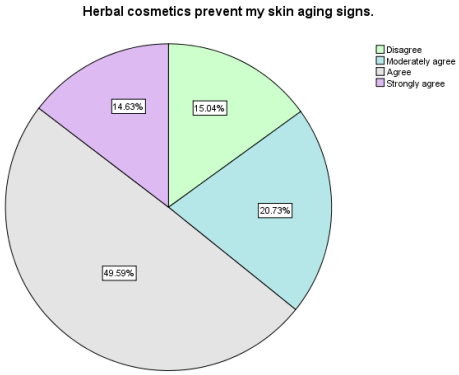


The table above illustrate the statement: herbal cosmetics improve my appearance. The majority agree to this statement by 57%. This was followed by those who moderately agree with the statement represented by 22%, those who strongly agreed with the statement represented by 11% and finally those who disagreed with the statement represented by 8% of the total sample.

Table 5.26: herbal cosmetics prevent my skin aging signs

Herbal cosmetics prevent my skin aging signs.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	37	15.0	15.0	15.0
	Moderately agree	51	20.7	20.7	35.8
	Agree	122	49.6	49.6	85.4
	Strongly agree	36	14.6	14.6	100.0

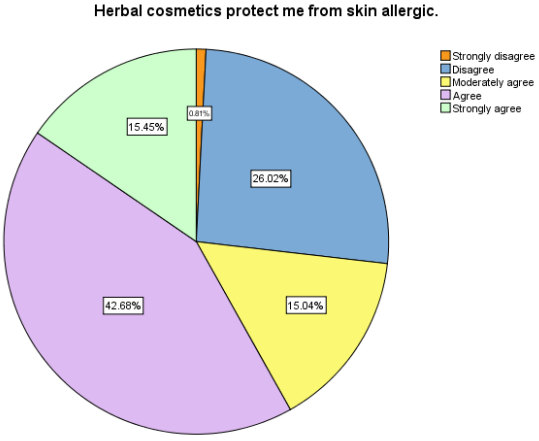
	Total	246	100.0	100.0	



49% of the participants agree that herbal cosmetics prevent their skins from aging signs. This was followed by those moderately agreed with the statement representing 20% of the participants, those who disagreed with the statement by 15% and lastly those who strongly agreed with the statement represented by 14% of the total sample.

Table 5.27: herbal cosmetics protect me from skin allergic

Herbal cosmetics protect me from skin allergic.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	2	.8	.8	.8
	Disagree	64	26.0	26.0	26.8
	Moderately agree	37	15.0	15.0	41.9
	Agree	105	42.7	42.7	84.6
	Strongly agree	38	15.4	15.4	100.0
	Total	246	100.0	100.0	

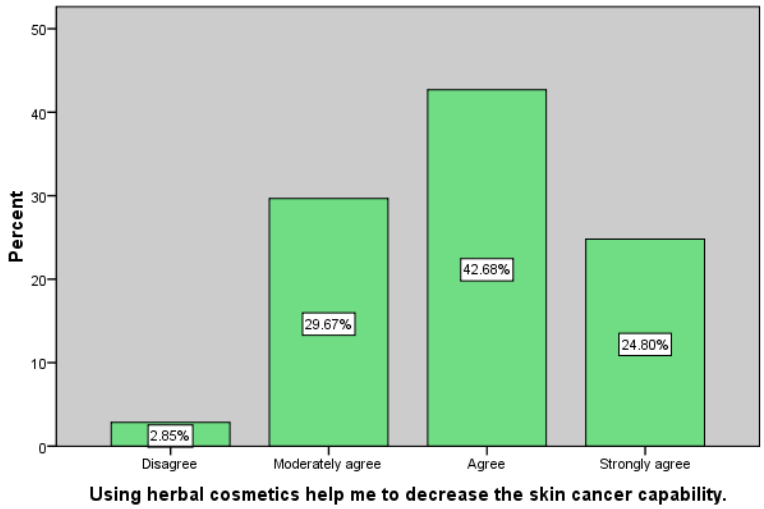


As shown on the graph above 42% of the participants agreed with the statement. This was

followed by those who disagreed with the statement represented by 26%, those who moderately agreed with the statement represented by 15%, those strongly agreed with the statement represented by 15% and finally those who strongly disagreed with the statement represented by 0.8% of the total sample.

Table 5.28: Using herbal cosmetics help me to decrease the skin cancer capability

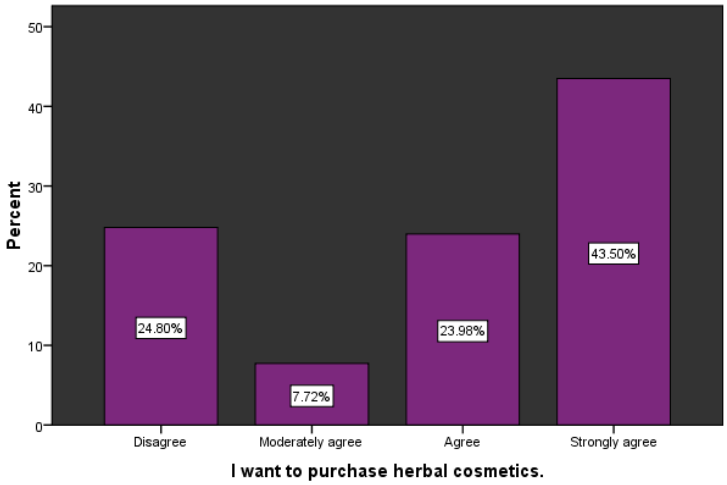
Using herbal cosmetics help me to decrease the skin cancer capability.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	7	2.8	2.8	2.8
	Moderately agree	73	29.7	29.7	32.5
	Agree	105	42.7	42.7	75.2
	Strongly agree	61	24.8	24.8	100.0
	Total	246	100.0	100.0	



As presented in table 54 most of the participants agreed with the statement represented by 42%. This was followed by 29% of those who moderately agreed with the statement, 24% of those who strongly agreed and lastly 2% of those who disagreed with the statement.

Table 5.29: I want to purchase herbal cosmetics

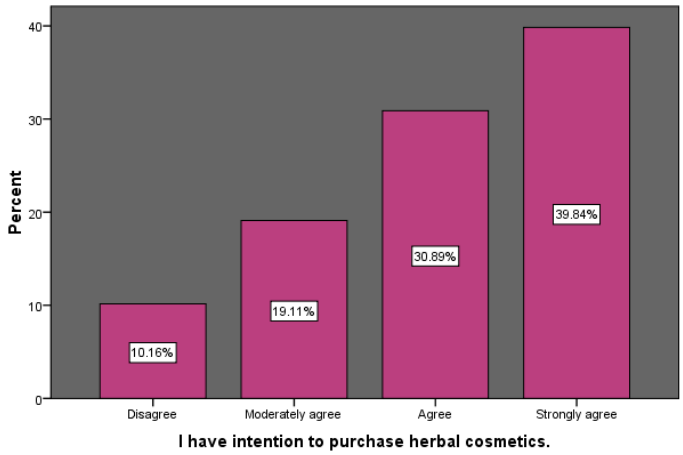
I want to purchase herbal cosmetics.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	61	24.8	24.8	24.8
	Moderately agree	19	7.7	7.7	32.5
	Agree	59	24.0	24.0	56.5
	Strongly agree	107	43.5	43.5	100.0
	Total	246	100.0	100.0	



As presented in table 71, 43% strongly want to purchase herbal cosmetics. This was followed by 24% who do not want to purchase herbal cosmetics, 23% want to purchase herbal cosmetics and the remaining 7% would moderately want to purchase herbal cosmetics.

Table 5.30: I have intention to purchase herbal cosmetics

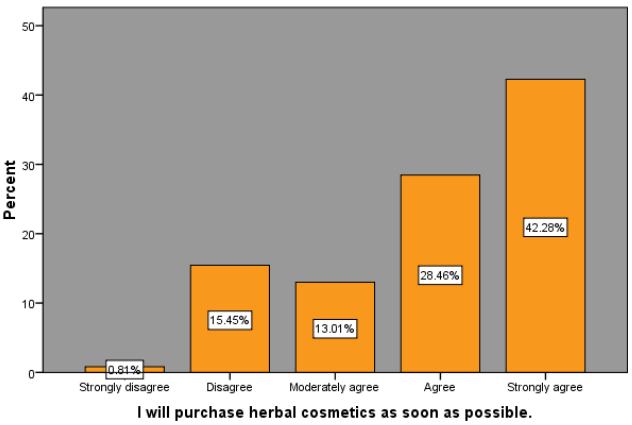
I have intention to purchase herbal cosmetics.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	25	10.2	10.2	10.2
	Moderately agree	47	19.1	19.1	29.3
	Agree	76	30.9	30.9	60.2
	Strongly agree	98	39.8	39.8	100.0
	Total	246	100.0	100.0	



As presented in table above, 39% of the participants have strong intention to purchase herbal cosmetics. This was followed by those agree that they have intention to purchase herbal cosmetics (30%), those who moderately agreed to having intention to purchase herbal cosmetics (19%) and lastly those who disagreed to having intention to purchase herbal cosmetics represented by 10% of the total sample.

Table 5.31: I will purchase herbal cosmetics as soon as possible

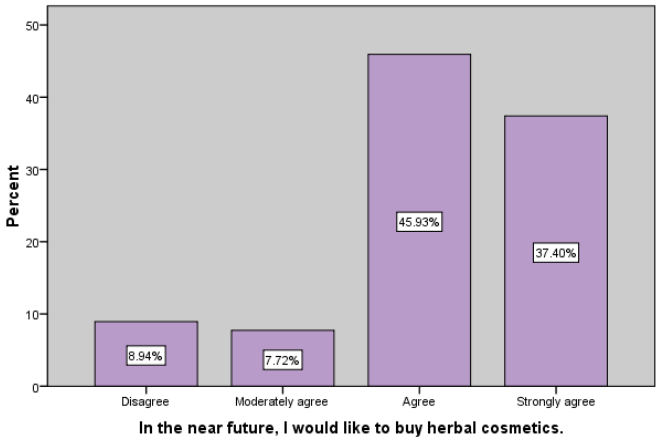
I will purchase herbal cosmetics as soon as possible.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	2	.8	.8	.8
	Disagree	38	15.4	15.4	16.3
	Moderately agree	32	13.0	13.0	29.3
	Agree	70	28.5	28.5	57.7
	Strongly agree	104	42.3	42.3	100.0
	Total	246	100.0	100.0	



The table above illustrate the statement: I will purchase herbal cosmetics as soon as possible. The majority of the participants' strongly agreed with the statement represented by 42%. This was followed by those who agreed with the statement represented by 28%, those who disagreed with the statement (15%), those who moderately agreed with the statement (13%) and finally those who strongly dis agreed with the statement representing 0.8% of the total sample.

Table 5.32: in the near future, I would like to buy herbal cosmetics.

In the near future, I would like to buy herbal cosmetics.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	22	8.9	8.9	8.9
	Moderately agree	19	7.7	7.7	16.7
	Agree	113	45.9	45.9	62.6
	Strongly agree	92	37.4	37.4	100.0
	Total	246	100.0	100.0	



As shown on the table above, most of the participants agree to purchase herbal cosmetics in the future represented by 45%. This was followed by those who strongly agreed with the statement (37%), those who disagreed with the statement (8%) and finally those who moderately agreed with the statement representing 7% of the total ample.

5.2. Structural Equation Modeling Approach

A two-stage approach in SEM as espoused by Anderson and Gerbing (1988) was employed. First, a confirmatory factor analysis (CFA) was carried out to determine the reliability and validity of the measurement model. As for validity, both discriminant and convergent validity of each construct in the model were assessed. Finally, the model fit for the measurement model was checked in order to determine the fit between the data and research model. The second stage focused on path analysis. Proposed hypotheses were tested and path coefficients and the p-values for assessing the significance level of the proposed relationships are provided

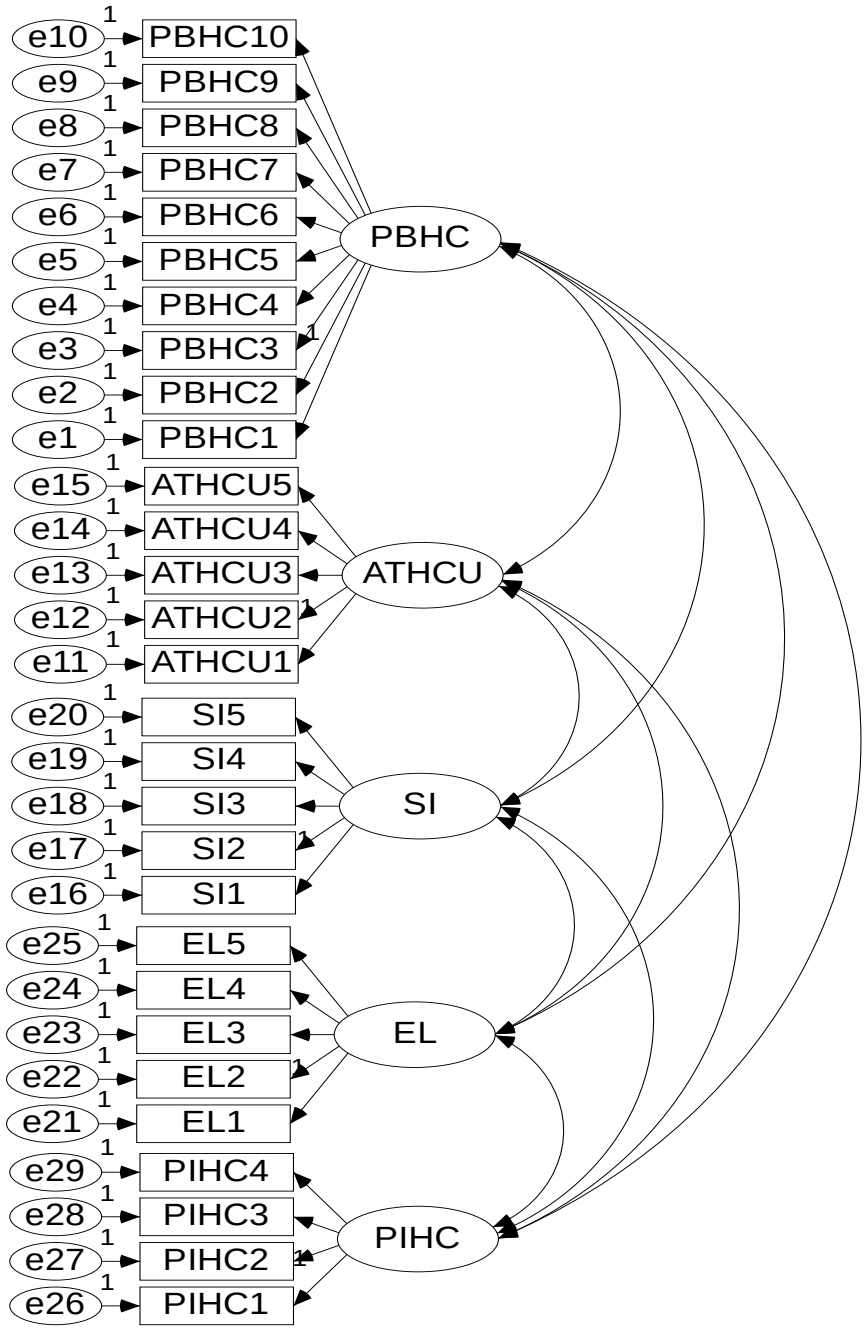
5.3. Measurement Model Assessment

The measurement model assessment mainly focused on three issues. These are the measurement instruments reliability, measurement instruments validity and the model fit. The confirmatory factor analysis model was used to generate these required statistics.

5.4. Confirmatory Factor Analysis Model

The figure below represents the confirmatory factor analysis model used to generate the standardised regression weights for the five constructs in the conceptual model. The standardised regression weights (factor loadings) were used by the researcher to calculate the composite reliability values and average variance extracted values for all the research constructs.

Figure 5.33: Confirmatory Factor Analysis Model



Note: SI = Social Influence on Generation Y Female Cohort; PBHC = Perceived Benefits of Herbal Cosmetics; EL = Eco-Literacy of Generation Y Female Cohort; ATHCU = Attitude towards Herbal Cosmetics Use; PIHC = Purchase Intention of Herbal Cosmetics.

5.5. Reliability Assessment

The reliability of the measurement instruments was assessed using both the Cronbach alpha coefficient and Composite reliability indicator.

5.5.1. Cronbach Alpha Coefficient (α)

Cronbach's coefficient alpha was used to evaluate the measurement scale in the study. Thus, Cronbach's alpha was used to verify the internal consistency of the variables – that is, to evaluate the reliability of the measurements of each variable. According to Kipkebut (2010) values for Cronbach alpha ranges between 0 and 1. Hair et cetera. (2009) also indicated that values higher than 0.6 were considered as being reliable. In the current study, the lowest Cronbach Alpha value was 0.816 while the highest value was 0.922. It was then clear that, the Cronbach alpha values of the study all exceeded the recommended threshold of 0.6, hence, authenticating that the measures that were used in the study were all reliable as presented in Table 5.35.

5.5.2. *Composite Reliability Coefficient (CR)*

The Composite Reliability (CR) index was also used to check internal consistency of the measurement model. Ramayah et cetera. (2011) observed that, composite reliability shows the extent to which variable indicators identify the latent variable. Urbach and Ahlemann (2010) posited that, values that are acceptable are normally between zero and one. According to Yang & Lai (2010) it is recommended that composite reliability values must exceed 0.7. The composite reliability test was calculated using the following formula:

$CR\eta = (\Sigma\lambda yi)\ 2/\ [(\Sigma\lambda yi)\ 2+ (\Sigma\varepsilon i)]$

Composite Reliability = (square of the summation of the factor loadings)/ {(square of the summation of the factor loadings) + (summation of error variances)}.

The current study's lowest composite reliability (CR) value was 0.813 while the highest value was 0.884. Table 6.15 provides the figures for the composite reliability values which were all greater than 0.7.

5.6. *Validity Assessment*

The study assessed both convergent and discriminant validity. Convergent validty results were provided first and then followed by discriminant validity.

5.6.1. Convergent validity

According to Hair et cetera. (2006: 771) convergent validity is "the extent at which indicators of a specific variable converge or share a high proportion of variance in common." It simply explains the extent at which a scale correlates with other measures of the same construct to the same direction. According to Carlsman and Herdman (2012) weaker convergent validity is evident using values deviating from one while values closer to one are normally accepted. In the current study, Factor loadings (standardised regression weights) and Item-to total correlation values.

5.6.1.1. *Factor Loading / Standardised Regression Weights*

Table 5.35 presents the estimates of the factor loadings/standardised regression weights that were all greater than 0.5, showing a greater convergent validity. The lowest loading or regression weight was 0.511, representing attitude towards herbal cosmetics use question number five (ATHCU5) while the highest among the loadings was also with the attitude towards herbal cosmetics use question number one (ATHCU1) with 0.884. This result indicates that all the measurement isnstruments used in this study explained at least 51% of what they are supposed to measure.

5.6.1.2. **The item-to-total correlation**

The corrected -item-to-total correlation values are shown in Table 16.6 which indicates the degree at which each item correlates with the total score (Pallant, 2010). Individual items or questions ought to be correlated between each distinct item and the total score (Field, 2006). Values that are less than three or < 3, shows that the item is measuring something different from the scale as a whole (Pallant, 2010:100). In this study, individual items that were less than 3 were considered as incorrect item scores and they were therefore removed prior to the statistical analysis. The values for the individual items ranged from 0.512 to 0.852. This demonstrates the reliable nature of the items that were used for the study. Again, this result further confirms that all the measurement isnstruments used in this study explained at least 51% of what they are supposed to measure.

5.6.2. Discriminant validity

Kline (2011) defined discriminant validity as contrary to convergent validity in the extent that variables alleged to evaluate different variables shows discriminant validity. Discriminant validity describes how measures in the same study are distinct from other measures. Inter-construct correlation matrics and Average variance extracted (AVE) compared to Shared variance (SV) were used to assess the discriminant validity in the current study.

5.6.2.1. *Inter-Construct Correlation Matrix*

The discriminant validity of the study was examined through an examination of the correlation values of the research constructs. The correlation values ramge from 0 – 1. A low correlation between research constructs indicates that the research constructs are unique and distinct from one another – while the reverse indicates the absence discriminant validity. Theoretically, a correlation value less than 0.6 is demmed an indicator of discriminant validity. However, practically, a correlation value that is less than 0.85 is still regarded marginally acceptable (Chinomona, 2011). In the current study, the highest correlation value is 0.599 as provided in Table 5.34 - hence confirming the existence of discriminant validity of the research constructs used in the current study.

Table 5.34: Correlation between the constructs

RESEARCH CONSTRUCTS	**SI**	**EL**	**ATHCU**	**PBHC**	**PIHC**
SI	**0.312**				
EL	0.317**	**0.203**			
ATHCU	0.523**	0.326**	**0.350**		
PBHC	0.497**	0.451**	0.363**	**0.247**	
PIHC	0.599**	0.483**	0.592**	0.335**	**0.312**

***. Correlation is significant at the 0.01 level (2-tailed).*

Note: SI = Social Influence on Generation Y Female Cohort; PBHC = Perceived Benefits of Herbal Cosmetics; EL = Eco-Literacy of Generation Y Female Cohort; ATHCU = Attitude

towards Herbal Cosmetics Use; PIHC = Purchase Intention of Herbal Cosmetics.

5.6.2.2. Average value extracted (AVE)

The average variance extracted approximate reflects the total elements of variance in the indicators which are accounted for by a latent construct. Dillon and Goldstein (1984) suggested that an AVE value greater than 0.50 demonstrates that the convergent validity of the variable is good. According to Fraering and Minor (2006) an AVE value of 0.4 is seen as satisfactory. Hair et cetera. (2006) also observed that a threshold value of 0.30 qualifies to be used as a minimum threshold in social sciences while in marketing, an accepted threshold of 0.5 was comparatively acceptable. The current study has thresholds ranging from 0.500 to 0.615, which is consistent with that of Fraering and Minor (2006) and Hair *et cetera.* (2006) and they are presented in Table

5.35. The values were calculated using Amos software and were again cross-checked with the manual calculation, which resulted in same values using the formula below:

$V\eta=\Sigma\lambda yi2/ (\Sigma\lambda yi2+\Sigma\varepsilon i)$

AVE = {(summation of the squared of factor loadings)/ {(summation of the squared of factor loadings) + (summation of error variances)}.

The AVE values greater than 05 further confirmed discriminant validity of the research constructs. However, to test the discriminant validity, a comparison of the AVE and the highest shared variance (HSV) was made in this study. This was done by either comparing either the AVE with the highest shared variance or through a comparison of the square root of the AVE for each construct and its relationship with other constructs (Fornell & Larcker, 1981:337). The highest shared variance (HSV) is found by squaring the highest shared correlation value among constructs. The Highest shared variance values (HSV) are provided in Table 5.34 as the diagonal values while the AVE values are provided in Table 5.35. A construct that is unique and distinct from other research construct is expected to have the Highest Shared Value (HSV) less than its Average Variance Extracted (AVE) (Chinomona, 2011). As can be noted from the current study results, the Highest Shared Variance (HSV) provided in Table 5.35, are all less than the AVE coefficients provided in Table 5.35 – hence confirming the existence of discriminant validity. Alternatively, as suggested by Fornell and Larcker (1981:337), discriminant validity was also achieved when a square root of an AVE for each research construct was found to be greater than the correlation with the other construct – showing that discriminant validity has been achieved.

5.7. Summary of Measurement Model Accuracy Statistics

The Table 5.35, below provides a summary of the descriptive statistics and the measurement model assessment statistics. The mean values provided below indicate that the majority of the respondents agreed with the measures asked (>3-<5). The standard deviations were less than 2, therefore, indicating that the mean values are correct reflection of the majority average perceptions. Detailed explanation of the measurement model statistics is provided under the reliability and validity assessment sections.

Table 5.35: Scale accuracy analysis

Research constructs		**Scale item**		**Cronbach's test**		**CR**	**AVE**	**Highest Shared Variance**	**Factor loadings**
		Mean	**SD**	**Item-total**	**α value**				
SI	**SI1**	3.61	1.147	0.782	0.870	0.878	0.592	0.312	0.841
	SI2	3.99	0.750	0.649					0.700
	SI3	3.89	0.867	0.704					0.753
	SI4	3.65	1.171	0.758					0.846
	SI5	3.92	0.733	0.674					0.693
ATHCU	**ATHCU1**	3.69	1.119	0.735	0.816	0.813	0.500	0.350	0.898
	ATHCU2	3.73	0.773	0.554					0.575
	ATHCU3	3.64	0.910	0.581					0.635
	ATHCU4	3.46	1.063	0.685					0.761
	ATHCU5	3.89	0.806	0.502					0.511
PIHC	**PIHC1**	3.86	1.221	0.791	0.860	0.864	0.615	0.312	0.859
	PIHC2	4.00	1.000	0.671					0.726
	PIHC3	3.96	1.117	0.719					0.832
	PIHC4	4.12	0.893	0.672					0.711
PBHC	**PBHC1**	3.78	1.006	0.721	0.922	0.884	0.564	0.247	0.809
	PBHC2	3.62	1.275	0.852					0.886
	PBHC3	4.03	0.847	0.744					0.743
	PBHC4	3.53	1.071	0.677					0.714
	PBHC5	3.67	0.885	0.638					0.641
	PBHC6	3.59	0.916	0.656					0.689
	PBHC7	3.70	0.880	0.519					0.534
	PBHC8	3.86	1.098	0.771					0.808
	PBHC9	3.96	1.021	0.727					0.742

	PBHC10	3.85	1.018	0.762					0.796
EL	**EL1**	3.61	1.070	0.745	0.852	0.852	0.537	0.203	0.835
	EL2	3.87	0.825	0.512					0.686
	EL3	3.86	1.152	0.747					0.742
	EL4	3.96	0.944	0.679					0.753
	EL5	4.02	0.939	0.658					0.635

Note: SI = Social Influence on Generation Y Female Cohort; PBHC = Perceived Benefits of Herbal Cosmetics; EL = Eco-Literacy of Generation Y Female Cohort; ATHCU = Attitude towards Herbal Cosmetics Use; PIHC = Purchase Intention of Herbal Cosmetics.

SD= Standard Deviation CR= Composite Reliability AVE= Average Variance Extracted

** Scores: 1 – Strongly Disagree; 3 – Moderately Agree; 5 – Strongly Agree*

5.8. Model Fit Summary – Measurement Model

This section presents the analysis of the study's model fit which are grouped into three: the absolute fit indices, incremental fit indices as well as the parsimony fit indices (Hair et cetera. 2010:665). The indices examined are: CMIN or the Chi-square $\chi 2$ /df), the Normed Fit Index (NFI), the Goodness-Of-Fit Index(GFI), the Root Mean Square Error of Approximation (RMSEA), the Tucker Lewis Index (TLI), the Comparative Fit index (CFI) as well as the Incremental Fit Index (IFI).

The Chi-square (CMIN/DF) was 2.015, falling below the recommended threshold of 3 by (Chinomona, 2011). The rest of the model fit indices were as follows: The Comparative fit index (CFI) was 0.911 exceeded the acceptable level of 0.900 suggested by (Hooper, Coughlan & Mullen, 2008), the goodness of fit index (GFI) was 0.902 exceeding the acceptable 0.9 level according to (Baumgartner & Hombur, 1996). The Relative fit index (RFI) was 0.904 also exceeding recommend value of 0.9 by (McDonald & Ho, 2002). Furthermore, the normed fit index (NFI) was 0.931 surpassing the 0.900 point as endorsed by (Bentler & Bonett, 1980) and the incremental fit index (IFI) was 0.922 also surpassed the 0.900 point as advised by (Bollen, 1989). The Tucker-Lewis Index (TLI) was 0.904, which was above the required 0.900 according to (Hooper *et cetera.* 2008). Finally, the root mean square error of approximation (RMSEA) was falling below the recommended thresholds of 0.08 and 0.05= 0.057.

Table 5.36: Model Fit Summary – Measurement Model

Model Fit Indices	Acceptable Threshold	Current Study Threshold	Decision: Acceptable/Unacceptable
Chi-Square Value:$\chi 2/(df)$	<3	2.015	Acceptable
Comparative Fit Index (CFI)	> 0.900	0.911	Acceptable
Goodness of Fit Index (GFI)	> 0.900	0.902	Acceptable
Incremental Fit Index (IFI)	> 0.900	0.922	Acceptable
Normed Fit Index (NFI)	> 0.900	0.931	Acceptable
Tucker Lewis Index (TLI)	> 0.900	0.904	Acceptable
Random Measure of Standard Error Approximation (RMSEA)	< 0.08	0.057	Acceptable

Note: SI = Social Influence on Generation Y Female Cohort; PBHC = Perceived Benefits of Herbal Cosmetics; EL = Eco-Literacy of Generation Y Female Cohort; ATHCU = Attitude towards Herbal Cosmetics Use; PIHC = Purchase Intention of Herbal Cosmetics.

The results of the fit indices of the initial assessment of the confirmatory factor analysis of all the manifest variables and their indicators were all acceptable as presented in the Table 5.36. The findings from the CFA showed that the conceptual model was a depiction of the data that was collected for the study. Lytras et cetera. (2010:63) and Thai et cetera. (2015:195) observed that, once a good fit is obtained for a hypothesised model, the path significance of each association in the research model and the variance ought to be estimated. In view of that, the path modelling, and its hypotheses testing are estimated in the next section.

5.9. *Structural model Assessment and Hypotheses Testing*

The diagram illustrated below, Figure 5.39 and Table 5.38, is an illustration of the structural model also known as the path model which depicts the results of the tested hypothesis of the study's research conceptual model. In the structural model social influence, perceived benefits of herbal cosmetics and eco-literacy are depicted to have direct effects on attitude towards herbal cosmetics use and purchase intention of herbal cosmetics. Furthermore, attitude towards herbal cosmetics use is noted to have an influence on purchase intention of herbal cosmetics. However, before the path analysis was performed, the model fit assessment was done. Table 5.37 below provides the results of structural model – fit results.

5.10. *Model Fit Summary – Structural Model*

Testing model fit is one of the most essential outcomes of appropriate path model (Lytras et cetera. (2010:63); Thai et cetera. (2015:195). The assessment of the model fit under path modelling just like the CFA was done before the actual testing of the study's hypotheses took place. Table 5.37 presents the model fit for the path modelling analysis of the study.

Table 5.37: Model Fit Summary – Structural Model

Model Fit Indices	**Acceptable Threshold**	**Current Study Threshold**	**Decision: Acceptable/Unacceptable**
Chi-Square Value:$\chi 2/(df)$	<3	2.931	Acceptable
Comparative Fit Index (CFI)	> 0.900	0.907	Acceptable
Incremental Fit Index (IFI)	> 0.900	0.911	Acceptable
Normed Fit Index (NFI)	> 0.900	0.927	Acceptable
Tucker Lewis Index (TLI)	> 0.900	0.901	Acceptable
Random Measure of Standard Error Approximation (RMSEA)	< 0.08	0.072	Acceptable

The model fit for the path analysis as presented in Table 5.37 is given as: χ_2/df= 2.931; CFI=0.907; IFI = 0.911; NFI= 0.927; TLI = 0.901; RMSEA = 0.072.

5.11. *Path Modelling: Hypothesis Testing and its Significance Levels*

The results of the path coefficient, the interpretation of the stated hypotheses with their corresponding factor loadings, the probability value (P-Value) as well as the outcome of their respective relationships are presented in Table 5.38 provided below.

Table 5.38. Hypothesis testing results

Proposed Hypothesis Relationship	Hypothesis	Path Coefficients	P-Values	Rejected/ Supported
SI → PIHC	H1	0.482	***	Supported and significant
SI → ATHCU	H2	0.571	***	Supported and significant
PBHC → ATHCU	H3	0.633	***	Supported and significant
PBHC → PIHC	H4	0.491	***	Supported and significant
EL → ATHCU	H5	0.298	***	Supported and significant
EL → PIHC	H6	0.187	0.06	Supported but insignificant
ATHCU → PIHC	H7	0.703	***	Supported and significant

Note: SI = Social Influence on Generation Y Female Cohort; PBHC = Perceived Benefits of Herbal Cosmetics; EL = Eco-Literacy of Generation Y Female Cohort; ATHCU = Attitude towards Herbal Cosmetics Use; PIHC = Purchase Intention of Herbal Cosmetics.

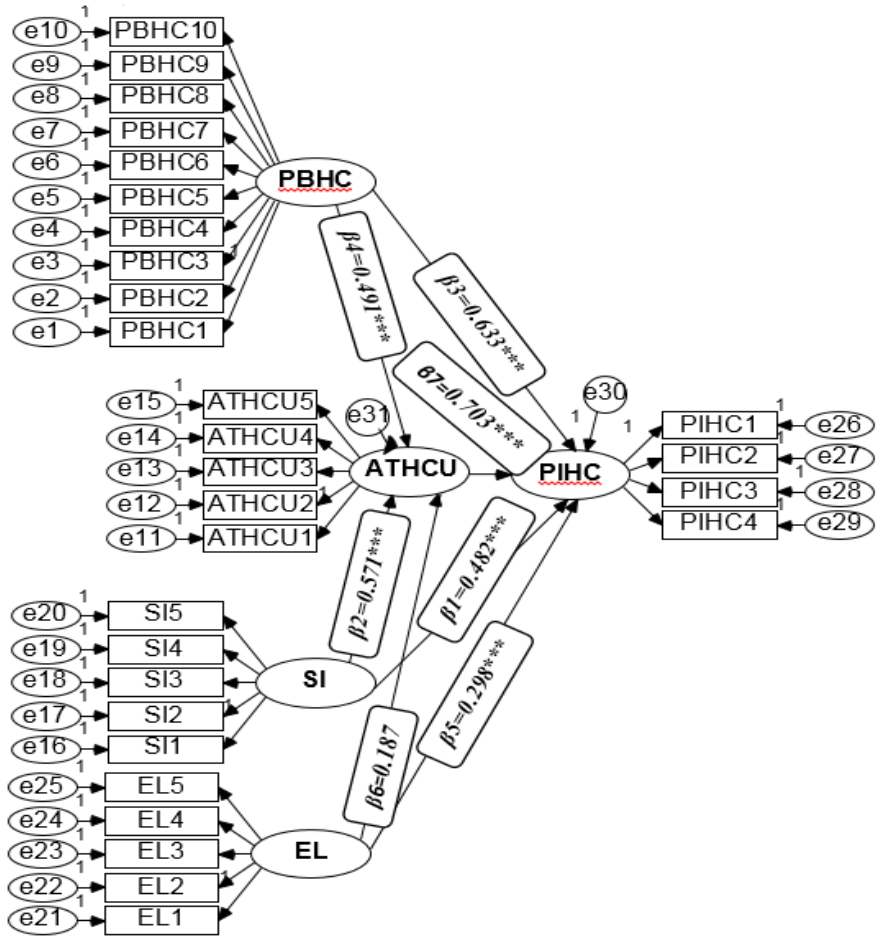
***Levels of Significance**: * = 0.10; ** = 0.05; *** = 0.01*

From the above Table 5.38, seven hypotheses were postulated for the study. The pathe analysis estimates or coefficients and their respective hypotheses were: *H*1, *H*2, *H*3, *H*4, *H*5, *H*6 and *H*7 were 0.482, 0.571, 0.633, 0.491, 0.298, 0.187 and 0.703 respectively. It is clear from Table 5.38 that, while all proposed hypotheses are supported - six out of the seven hypotheses stated are significant. In assessing the probability value or the P - value, it was observed that, six of the hypotheses were significant at level of 0.01 which are indicated with asterisks (***) as shown in table 5.38.

5.12. Summary of the Research Findings

The summary of the hypothesised relationships was done according to the conceptual model presented in the path diagram analysis in Fig. 5.39 as well as outcome from Table 5.38.

Figure 5.39: Structural Model Results



Note: SI = Social Influence on Generation Y Female Cohort; PBHC = Perceived Benefits of Herbal Cosmetics; EL = Eco-Literacy of Generation Y Female Cohort; ATHCU = Attitude towards Herbal Cosmetics Use; PIHC = Purchase Intention of Herbal Cosmetics.

5.12.1 *Social influence and Purchase intention of herbal cosmetics*

H1: Social influence and purchase intention of herbal cosmetics by Generation Y female cohort in South Africa was assessed. The result indicating that social influence has a relative strong positive and significant effect on Generation Y female cohort's purchase intention of herbal cosmetics (β= 0.482; p-value = 0.01). This finding means that social influence in South Africa can possibly explain about 48.2% of the Generation Y female cohort's purchase intention behavior of herbal cosmetics.

5.12.2 *Social influence and Attitude towards herbal cosmetics use*

H2: Social influence and attitude towards herbal cosmetics use by Generation Y female cohort in South Africa was assessed. The result indicating that social influence has a stronger positive and significant effect on Generation Y female cohort's attitude towards herbal cosmetics use (β= 0.571; p-value = 0.01), when compared to their purchase intention of herbal cosmetics (β= 0.482; p-value = 0.01). This finding means that social influence in South Africa can possibly explain about 57.1% of the Generation Y female cohort's attitude towards herbal cosmetics use.

5.12.3 *Perceived benefits of herbal cosmetics and Purchase intention of herbal cosmetics*

H3: Perceived benefits of herbal cosmetics and purchase intention of herbal cosmetics by Generation Y female cohort in South Africa was assessed. The result indicating that perceived benefits of herbal cosmetics has a stronger positive and significant effect on Generation Y female cohort's purchase intention of herbal cosmetics (β= 0.633; p-value = 0.01) when compared to their attitude towards herbal cosmetics use (β= 0.491; p-value = 0.01). This finding means that perceived benefits of herbal cosmetics in South Africa can possibly explain about 63.3% of the Generation Y female cohort's purchase intention of herbal cosmetics use.

5.12.4 *Perceived benefits of herbal cosmetics and Attitude towards herbal cosmetics use*

H4: Perceived benefits of herbal cosmetics and attitude towards herbal cosmetics use by Generation Y female cohort in South Africa was assessed. The result indicating that perceived

benefits of herbal cosmetics has a tive strong positive and significant effect on Generation Y female cohort's attitude towards herbal cosmetics use (β= 0.491; p-value = 0.01). This finding means that perceived benefits of herbal cosmetics in South Africa can possibly explain about 49.1% of the Generation Y female cohort's attitude towards herbal cosmetics use.

5.12.5 Eco-Literacy and Purchase intention of herbal cosmetics

H5: Eco-literacy and purchase intention of herbal cosmetics use by Generation Y female cohort in South Africa was assessed. The result indicating that eco-literacy influence has a stronger positive and significant effect on Generation Y female cohort's purchase intention of herbal cosmetics use (β= 0.298; p-value = 0.01), when compared to their attitude towards herbal cosmetics use (β= 0.187; p-value = 0.01). This finding means that eco-literacy in South Africa can possibly explain about 29.8.7% of the Generation Y female cohort's purchase intention of herbal cosmetics use.

5.12.6 Eco-Literacy and Attitude towards herbal cosmetics use

H6: Eco-literacy and attitude towards herbal cosmetics use by Generation Y female cohort in South Africa was assessed. The result indicating that eco-literacy has a relative weak positive and insignificant effect on Generation Y female cohort's purchase intention of herbal cosmetics (β= 0.187; p-value = 0.06). This finding means that social influence in South Africa can possibly explain about 18.7% of the Generation Y female cohort's attitude towards herbal cosmetics use.

5.12.7 Attitude towards herbal cosmetics use and Purchase intention of herbal cosmetics

H7: Attitude towards herbal cosmetics use and purchase intention of herbal cosmetics by Generation Y female cohort in South Africa was assessed. The result indicating that attitude towards herbal cosmetics use has a very strong positive and significant effect on Generation Y female cohort's purchase intention of herbal cosmetics (β= 0.703; p-value = 0.01). This finding means that social influence in South Africa can possibly explain about 70.3% of the Generation Y female cohort's purchase intention behavior of herbal cosmetics.

5.13 *Summary of the Chapter*

The chapter started by the description of demographic profile of the respondents, descriptive statistics of the individual variables were discussed with their respective mean and standard deviation values. The measurement model (CFA) was assessed as the first stage of structural equation modelling approach. The confirmatory factor analysis (CFA) provided important statistics that were further used to validate the reliability and validty of the measurement instruments used in the current study – in conjuction with the statistics generated using the SPSS statistical software. The test for the reliability comprised the Cronbach alpha, the composite reliability. The validity was assessed through the convergent and discriminant validity. Convergent validity was assessed using item-to-total correlation values, factor loadings/standardised regression weights and AVE. Discriminant validity was evaluated using inter-construct correlation matrix and AVE compared to Highest Shared Variance (HSV). The determination of the model fit was then evaluated for confirmation through the application of thresholds and indices to conclude that the collected data fit the model. It was then followed with the structural model fit testing using the various indices to determine the model fit for the structural analysis. The determination of the structural model fit was followed with a summary of the seven hypothesised relationships − subject to how they were stated or how they were represented in the study's conceptual model. Specifically, all the seven hypotheses stated were supported although one of the hypothesis was insignificant. The next chapter discussed the findings, conclude and make recommendations.

CHAPTER VI: CONCLUSIONS, RECOMMENDATIONS AND FUTURE RESEARCH

6.0 ***Introduction***

Premised on the research problem aforementioned in Chapter one (1) and the identified research gaps, this study aimed to explore the determining factors affecting the purchase intention of herbal cosmetic products. Particularly, the independent variables include social influence, eco-literacy and perceived benefits of herbal cosmetic use. In addition to that, this study also is interested in investigating the mediating role of attitude towards use of herbal cosmetics on the relationship between social influences, eco-literacy, perceived benefits and purchase intention of herbal cosmetics. In particular, the scope of the study is limited to female students at the University of the Witwatersrand deemed to belong to the Generation Y cohort. Below are the overall empirical research objectives that the current study investigated.

6.1. *Overview of the Research Objectives*

Given the purpose of the study, the following empirical objectives were developed:

- To determine the impact of social influence on attitude towards use and purchse intention of herbal cosmetics by Generation Y cohort female students at a tertiary institution in Gauteng Province.
- To examine the influence of individuals' eco-literacy on attitude towards use and purchase intention of herbal cosmetics by Generation Y cohort female students at a tertiary institution in Gauteng Province.
- To investigate the impact of perceived benefits on attitude towards use and purchase intention of herbal cosmetics by Generation Y cohort female students at a tertiary institution in Gauteng Province.
- To examine the impact of attitude towards use of herbal cosmetics on purchase intention by Generation Y cohort female students at a tertiary institution in Gauteng Province.

Also drawing from the empirical research objectives, the current study had some research questions to answer. Below are the overall research objectives that were set by the current study.

6.2. Overview of the Research Questions

- Does social influence impact attitude towards use and purchse intention of herbal cosmetics of Generation Y cohort female students at a tertiary institution in Gauteng Province?
- Does eco-literacy influence attitude towards use and purchase intention of herbal of Generation Y cohort female students at a tertiary institution in Gauteng Province?
- Does perceived benefits influence attitude towards use and purchase intention of herbal cosmetics of Generation Y cohort female students at a tertiary institution in Gauteng Province?
- Does attitude towards use of herbal cosmetics influence purchase intention of Generation Y cohort female students at a tertiary institution in Gauteng Province?

6.3. Discussion of study results and implications

This section of the study provides a discussion of the implications of specific proposed hypotheses. Overall implications were provided thereafter.

6.3.1. Social influence and Purchase intention of herbal cosmetics

The testing of the relationship between social influence and purchase intention of herbal cosmetics revealed a significant positive relationship. It explains that Generation Y female cohort's perspective on their social influence was stronger and has a significant influence on their purchase intention of herbal cosmetics. The effects of social influence on consumer behaviour has been noted in the extant literature (Bandura, 2007; Peng, Yang, Cao, Yu, Xie, 2017). It is even argued in the literature that one of the most important determinant of consumer's behaviour is the influence of others (Arcury., Grzywacz., Bell., Neiberg, Lang, & Quandt, 2007; Stafford & Cocanougher, 2013). Such social influence can come from family members, friends, peers, role models or celebrities among others. It is further noted that social

influence leads to the development of attitudes, values, norms, aspirations and eventually purchase behaviour. Drawing from the current study results and the empirical literature, it can be concluded that social influence, has a strong significant influence on purchase intention of herbal cosmetics in South Africa. This implies that marketing managers of herbal cosmetics can adopt strategies targeted at influence the social base of a society to eventually influence the purchase intention of herbal cosmetics. Such strategies can include among others social media marketing and celebrity endorsement (Stafford and Cocanougher, 2013).

6.3.2 Social influence and Attitude towards herbal cosmetics use

An examination of the social influence and consumer behaviour has been scrutinised by many researchers in the previous studies (Haque, Rahman & Haque, 2011; Budiman, 2012; Chow, Chen, Yeow, & Wong, 2012; Peng, Yang, Cao, Yu, Xie, 2017). These studies showed that consumers feel the need to mimic their peers' preferences and behaviours. Bandura (1977) social learning theory (SLT) too. Social influence is therefore noted to shape the consumer attitude and eventually their purchase behaviour (Lee et cetera, 2011; Venkatesh et cetera, 2012; Sun, 2013; Xu, Li, Peng, Hsia, Huang & Wu, 2017). The current study is one of the studies that further confirms this social influence – consumer attitude relationship but in the context of Generation Y female cohort use of herbal cosmetics in South Africa. The current study findings indicated that there is a strong significant positive relationship between social influence and attitude towards herbal cosmetics use. Deducing from this study findings and the empirical results, it can be concluded that social influence, has a strong significant influence on Generation Y female cohort's attitude towards herbal cosmetics in South Africa. By implications, this mean that marketing managers of herbal cosmetics can also adopt strategies targeted at influence the social base of a society in order to change consumers' attitude towards herbal cosmetics. Among others, such strategies may involve creating awareness among consumers using their social networks.

6.3.3 Perceived Benefits of Herbal Cosmetics and Purchase intention of herbal cosmetics

The inspection of the relationship between perceived benefits of herbal cosmetics and purchase intention of herbal cosmetics exposed a significant positive relationship. This study finding show that Generation Y female cohort's perception of benefits derived from the use herbal cosmetics stronger and significant influence on their intention to purchase herbal cosmetics. The empirical prior studies have confirmed the existence of perceived benefits – purchase

intention relationship. For instance, Amin et cetera. (2011) found that who experienced good health from using herbal products were intend to repurchase the herbal products. In the same vein, Vos and Brennan, (2010) found that benefits perceptions lead to consumer purchase intentions of certain products. These sentiments were supported by several scholars who asserted that customers who are confident with the product supremacy develop a positive mindset or attitude and are more likely to purchase it (Goldstein, Lee, Ballard-Barbash, & Brown, 2008; Chen, 2009; O'Connor & White, 2009; Banytė et cetera ., Chryssohoidis & Krystallis, 2010; Kim & Chung, 2011). The same sentiments are echoed in the Theory of Consumption Value which indicates that the expected value influences attitude and purchase intention. Drawing from the findings of this study and the empirical literature afforementioned, it can be concluded that perceived benefits of herbal cosmetics has a strong significant influence on purchase intention of herbal cosmetics in South Africa. This implies that marketing managers of herbal cosmetics can adopt advertising or promotional strategies that highlight the benefits of herbal cosmetics in order to, eventually influence the purchase intention of herbal cosmetics.

6.3.4 Perceived Benefits of Herbal Cosmetics and Attitude towards herbal cosmetics use

Drawing from the existing spate of empirical literature, it is noted that benefits perceiptions positively influences consumer attitude (Beckford, Jacobs, Williams & Nahdee., 2010; Solomom, Bamossy, Askegaard & Hoggg, 2010; Amin et cetera., 2011; Cheah & Phau, 2011; Kim and Chung, 2011). These research findings are supported by the current study results. In the context of Generation Y female cohort, the current study authenticated that perceived benefits of herbal cosmetics have a strong, positive and significant influence on consumer attitude towards herbal cosmetic use in South Africa. Therefore, based on the current study results and the empirical findings, it can be concluded that by implication that managers in the herbal cosmetic industry can strategically promote more and more of the benefits associated with herbal cosmetics to change or reinforce consumer positive attitude towards herbal cosmetics. The strategies to be used might include flighting advertisements that are rich with information on advantages and the value to beobtained from using herbal cosmetics

6.3.5 Eco-Literacy and Purchase intention of herbal cosmetics

The testing of the eco-literacy and purchase intention relationship done in the current study confimed an insignificant positive relationship. The results indicate that Generation Y female cohort's eco-literacy was weak and has a negligeable influence on their purchase intention of

herbal cosmetics. The influence of eco-literacy on consumer behaviour such as purchase intention or even actual purchase has been asserted in the empirical literature (Trivedi, Patel & Savalia, 2015; Diamantopoulos, Schlegelmilch, Sinkovics, & Bohlen, 2003; Rahbar & Wahid, 2010). These scholars argue that eco-literacy as a desired outcome of environmental education process, involves getting knowledge and awareness of environmental issues and problems, and the skills to recognise and solve them, and above all, behave environmentally responsible. The current study findings are a slight departure from the extant literature results by previous scholars. However, deducing from the current study findings and the empirical results in the empirical literature, it can still be concluded that eco-literacy, has a weak to relatively strong influence on purchase intention of herbal cosmetics in South Africa. This implies that government and marketing managers of herbal cosmetics can still adopt strategies targeted at educating the consumers of the natural benefits of using environment-friendly products – in order to encourage their purchase intention of herbal cosmetics. On the part of government, it can propagate policies that rewards the production of green products in the interest of promoting public health living.

6.3.6 Eco-Literacy and Attitude towards herbal cosmetics use

The association between eco-literacy and attitude towards herbal cosmetics was seen to be positive and significant. This explains that, the comprehension of eco-literacy in South Africa can potentially lead to attitudinal shift in perceprions towards herbal cosmetics. An examination of the eco-literacy influence and consumer attitude has been inspected by some scholars in the previous studies (Hampson, 2012; Szell & Hallett, 2013; Saribas, Teksoz, Ertepinar, 2014). These studies indicated that higher levels of eco-literacy among consumers associated with strong positive attitude towards herbal cosmetics. The current study is one of the few studies that further confirms this eco-literacy and consumer attitude relationship but in the context of Generation Y female cohort use of herbal cosmetics in South Africa. The current study findings indicated that there is a strong significant positive relationship between eco-literacy and attitude towards herbal cosmetics use. Drawing from this study findings and the empirical results, it can be concluded that eco-literacy, has a relatively strong and significant influence on Generation Y female cohort's attitude towards herbal cosmetics in South Africa. By implications, this mean that – by adopting strategies targeted at creating awareness among consumers using different media and promotional platforms marketing managers of herbal cosmetics can successfully change the attitude of consumers towards herbal cosmetics to be positive.

6.3.7 Attitude towards herbal cosmetics use and Purchase intention of herbal cosmetics

The relationship between consumer attitude and purchase intention has been extensively Investigated in the marketing literature (Ha and Janda, 2012; Chinomona, 2013; Hashjin, VakilaRoaia, & Hemati, 2014; Warayuanti and Suyanto, 2015). The relationship between consumer attitude and purchase intention in this study strongly supported the stated hypothesis and was very significant. This imply that, higher levels of positive attitude towards herbal cosmetics are related to higher chances of consumer purchase intention. Based on the findings of this study and the empirical literature afforementioned, it can be concluded that Generation Y female cohort's attitude towards herbal cosmetics has a very strong and significant influence on purchase intention of herbal cosmetics in South Africa. Thus, conclusively - marketing managers of herbal cosmetics can adopt for instance, promotional strategies that are aimed at affecting the consumer attitude in order effectively influence their purchase intention of herbal cosmetics in South Africa.

6.4. Overall Implication of the Study

The overall implication of the study was that both managers in the herbal cosmetic industry and practitioners in the Department of Health can deduce from the current study findings that confirms the paramount role played by social influence and eco-literacy on Generation Y females' intention to purchase herbal cosmetic products. This implied that educational awareness on oganic cosmetics through social networks and perhaps social media platforms can have significant switch in consumer behavior – that is switch from purchasing conventional cosmetics to herbal cosmetics which are deemed to be much healthier to use.

6.5. Overall Conclusion

The current study found out that social influence, eco-literacy and consumer attitudes play a promount role in influencing consumere purchase behaviour of herbal cosmetics. It was identified that perceived benefits of herbal cosmetics, social influence and eco-literacy positively influences consumer attitudes towards the purchase of herbal cosmetcs more than the same variables directly influences consumerr purchase behaviour. In turn, consumer attitudes strongly influence the consumers' purchase intentions of herbal cosmetics more than social influence, eco-literacy and benefits perceptions directly influence consumers' purchase intentions of herbal cosmetics. Based on these research findings, the current study concludes that social influence, benefits perception and eco-literacy have strong effects on consumer

purchase intention of herbal cosmetics via consumer attitudes towards herbal cosmetics use. These study findings makes both interesting theoretical contribution to the academic literacture and practical contributions to marketing managers in the herbal cosmetic industry and activists who promote health lifestyle through using greener products.

6.6. CONTRIBUTIONS OF THE STUDY

The study's contribution was structured into three categories: the conceptual contribution, the theoretical contribution as well as the practical or managerial contribution.

6.6.1. The Conceptual Contribution

The conceptualisation of this study offers an original insight into studies in green marketing and consumer behaviour. Previous studies have researched on the individual variables like the social influence, perceived benefits and consumer attitude on purchase intention; where individual variable relationship has been employed as part of their final conclusions. This study contributes to theory in terms of conceptualising a model that intergret green marketing variables such as eco-literacy to the antecedents (social influence, perceived benefits and consumer attitude) and their impact on consumer purchase intention of herbal cosmetics. The proposed current conceptual model is unique from the previous conceptual models in the extant literature – hence, the noted conceptual contribution.

6.6.2. The Theoretical Contribution

The study’s results have significant theoretical contribution towards research on green maketing variables (perceived benefits of herbal cosmetics and eco-literacy), social influence and consumer behaviour (attitude and purchase intention) in the context of an African country. Although research on organic products, especially food products, have been examined in academic research, little has been published on the predictors or consumer motivations towards purchase intentions of herbal cosmetics (Saokaew, Suwankesawong, Permsuwan, & Chaiyakunapruk, 2011; Girotto, 2013). The current study focuses on green marketing variables such as eco-literacy. Given that more and more consumers are becoming environmentally friendly, it is impotant that research in this academic void is popularised. The current study is one of the few African studies to confirm the extent to which the identified green marketing

variables such as eco-literacy, herbal cosmetics benefit perceptions and herbal cosmetic use attitudes influences purchase intentions of herbal cosmetic products. This study has therefore contributed new theoretical literature on these interesting green marketing variables from a neglected research context – Africa in general and South Africa in particular. More over, the current study has managed to generate new theoretical literature that not only focus on the South Africa context but a Generation Y female cohort – a market segment that is deemed to be profitable in the cosmetic industry (Stovel, 2007).

6.6.3. Managerial contribution

The findings of this study have significant practical implications for managers. In the first place, the study confirms the positive significant impact of eco-literacy, herbal cosmetics benefit perceptions and herbal cosmetic use attitudes influences purchase intentions of herbal cosmetic products. It is therefore necessary for companies and their managers in the herbal cosmetic industry to consider utilising strategies that promote eco-literacy among the South Africa populacy – for instance, flighting more advertsiments on benefits of herbal cosmetics in both electronic and print media. Utilising social media to promote herbal cosmetics products may be effective given that social media is actively used by Generation Y cohort in today's knowledge society (Chinje & Chinomona, 2015).

6.6.4. The contribution to policy

Given the documented benefits of organic products to societal health, perhaps the Department of Health in South Africa should instigate policies that promote more and more use of organic products such as herbal cosmetics in the interest of public health. Such public awareness from a government outfit may have immense consumers' behavioural changes and switch from conventional cosmetic products – some of which have been recently associated with adverse effects on human health in the long term to natural and environmental friendly cosmetics.

6.7. Limitations and Future research

This study has contributed to theory, managers as well as to policy-makers. However, there are some limitations that suggest opportunities for future research. In the first place, the data for the study was limited to Genaration Y female cohort based at University of the Witwatersrand. University of the Witwatersrand is one of the many universities in South Africa with a bigger segment of female Generation Y herbal cosmetic consumers. Perhaps future study should consider extending the research to other universities across Africa. More over, it might be prudent for future studies to consider the male segment of herbal cosmetic consumers. This market segment is also noted to be growing tremendously, and therefore research in that direction migh add new insights too.

Secondly, the definite nature of the study's sampling technique restricts the degree at which the findings may be generalised. Given the challnges faced in order to utilise a probability sampling technique, a convenience sampling approach was mostly relied on in this current study. Perhaps future studies can consider utilising some probability sampling techniques where feasible in order to allow the generalisability of the research findings across geographical settings. Perhaps too, future studies might even consider adopting a qualitative approach to investigate more factors that influence the purchase of herbal cosmetic products.

6.8. SUMMARY OF CHAPTER 6

This chapter concludes the entire study. It was divided into four main parts. The first, being the introduction, which was then followed by implications of the study. These implications had a special section solely dedicated to the study's overall implication. The third section focused on the overall contribution that was made by this dissertation. Last, this chapter concludes with future research and limitations.

LIST OF REFERENCES

Ab Karim, M. ., Nasouddin, S. ., Othman, M., Mohd Adzahan, N., & Hussin, S. (2011). Consumers' knowledge and perception towards Melicope ptelefolia (Daun Tenggek Burung): A preliminary qualitative study. *International Food Research Journal*, 18 (4), 1481–1488

Abdullah, N., Talib, A.R.A., Jaafar, A.A., Salleh, M.A.M. and Chong, W.T., 2010. The basics and issues of thermochromic liquid crystal calibrations. *Experimental Thermal and Fluid Science*, 34(8), pp.1089-1121.

Abdullah, S., Abidin, S.A.Z., Murad, N.A., Makpol, S., Ngah, W.Z.W. & Yusof, Y.A.M., (2010). Ginger extract (Zingiber officinale) triggers apoptosis and G0/G1 cells arrest in HCT 116 and HT 29 colon cancer cell lines. *African Journal of Biochemistry Research*, 4(5), 134-142.

Ajzen, I., (1985). From intentions to actions: A theory of planned behavior. In Action control (pp. 11-39). *Springer Berlin Heidelberg*.

Akers, R.L. and Lee, G., 1996. A longitudinal test of social learning theory: Adolescent smoking. *Journal of Drug Issues*, 26(2), pp.317-343.

AlBraik, F.A., Rutter, P.M. and Brown, D., 2008. A cross- sectional survey of herbal remedy taking by United Arab Emirate (UAE) citizens in Abu Dhabi. *Pharmacoepidemiology and drug safety*, 17(7), pp.725-732.

Al-Khatib, J. A., Robertson, C.J., & Lascu, D.N. (2006). Post-Communist Consumer Ethics: The Case of Romania. *Journal of Business Ethics*, 54(1), pp. 81-95

Al-Naggar, R.A., Al-Naggar, D.H., Bobryshev, Y.V., Chen, R. and Assabri, A., 2011. Practice and barriers toward breast self-examination among young Malaysian women. *Asian Pac J Cancer Prev*, 12(5), pp.1173-1178.

Alp, E., Ertepinar, H., Tekkaya, C. and Yilmaz, A., 2008. A survey on Turkish elementary school students' environmental friendly behaviours and associated variables. *Environmental Education Research*, 14(2), pp.129-143.

Al-Shafi, S. and Weerakkody, V., 2010. Factors affecting e-government adoption in the state of Qatar.

Aluko, F.S., 2006. Social science research: a critique of quantitative and qualitative methods and proposal for an eclectic approach. *IFE Psychologia: An International Journal*, 14(1), pp.198-210.

Amin, T.T., Suleman, W., Ali, A., Gamal, A. & Wehedy, A.A., (2011). Pattern, prevalence, and perceived personal barriers toward physical activity among adult Saudis in Al-Hassa, KSA. *Journal of Physical Activity and Health*, 8(6), 775-784.

Anderson, J.C. & Gerbing, D.W. (1988). Structural equation modelling in practice: A review and recommended two-step approach. *Psychological Bulletin*, 103, 411-423

Anderson, W.T. & Cunningham, W. (2002), "The socially conscious consumer", *Journal of Marketing*, 36, 23-31.

Anelich, L.E. and Korsten, L., 1996. Survey of micro- organisms associated with spoilage of cosmetic creams manufactured in South Africa. *International journal of cosmetic science*, 18(1), pp.25-40.

Apaolaza-Ibáñez, V., Hartmann, P., Diehl, S. and Terlutter, R., (2011). Women satisfaction with cosmetic brands: The role of dissatisfaction and hedonic brand benefits. *African Journal of Business Management*, 5(3), p.792.

Arcury, T.A., Grzywacz, J.G., Bell, R.A., Neiberg, R.H., Lang, W. and Quandt, S.A., 2007. Herbal remedy use as health self-management among older adults. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, 62(2), pp. S142-S149.

Arnold, M.J. and Reynolds, K.E., 2003. Hedonic shopping motivations. *Journal of retailing*, 79(2), pp.77-95.

Ates, A. and Bititci, U., 2008. Fundamental concepts in management research and ensuring research quality: focusing on case study method. *In European Academy of Management Annual Conference*, 2008.

Axelrod, L.J. and Lehman, D.R., 1993. Responding to environmental concerns: What factors guide individual action?. *Journal of environmental psychology*, 13(2), pp.149-159.

Aziz, Z. and Tey, N.P., 2009. Herbal medicines: prevalence and predictors of use among

Malaysian adults. *Complementary Therapies in Medicine*, 17(1), pp.44-50.

Bakewell C & Mitchell V (2003). Generation Y female consumer decisionmaking styles. Int. J. Ret. Dist. *Manag*., 31(2), 95-106.

Bandura, A. (2007), "Self-efficacy: Toward a unifying theory of behavioral change", *Psychological Review*, 84, 191-215.

Bakshi, M., Singh, H.B. and Abhilash, P.C., 2014. The unseen impact of nanoparticles: More or less. *Curr Sci*, 106, pp.350-352.

Balderjahn, I., 1988. Personality variables and environmental attitudes as predictors of ecologically responsible consumption patterns. *Journal of business Research*, 17(1), pp.51-56.

Banerjee, R., 1992. Gauge independent analysis of Chern-Simons theory with matter coupling. *Physical review letters*, 69(1), p.17.

Banytė, J., Brazionienė, L.and Gadeikienė, A.(2010), "Investigation of green consumer profile: a case of Lithuanian market of eco-friendly food products", *Economics and Management*, Vol. 15, pp.374-383.

Barretina, J., Caponigro, G., Stransky, N., Venkatesan, K., Margolin, A.A., Kim, S., Wilson, C.J., Lehár, J., Kryukov, G.V., Sonkin, D. and Reddy, A., 2012. The Cancer Cell Line Encyclopedia enables predictive modelling of anticancer drug sensitivity. *Nature*, 483(7391), pp.603-607.

Baumgartner, H. and Steenkamp, J.B.E., 1996. Exploratory consumer buying behavior: Conceptualization and measurement. *International journal of Research in marketing*, 13(2), pp.121-137.

Bearden, W.O., Tian, K.T and Hunter, G.L., 2001. Consumers' need for uniqueness: Scale development and validation. *Journal of consumer research*, 28(1), 50-66.

Bearman, S.K., Presnell, K., Martinez, E. and Stice, E., 2006. The skinny on body

dissatisfaction: A longitudinal study of adolescent girls and boys. *Journal of youth and adolescence*, 35(2), pp.217-229.

Bech-Larsen, T., 1996. Danish consumers' attitudes to the functional and environmental characteristics of food packaging. *Journal of Consumer Policy*, 19(3), pp.339-363.

Beckford, C. L., Jacobs, C., Williams, N., & Nahdee, R. (2010). Aboriginal environmental wisdom, stewardship, and sustainability: Lessons from the Walpole Island First Nations, Ontario, Canada. *The journal of environmental education*, 41(4), 239-248.

Bei, L.T. and Simpson, E.M., 1995. The determinants of consumers' purchase decisions for recycled products: an application of acquisition-transaction utility theory. *ACR North American Advances*.

Bell, B.T. and Dittmar, H., 2011. Does media type matter? The role of identification in adolescent girls' media consumption and the impact of different thin-ideal media on body image. *Sex roles*, 65(7-8), p.478.

Bem, D.J., 1972. Self-perception theory. Advances in experimental social psychology, 6, pp.1-62.

Bentler, P.M. and Bonett, D.G., 1980. Significance tests and goodness of fit in the analysis of covariance structures. *Psychological bulletin*, 88(3), p.588.

Beran, T.N. & Violato, C. (2010). Structural equation modelling in medical research: A primer. *BMC Research Notes*, 3:267-280.

Beran, T.N. & Violato, C., 2010. Structural equation modeling in medical research: a primer. *BMC research notes*, 3(1), 267.

Bewick, V., Cheek, L & Ball, J. (2004). One-way analysis of variance critical care. *Statistics Review*, 8(2), 130-136.

Bikhchandani, S., Hirshleifer, D. and Welch, I., 1992. A theory of fads, fashion, custom, and cultural change as informational cascades. *Journal of political Economy*, 100(5), pp.992-1026.

Billeke, P., Boardman, S. and Doraiswamy, P., 2013. Social cognition in major depressive disorder: A new paradigm?. *Translational Neuroscience*, 4(4), pp.437-447.

Blaikie N (1993) Approaches to Social Enquiry. Polity Press, Cambridge MA

Blencowe, Hannah, Simon Cousens, Mikkel Z. Oestergaard, Doris Chou, Ann-Beth Moller, Rajesh Narwal, Alma Adler et cetera . "National, regional, and worldwide estimates of preterm birth rates in the year 2010 with time trends since 1990 for selected countries: a systematic analysis and implications." *The Lancet* 379, no. 9832 (2012): 2162-2172.

Bloch, P.H. & Richins, M.L., (2002). You look "mahvelous": The pursuit of beauty and the marketing concept. *Psychology & Marketing*, 9(1), 3-15.

Bollen, K.A. and Davis, W.R., 2009. Two rules of identification for structural equation models. *Structural Equation Modeling: A Multidisciplinary Journal*, 16(3), pp.523-536.

Bolton, P. and Betancourt, T.S., 2004. Mental health in postwar Afghanistan. *Jama*, 292(5), pp.626-628.

Bonabeau, E., 2004. The perils of the imitation age. *Harvard business review*, 82(6), pp.45-54.

Botta, R.A., 2000. The mirror of television: A comparison of Black and White adolescents' body image. *Journal of communication*, 50(3), pp.144-159.

Bourke- Taylor, H., Law, M., Howie, L. and Pallant, J.F., 2010. Development of the Child's Challenging Behaviour Scale (CCBS) for mothers of school- aged children with disabilities. *Child: care, health and development*, 36(4), pp.491-498.

Britton, A.M., 2012. The beauty industry's influence on women in society.

Brown, W., 2009. Regulating aversion: Tolerance in the age of identity and empire. *Princeton University Press.*

Browne, M.W & Cudeck, R. (1993). Alternative ways of assessing model fit. In K.A. Bollen & J.S. Long (Eds.), Testing Structural Equation Models (pp. 136-161). *Newbury Park, CA:*

Sage.

Brun, A. and Castelli, C., 2008. Supply chain strategy in the fashion industry: Developing a portfolio model depending on product, retail channel and brand. *International Journal of Production Economics*, 116(2), pp.169-181.

Brunk, K.H., 2010. Exploring origins of ethical company/brand perceptions—A consumer perspective of corporate ethics. *Journal of Business Research*, 63(3), pp.255-262.

Bryman, A. (2012). Social Research Methods. 4th edn Oxford: Oxford University Press.

Brynjolfsson, E. and Smith, M.D., 2000. Frictionless commerce? A comparison of Internet and conventional retailers. *Management science*, 46(4), pp.563-585.

Budiman, S., 2012. Analysis of consumer attitudes to purchase intentions of counterfeiting bag product in Indonesia. *Browser Download This Paper*.

Burke, P., 2009. Popular culture in early modern Europe. Ashgate Publishing, Ltd..

Burnkrant, R. & Cousineau, A. (2005), "Informational and Normative Social Influence in Buyer Behavior", *Journal of Consumer Research*, 2, 206-215.

Burton, D.B., Ryan, J.J., Axelrod, B.N., Schellenberger, T. and Richards, H.M., 2003. A confirmatory factor analysis of the WMS-III in a clinical sample with crossvalidation in the standardization sample. *Archives of Clinical Neuropsychology*, 18(6), pp.629-641.

Buunk, B.P. and Mussweiler, T., 2001. New directions in social comparison research. *European Journal of Social Psychology*, 31(5), pp.467-475.

Byrne, B.M. (1994). Structural equation modeling with EQS and EQS/Windows. Thousand Oaks, CA: *Sage*.

Byrne, B.M. (2001). Structural equation modelling with AMOS: Basic concepts, applications, and programming. *Mahwah, NJ: Lawrence Erlbaum Associates, Inc*.

Cantrell, D.A., 2001. Phosphoinositide 3-kinase signalling pathways. *Journal of cell science*, 114(8), pp.1439-1445.

Carlson, K.D. and Herdman, A.O., 2012. Understanding the impact of convergent validity on research results. *Organizational Research Methods*, 15(1), pp.17-32.

Carr, W. and Kemmis, S., 1986. Becomming critical. Education., knowledge and action

research. *London: Falmer*.

Carver, C.S. and Scheier, M.F., 1981. Self-consciousness and reactance. *Journal of Research in Personality*, 15(1), pp.16-29.

Cash, T.F., Rissi, J. & Chapman, R., (2005). Not just another pretty face: Sex roles, locus of control and cosmetics use. *Personality and Social Psychology Bulletin*, 11(3), pp.246-257.

Cassidy, A., (2016). A practical guide to information systems strategic planning. *CRC press*.

Cavers, D.F., 1939. The Food, Drug, and Cosmetic Act of 1938: its legislative history and its substantive provisions. *Law and Contemporary Problems*, 6(1), pp.2-42.

Chan, R.Y. and Lau, L.B., 2002. Explaining green purchasing behavior: A cross-cultural study on American and Chinese consumers. *Journal of international consumer marketing*, 14(2-3), pp.9-40.

Chaniotakis, I.E., Lymperopoulos, C. and Soureli, M., 2010. Consumers' intentions of buying own-label premium food products. *Journal of Product & Brand Management*, 19(5), pp.327-334.

Chase, J.S., Anderson, D.C., Thakar, P.N., Vahdat, A.M. and Doyle, R.P., 2001. Managing energy and server resources in hosting centers. *ACM SIGOPS operating systems review*, 35(5), pp.103-116.

Chaudhri, S.K. and Jain, N.K., 2009. History of cosmetics. *Asian Journal of Pharmaceutics*, 3(3), p.164.

Cheah, I. and Phau, I., 2011. Attitudes towards environmentally friendly products: The influence of ecoliteracy, interpersonal influence and value orientation. *Marketing Intelligence & Planning*, 29(5), pp.452-472.

Chelliah, S. and Chin, K.K., 2011. A study of the relationship between marketing mix and customer retention for herbal coffee in Malaysia.

Chen, C.F. & Chen, F.S., (2010). Experience quality, perceived value, satisfaction and behavioral intentions for heritage tourists. *Tourism management*, 31(1), 29-35.

Chen, C.F. & Chen, F.S., (2016). Experience quality, perceived value, satisfaction and behavioral intentions for heritage tourists. *Tourism management*, 31(1), 29-35.

Chen, C.F., (2008). Investigating structural relationships between service quality, perceived

value, satisfaction, and behavioral intentions for air passengers: Evidence from Taiwan. Transportation Research Part A: *Policy & Practice*, 42(4), pp.709-717.

Chen, C.F., 2008. Investigating structural relationships between service quality, perceived value, satisfaction, and behavioral intentions for air passengers: Evidence from Taiwan. *Transportation Research Part A: Policy and Practice*, 42(4), pp.709-717.

Chenail, R.J., Cooper, R. and Desir, C., 2010. Strategically Reviewing the Research Literature in Qualitative Research. *Journal of Ethnographic & Qualitative Research*, 4(2).

Chenail, R.J., Cooper, R. and Desir, C., 2010. Strategically Reviewing the Research Literature in Qualitative Research. *Journal of Ethnographic & Qualitative Research*, 4(2).

Cheung, C.M., Chiu, P.Y. and Lee, M.K., 2011. Online social networks: Why do students use facebook?. *Computers in Human Behavior*, 27(4), pp.1337-1343.

Chin, W. (1988). The Partial Least Squares Approach for Structural Equation Modeling, in G.A. Marcoulides (Ed.) Modern Methods for Business Research, Lawrence Erlbaum Associates, *Mahwah, NJ*, 1988, 295-336.

Chinje, N.B. and Chinomona, R., 2015. Digital natives and information sharing on social media platforms: implications for managers. *Journal of Contemporary Management*, 12(1), pp.795-814.

Chinomona, R. and Pretorius, M., 2011. Major dealers' expert power in distribution channels. *South African Journal of Economic and Management Sciences*, 14(2), pp.170-187.

Chinomona, R., Mahlangu, D. and Pooe, D., 2013. Brand service quality, satisfaction, trust and preference as predictors of consumer brand loyalty in the retailing industry. *Mediterranean Journal of Social Sciences*, 4(14), p.181.

Chrisler, J.C. and Ghiz, L., 1993. Body image issues of older women. Women & Therapy, 14(1-2), pp.67-75.

Christiansen, H. & Martinenghi, D., 2006. On simplification of database integrity constraints. *Fundamenta Informaticae*, 71(4), 371-417.

Cohen, L., Manion, L. & Morrison, K., (2013). Research methods in education. Routledge.

Conner, M. & Sparks, P., (2005). Theory of planned behaviour and health behaviour. *Predicting health behaviour*, 2, pp.170-222.

Corbett, C.J., Blackburn, J.D. and Wassenhove, L.N.V., 1999. Partnerships to improve supply chains. *Sloan Management Review*, 40(4), p.71.

Cox, C.L. & Glick, W.H., (2006). Resume evaluations and cosmetics use: When more is not better. *Sex Roles*, 14(1-2), pp.51-58.

Creswell, J.W., (2013). Research design: Qualitative, quantitative, and mixed methods approaches. *Sage publications*.

Cummings, S.R., Nevitt, M.C., Browner, W.S., Stone, K., Fox, K.M., Ensrud, K.E., Cauley, J., Black, D. and Vogt, T.M., 1995. Risk factors for hip fracture in white women. New England *journal of medicine*, 332(12), pp.767-774.

Cunningham, M.R., 1988. What do you do when you're happy or blue? Mood, expectancies, and behavioral interest. *Motivation and emotion*, 12(4), pp.309-331.

Dakanalis, A. and Riva, G., 2013. Mass media, body image and eating disturbances: The underlying mechanism through the lens of the objectification theory. Body image: Gender differences, sociocultural influences and health implications, pp.217-36.

Davies, H., 2013. Compact and the like for receiving and preserving cosmetic and similar pads. *U.S. Patent* 2,264,300.

Davis, K., (2013). Reshaping the female body: The dilemma of cosmetic surgery. *Routledge.*

De Pelsmacker, P., Janssens, W. and Mielants, C., 2005. Consumer values and fair-trade beliefs, attitudes and buying behaviour. *International Review on Public and Nonprofit Marketing*, 2(2), pp.50-69.

Denzin NK, Lincoln YS (Eds) (2005) Handbook of Qualitative Research. Third edition. *Sage*

Denzin, N.K. & Lincoln, Y.S., (2011). The Sage handbook of qualitative research *Sage.*

Deutsch, Morton & Gerard, H. (2005), "A Study of Normative and Informational Influence upon Individual Judgment", *Journal of Abnormal and Social Psychology,* 51, 629-636.

Dholakia, U.M., Bagozzi, R.P. and Pearo, L.K., 2004. A social influence model of consumer participation in network-and small-group-based virtual communities. *International journal of research in marketing*, 21(3), pp.241-263.

Di Bartolo, L.M. (2000). A spatial study of reported domestic violence in Brisbane: A social justice perspective.

Diamantopoulos, A., Schlegelmilch, B.B., Sinkovics, R.R. & Bohlen, G.M., (2003). Can socio-demographics still play a role in profiling green consumers? A review of the evidence and an empirical investigation. *Journal of Business research*, 56(6), 465-480.

Dickman, A.J., 2010. Complexities of conflict: the importance of considering social factors for effectively resolving human–wildlife conflict. *Animal conservation*, 13(5), pp.458-466.

Diederichs, K., 2006. Some aspects of quantitative analysis and correction of radiation damage. *Acta Crystallographica Section D: Biological Crystallography*, 62(1), pp.96-101.

Diedrichs, P.C., Lee, C. and Kelly, M., 2011. Seeing the beauty in everyday people: A qualitative study of young Australians' opinions on body image, the mass media and models. *Body Image*, 8(3), pp.259-266.

Dillon, W.R.G., Dillon, M.W.R. and Goldstein, M., 1984. Multivariate analysismethods and applications (No. 519.535 D5).

Dion, K., Berscheid, E. and Walster, E., 1972. What is beautiful is good. *Journal of personality and social psychology*, 24(3), p.285.

Dittmar, H. and Howard, S., 2004. Thin-ideal internalization and social comparison tendency as moderators of media models' impact on women's body-focused anxiety. *Journal of Social and Clinical Psychology*, 23(6), pp.768-791.

Dodds, R.E., Tseëlon, E. & Weitkamp, E.L., (2008). Making sense of scientific claims in advertising. A study of scientifically aware consumers. *Public Understanding of Science*, 17(2), 211-230.

Domegan, C. and Fleming, D., 2007. Market research in Ireland. *Gill and Macmillan Ltd*, Dublin.

Draelos, Z.D., 2001. Special considerations in eye cosmetics. *Clinics in dermatology*, 19(4), pp.424-430.

Draize, J.H., 1944. The determination of the pH of the skin of man and common laboratory animals. *Journal of Investigative Dermatology*, 5(2), pp.77-85.

D'Souza, C., Taghian, M. and Lamb, P., 2006. An empirical study on the influence of environmental labels on consumers. *Corporate communications: an international journal*, 11(2), pp.162-173.

Dunne, S.S. and Dunne, C.P., 2015. What do people really think of generic medicines? A systematic review and critical appraisal of literature on stakeholder perceptions of generic drugs. *BMC medicine*, 13(1), p.173.

Eagly, A.H., Ashmore, R.D., Makhijani, M.G. and Longo, L.C., 1991. What is beautiful is good, but…: A meta-analytic review of research on the physical attractiveness stereotype. *Psychological bulletin*, 110(1), p.109.

Easterby-Smith, M., Antonacopoulou, E., Simm, D. and Lyles, M., 2004. Constructing contributions to organizational learning: Argyris and the next generation. *Management Learning*, 35(4), pp.371-380.

Elek, E., Miller-Day, M. and Hecht, M.L., 2006. Influences of personal, injunctive, and descriptive norms on early adolescent substance use. *Journal of Drug Issues*, 36(1), pp.147-172.

Ellen, P., Eroglu, D. & Webb, D., (1997). Consumer Judgments in a Changing Information Environment: How Consumers Respond to'Green Marketing'Claims. Working paper, Georgia State University. *Euromonitor International*. (2016). Herbal/Traditional Products Market Size. http://www.euromonitor.com/herbal -traditional products- in Malaysia

Engeln–Maddox, R., 2005. Cognitive responses to idealized media images of women: The relationship of social comparison and critical processing to body image disturbance in college women. *Journal of Social and Clinical Psychology*, 24(8), pp.1114-1138.

Erdogan, N. and Tosun, C., 2009. Environmental performance of tourism accommodations in the protected areas: Case of Goreme Historical National Park. *International Journal of Hospitality Management*, 28(3), pp.406-414.

Eriksson, P. and Kovalainen, A., 2008. *Qualitative research in business studies*.

Esmaili, E., Desa, M.I., Moradi, H. and Hemmati, A., 2011. The role of trust and other behavioral intention determinants on intention toward using internet banking. *International Journal of Innovation, Management and Technology*, 2(1), p.95.

Etcoff, N., Orbach, S., Scott, J. and D'Agostino, H., 2004. The Real Truth About Beauty: A Global Report, Findings of the Global Study on Women, Beauty and WeilBeing. *Commissioned by Dove, a Unilever Beauty Brand* (September, 2004).

Evans, G.W., Brauchle, G., Haq, A., Stecker, R., Wong, K. and Shapiro, E., 2007. Young

children's environmental attitudes and behaviors. *Environment and behavior*, 39(5), pp.635-658.

Fagarasanu, M. and Kumar, S., 2002. Measurement instruments and data collection: a consideration of constructs and biases in ergonomics research. *International Journal of Industrial Ergonomics*, 30(6), pp.355-369.

Faraco, J., Lin, L., Kornum, B.R., Kenny, E.E., Trynka, G., Einen, M., Rico, T.J., Lichtner, P., Dauvilliers, Y., Arnulf, I. and Lecendreux, M., 2013. ImmunoChip study implicates antigen presentation to T cells in narcolepsy. *PLoS genetics*, 9(2), p.e1003270.

Fazel-Rezai, R., Allison, B.Z., Guger, C., Sellers, E.W., Kleih, S.C. and Kübler, A., 2012. P300 brain computer interface: current challenges and emerging trends. *Frontiers in neuroengineering*, 5.

Fishbein, M., (1975). Belief, Attitude, Intention, and Behaviour: An Introduction to Theory and Research.

Flowers, R.M., Ketcham, R.A., Shuster, D.L. and Farley, K.A., 2009. Apatite (U–Th)/He thermochronometry using a radiation damage accumulation and annealing model. *Geochimica et Cosmochimica Acta*, 73(8), pp.2347-2365.

Folwler. J.F, Woolervy-lioyd., H., & Waldalt, S. (2010). Innovations in natural ingredients and their use in skin care. *J drugs Dermatol* 9, 72-81.

Fraering, M. and Minor, M.S., 2006. Sense of community: An exploratory study of US consumers of financial services. *International Journal of Bank Marketing*, 24(5), pp.284-306.

Fredrickson, B.L. and Roberts, T.A., 1997. Objectification theory: Toward understanding women's lived experiences and mental health risks. *Psychology of women quarterly*, 21(2), pp.173-206.

Fryxell, G. & Lo, C. (2003), "The influence of environmental knowledge and values on managerial behaviors on behalf of the environment: An empirical examination of managers in China", *Journal of Business Ethics*, 46, 45-59.

Gephart, R., 1999, January. Paradigms and research methods. *In Research methods forum* (Vol. 4, No. 1, p. 11).

Ghauri, P., 2002. Designing and conducting case studies in international business research.

Handbook of qualitative research methods for international business, pp.109-124.

Ghosh, A. (1990).Retail management. Chicago: *Drydden press*

Gilg, A., Barr, S. and Ford, N., 2005. Green consumption or sustainable lifestyles? Identifying the sustainable consumer. *Futures*, 37(6), pp.481-504.

Gimpel, K., Schneider, N., O'Connor, B., Das, D., Mills, D., Eisenstein, J., Heilman, M., Yogatama, D., Flanigan, J. and Smith, N.A., 2011, June. Part-of-speech tagging for twitter: Annotation, features, and experiments. In Proceedings of the 49th Annual Meeting of the Association for Computational Linguistics: Human Language Technologies: short papers-Volume 2 (pp. 42-47*). Association for Computational Linguistics*.

Girotto, G., (2013). Sustainability and green strategies in the cosmetic Industry: Analysis of natural and organic cosmetic products from the value chain to final certification (Bachelor's thesis, Università Ca'Foscari Venezia).

Gist, M.E. and Mitchell, T.R., 1992. Self-efficacy: A theoretical analysis of its determinants and malleability. *Academy of Management review*, 17(2), pp.183-211.

Glenn, E.N., 2008. Yearning for lightness: Transnational circuits in the marketing and consumption of skin lighteners. *Gender & society*, 22(3), pp.281-302.

Goldstein, M.S., Lee, J.H., Ballard- Barbash, R. and Brown, E.R., 2008. The use and perceived benefit of complementary and alternative medicine among Californians with cancer. Psycho-Oncology, 17(1), pp.19-25.

Gondal, M.A., Seddigi, Z.S., Nasr, M.M. & Gondal, B., (2010). Spectroscopic detection of health hazardous contaminants in lipstick using laser induced breakdown spectroscopy. *Journal of Hazardous Materials*, 175(1), 726-732.

Grabe, S., Ward, L.M. and Hyde, J.S., 2008. The role of the media in body image concerns among women: a meta-analysis of experimental and correlational studies. *Psychological bulletin*, 134(3), p.460.

Grace, J.B., 2006. Structural equation modeling and natural systems. *Cambridge University Press*.

Grafström, A., Lundström, N.L. & Schelin, L., (2012). Spatially balanced sampling through the pivotal method. *Biometrics*, 68(2), 514-520.

Graneheim, U.H. & Lundman, B., (2004). Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness. *Nurse education today*, 24(2), 105-112.

Groesz, L.M., Levine, M.P. and Murnen, S.K., 2002. The effect of experimental presentation of thin media images on body satisfaction: A meta- analytic review. *International Journal of eating disorders*, 31(1), pp.1-16.

Grogan, S. (2008). Body image. Understanding body dissatisfaction in men, women, and children

Grönroos, C., 2006. Adopting a service logic for marketing. *Marketing theory*, 6(3), pp.317-333.

Guéguen, N. and Jacob, C., 2012. Lipstick and tipping behavior: When red lipstick enhance waitresses tips. *International Journal of Hospitality Management*, 31(4), pp.1333-1335.

Gupchup, G. V., Abhyankar, U. L., Worley, M. M., Raisch, D. W., Ma Guthrie, M., Kim, H.S. & Jung, J., (2008). The effects of facial image and cosmetic usage on perceptions of brand personality. *Journal of Fashion Marketing and Management: An International Journal*, 12(2), 164-181.

Gupta, V., 2013. A study on consumer perception and brand personality traits for making cosmetic purchase decisions. *Journal of Management*, 5(1), pp.1-22.

Gwinner, K.P., Gremler, D.D. and Bitner, M.J., 1998. Relational benefits in services industries: the customer's perspective. *Journal of the academy of marketing science*, 26(2), pp.101-114.

Ha, H.Y. and Janda, S., 2012. Predicting consumer intentions to purchase energy-efficient products. *Journal of Consumer Marketing*, 29(7), pp.461-469.

Hair, J.F. J., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2014). A Primer On Partial Least Squares Structure Equation Modeling (PLS-SEM). *Sage Publications Inc.*

Hamermesh, Daniel S., Biddle, Jeff E., 1994. Beauty and the labor market. *American Economic Review* 84,

Hampson, C., Lawless, S., Bailey, E., Yogev, S., Zwerdling, N., Carmel, D., Conlan, O., O'Connor, A. and Wade, V., 2012. CULTURA: A metadata-rich environment to support the enhanced interrogation of cultural collections. *Metadata and Semantics Research*, pp.227-238.

Han, H., Hsu, L.T.J. & Sheu, C., (2010). Application of the theory of planned behavior to green hotel choice: Testing the effect of environmental friendly activities. *Tourism management*, 31(3), 325-334.

Haque, A., Rahman, S., & Haque, M. (2011). Religiosity , Ethnocentrism and Corporate Image Towards the Perception of Young Muslim Consumers : Structural Equation Modeling Approach. *European Journal of Social Sciences*, 23(1), 98–108.

Hartmann, T. and Klimmt, C., 2006. The influence of personality factors on computer game choice. *Playing video games: Motives, responses, and consequences*, pp.115-131.

Hashjin, S.T., VakilaRoaia, Y. and Hemati, M., 2014. The Study of Factors Influencing the Accepting of Internet Banking: Case Study: Bank Sepahin Alborz Province. *Oman Chapter of Arabian Journal of Business and Management Review*, 3(7), pp.85-98.

Hatch, M.J. and Cunliffe, A.L., 2006. Organization theory (2nd).

Hellier, P.K., Geursen, G.M., Carr, R.A. Rickard, J.A., (2003). Customer repurchase intention: A general structural equation model. *European journal of marketing*, 37(11/12), 1762-1800.

Henwood, K. and Pidgeon, N., (2003). Grounded theory in psychological research.

Hidayat, A. and Diwasasri, A.H.A., 2013. Factors influencing attitudes and intention to purchase counterfeit luxury brands among Indonesian consumers. *International Journal of Marketing Studies*, 5(4), p.143.

Higgins, E.T., 1987. Self-discrepancy: a theory relating self and affect. *Psychological review*, 94(3), p.319.

Himmel, W., Simmenroth-Nayda, A., Niebling, W., Ledig, T., Jansen, R.D., Kochen, M.M., Gleiter, C.H. and Hummers-Pradier, E., 2005. What do primary care patients think about generic drugs?. *International Journal of Clinical Pharmacology & Therapeutics*, 43(10).

Hinds, J. and Sparks, P., (2011). The affective quality of human-natural environment relationships. *Evolutionary Psychology*, 9(3),

Hittleman, D.R. and Simon, A.J., 1997. Interpreting educational research: An introduction for consumers of research. Prentice-Hall, Inc., One Lake St., *Upper Saddle River*, NJ 07458.

Holbrook, M.B. and Hirschman, E.C., 1982. The experiential aspects of consumption: Consumer fantasies, feelings, and fun. *Journal of consumer research*, 9(2), pp.132-140.

Hollweg, K.S., Taylor, J.R., Bybee, R.W., Marcinkowski, T.J., McBeth, W.C. and Zoido, P., 2011. Developing a framework for assessing environmental literacy. Washington, DC: North *American Association for Environmental Education*.

Hooper, D., Coughlan, J. and Mullen, M., 2008. Structural equation modelling: Guidelines for determining model fit. *Articles*, p.2.

Horio, T., 1976. The induction of photocontact sensitivity in guinea pigs without UVB radiation. *Journal of Investigative Dermatology*, 67(5), pp.591-593.

Hsu, S.J. and Roth, R.E., 1998. An assessment of environmental literacy and analysis of predictors of responsible environmental behaviour held by secondary teachers in the Hualien area of Taiwan. *Environmental education research*, 4(3), pp.229-249.

Hughes, J.A. and Sharrock, W.W., 1997. *The philosophy of social research*.

Hunter, M.L., 2011. Buying racial capital: Skin-bleaching and cosmetic surgery in a globalized world. *The Journal of Pan African Studies*, 4(4), pp.142-164.

Ibrahim, S and Abdul, Z., 2002. Executive and management attitudes towards corporate social responsibility in Malaysia. Corporate Governance: *The international journal of business in society*, 2(4), pp.10-16.

Ireland, K. and Rosen, M., 2013. A classical introduction to modern number theory (Vol. 84). *Springer Science & Business Media*.

Irving, L.M., 1990. Mirror images: Effects of the standard of beauty on the self-and body-esteem of women exhibiting varying levels of bulimic symptoms. *Journal of social and clinical psychology*, 9(2), pp.230-242.

Ismaila, S. and Mokhtara, S.S.M., (2016). The Actual Purchase of Herbal Products in Malaysia: *The Moderating Effect of Perceived Benefit*.

Jacob, C., Guéguen, N., Boulbry, G. and Ardiccioni, R., 2010. Waitresses' facial cosmetics and tipping: A field experiment. *International journal of hospitality management*, 29(1), pp.188-190.

Jacob, C., Guéguen, N., Boulbry, G. and Ardiccioni, R., 2010. Waitresses' facial cosmetics and tipping: A field experiment. *International journal of hospitality management*, 29(1), pp.188-190.

Jamal, J.A., (2006). Malay traditional medicine. Tech Monitor (Special Feature: *traditional Medicine: S & T Advancement), 37-49.*

Jamal, M.M., 2006. Epidemiology of hepatitis C virus (HCV) infection. *International journal of medical sciences*, 3(2), p.41.

Jang, J.H., Park, Y.D., Ahn, H.K., Kim, S.J., Lee, J.Y., Kim, E.C., Chang, Y.S., Song, Y.J. & Kwon, H.J., (2014). Analysis of green tea compounds and their stability in dentifrices of different pH levels. *Chemical and Pharmaceutical Bulletin*, 62(4), 328-335.

Jayaratne, S., 1993. The antecedents, consequences, and correlates of job satisfaction. *Handbook of organizational behavior*, 111, p.40.

Jenatabadi, H.S. & Ismail, N.A., (2014). Application of structural equation modelling for estimating airline performance. *Journal of Air Transport Management*, 40, 25-33.

Johnson, B., 2001. Toward a new classification of nonexperimental quantitative research. *Educational Researcher*, 30(2), 3-13.

Johnson, R.B. & Onwuegbuzie, A.J., (2004). Mixed methods research: A research paradigm whose time has come. *Educational researcher*, 33(7), 14-26.

Johnston, M.W. & Marshall, G.W., (2016). Sales force management: Leadership, innovation, technology. *Routledge.*

Jöreskog, K.G. & Sörbom, D., (2003). LISREL 8.54. Structural equation modeling with the Simplis command language.

Jung, J., Lennon, S.J. and Rudd, N.A., 2001. Self-schema or self-discrepancy? Which best explains body image?. *Clothing and Textiles Research Journal*, 19(4), pp.171-184.

Kamakura, W.A. and Novak, T.P., 1992. Value-system segmentation: Exploring the meaning of LOV. *Journal of consumer research*, 19(1), pp.119-132.

Kamins, M.A., 1989. Celebrity and noncelebrity advertising in a two-sided context. *Journal of advertising research*.

Kaplan, B. and Maxwell, J.A., 1994. Evaluating health care information systems: Methods and applications. Qualitative Research Methods for Evaluating Computer Information Systems. JG Anderson, CE Ayden and SJ Jay. *Thousand Oaks, Sage*.

Karim, A., Schinnerer, E., Martínez-Sansigre, A., Sargent, M.T., van der Wel, A., Rix, H.W.,

Ilbert, O., Smolčić, V., Carilli, C., Pannella, M. and Koekemoer, A.M., 2011. The star formation history of mass-selected galaxies in the COSMOS field. *The Astrophysical Journal*, 730(2), p.61.

Karim, A., Shahrim, M., Nasouddin, S.S., Othman, M., Mohd Adzahan, N., Hussin, S.R. & Shaari, K., (2011). Consumers knowledge and perception towards Melicope ptelefolia Daun Tenggek Burung): a preliminary qualitative study. *International Food Research Journal*, 18(4), 1481-1488.

Karim, A., Sohail, M.N., Munir, S. & Sattar, S., (2011). Pharmacology and phytochemistry of Pakistani herbs and herbal drugs used for treatment of diabetes. *Int. J. Pharmacol*, 7(4), 419-439.

Kauffman J (2009) Advancing sustainability science: report on the international conference on sustainability science (ICSS) 2009.Sustain Sci 4:233–242. doi: 10.1007/s11625-009-0088-y

Kaytaz, M. and Gul, M.C., 2014. Consumer response to economic crisis and lessons for marketers: The Turkish experience. *Journal of Business Research*, 67(1), pp.2701-2706.

Kelliher, F., 2011. Interpretivism and the pursuit of research legitimisation: an integrated approach to single case design. *Leading issues in business research methods*, 1, p.45.

Kelly, D.J., Liu, S., Ge, L., Quinn, P.C., Slater, A.M., Lee, K., Liu, Q. and Pascalis, O., 2007. Cross-race preferences for same-race faces extend beyond the African versus Caucasian contrast in 3-month-old infants. Infancy, 11(1), pp.87-95.

Kelson, T.R., Kearney-Cooke, A. & Lansky, L.M., (2000). Body-image and body-beautification among female college students. *Perceptual and Motor Skills*, 71(1), 281-289.

Kenrick, D.T., Montello, D.R., Gutierres, S.E. and Trost, M.R., 1993. Effects of physical attractiveness on affect and perceptual judgments: When social comparison overrides social reinforcement. *Personality and Social Psychology Bulletin*, 19(2), pp.195-199.

Kensler, L.A., (2012). Ecology, Democracy, and Green Schools: An Integrated Framework. *Journal of School Leadership*, 22(4).

Kheiry, B. and Nakhaei, A., 2012. Consumers' green purchase decision: An examination of environmental literacy and demographics. *International Journal of Marketing and Technology*, 2(9), p.171.

Khobzi, N., Strike, C., Cavalieri, W., Bright, R., Myers, T., Calzavara, L. and Millson, M., 2009. A qualitative study on the initiation into injection drug use: Necessary and background processes. *Addiction Research & Theory*, 17(5), pp.546-559.

Khraim, H.S., 2011. The influence of brand loyalty on cosmetics buying behavior of UAE female consumers. *International Journal of Marketing Studies*, 3(2), p.123.

Kim, Y.J., Njite, D. & Hancer, M., (2013). Anticipated emotion in consumers' intentions to select eco-friendly restaurants: Augmenting the theory of planned behavior. *International journal of hospitality management*, 34, 255-262.

Kleinhans, D. and Knoth, W., 1976. Granulomas of axillae (zirconium?)(author's transl). *Dermatologica*, 152(3), pp.161-167.

Klöckner, C.A., 2013. A comprehensive model of the psychology of environmental behaviour—A meta-analysis. *Global Environmental Change*, 23(5), pp.1028-1038.

Klopper, H., 2008. The qualitative research proposal. Curationis, 31(4), pp.62-72.

Kneale, J. and Santy, J., 1999. Critiquing qualitative research. *Journal of Orthopaedic Nursing*, 3(1), pp.24-32.

Kotchen, M.J. and Reiling, S.D., 2000. Environmental attitudes, motivations, and contingent valuation of nonuse values: a case study involving endangered species. *Ecological Economics*, 32(1), pp.93-107.

Kristal, A.R., Darke, A.K., Morris, J.S., Tangen, C.M., Goodman, P.J., Thompson, I.M., Meyskens, F.L., Goodman, G.E., Minasian, L.M., Parnes, H.L. & Lippman, S.M., (2014). Baseline selenium status and effects of selenium and vitamin e supplementation on prostate cancer risk. *Journal of the National Cancer Institute*, 106(3), 45-56.

Kuhn, T., 1977. Objectivity, value judgment, and theory choice. *Arguing About Science*, pp.74-86.

Kulkarni, S.S., Bhalke, R.D., Pande, V.V. & Kendre, P.N., (2014). Herbal plants in photo protection and sun screening action: An overview. *Indo American Journal of Pharmaceutical Research*, 4(2), 1104-1113.

Kumar, S. and Phrommathed, P., 2005. Research methodology (pp. 43-50). *Springer US*.

Kunene, T.R., (2008). A critical analysis of entrepreneurial and business skills in SMEs in the

textile and clothing industry in Johannesburg, South Africa (Doctoral dissertation, University of Pretoria).

Kuo, Y.F. and Feng, L.H., 2013. Relationships among community interaction characteristics, perceived benefits, community commitment, and oppositional brand loyalty in online brand communities. *International Journal of Information Management*, 33(6), pp.948-962.

Kwun, D.J.W., 2011. Effects of campus foodservice attributes on perceived value, satisfaction, and consumer attitude: A gender-difference approach. International *Journal of Hospitality Management*, 30(2), pp.252-261.

Lakin, J.L. and Chartrand, T.L., 2003. Using nonconscious behavioral mimicry to create affiliation and rapport. *Psychological science*, 14(4), pp.334-339.

Landau, S. & Everitt, B., (2004). A handbook of statistical analyses using SPSS (Vol. 1). Boca Raton, FL: Chapman & Hall/CRC.

Laroche, M., Bergeron, J. & Barbaro-Forleo, G., (2001). Targeting consumers who are willing to pay more for environmentally friendly products. *Journal of consumer marketing*, 18(6), 503-520.

Lethbridge, T.C., Sim, S.E. & Singer, J., (2005). Studying software engineers: Data collection techniques for software field studies. *Empirical software engineering*, 10(3), 311-341.

Levine, M.P. and Murnen, S.K., 2009. "Everybody knows that mass media are/are not [pick one] a cause of eating disorders": A critical review of evidence for a causal link between media, negative body image, and disordered eating in females. *Journal of Social and Clinical Psychology*, 28(1), pp.9-42.

Ligget, A., 2012. Research shows college-aged women buy cosmetics strive for physical beauty more during recession. *College Times*.

Lincoln, Y.S. and Guba, E.G., 1985. *Naturalistic inquiry* (Vol. 75). Sage.

Ling-Yee, L., 1997. Effect of collectivist orientation and ecological attitude on actual environmental commitment: The moderating role of consumer demographics and product involvement. *Journal of international consumer marketing*, 9(4), pp.31-53.

Liobikienė, G., Mandravickaitė, J. and Bernatonienė, J., 2016. Theory of planned behavior approach to understand the green purchasing behavior in the EU: A cross-cultural study.

Ecological Economics, 125, pp.38-46.

Lopaciuk, A & Loboda, M., (2013), Global beauty industry trends in the 21st century. *International Conference*, Zadar, Croatia.

Lucas, A., 1930. Cosmetics, perfumes and incense in ancient Egypt. *The Journal of Egyptian Archaeology*, 16(1), pp.41-53.

Luzar, E.J., Diagne, A., Gan, C. and Henning, B.R., 1995. Evaluating nature-based tourism using the new environmental paradigm. *Journal of Agricultural and applied Economics*, 27(2), pp.544-555.

Lytras, M.D., 2010. From the special issue editor: Information systems research for a sustainable knowledge society.

Madahi, A. and Sukati, I., 2012. The effect of external factors on purchase intention amongst young generation in Malaysia. *International Business Research*, 5(8), p.153.

Magazine, G.C.I., Controversial Ingredients: One Brand's Perspective.

Magnusson, M.K., Arvola, A., Koivisto Hursti, U.K., Åberg, L. & Sjödén, P.O., (2001). Attitudes towards organic foods among Swedish consumers. *British food journal*, 103(3), 209-227.

Malaeb, Z.A., Summers, J.K. and Pugesek, B.H., 2000. Using structural equation modeling to investigate relationships among ecological variables. *Environmental and Ecological Statistics*, 7(1), pp.93-111.

Maldonado, C., 2011. The effect of cultural orientation on advertising effectiveness. A comparison among Americans, Mexican-Americans, and Mexicans. *Academy of Marketing Studies Journal*, 15, p.83.

Manaktola, K. & Jauhari, V., (2007). Exploring consumer attitude and behaviour towards green practices in the lodging industry in India. *International Journal of Contemporary Hospitality Management*, 19(5), 364-377.

Mander, M., 1998. Marketing of indigenous medicinal plants in South Africa: a case study in KwaZulu-Natal.

Marinac, J.S., Buchinger, C.L., Godfrey, L.A., Wooten, J.M., Sun, C. & Willsie, S.K., (2007). Herbal products and dietary supplements: a survey of use, attitudes, and knowledge among

older adults. *The Journal of the American Osteopathic Association*, 107(1), 13-23.

Matzler, K. & Renzl, B., (2006). The relationship between interpersonal trust, employee satisfaction, and employee loyalty. *Total quality management and business excellence*, 17(10), 1261-1271.

Maug, E. and Naik, N., 1996. Herding and delegated portfolio management. *London Business School mimeo*.

Maxwell, J.A., 1998. Designing a qualitative study: Handbook of applied social research methods.

McAlexander, J.H., Schouten, J.W. and Koenig, H.F., 2002. Building brand community. *Journal of marketing*, 66(1), pp.38-54.

McBeth, W. and Volk, T.L., 2008. The national environmental literacy project: A baseline study of middle grade students in the United States. *The Journal of Environmental Education*, 41(1), pp.55-67.

McCabe, M.P., 1997. Intimacy and quality of life among sexually dysfunctional men and women. *Journal of Sex & Marital Therapy*, 23(4), pp.276-290.

McDonagh, P. and Prothero, A., 2012. 'Special Issue on Sustainability as Megatrend: Journal of Macromarketing, 2014. Journal of Macromarketing, 32(4), p.461.

McDonald, R.P. and Ho, M.H.R., 2002. Principles and practice in reporting structural equation analyses. *Psychological methods*, 7(1), p.64.

McEachern, M.G. and Mcclean, P., 2002. Organic purchasing motivations and attitudes: are they ethical?. *International Journal of Consumer Studies*, 26(2), pp.85-92.

McLeod, J. and Balamoutsou, S., 2001. A method for qualitative narrative analysis of psychotherapy transcripts. *Psychological Test and Assessment Modeling*, 43(3), p.128.

Mei Min, C., Ling Hong, C., Jian Ai, Y. and Pei Wah, W., 2012. Conceptual Paper: Factors Affecting the Demand of Smartphone among Young Adult. *International Journal on Social Science, Economics and Art*, 2(2), pp.44-49.

Meng, J. and Pan, P.L., 2012. Investigating the effects of cosmeceutical product advertising in beauty-care decision making. *International Journal of Pharmaceutical and Healthcare Marketing*, 6(3), pp.250-266.

Meredith, J.R., Raturi, A., Amoako-Gyampah, K. and Kaplan, B., 1989. Alternative research paradigms in operations. *Journal of operations management*, 8(4), pp.297-326.

Merriam, S.B., 1998. Qualitative Research and Case Study Applications in Education. Revised and Expanded from" Case Study Research in Education.". J*ossey-Bass Publisher*s, 350 Sansome St, San Francisco, CA 94104.

Miles, M.B. and Huberman, A.M., 1994. Qualitative data analysis: An expanded sourcebook. sage.

Miles, M.B. and Huberman, A.M., 1994. Qualitative data analysis: An expanded sourcebook. sage.

Mimouni-Chaabane, A. and Volle, P., 2010. Perceived benefits of loyalty programs: Scale development and implications for relational strategies. *Journal of Business Research*, 63(1), pp.32-37.

Minton, A.P. and Rose, R.L., 1997. The effects of environmental concern on environmentally friendly consumer behavior: An exploratory study. *Journal of Business research*, 40(1), pp.37-48.

Moè, A., Meneghetti, C. & Cadinu, M., (2009). Women and mental rotation: Incremental theory and spatial strategy use enhance performance. *Personality and Individual Differences*, 46(2), 187-191.

Mohai, P., 1990. Black environmentalism. Social Science Quarterly, 71(4), p.744.

Moisander, J., 2007. Motivational complexity of green consumerism. *International journal of consumer studies*, 31(4), pp.404-409.

Momtaz, S., Mapunya, B.M., Houghton, P.J., Edgerly, C., Hussein, A., Naidoo, S. and Lall, N., 2008. Tyrosinase inhibition by extracts and constituents of Sideroxylon inerme L. stem bark, used in South Africa for skin lightening. *Journal of ethnopharmacology*, 119(3), pp.507-512.

Morrison, A., Rabellotti, R. & Zirulia, L., (2013). When do global pipelines enhance the diffusion of knowledge in clusters?. *Economic Geography*, 89(1), 77-96.

Morwitz, V.G., Steckel, J.H. and Gupta, A., 2007. When do purchase intentions predict sales?. *International Journal of Forecasting*, 23(3), pp.347-364.

Moseley, C., 2000. Teaching for environmental literacy. *The Clearing House*, 74(1), p.23.

Mostafa, M.M., 2007. Gender differences in Egyptian consumers' green purchase behaviour: the effects of environmental knowledge, concern and attitude. *International Journal of Consumer Studies,* 31(3), pp.220-229.

Motta, R.J. and Dispoto, G.J., Motta, Ricardo J., Dispoto and Gary J., 1997. Image production using color error diffusion. *U.S. Patent* 5,621,545.

Mouton, J., (2011). How to succeed in your master's and doctoral studies: A South African perspective. *Van Schaik Publishers*.

Mukhtar, A. and Mohsin Butt, M., 2012. Intention to choose Halal products: the role of religiosity. *Journal of Islamic Marketing*, 3(2), pp.108-120.

Mulhern, R., Fieldman, G., Hussey, T., Lévêque, J.L. & Pineau, P., (2003). Do cosmetics enhance female Caucasian facial attractiveness? *International Journal of Cosmetic Science*, 25(4), 199-205.

Mulkey, J.P. and Oehme, F.W., 1993. A review of thallium toxicity. *Veterinary and human toxicology*, 35(5), pp.445-453.

Nagasawa, S. & Kizu, Y., (2013). Green action as a luxury strategy in the field of cosmetics. *Waseda Business & Economic Studies*, 48, 1-17.

Nambisan, S. and Baron, R.A., 2009. Virtual customer environments: testing a model of voluntary participation in value co- creation activities. *Journal of product innovation management,* 26(4), pp.388-406.

Narayanaswamy, R. & Ismail, I.S., (2015). Cosmetic potential of Southeast Asian herbs: an overview. *Phytochemistry Reviews*, 14(3), 419-428.

Nash, J.F., Tanner, P.R. & Matts, P.J., (2006). Ultraviolet A radiation: testing and labeling for sunscreen products. *Dermatologic clinics*, 24(1), 63-74.

Nau, D.S., 1995. Mixing methodologies: can bimodal research be a viable post-positivist tool?. *The Qualitative Report*, 2(3), pp.1-6.

Negev, M., Sagy, G., Garb, Y., Salzberg, A. and Tal, A., 2008. Evaluating the environmental literacy of Israeli elementary and high school students. *The Journal of Environmental Education*, 39(2), pp.3-20.

Neuman, L. W. (2006). Social research methods: Qualitative and quantitative approaches. 6th edition. *Boston: Pearson International Education*.

Nguyen, N.H.K., (2014). Evaluating factors that affect young consumers' purchase intention toward organic cosmetics in Ho Chi Minh City (Doctoral dissertation, International University HCMC, Vietnam).

Nikdavoodi, J., (2013). The Imapct of Attitude, Subjective Norm and Consumer *Innovativeness on Cosmetic Buying Behavior*.

Niu, W., Zhang, J.X. & Yang, Y., (2007). Deductive reasoning and creativity: A cross-cultural study. *Psychological reports*, 100(2), 509-519.

Noe, F.P. and Snow, R., 1990. Hispanic cultural influence on environmental concern. The *Journal of Environmental Education*, 21(2), pp.27-34.

Nohynek, G.J., Antignac, E., Re, T. and Toutain, H., 2010. Safety assessment of personal care products/cosmetics and their ingredients. *Toxicology and applied pharmacology*, 243(2), pp.239-259.

Noor, M.N.M., Sreenivasan, J. and Ismail, H., 2013. Malaysian consumers attitude towards mobile advertising, the role of permission and its impact on purchase intention: a structural equation modeling approach. *Asian Social Science*, 9(5), p.135.

Ntshingila, F., 2005. Female buppies using harmful skin lighteners. Sunday Times, South Africa.

Olsen, M.D., Lodwick and R Dunlop, 1992. Viewing the world ecologically. San.

Olsen, N.V., Sijtsema, S.J. and Hall, G., 2010. Predicting consumers' intention to consume ready-to-eat meals. The role of moral attitude. *Appetite*, 55(3), pp.534-539.

Paladino, J., Mrak, G., Miklić, P., Jednacak, H. and Mihaljević, D., 2005. The keyhole concept in aneurysm surgery-a comparative study: keyhole versus standard craniotomy. Min-*Minimally Invasive Neurosurgery*, 48(05), pp.251-258.

Palys, T., 2007. Basic Research. The Sage encyclopedia of qualitative research methods, pp.58-60.

Pandey S, Meshya N, & Viral, D. (2010). Herbs play an important role in the field of cosmetics. *International Journal of Pharm Tech Research* 2, 632-639

Papista, E. and Krystallis, A., 2013. Investigating the types of value and cost of green brands: proposition of a conceptual framework. *Journal of Business Ethics*, 115(1), pp.75-92.

Parfatia, A. A., & Namdar, R. (2006). Relationships between Hispanic ethnicity and attitudes and beliefs toward herbal medicine use among older adults. *Research in Social & Administrative Pharmacy* 2, 266 – 279

Paul, J., & Rana, J. (2012). Consumer behavior and purchase intention for organic food. *Journal of Consumer Marketing*, 29(6), 412-422.

Pauwels, M. and Rogiers, V., 2004. Safety evaluation of cosmetics in the EU: reality and challenges for the toxicologist. *Toxicology letters*, 151(1), pp.7-17.

Pauwels, M. and Rogiers, V., 2010. Human health safety evaluation of cosmetics in the EU: a legally imposed challenge to science. *Toxicology and Applied Pharmacology*, 243(2), pp.260-274.

Pauwels, M., Dejaegher, B., Vander Heyden, Y. and Rogiers, V., 2009. Critical analysis of the SCCNFP/SCCP safety assessment of cosmetic ingredients (2000–2006). *Food and chemical toxicology*, 47(4), pp.898-905.

Pawlak, R., Brown, Æ. D., Kay, Æ. M., Connell, C., Yadrick, Æ. K., & Blackwell, A. (2008). Theory of Planned Behavior and Multivitamin Supplement Use in Caucasian College Females. *Journal Primary Prevention*, 29(1), 57–71

Peattie, K., 2001. Towards sustainability: The third age of green marketing. *The Marketing Review*, 2(2), pp.129-146.

Persson, J., (2010). Misconceptions of positivism and five unnecessary science theoretic mistakes they bring in their train. *International journal of nursing studies*, 47(5), 651-661.

Petty, R. & Cacioppo, J., (2012). Communication and persuasion: Central and peripheral routes to attitude change. *Springer Science & Business Media*.

Philip, L.J., 1998. Combining quantitative and qualitative approaches to social research in human geography—an impossible mixture?. *Environment and planning* A, 30(2), pp.261-276.

Pieroni, Andrea, Cassandra L. Quave, Maria Lorena Villanelli, Paola Mangino, Giulia Sabbatini, Luigina Santini, Tamara Boccetti et cetera . "Ethnopharmacognostic survey on the natural ingredients used in folk cosmetics, cosmeceuticals and remedies for healing skin

diseases in the inland Marches, Central-Eastern Italy." *Journal of Ethnopharmacology* 91, no. 2 (2004): 331-344.

Pincus, H.S. & Schmelkin, L.P., (2003). Faculty perceptions of academic dishonesty: A multidimensional scaling analysis. *The Journal of Higher Education*, 74(2), 196-209.

Polit-O'Hara, D. and Beck, C.T., (2006). Essentials of nursing research: Methods, appraisal, and utilization (Vol. 1). *Lippincott Williams & Wilkins.*

Polkinghorne, D.E., 2005. Language and meaning: Data collection in qualitative research. *Journal of counseling psychology*, 52(2), p.137.

Preston, A., (2004). Review: America Unbound. Sage UK: London, England: *SAGE Publications.*

Price, G.G., 2003. Ecotourism operators and environmental education: enhancing competitive advantage by advertising environmental learning experiences. *Tourism Analysis*, 8(2), pp.143-147.

Products in Thailand An Analysis of Report in the Thai Health Product Vigilance Center. Database from 2000 to 2008, 34(4), 339–351.

Publications, Thousand Oaks CA.

Raghavendra, R.M., Vadiraja, H.S., Nagarathna, R., Nagendra, H.R., Rekha, M., Vanitha, N., Gopinath, K.S., Srinath, B.S., Vishweshwara, M.S., Madhavi, Y.S. and Ajaikumar, B.S., 2009. Effects of a yoga program on cortisol rhythm and mood states in early breast cancer patients undergoing adjuvant radiotherapy: a randomized controlled trial. *Integrative cancer therapies*, 8(1), pp.37-46.

Rahbar, E. & Wahid, N.A., (2010). The Malaysian consumer and the environment: Purchase behavior. Global Business and Management Research: An International Journal, 2(4), 323-336.

Ramayah, T., Lee, J.W.C. and Mohamad, O., 2010. Green product purchase intention: Some insights from a developing country. *Resources, Conservation and Recycling*, 54(12), pp.1419-1427.

Ramdas, M. and Mohamed, B., 2014. Impacts of tourism on environmental attributes, environmental literacy and willingness to pay: A conceptual and theoretical review. *Procedia-Social and Behavioral Sciences*, 144, pp.378-391.

Ramkissoon, H. & Uysal, M.S., (2011). The effects of perceived authenticity, information search behaviour, motivation and destination imagery on cultural behavioural intentions of tourists. *Current Issues in Tourism*, 14(6), 537-562.

Rashid, N.R.N.A., 2009. Awareness of eco-label in Malaysia's green marketing initiative. *International Journal of Business and Management*, 4(8), p.132.

Reckhow, K.H., Arhonditsis, G.B., Kenney, M.A., Hauser, L., Tribo, J., Wu, C., Elcock, K.J., Steinberg, L.J., Stow, C.A. and McBride, S.J., 2005. A predictive approach to nutrient criteria.

Reed, E., Hansen, J. and Waters, M.A., 1986. Cosmetics, Fashions and the Exploitation of Women. Atlanta, GA: *Pathfinder Press*.

Reeves, T.C. and Hedberg, J.G., 2003. Interactive learning systems evaluation. *Educational Technology*.

Renfrew Center Foundation (2012, February, 22). New Survey Results Indicate There's more to Makeup Use than Meets the Eye. Retrieved from http://renfrewcenter.com/sites/default/files/press_release_pdfs/Barefaced%20and%20Beautiful%20Release%20-%20FINAL.pdf

Rezai, G., Zahran, M. Z. M., & Mohamed, Z. (2013). Factors Influencing Malaysian Consumers. Online Purchase of Herbal Products. *Pertanika Jounal Social Science & Human*, 21(S), 109–122.

Richins, M.L., 1991. Social comparison and the idealized images of advertising. *Journal of consumer research*, 18(1), pp.71-83.

Rimal, A., Moon, W. and Balasubramanian, S.K., 2006. Perceived risks of agro-biotechnology and organic food purchases in the United States. *Journal of Food Distribution Research*, 37(2), p.70.

Ritho, M., Klepser, T.B. and Doucette, W.R., 2002. Influences on consumer adoption of herbal therapies. *Drug information journal*, 36(1), pp.179-186.

Rivis, A. & Sheeran, P., (2003). Social influences and the theory of planned behaviour: Evidence for a direct relationship between prototypes and young people's exercise behaviour. *Psychology and Health*, 18(5), 567-583.

Rivis, A., Sheeran, P. & Armitage, C.J., (2009). Expanding the affective and normative

components of the Theory of Planned Behavior: A meta- analysis of anticipated affect and moral norms. *Journal of Applied Social Psychology*, 39(12), 2985-3019.

Roberts JA, Bacon DR. 1997. Exploring the subtle relationships between environmental concern and ecologically conscious consumer behavior. *Journal of Business Research* 40: 79–89.

Robertson, J., Fieldman, G. and Hussey, T., 2008. " Who wears Cosmetics?" Individual Differences and their Relationship with Cosmetic Usage. *Individual Differences Research*, 6(1).

Roche, M., Duffield, C. & White, E., (2011). Factors in the practice environment of nurses working in inpatient mental health: A partial least squares path modeling approach. *International journal of nursing studies*, 48(12), 1475-1486.

Roy, M. and Payette, H., 2012. The body image construct among Western seniors: A systematic review of the literature. *Archives of gerontology and geriatrics*, 55(3), pp.505-521.

Sánchez-Fernández, R. & Iniesta-Bonillo, M.Á., (2007). The concept of perceived value: a systematic review of the research. *Marketing theory*, 7(4), 427-451.

Saokaew, S., Suwankesawong, W., Permsuwan, U. and Chaiyakunapruk, N., 2011. Safety of herbal products in Thailand. *Drug safety*, 34(4), pp.339-350.

Saokaew, S., Suwankesawong, W., Permsuwan, U., & Chaiyakunapruk, N. (2011). *Safety of Herbal.*

Saribas, D., Teksoz, G. and Ertepinar, H., 2014. The relationship between environmental literacy and self-efficacy beliefs toward environmental education. *Procedia-Social and Behavioral Sciences*, 116, pp.3664-3668.

Saribas, D., Teksoz, G. and Ertepinar, H., 2014. The relationship between environmental literacy and self-efficacy beliefs toward environmental education. *Procedia-Social and Behavioral Sciences*, 116, pp.3664-3668.

Saunders, M., 2004. Lewis P & Thornhill A.(2007): Research Methods for Business Students. *England: Printhall*.

Schlosser, A.E., 2003. Experiencing products in the virtual world: the role of goal and imagery in influencing attitudes versus purchase intentions. *Journal of consumer research*, 30(2),

pp.184-198.

Schmelkin, L.P., Kaufman, A.M. and Liebling, D.E., 2001. Faculty Assessments of the Clarity and Prevalence of Academic Dishonesty.

Scholarios, D., 2005. Research Methodology: Research Methods. Unpublished presentation. *Strathclyde Business School, Glasgow UK*.

Scholtes, V.A., Terwee, C.B. & Poolman, R.W., (2011). What makes a measurement instrument valid and reliable?. *Injury*, 42(3), pp.236-240.

Schultz, P., 2000. New environmental theories: Empathizing with nature: The effects ofPerspective taking on concern for environmental issues. *Journal of social issues*, 56(3), pp.391-406.

Schumacker, R.E. & Lomax, R.G., (2004). A beginner's guide to structural equation modeling. *Psychology Press.*

Service, R.W., (2009). Book Review: Corbin, J., & Strauss, A. (2008). Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory . Thousand Oaks, CA: Sage. *Organizational Research Methods*, 12(3), 614-617.

Sewell, A.A., 2017. The illness associations of police violence: Differential relationships by ethnoracial composition. *In Sociological Forum*.

Shelley, W.B. and Hurley, H.J., 1958. The allergto origin of zirconium deodorant granulomas. *British Journal of Dermatology*, 70(3), pp.75-101.

Sheth, J.N., Newman, B.I. & Gross, B.L., (1991). Why we buy what we buy: A theory of consumption values. *Journal of business research*, 22(2), 159-170.

Sicilia, M. and Palazón, M., 2008. Brand communities on the internet: A case study of Coca-Cola's Spanish virtual community. Corporate Communications: *An International Journal*, 13(3), pp.255-270.

Sirohi, N., McLaughlin, E.W. and Wittink, D.R., 1998. A model of consumer perceptions and store loyalty intentions for a supermarket retailer. *Journal of retailing*, 74(2), pp.223-245.

Skaltsas, L.N. and Vasileiou, K.Z., 2015. Patients' perceptions of generic drugs in Greece. *Health Policy*, 119(11), pp.1406-1414.

Smith, R.B and Sherman, E., Mathur, A., 1997. Store environment and consumer purchase

behavior: mediating role of consumer emotions. *Psychology and Marketing*, 14(4), pp.361-378.

Sobh, R. and Belk, R.W., 2011. Privacy and gendered spaces in Arab Gulf homes. *Home Cultures*, 8(3), pp.317-340.

Solomon, M., Bamossy, G., Askegaard, S. and Hogg, M., 2010. Consumer Behavior: Buying: *A European Perspective.*

Solomon, M.R., 2009. Marketing: Real people, real decisions. *Pearson Education*.

Souiden, N. and Diagne, M., 2009. Canadian and French men's consumption of cosmetics: a comparison of their attitudes and motivations. *Journal of Consumer Marketing*, 26(2), pp.97-109.

Sprinthall, R.C., Schmutte, G.T. and Sirois, L., 1991. Understanding educational research. *Prentice Hall*.

St. Pierre, E.A. & Jackson, A.Y., (2014). Qualitative data analysis after coding.

Stables, A. and Bishop, K., 2001. Weak and strong conceptions of environmental literacy: Implications for environmental education. *Environmental Education Research*, 7(1), pp.89-97.

Stafford, J.E. & Cocanougher, B.A. (2013), "Reference group theory", in Selected Aspects of Consumer Behavior, Superintendent of Documents, U.S. Government Printing Office, *Washington D.C.*, 361-380.

Stainback, S. and Stainback, W., 1988. Understanding & Conducting Qualitative Research. Council for Exceptional Children, Publication Sales, *1920 Association Dr., Reston*, VA.

Starch, M., The Andrew Jergens Company and Kao Corporation, 1996. Rinse-off skin conditioner. *U.S. Patent* 5,578,299.

Steg, L. and Vlek, C., 2009. Encouraging pro-environmental behaviour: An integrative review and research agenda. *Journal of environmental psychology*, 29(3), pp.309-317.

Stein, E.M., (2016). Harmonic Analysis (PMS-43): Real-Variable Methods, Orthogonality, and Oscillatory Integrals.(PMS-43) (Vol. 43). *Princeton University Press.*

Stokburger-Sauer, N., Ratneshwar, S. & Sen, S., (2012). Drivers of consumer–brand identification. *International journal of research in marketing*, 29(4), 406-418.

Stovel, H., (2007). Effective use of authenticity and integrity as world heritage qualifying conditions. *City & Time*, 2(3), 3-14.

Straughan, R. and Roberts, J. (1999), "Environmental segmentation alternatives: a look at green consumer behaviour in the new millennium", *Journal of Consumer Marketing*, Vol. 16 No. 6,pp. 558-75

Strauman, T.J., Vookles, J., Berenstein, V., Chaiken, S. and Higgins, E.T., 1991. Self-discrepancies and vulnerability to body dissatisfaction and disordered eating. *Journal of personality and social psychology*, 61(6), p.946.

Street, B.V and Heath, S.B., 2008. On Ethnography: Approaches to Language and Literacy Research. Language & Literacy (NCRLL). Teachers College Press. 1234 Amsterdam Avenue, *New York*, NY 10027.

Sweeney, J.C. & Soutar, G.N., (2001). Consumer perceived value: The development of a multiple item scale. *Journal of retailing*, 77(2), 203-220.

Synodinos, N.E. and Yamada, S., 2000. Response rate trends in Japanese surveys. International *Journal of Public Opinion Research*, 12(1), pp.48-72.

Szell AB, Hallett LF (2013) Attitudes and perceptions of local residents and tourists toward the protected area of Retezat National Park, Romania. *Int J Hum Soc Sci* 3(4):18–34

Tan, C.T. & Farley, J.U., (2016). The impact of cultural patterns on cognition and intention in Singapore. *Journal of consumer research*, 13(4), 540-544.

Tangkiatkumjai, M., Boardman, H., Praditpornsilpa, K. and Walker, D.M., 2013. Prevalence of herbal and dietary supplement usage in Thai outpatients with chronic kidney disease: a cross-sectional survey. *BMC complementary and alternative medicine*, 13(1), p.153.

Tansey, O., 2007. Process tracing and elite interviewing: a case for non-probability sampling. PS: *Political Science & Politics*, 40(4), pp.765-772.

Tauber, E.M., 1972. Why do people shop?. *The Journal of Marketing*, pp.46-49.

Teng, Y.M., 2011. Applying the extended theory of planned behavior to predict the intention of visiting a green hotel. *African Journal of Business Management*, 5(17), p.7579.

Thai, H.T. and Kim, S.E., 2015. A review of theories for the modeling and analysis of functionally graded plates and shells. *Composite Structures*, 128, pp.70-86.

Thanisorn, R., Byaporn, N. and Chanchai, B., 2012. Thai consumers' perception on herbal cosmetic products: A comparative study of Thai and imported products. *Information Management and Business Review*, 4(1), p.35.

Thomas, M., Chandran, S. and Trope, Y., 2007. The effects of information type and temporal distance on purchase intentions. *Samuel Curtis Johnson Graduate School of Management*, Cornell University.

Thompson, J.K. and Stice, E., 2001. Thin-ideal internalization: Mounting evidence for a new risk factor for body-image disturbance and eating pathology. *Current directions in psychological science*, 10(5), pp.181-183.

Thompson, J.K., Heinberg, L.J., Altabe, M. and Tantleff-Dunn, S., 1999. Exacting beauty: Theory, assessment, and treatment of body image disturbance. *American Psychological Association.*

Tiggemann, M. and McGill, B., 2004. The role of social comparison in the effect of magazine advertisements on women's mood and body dissatisfaction. *Journal of Social and Clinical Psychology*, 23(1), pp.23-44.

Tikka, P.M., Kuitunen, M.T. and Tynys, S.M., 2000. Effects of educational background on students' attitudes, activity levels, and knowledge concerning the environment. *The journal of environmental education*, 31(3), pp.12-19.

Till, B.D. and Busler, M., 1998. Matching products with endorsers: attractiveness versus expertise. *Journal of consumer marketing*, 15(6), pp.576-586.

Tirtiroglu, E. and Elbeck, M., 2008. Qualifying purchase intentions using queueing theory. *Journal of applied quantitative methods*, 3(2), pp.167-168.

Tourangeau, R., Conrad, F., Arens, Z., Fricker, S., Lee, S. & Smith, E., (2006). Everyday concepts and classification errors: Judgments of disability and residence. *Journal of Official Statistics*, 22(3), 385 -389.

Trivedi, R.H., Patel, J.D. & Savalia, J.R., (2015). Pro-environmental behaviour, locus of control and willingness to pay for environmental friendly products. *Marketing Intelligence & Planning*, 33(1), 67-89.

Tsakiridou, E., Boutsouki, C., Zotos, Y. & Mattas, K., (2008). Attitudes and behaviour towards organic products: an exploratory study. *International Journal of Retail & Distribution*

Management, 36(2), 158-175.

Tuncer, G., Tekkaya, C., Sungur, S., Cakiroglu, J., Ertepinar, H. and Kaplowitz, M., 2009. Assessing pre-service teachers' environmental literacy in Turkey as a mean to develop teacher education programs. *International Journal of Educational Development*, 29(4), pp.426-436.

Van der Lans, R., van Everdingen, Y. and Melnyk, V., 2016. What to stress, to whom and where? A cross-country investigation of the effects of perceived brand benefits on buying intentions. *International Journal of Research in Marketing*, 33(4), pp.924-943.

Van Rensburg, W., Henning, E and Smit, B., 2004. Finding your way in qualitative research (pp. 19-22). *Pretoria: Van Schaik*.

Van Wyk, B.E. and Gericke, N., 2000. People's plants: A guide to useful plants of Southern Africa. *Briza Publications*.

Van Wyk, B.E., 2011. The potential of South African plants in the development of new medicinal products. *South African Journal of Botany*, 77(4), pp.812-829.

Van Wyk, B.E., Oudtshoorn, B.V. and Gericke, N., 1997. *Medicinal plants of South Africa*. Briza.

Velnampy, T., Achchuthan, S. & Kajananthan, R., (2013). Foreign Direct Investment, Economic Growth, and Unemployment: Evidence from Sri Lanka. *Annamali Business Review*, 4, 74-78.

Venkatesh, A., Joy, A., Sherry Jr, J.F., Wang, J. and Chan, R., 2012. Fast fashion, sustainability, and the ethical appeal of luxury brands. *Fashion Theory*, 16(3), pp.273-295.

Verhoef, P.C., Lemon, K.N., Parasuraman, A., Roggeveen, A., Tsiros, M. & Schlesinger, L.A., (2009). Customer experience creation: Determinants, dynamics and management strategies. *Journal of retailing*, 85(1), 31-41.

Vining, J. and Ebreo, A., 1990. What makes a recycler? A comparison of recyclers and nonrecyclers. *Environment and behavior*, 22(1), pp.55-73.

Vitell, S.J., Singhapakdi, A. and Thomas, J., 2001. Consumer ethics: an application and empirical testing of the Hunt-Vitell theory of ethics. *Journal of Consumer marketing*, 18(2), pp.153-178.

Von Ahlefeldt, D., Crouch, N.R., Nichols, G., Symonds, R., Mckean, S., Sibiya, H., Cele, M.P.,

2003. Medicinal Plants Traded on South Africa's Eastern Seaboard. *Porcu-pine Press*, Durban.

Vos, L., & Brennan, R. (2010). Complementary and Alternative Medicine: Shaping a Marketing Research Agenda. *Marketing Intelligence & Planning*, 28(3), 349 –364.

Vyas, A., Saraf, S. and Saraf, S., 2008. Cyclodextrin based novel drug delivery systems. *Journal of inclusion phenomena and macrocyclic chemistry*, 62(1-2), pp.23-42.

Walsh, J. and McGuire, J., 1992. An examination of environmental attitudes among college students. Procedings of the 1992 Northeastern Recreational Research Symposium. *General Technical Report*, NE-176.

Walsham, G., 1995. Interpretive case studies in IS research: nature and method. *European Journal of information systems*, 4(2), pp.74-81.

Wang, Y., Xu, J.F., Chen, Y.Z., Niu, L.Y., Wu, L.Z., Tung, C.H. and Yang, Q.Z., 2014. Photoresponsive supramolecular self-assembly of monofunctionalized pillar [5] arene based on stiff stilbene. *Chemical Communications*, 50(53), pp.7001-7003.

Wangthong, S., Tonsiripakdee, I., Monhaphol, T., Nonthabenjawan, R. and Wanichwecharungruang, S.P., 2007. Post TLC developing technique for tyrosinase inhibitor detection. *Biomedical Chromatography*, 21(1), pp.94-100.

Want, S.C., Vickers, K. and Amos, J., 2009. The influence of television programs on appearance satisfaction: Making and mitigating social comparisons to "Friends". *Sex Roles*, 60(9-10), pp.642-655.

Warayuanti, W. and Suyanto, A., 2015. The influence of lifestyles and consumers attitudes on product purchasing decision via online shopping in Indonesia. *European Journal of Business and Management*, 7(8), pp.74-80.

Washington, S., Karlaftis, M.G. and Mannering, F.L., 2003. Statistical and econometric techniques for transportation data analysis. *CRC/Chapman & Hall Press, New York, NY*.

Watt, J.M. and Breyer-Brandwijk, M.G., 1962. The Medicinal and Poisonous Plants of Southern and Eastern Africa being an Account of their Medicinal and other Uses, Chemical Composition, Pharmacological Effects and Toxicology in Man and Animal. The Medicinal and Poisonous Plants of Southern and Eastern Africa being an Account of their Medicinal and other Uses, Chemical Composition, Pharmacological Effects and Toxicology in Man and Animal., (Edn 2).

Weber, J.M. and Capitant de Villebonne, J., 2002. Differences in purchase behavior between France and the USA: the cosmetic industry. *Journal of Fashion Marketing and Management: An International Journal*, 6(4), pp.396-407.

Weisberg, J., Te'eni, D. and Arman, L., 2011. Past purchase and intention to purchase in e-commerce: The mediation of social presence and trust. *Internet research*, 21(1), pp.82-96.

Wells, F.V. and Lubowe, I.I., 1964. *Cosmetics and the Skin. Reinhold Pub*. Corp..

Westerman, M.A., 2011. Conversation analysis and interpretive quantitative research on psychotherapy process and problematic interpersonal behavior. *Theory & Psychology*, 21(2), 155-178.

WHO, G., 2011. Guidelines for drinking-water quality. World Health Organization, 216, pp.303-4.

Wilcken, C. F., Couto, E. B., Orlato, C., Ferreira Filho, P. J., & Firmino, D. C. (2003). Ocorrência do psilídeo-de-concha (Glycaspis brimblecombei) em florestas de eucalipto no Brasil.Circular técnica IPEF, no. 201. http://www.ipef.br/publicacoes/ctecnica/nr201.pdf. Accessed 3 January 2012.

Williams, D.R., Yu, Y., Jackson, J.S. and Anderson, N.B., 1997. Racial differences in physical and mental health: Socio-economic status, stress and discrimination. *Journal of health psychology*, 2(3), pp.335-351.

Willis, P., 1981. Cultural production is different from cultural reproduction is different from social reproduction is different from reproduction. *Interchange*, 12(2), pp.48-67.

Wood, J.V., 1989. Theory and research concerning social comparisons of personal attributes. *Psychological bulletin*, 106(2), p.231.

Woodall, T., (2003) Conceptualising'value for the customer': An attributional, structural and dispositional analysis. *Academy of marketing science review*, 1(3), 24-26.

Woodruff, R.B., 1997. Customer value: the next source for competitive advantage. *Journal of the academy of marketing science*, 25(2), pp.139-153.

Workman, J.E. & Johnson, K.K., (2001). The role of cosmetics in impression formation. *Clothing and Textiles Research Journal*, 10(1), 63-67.

Wu, W.Y., Lee, C.L., Fu, C.S. and Wang, H.C., 2013. How can online store layout design and

atmosphere influence consumer shopping intention on a website?. *International Journal of Retail & Distribution Management*, 42(1), pp.4-24.

Wu, Z.S., (2010). Graphene anchored with Co3O4 nanoparticles as anode of lithium ion batteries with enhanced reversible capacity and cyclic performance. ACS nano, 4(6), 3187-3194.

Xie, C., Bagozzi, R.P. & Troye, S.V., (2008). Trying to prosume: toward a theory of consumers as co-creators of value. *Journal of the Academy of Marketing Science*, 36(1), 109-122.

Yadav, R. & Pathak, G.S., (2016). Young consumers' intention towards buying green products in a developing nation: Extending the theory of planned behavior. *Journal of Cleaner Production*, 135, 732-739.

Yadav, R. and Pathak, G.S., 2016. Young consumers' intention towards buying green products in a developing nation: Extending the theory of planned behavior. *Journal of Cleaner Production*, 135, pp.732-739.

Yang, E.C., Chuang, Y.C., Chen, Y.L. & Chang, L.H., (2008). Abnormal foraging behavior induced by sublethal dosage of imidacloprid in the honey bee (Hymenoptera: Apidae). *Journal of economic entomology*, 101(6), 1743-1748.

Yeon Kim, H. & Chung, J.E., (2011). Consumer purchase intention for organic personal care products. *Journal of consumer Marketing*, 28(1), 40-47.

Yeonsoo, L., Jinwoo, K., Inseong, L. & Hoyong, K. (2002). "A cross-cultural study on the value structure of mobile internet usages: comparison between Korea and Japan", *Journal of Electronic Commerce Research*, 3(4), 227-239.

Yin, R., 2003. *Case study methodology*.

Yin-Fah, B.C., Osman, S. and Foon, Y.S., 2011. Simulation of Sales Promotions towards buying behavior among University Students. *International Journal of Marketing Studies*, 3(3), p.78.

Zeithaml, V.A. (1978). "Consumer perceptions of price, quality, and value: a mean send model and synthesis of evidence", *Journal of Marketing*, 52, (3), 2-22.

Zikmund, W.G., Babin, B.J., Carr, J.C. & Griffin, M., (2013). *Business research methods*. Cengage Learning.

APPENDIX A: MEASUREMENT INSTRUMENTS

Appendices

1. **Respondent information**

1A. Participation letter

University of the Witwatersrand

School of Economics and Business Science

Date: 09/03/2017

Dear possible participant

My name is Rudo Cynthia Christine Chinomona, and I am Masters' student in the Marketing Division at the University of the Witwatersrand, Johannesburg. I am conducting research on the predictors of herbal cosmetic products purchase intention by female students at University of the Witwatersrand (Generation Y Cohort).

As a Female student, you are invited to take part of this survey. This survey aims

to determine which factors play a key role in the purchase decision towards herbal cosmetics. The results of the study will be a Masters' dissertation, and will become available online after completion of the research.

Your response is highly important for the study, and there are no right or wrong answers. This survey is confidential and anonymous, which are both guaranteed by no need to enter your name on the questionnaire. The participants' involvement is solely answering the questionnaire, and participation does not involve any risk or loss of benefits whether or not you participate, neither when ambiguity arises, nor does the research does not under any circumstance involve payment. In addition, your participation is completely voluntary, which implies that you are able to withdraw from the study at any stage. The collected data will only be used for research purposes. Also, the research is completely anonymous and confidential, and the survey will not ask for your details in any way.

Thank you for considering participation. Should you have any questions, or should you wish to obtain a copy of the results of the survey, please contact me on (081)-4273976, or online via email at 1768182@students.wits.ac.za. My supervisor's name and contact details are: Dr. Norman Chiliya- to reach at Norman.chiliya@wits.ac.za and Rukudzo Pamacheche- to reach at Rukudzo.Pamacheche@wits.ac.za

Kind regards,

Rudo Cynthia Christine Chinomona
Masters student Marketing
School of Economic and Business Science
University of the Witwatersrand, Johannesburg

SECTION A

GENERAL INFORMATION

Please indicate your answer by ticking (✓) on the appropriate box.

A1 Please indicate your Age.

17-22		23-28		29-33		34-37	

A2 Indicate your level of study.

Undergraduate	
Postgraduate	

A3 Please indicate the Division you belong to.

Marketing Division	
Economics Division	
Insurance & Risk Management Division	
Finance Division	
Human Resource & General Management Division	
Information Systems Division	

A4 Please indicate your Race.

Black	
Coloured	
Asian	
White	
Others (Please Specify)	

SECTION B

SOCIAL INFLUENCE (SI)

Below are statements about Social Influence. You can indicate the extent to which you agree or disagree with the statement by ticking the corresponding number in the 5 point scale below:

1=strongly disagree, 2= disagree, 3= moderately agree, 4= agree and 5= strongly agree

Please tick only one number for each statement

SI1	My friend(s) advise me to purchase herbal cosmetics.	Strongly disagree	1	2	3	4	5	Strongly agree
SI2	My family member(s) advise me to purchase herbal cosmetics.	Strongly disagree	1	2	3	4	5	Strongly agree
SI3	My doctor(s)/ Dermatologist(s) advise me to purchase herbal cosmetics.	Strongly disagree	1	2	3	4	5	Strongly agree
SI4	Daily Newspaper(s) and magazine(s) influence me to purchase herbal cosmetics.	Strongly disagree	1	2	3	4	5	Strongly agree
SI5	Mass Media(s) like television / radio channels influence me to purchase.	Strongly disagree	1	2	3	4	5	Strongly agree

SECTION C

ECO – LITERACY (EL)

Below are statements about Eco-Literacy. You can indicate the extent to which you agree or disagree with the statement by ticking the corresponding number in the 5 point scale below:

1=strongly disagree, 2= disagree, 3= moderately agree, 4= agree and 5= strongly agree

Tick only one number for each statement.

EL1	I know that I buy products and packages that are environmentally safe.	Strongly disagree	1	2	3	4	5	Strongly agree
EL2	I know more about recycling than the average person.	Strongly disagree	1	2	3	4	5	Strongly agree

EL3	I know how to select products and packages that reduce the amount of waste ending up in landfills.	Strongly disagree	1	2	3	4	5	Strongly agree
EL4	I understand the environmental phrases and symbols on product package.	Strongly disagree	1	2	3	4	5	Strongly agree
EL5	I am very knowledgeable about environmental issues.	Strongly disagree	1	2	3	4	5	Strongly agree

SECTION D

PERCEIVED BENEFITS OF HERBAL COSMETICS (PBHC)

Below are statements about Perceived Benefits of Herbal Cosmetics. You can indicate the extent to which you agree or disagree with the statement by ticking the corresponding number in the 5 point scale below:

1=strongly disagree, 2= disagree, 3= moderately agree, 4= agree and 5= strongly agree. ***Please tick only one number for each statement***

PBHC1	Herbal cosmetics can make my skin feel soft.	Strongly disagree	1	2	3	4	5	Strongly agree
PBHC2	Herbal cosmetics can improve skin elasticity and reduce wrinkles.	Strongly disagree	1	2	3	4	5	Strongly agree
PBHC3	Herbal cosmetics have a moisturising effect.	Strongly disagree	1	2	3	4	5	Strongly agree
PBHC4	Herbal cosmetics can protect my skin.	Strongly disagree	1	2	3	4	5	Strongly agree
PBHC5	Herbal cosmetics can cover freckles, dark spots, and other blemishes.	Strongly disagree	1	2	3	4	5	Strongly agree
PBHC6	Herbal cosmetics can display my aesthetic taste.	Strongly disagree	1	2	3	4	5	Strongly agree
PBHC7	Herbal cosmetics suit my fashion sense	Strongly disagree	1	2	3	4	5	Strongly agree

PBHC8	Herbal cosmetics can make me look more attractive	Strongly disagree	1	2	3	4	5	Strongly agree
PBHC9	Herbal cosmetics help me to look brighter	Strongly disagree	1	2	3	4	5	Strongly agree
PBHC10	Herbal cosmetics help me to look confident	Strongly disagree	1	2	3	4	5	Strongly agree

SECTION E

ATTITUDE TOWARDS HERBAL COSMETICS USE (ATHCU)

Below are statements about Attitude Toeards Herbal Cosmetics Use. You can indicate the extent to which you agree or disagree with the statement by ticking the corresponding number in the 5 point scale below:

1=strongly disagree, 2= disagree, 3= moderately agree, 4= agree and 5= strongly agree

Please tick only one number for each statement

ATHCU1	Herbal cosmetics are safe.	Strongly disagree	1	2	3	4	5	Strongly agree
ATHCU2	Herbal cosmetics improve my appearance.	Strongly disagree	1	2	3	4	5	Strongly agree
ATHCU3	Herbal cosmetics prevent my skin aging signs.	Strongly disagree	1	2	3	4	5	Strongly agree
ATHCU4	Herbal cosmetics protect me from skin allergic.	Strongly disagree	1	2	3	4	5	Strongly agree
ATHCU5	Using herbal cosmetics help me to decrease the skin cancer capability.	Strongly disagree	1	2	3	4	5	Strongly agree

SECTION F

PURCHASE INTENTION (PIHC)

Below are statements about Purchase Intention. You can indicate the extent to which you agree or disagree with the statement by ticking the corresponding number in the 5 point scale.

1=strongly disagree, 2= disagree, 3= moderately agree, 4= agree and 5= strongly agree

Please tick only one number for each statement

PIHC1	I want to purchase herbal cosmetics.	Strongly disagree	1	2	3	4	5	Strongly agree
PIHC2	I have intention to purchase herbal cosmetics.	Strongly disagree	1	2	3	4	5	Strongly agree
PIHC3	I will purchase herbal cosmetics as soon as possible.	Strongly disagree	1	2	3	4	5	Strongly agree
PIHC4	In near future, I would like to buy herbal cosmetics.	Strongly disagree	1	2	3	4	5	Strongly agree

THANK YOU