

**A STUDY OF CONSUMER BEHAVIOUR WITH A PARTICULAR
FOCUS ON THE FACTORS AND ATTRIBUTES THAT
INFLUENCE THE CHOICE OF TOOTHPASTE IN THE
PIETERMARITZBURG MARKET**

By

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EXECUTIVE SUMMARY

All of us are consumers. We consume products such as bread and milk and services such as education, banking and transportation. A fundamental understanding of consumer behaviour forms the backbone of all marketing activities and is an imperative prerequisite for the success of businesses. Consumers' wants and needs in today's competitive world are continuously changing. Therefore companies are forced to understand how consumers make purchasing decisions before an effective marketing strategy could be designed. (Skinner, 1994:218) According to Lamb *et al* (2000:66) in order to design an appropriate marketing mix for their defined market, marketing managers must be able to understand consumers' behaviour thoroughly. This is essential because it will determine how successful the marketing strategy would be. Mowen (1995:5) define consumer behaviour as "the study of the buying units and the exchange processes involved in acquiring, consuming, and disposing of goods, services, experiences and ideas." In a nutshell, to stress the importance of understanding consumer behaviour, Assael summarises it by saying that "marketers have come to realise that their effectiveness in meeting consumer needs directly influences their profitability and the better they understand the factors underlying consumer behaviour, the better able they are to develop effective marketing strategies to meet consumer needs" (Assael,1998:5)

This study examined toothpaste purchasing amongst Pietermaritzburg (PMB) consumers. The specific objectives were to evaluate which marketing stimuli affect the purchase of toothpaste in PMB, to evaluate the attributes consumers look for in toothpaste purchasing, to identify the various demographic variables that influence the purchase and finally to identify which brand of toothpaste has preference amongst PMB consumers. Theoretical reviews of the factors influencing consumer behaviour, which are categorised into marketing stimuli as well as environmental and individual factors are first discussed. These are followed by a brief description of the toothpaste industry and the various product attributes. The methodology used for the data collection as well as the interpretation procedures are also outlined. The key findings were Colgate Herbal was top on the list with 16.3% of respondents selecting it while Aquafresh All-in-One came in

second with 15.3% of respondents having chosen it. Consumers attach different levels of importance to the different attributes of the toothpaste and the study found fresher breath to be the most important product attribute consumers look for when purchasing their toothpaste. The significance test done between brand preference and demographic variables indicated differences between racial groups. Based on the findings recommendations are then made for appropriate segmenting and positioning of the product that will be of use for manufacturers and retailers in the toothpaste industry.

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DECLARATION

This study is the original work of the author, except where use has been made of the work of others and it has been duly acknowledged in the text.

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1. INTRODUCTION

1.1 Introduction

Wilkie (1986:8) defines consumer behaviour as “the activities that people engage in when selecting, purchasing and using products and services so to satisfy needs and desires. Such activities involve mental and emotional processes, in addition to physical actions.” Consumer behaviour in recent years has become one of the most interesting parts of marketing. Basically all marketing decisions involved in a product, price, place and promotion are based on the level of knowledge about the consumer. Therefore understanding the behaviour of consumers has a direct link to how the marketing mix (stimuli) of the product are set.

An important part of the marketing process is to understand why a consumer makes a particular purchase. Without such understanding businesses find it hard to respond to the consumers' needs and wants. According to Schiffman and Kanuk (1997:6) in recent years businesses are investing considerable amount of time and money in trying to understand and answer the following questions:

- Who Buys?
- Why do they buy?
- Where do they buy?
- When do they buy?
- How do they buy?

Hence the challenge for businesses has been to understand how consumers might respond to the different elements of the marketing mix. Kotler (2000:160) explains this by saying “studying customers provides clues for developing new products, product features, prices, channels, messages, and other marketing mix elements.” Therefore understanding the consumer response or behaviour better than competitors serves as a significant competitive advantage.

There are many factors that influence the choice consumers make when making a purchase. Although many of the factors might not be directly controlled, understanding of their influence and impact helps businesses target their specific niche market for their products. Successful companies are continuously involved in the study of consumer needs as well as environmental trends. "Marketers have come to realise that their effectiveness in meeting consumer needs directly influences their profitability. The better they understand the factors underlying consumer behaviour, the better able they are to develop effective marketing strategies to meet consumer needs." (Assael, 1998:3)

The biggest challenge marketers' face is to get consumers to behave the way they expect them to behave. Kotler (2000:160) reinforces this by stating that "understanding consumer behaviour and 'knowing customers' are never simple and customers may say one thing and do another." The reality usually is consumers do not always behave the way marketers expect them to behave. This is why a study of consumers' attitudes, beliefs, and the way purchase decisions are made is gaining more recognition in today's competitive world. (Assael, 1998:4) Marketers and organisations as a whole will then use this information obtained from studying consumer behaviour in order to formulate effective marketing strategies for a product.

Assael mentions two broad influences that determine the consumer's choices. One of the influences is the consumer whose needs, perceptions of brand characteristics, and attitudes towards alternatives together with the consumer's demographics, lifestyles and personality can influence brand choice. The second influence is the environment in which the consumer exists. The consumer's environment is surrounded by culture (the norms and values of society), by subcultures (a part of society with distinct norms and values in certain aspects), and face-to-face groups (friends, family members, and reference groups) (Assael, 1998:23)

Therefore with the increasing demand for more customised products by consumers coupled with today's massive amount of information available to consumers and also the tendency of becoming more value conscious on the part of consumers have shown the

need to be very sensitive to consumer needs and wants more today than ever before. “Companies that fail to recognise consumer needs are more likely to make costly mistakes.” (Assael, 1998:7) It then becomes crucial to continuously study consumer behaviour because of the complexity and expectations of today’s consumer. It is within this context that this study was carried out on why consumers in Pietermaritzburg (PMB) choose one brand of toothpaste from that of another brand and what demographical factors and attributes could influence the purchase of a particular toothpaste.

1.2 Research Questions

As mentioned earlier the primary forces that influence consumer behaviour usually are the combination of the environment and personal attributes of the consumer. The study of basic variables that determine consumer behaviour is very important in today’s competitive world. It also helps in segmenting a particular market from which a specific target group is chosen. Wilkie (1986:56) explains how the main interest of consumers is usually obtaining the best alternative there is for a product regardless of which brand it is or who happens to make it when considering a purchase. Therefore understanding the factors that will continuously make a consumer buy one brand of product from that of another is a key to success.

The research will specifically aim to answer the following questions:

- Which demographic variables have the most influence on the purchase?
- What are the attributes consumers look for in toothpaste purchasing?
- Which marketing stimuli affect the purchase of toothpaste?
- Which brand of toothpaste has preference amongst PMB consumers?

1.3 Objectives of the Study

The general purpose of the study was to identify a set of brand attributes that influence consumers in PMB to purchasing a particular type of toothpaste.

The specific objectives were:

- To evaluate which marketing stimuli affect the purchase of toothpaste in PMB
- To evaluate the attributes consumers look for in toothpaste purchasing
- To identify the various demographic variables that influence the purchase
- To identify which brand of toothpaste has preference amongst PMB consumers

1.4 Research Design

The research consisted of both primary and secondary types of research. Primary research was used to specifically address the research objectives while secondary data was extensively used for gathering the relevant literature in the area of consumer behaviour.

Data collection was done through administering structured questionnaires in shopping centres and other public areas. The questionnaires were distributed across different age groups and levels in society such as professors, students, drivers, various professionals and so on. The collection of the data was done through mall intercept technique. Sudman and Blair (1998:157) point out that the most popular location for intercept surveys is shopping malls, because they provide access to general population that is appropriate for most consumer research. Four hundred questionnaires were administered for the research. Upon completion of the questionnaires the responses were categorised into different variables to determine brand attributes and other factors that influence the purchase of the particular toothpaste.

1.5 Anticipated Contribution

The research aimed at providing relevant information to marketers who want to understand the different factors that influence consumers when purchasing toothpaste. This will contribute a great deal to these companies' effectively segmenting and targeting their specific markets in order to formulate sound positioning strategies. The research should especially be of assistance to marketers in the toothpaste industry to effectively design promotional and advertising campaigns for PMB consumers.

1.6 Outline of the Dissertation

Chapter Two: Consumer Behaviour Influencing Factors

This chapter deals with a critical literature review in the area of consumer behaviour. In the chapter consumer behaviour is categorised into marketing stimuli and individual/environmental influencing factors. Previous research findings in the area of consumer behaviour are also discussed under the relevant sections.

Chapter Three: The Toothpaste Industry

In this chapter an overall view of the toothpaste industry in South Africa and other parts of the world are briefly explained. The various product attributes of the toothpaste and classification of toothpaste as product are also explained in the chapter.

Chapter Four: Research Methodology

This chapter discusses the research methodology and design used to collect and analyse the data. The significance test used to test if any difference exists between the variables is also explained in this chapter.

Chapter Five: Research Findings

This chapter outlines the sample profile and findings for each question in the questionnaire. Descriptive statistics with appropriate graphs and tables are used to portray these results. Non-parametric statistical tests known as the Mann-Whitney test are used to investigate if any relationship exists between the various demographic variables and brand choice.

Chapter Six: Discussion and Conclusion

This chapter discusses the relevant findings in relation to the research objectives. Relevant reference is made to the literature and past research in light of the findings.

Chapter Seven: Recommendations

This chapter suggests relevant recommendations to all in the industry to enable them to design an effective marketing mix for their products. These recommendations are intended to help marketers for effectively segmenting and targeting their potential market.

Chapter Eight: Research Limitations

This chapter outlines the various limitations encountered during the research.

2. CONSUMER BEHAVIOUR INFLUENCING FACTORS

2.1 Introduction

This chapter focuses on the main factors that influence consumer behaviour. These are categorised into marketing stimuli and individual and environmental factors. Marketing stimuli involve the development of an effective marketing mix (product, price, place and promotion) for the target consumer. The individual/environment influencing factors are grouped into four broad variables. These are cultural, social, psychological, and personal factors. These are discussed together with the relevant findings of prior research done on the various factors which influence the consumer. An understanding of consumer behaviour helps marketers anticipate how the target consumer will react to the various marketing mix and other strategies.

2.2 What is Consumer Behaviour?

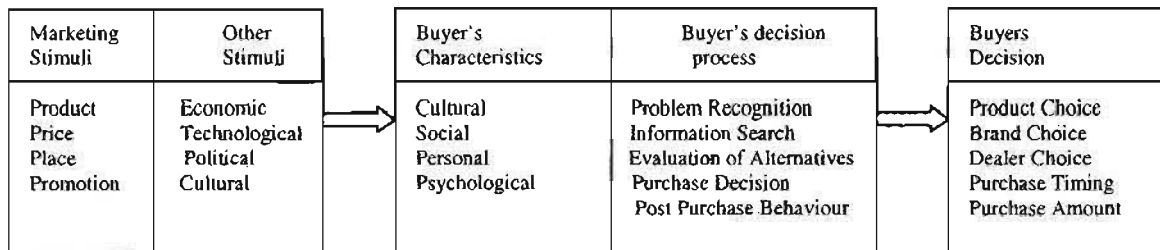
Solomon (1996:7) explains the field of consumer behaviour as “the study of the processes involved when individuals or groups select, purchase, use or dispose of products, services, ideas or experiences to satisfy needs and desires.” Du Plessis *et al* (1994:12) explain consumer behaviour as comprising the behaviour patterns of decision units (individuals as well as families), which precede, determine and follow on the decision process for the acquisition of need- satisfying products, ideas and services.

Engel *et al* (1995:4) define consumer behaviour as “those activities directly involved in obtaining, consuming, and disposing of products and services, including the decision process that preceded and follow these actions.” The focal point here is satisfying the consumer needs through an in depth understanding of the factors and influences that cause the consumer to behave in a certain manner and then position the product accordingly.

2.3 Model of Consumer Behaviour

Kotler (2000:161) explains that in order to understand consumer behaviour an understanding of the below stimulus- response model is the starting point.

Figure 2.1 Model of Buyer Behaviour

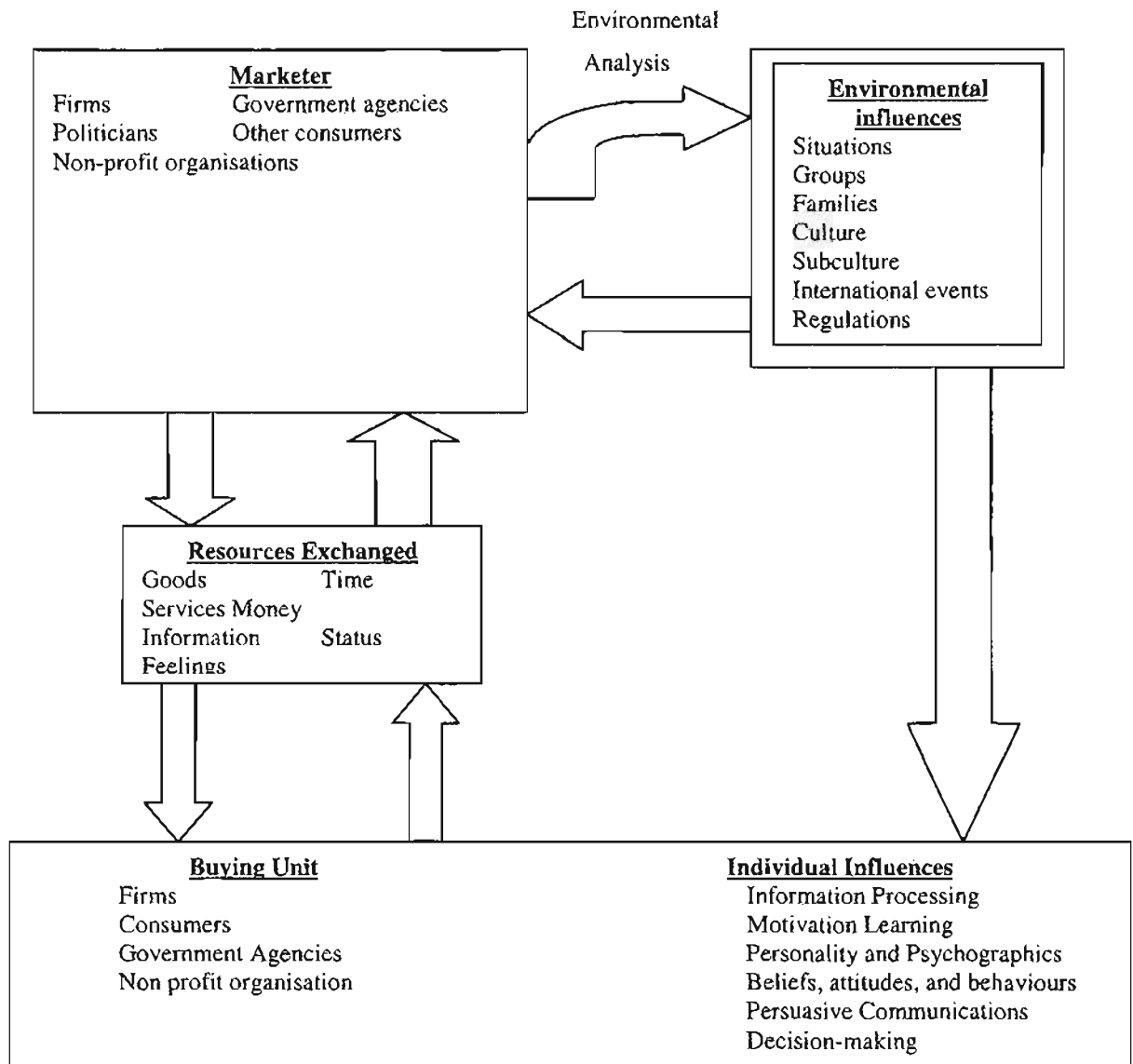


Source: (Kotler, 2000:161)

The above model shows how marketing and environmental stimuli enter the consumers mind and influence the consumers' characteristics and decision process. These influences, if positive, will then result in a purchase of a product. To gain a further insight a more detailed model by Mowen is explained next.

Mowen (1995:11) provides an overview of consumer behaviour model that consists of five components namely: the buying unit, the exchange process, the marketer's strategy, the individual influences, and the environmental influences.

Figure 2.2 An Organising Model of Consumer Behaviour



Source: (Mowen,1995:11)

In the model the marketer is the one who builds a relationship in order to trade something. This is done through segmenting and positioning strategies and the marketing mix to create an attractive exchange process. Marketers form this relationships and strategies through a number of ways. One good method could be interviewing consumers in order to find out their experience with the products, their expectations of the product, their ideal product as well as other aspects of the marketing mix for the product. In a

nutshell the role of a marketer is to identify situation that stimulate a need and then develop marketing strategies that would satisfy that specific need. (Kotler, 2000:179)

The buying unit is responsible for the purchase decision. The buying unit is an important component in the model because it is involved in the buying process. Marketers also view this unit as very important because its role and authority determines what should be purchased. The individual influence factors represent the psychological processes that affect individuals engaged in acquiring, consuming and disposing of goods, services and experiences. (Mowen, 1995:11) The individual forms the bases for a particular market and individuals perceptions, believes, attitudes, demographics, lifestyle and personality all influence the choice of a product. Marketers who base their offerings on recognition of consumer needs find a ready market for their products. (Schiffman and Kanuk, 1997:82)

The environmental influencers represent those factors outside of the individual that influence the consumer. (Mowen, 1995:11) These include our culture, subculture, the groups we belong to and our overall situations in society. As individuals we regularly interact with other segments of society who directly or indirectly influence our purchase decisions.

The resource exchanged between the marketer and buying unit are in the form of goods, services, information and so on. (Assael, 1998:23) Anything that could be offered by the marketer and is seen as adding value by the buying unit is considered as a resource that could be exchanged.

2.4 Marketing Stimuli Influence on Consumer Behaviour

Marketers use various tools to get a positive reaction from their target consumers. These tools are defined by Kotler (2000:15) as the marketing mix (stimuli). Waterschoot and Van den Bulte (1992:90) mention that the marketing mix is the product, price, promotion and place which are provided to the target market. These are now explained in brief.

2.4.1 Product

A product is “anything a consumer acquires or might acquire to meet a perceived need.” (Hawkins *et al*, 2001:19) Product decisions are referred to by Wilkie (1994:31) as “all aspects of the design, materials, and quality offered by a product.” A product is a key element in the market offering because the first step in formulating the marketing mix is designing how to meet customer needs and wants. (Kotler, 2000:394) Therefore the overall aim of the marketer is to provide a product that is better than the competitor and fulfils the consumers’ needs and wants.

Packaging can determine the success of the marketing strategy because it promotes and protects the product by making it easier to use as well as protect it from damage. (McCarthy and Perreault, 1991:192) For example in the USA “toothpaste pump dispensers were able to capture 12 percent of the toothpaste market just because they made them more convenient and less messy.” (Kotler, 2000:418) The size, colour, and other form of packaging all influence the product. Most toothpaste is packed in various attractively coloured boxes and flexible plastic tubes in order to make them user friendly and eye catching. Hence the different variations in packaging can serve as the basis for targeting different markets. Eventually the ultimate goal of packaging is to be able to communicate the message to the consumer so that purchase can be made. (Wilkie, 1994:34)

Other research which illustrates the success of packaging is the market test done by Colgate-Palmolive for its total antibacterial plaque-fighting toothpaste brand in six countries namely: the Philippines, Australia, Colombia, Greece, Portugal, and the United Kingdom. The company incorporated its operations, logistics and marketing strategy that would serve the global market. Their efforts were so successful that the total brand valued at 150 million dollars and sells in 75 countries with identical packaging, positioning and advertising strategies. (Weisz, (1994) cited in Kotler, 2000:139)

2.4.2 Promotion

According to Hawkins *et al* (2001:19) promotion is marketing communication that includes advertising, sales, public relations, packaging as well as any reflection about the company and its offerings. Wilkie (1994:31) mentions one of the roles of promotion as informing consumers about the mix and ultimately encouraging the purchase of the products. In other words promotion can directly facilitate the exchange processes of goods and services of a company to its target market. (Skinner, 1994:580) Basically promotion is a communication processes aimed at informing, persuading and reminding the target consumer about products and services in order to influence their purchase decisions. (Lamb *et al*, 2000:302)

2.4.3 Place

Hawkins *et al* (2001:21) refers to place or distribution as “having the product available where target customers can buy it.” This is very important to the success of the product. This is supported by Wilkie (1994:34) who mentions that distribution should be “well structured to meet consumers need.” Therefore marketers need to continuously study where consumers shop for their product in order to formulate an appropriate and effective distribution strategy.

2.4.4 Price

Kotler (2000:456) mentions that price is the only marketing mix element that produces revenue while the other three are costs. He further explains that price is one of the most flexible elements which can be changed more easily than other product features. Marketers must decide on the best price to charge consumers and this is dependent on factors such as competition, demand for the product and so on. (Wilkie, 1994:32) Price can play a great role in consumer’s perception of quality. A product that is low in price can be taken as having low quality. (Hawkins *et al*, 2001:21) Hence price can play a great role in the success or failure of a particular product.

2.5 Environmental Influences on Consumer Behaviour

There are four major individual/environmental variables that impact on the consumer: these are cultural, social, psychological and personal factors. (Kotler, 2000:161) These factors shape and determine when the consumer decides on a product and brand preferences.

2.5.1 Cultural Factors

2.5.1.1 *Culture*

In the 1870s the anthropologist Edward Taylor defined culture as “that complex whole which includes knowledge, belief, art, morals, law, custom, and other capabilities acquired by man as a member of society. Ever since many definitions by many scholars have emerged. For example Geert Hofstede, an expert on cross-cultural differences and management defined culture as “the collective programming of the mind which distinguishes the members of one human group from another.” (Hill, 2003:89) Hence culture impacts on the way a specific group shop. Cultural values influence consumption patterns (Assael, 1998:459) and in this context by values it is meant, “abstract ideas about what a group believes to be good, right, and desirable.” (Hill, 2003:89)

However both anthropologists and marketing scientists who have investigated culture, have stressed the differences in beliefs, actions and techniques that distinguish one culture from another but still agree all cultures actually have a lot in common. (Foxall and Goldsmith, 1994:205) There are certain cultural norms that are universal such as cleanliness, courtship, cosmology, dream interpretation, education, faith healing, funeral rites, marriages, religion rituals and so on. (Murdock: 1940, cited in Foxall and Goldsmith, 1994:205)

Culture determines our behaviour in all aspects of life and is therefore natural to influence our pattern of consumption. The level of influence depends on the capability of

the goods to portray and communicate the specific cultural meaning. (Mowen, 1995:703) For example research by Saegert *et al* (1985:104) investigating the characteristics of Mexican Americans found out that Mexican Americans prefer familiar stores, are more price conscious and are not brand loyal than non-Hispanics. Hence one's culture greatly influences how one reacts to a product.

2.5.1.1.1 Norms

Norms are ways culture determines behaviour because norms govern people's actions toward one another."(Hill, 2003:90) They are the rules and standards of conduct the group establishes.(Assael,1998:542) According to MacDonagh and Weldridge (1994:175) these standards of behaviour aim at fulfilling two basic functions:

- ***Set the standard of behaviour:*** This is determining what standards are acceptable and expected of a person. An example is when meeting a new person the norm is to shake hands.
- ***Ensure Continuity:*** This is a situation whereby individuals with similar situations repeat certain behaviours. For example if a person is a follower of the Muslim faith then the norm is to pray five times a day.

In general, norms serve as a guide for an individual to fit into a particular society and likewise influence the purchase behaviour based on what society thinks is acceptable. (Schiffman and Kanuk, 1997:245)

2.5.1.1.2 Values

"Values form the bedrock of a culture. This may include a society's attitudes toward such concepts as individual's freedom, democracy, truth, justice, honesty, loyalty, social obligation, collective responsibility, the role of women, love, sex, marriage and so on. People argue, fight, and even die over values such as freedom." (Hill, 2003:90) Hence

values shape the way people interact with each other. Solomon (1996:142) defines “value as a belief that some condition is preferable to its opposite.” Therefore values determine and shape individuals consumption patterns because purchases are made due to a belief that they may help attain a value-related goal.

Accordingly, understanding of the characteristics of cultural values serves as the basis for pointing out the underlying influences culture has on consumer behaviour. These which are common to all cultural values are listed below.

➤ ***Cultural values are learned***

Children learn their culture from parents and their environment from childhood. Cultural learning occurs in three ways: informal learning (a foreigner copying local customs), formal learning (a child taught how to behave by family members), and by technical learning (a child taught in school environment). (Engel *et al*, 1978:66, Assael, 1998:462, Schiffman and Kanuk, 1997:408)

➤ ***Cultural values are guides to behaviour***

Cultural values serve as a guide to an individual’s behaviour through the establishment of cultural norms and these norms establish standards of behaviour regarding proper social relations, means of ensuring safety, eating habits and etc. (Hawkins *et al*, 2001:42, Perner, no date: 9, Assael, 1998:464)

➤ ***Cultural values are permanent***

Children learn their cultural values from their parents and they stay with them throughout their lives. Other forms that contribute to the permanence of cultural values are schools, religious groups and other social gatherings. (Assael, 1998:464, Schiffman and Kanuk, 1997:414)

➤ *Cultural values are dynamic*

Cultures are not static. (Hawkins *et al*, 2001:43) Culture is said to be dynamic because it changes as society changes. (Schiffman and Kanuk, 1997:414) A great deal has changed in many societies over the years although the degree of change differs from one society to another. For example, American culture has changed a great deal since the 1980's, while the culture of Saudi Arabia has changed much less."(Perner, no date: 9) A study done in the USA found the following value difference between 1980's and 1990's. (Assael, 1998:464)

1980's

Belief in the American dream

Live to work

Be a winner

Family, religion

Home as a cocoon

Control the environment

Control technology

Conspicuous consumption

1990's

A new reality

Work to live

Do not be a loser

New alternatives

Homes as a resource centre

Manage the environment

Adapt to technology

Prudent Purchasing

(Assael, 1998:464)

The above values prove that culture will continue to change overtime as society's thinking and priorities change. Consumer behaviour is therefore affected by these cultural changes and it is essential to continuously follow up on developing existing and new products in line with cultural changes.

➤ *Cultural values are widely held*

Each culture has unique characteristics that distinguish it from other cultures. (Schiffman and Kanuk, 1997:412) Culture is used as a link that brings members of society together. A common language helps people to share their values and beliefs with each other. For

example in countries such as Canada and India, the lack of single cultural bond has resulted in divisiveness while in the USA the mass media have facilitated the sharing of cultural norms. (Assael, 1998:465)

Research conducted by Dempsey (1999) investigated if the relationships between values, beliefs, attitudes and behavioural intentions of Indian consumers with regard to the purchase of laundry detergents. The main objectives were to examine cultural and environmental values, objective and subjective beliefs and attitudes, and behavioural consumer data relating to the specific consumer behaviour. The research was carried out by the India Institute of Technology in Kanpur, India campus. The results of the study were that cultural values and social influences have significant impact on how the consumer behaves and also identified relevant product attributes such as price, convenience, value and brand image.(Dempsey, 1999) This is in line with other researches which have found that cultural values and social influences form a great part of the factors that shape the consumer actions. For example research by Briley and Wyer (2002:412) found that when Asian and Western participants' attention was focused on their cultural identity, it resulted in influencing their purchase decisions. For example one of the experiments found that making Chinese participants' aware of their identity, by portraying Chinese icons such as the Chinese dragon or the Great Wall, stimulated them to avoid decisions that might have negative consequences culturally and result in compromise while making USA participants aware of their identity, by portraying American icons such as the American flag or Superman, had precisely the same effect. (Briley and Wyer, 2002:412)

2.5.1.2 Subculture

A subculture is a division of a culture that shares unique patterns of behaviour. For example like many societies the South Africa ethnic subcultures are based on nationality, religion and race.”(Du Plessis, *et al*, 1994: 159) A group in a specific sub-culture has certain values it follows. As a result, members of a subculture frequently buy the same

brands and products, read the same magazines and newspapers, and shop in the same types of stores. (Assael, 1998: 509)

For example although this does not apply to everyone, African Americans in the U.S tend to worship in churches that have predominately African American membership, and church is often a significant part of family life. (Perner, No date: 11) Consumers are simultaneously members of more than one sub-cultural segment which forces marketers to continuously strive to understand how multiple sub-cultural membership impacts on consumption behaviour of the consumer. (Schiffman and Kanuk, 1997:466)

Research done by Schouten *et al* (1995:55) investigated subculture for understanding consumers of Harley-Davidson motorcycles. The study found that ownership of Harley-Davidson Motorcycle was associated with personal freedom, patriotism and American heritage as well as machismos. As the sole survivor of the American Motorcycle industry, owners related ownership of the motorcycle as reflecting their Americanism. Ownership of the Harley-Davidson motorcycle was also associated with manliness. This was reflected through leather clothing, heavy boots, knives, wallet chains and etc. This illustrates the need to belong to a specific sub-group. Hence their main conclusion was that sub-culture influences consumer behaviour and can serve as a great role for understanding consumer behaviour.

2.5.1.3 *Social Class*

Kotler (2000:161) defines social class as “a relatively homogeneous and enduring divisions in a society, which are hierarchically ordered and whose members share similar values, interests and behaviour.” Usually people in the same social class are more or less in equal range in their social status. (Engel *et al*, 1978:109) They work in roughly similar occupations and tend to have similar tastes in music, clothing, and so on. There is also a tendency to socialise with each other as well as share ideas and values to their common interest. (Coleman, 1983:273)

Some indicators of social class are occupation, income, education and wealth. (Schiffman and Kanuk, 1997:376) In most countries the income level is closely linked to social class, but because the income level of people within the same social class varies, income by itself is not usually a good measure of social class. (Wilkie, 1994:348) Usually people in different social classes utilise their money in various ways such as clothing, housing, entertainment & etc. (McCarthy and Perreault, 1993:214) Therefore identifying the specific social class helps marketers to design appropriate and effective marketing mix strategies for their products.

2.5.2 Social Factors

Consumer's behaviour is also influenced by social factors such as various groups, family, and roles and status.

2.5.2.1 Groups

Schiffman and Kanuk (1997:320) define "a group as two or more people who interact to accomplish either individual or mutual goal." When an individual consumer looks to others in deciding which product to purchase, he/she in fact is indirectly asking them to perform the role of a consumption adviser. This then leads to the discussion of two main types of groups that influence consumer behaviour. These are reference groups and membership groups.

2.5.2.1.1 Reference Groups

Kotler (2000:163) explains a person's reference groups as consisting of all the groups that have a direct (face to face) or indirect influence on the person's attitudes or behaviour. Du Plessis *et al* (1994:177) point out that the most influential groups are informal primary groups represented by family and peer groups. However, reference group influences are not equally powerful for all types of products and consumption activities. (Solomon, 1996:344) Hence the degree of the influence these groups will have

on purchase behaviour of the consumer will solely depend on the willingness of the actual consumer (user) of the product to be influenced by these groups.

According to Solomon (1996:344) there are two dimensions that influence the extent to which reference groups' can influence consumer behaviour. These are whether the purchase is to be consumed publicly or privately and whether it is a luxury or a necessity. (Solomon, 1996:344) Obviously for products consumed publicly reference groups will have greater influence than for those that will be used privately. Therefore reference groups, by exposing an individual to new behaviours and lifestyles as well as influencing attitudes and self-concept, will create pressures for conformity that may affect actual product and brand choices. (Kotler, 2000:164) For example a research was done by Bearden and Etzel (1982) to investigate if group influence had an impact on purchase decisions. The results indicated that there was a difference in the level of reference group influence between publicly and privately consumed products as well as luxuries and necessities.

2.5.2.1.2 Membership Groups

Groups that have direct influence on a person are considered as a membership groups. These are further divided into primary and secondary groups. Primary groups are groups such as family, friends, neighbours and co-workers who have direct interaction with each other on a fairly continuous base, while secondary groups are groups such as religious, professional and trade unions that have less interaction with the individual. (Kotler, 2000:165) Research by Briley and Wyer (2002:406) investigated the effects of group membership on consumer decision making. This experiment concluded that people with a group mind-set are more likely to seek balance and compromise in their choices than those with an individual mind set.

According to Engel *et al* (1978:149) the family is a primary group that both earns and consumes. Wilkie (1994:391) defines family as "a household having at least two people-related by blood or marriage-living together." The family is considered as a great

influencer of purchasing behaviour because of the frequency of contact that the individual has with other family members. (Schiffman and Kanuk, 1997:321) Hence for a fast moving product such as toothpaste, which is likely to be consumed jointly in a household setting, a member in the family could greatly influence the choice of other members in the house. Du Plessis *et al* (1994:179) mention two consumer-related reasons, which make families an important social system, these are:

- The family consumes a large array of food, shelter, transportation, medical and recreational as well as other products and services jointly.
- The family may influence the purchase and use of many products such as clothing, which are customarily considered a matter of individual choice. In South Africa, the advent and proliferation of super and hyper markets has resulted in shopping becoming a “whole family” matter. Late shopping hours and speciality departments appealing to children and husbands have all contributed to drawing the whole family into the store. (Du Plessis *et al*, 1994:179)

Hence the marketer considers families to be an important social system because members influence another’s choices and many products are consumed jointly. Another important factor to note about the family is although spouses significantly influence family consumption decisions; children in recent years have exerted considerable influence on their parents’ decision especially in product categories such as toys, clothing, cosmetics and sporting goods. (Du Plessis *et al*, 1994:190)

The influence of children on parents is happening everywhere. For example in the USA children age 4 to 12 spent an estimated \$ 24.4 billion, an increase of almost 300 percent from 1991. (Hawkins *et al* 2001:217) The indirect influence of parental spending of kids age 2 to 14 accounted for \$300 billion of household purchases in 1997. Indirect influences means that parents know the brands, product choices and preferences of their children without hints or outright requests. Direct influences describe children’s hints, requests, and demands such as “I want to go to McDonald’s”. (Kotler, 2000:166)

In 1997 direct influence stood at \$188 billion. (Kotler, 2000:166) Therefore more businesses are discovering that children can significantly influence the consumption behaviour of parents and greatly impact on the success of a product.

2.5.2.2 *Roles and Statuses*

Roles are activities a person performs in a society while status is incorporated in the role a person is engaged in. (Kotler, 2000:167) For example a doctor has more status than a driver while a driver has more status than a domestic worker. Therefore people tend to choose products that reflect their status in society. Likewise consumer behaviour is closely linked to the roles and statuses of the individual. (Kotler, 2000:167)

Wilkie (1994:367) define a role as “a set of accepted rules for appropriate behaviours in a particular situation.” Many people adopt many roles during their life time. For example a woman in her life time could have roles as a company director, wife, mother, daughter, sister, jogger, shopper, club member, and so on.(Wilkie1994:368) Other example of roles identified in family decision are the influencer, the gatekeeper (the individual controlling the flow of information), the decision maker, the purchasing agent and the consumer.(Assael,1998:543)

Research by Fischer *et al* (1990) investigated whether men or women are involved more than the other during Christmas gift shopping. The results showed that women were more engaged in the process than men and the overall conclusion was that Christmas shopping generally was regarded as a woman’s role.

2.5.3 *Psychological Factors*

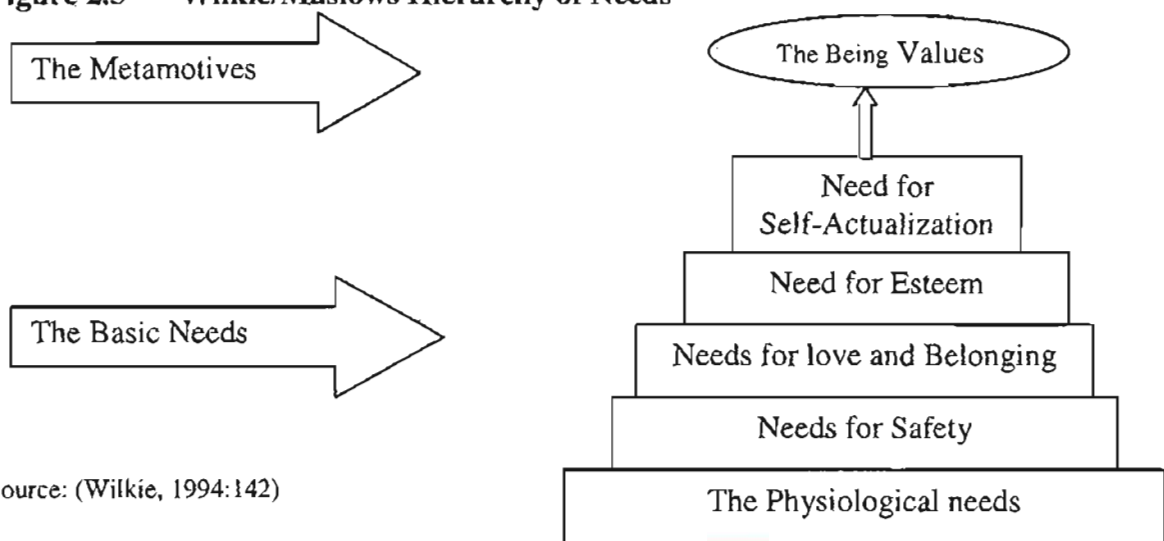
Kotler (2000:171) mentions four major psychological factors that will influence consumer behaviour. These are: Motivation, Perception, Learning, and Beliefs and Attitudes.

2.5.3.1 Motivation

Solomon (1996:126) refers to motivation as “the process that causes people to behave as they do which occurs when a need is aroused the consumer wishes to satisfy.” Once a need is identified the consumer will continue to look for ways to satisfy the need. The ultimate goal of marketing is to satisfy consumer’s needs. (Kotler, 2000:2) This requires knowing the specific needs as well as studying why they exist. Therefore the motivation process is used to satisfy the specific need. According to McCarthy and Perrault (1993:204) “needs are the basic forces that motivate a person to do something while wants are “needs” that are learned during the person’s life.” Usually needs tend to be basic while on the other hand wants are specific requirements the person looks for.

Abraham Maslow developed a motivational theory based on a hierarchy of needs. (Hawkins *et al*, 2001:363) According to Wilkie there are three propositions to Maslow’s theory: First, the environment is very important in determining which need is active at a time, secondly when a need is satisfied, it becomes inactive, and thirdly a person will not need a second level need until the first level is satisfied. Hence, Maslow’s conclusion was that if people create a positive environment for themselves they would be able to move up the need hierarchy. (Wilkie, 1994:142) The diagram below is an illustration of the above explanation:

Figure 2.3 Wilkie/Maslows Hierarchy of Needs



Source: (Wilkie, 1994:142)

Perner (no date: 33) lists properties of motivation that explain its relation to consumer behaviour.

- ***Motivation is composed of energy and direction:*** For example a person may be motivated enough to go and shop for food, but not enough to engage in a comprehensive exercise program.
- ***Motives may be overt, hidden, and multiple:*** Some motivations are publicly expressed like the desire to buy a laptop while others are not like the desire to look wealthy by buying a fancy car.
- ***Many motivations can be driven by both internal and external factors:*** For example a person may want a Volvo car either because for the safety of the car (internal motivation) or for the status it offers among work colleagues (external motivation).
- ***Many motivations are driven by the desire for tension reduction:*** For example eliminating thirst or hunger.
- ***Motivations may have either a positive or negative valence:*** For example being motivated to be promoted at work while avoiding arguments at home by staying out late.
- ***Consumers are motivated to achieve goals:*** Achieving these goals may require sustained activity overtime (e.g. exercising everyday for months or years) as opposed to just taking some action once.
- ***Consumers maintain a balance between the desires for stability and variety:*** For example we all don't want to eat the same food everyday while we are reluctant to try new food on a regular basis.

- ***Motivation reflects individual differences:*** Different consumers are motivated to achieve different things. (Perner, no date: 33)

The challenge is how to use these motivational properties in order to determine specific consumer behaviour and provide a product that will motivate purchase and hence satisfy the specific need.

Research by Jain and Maheswaran (2000:368) investigated if motivation affects reasoning through reliance on a biased set of cognitive processes. They manipulated the level of brand preferences and exposed participants to a message that was either consistent or inconsistent with their manipulated preferences. Weak and strong arguments were also used. The results were that preference–inconsistent information is processed more systematically and was counter argued more than preference-consistent information. It also showed that strong arguments are more persuasive than weak arguments in the preference-inconsistent condition. In other words, preference-consistent information the consumer has on a particular product is more likely to generate a positive action such as purchasing than preference-inconsistent information.

2.5.3.2 *Perceptions*

Schiffman and Kanuk (1997:146) define perception as “the process by which an individual selects, organises, and interprets stimuli into a meaningful and coherent picture of the world.” Perner (no date: 33) says our “perceptions are an approximation of reality.” He goes on to say that our brain attempts to make sense of the stimuli to which we are exposed. Hence our perceptions of the products we are exposed determine our purchase behaviour.

Kotler (2000:173) gives further insight into perception by stating that “perception depends not only on the physical stimuli but also on the stimuli’s relation to the surrounding field and on condition within the individual.” The key word in the definition

of perception is individual. One person might perceive a fast-talking salesperson as aggressive and insincere while another can see him as intelligent and helpful.

McCarthy and Perreault (1993:206) mention that perception determines what consumers see and feel. Stimuli-ads, products, and stores constantly bombard us and yet we may not hear or see anything. This, according to McCarthy and Perreault is due to the following three selective processes.

- **Selective Exposure:** our eyes and minds find out and notice only information that interests us. Consumers concentrate on certain stimuli while ignoring others. (Kotler, 2000:173, Assael 1998:220, Wilkie, 1994:216.) For example, when the law was passed in the USA requiring banks to explain details about money transfer in electronic banking, the North-Western National Bank distributed a pamphlet to 120,000 of its customers at a considerable cost to provide the required information. In 100 of the leaflets a phrase in the middle of the pamphlet offered the reader \$10.00 just for finding that paragraph. Surprisingly no one claimed the 10-dollar, which proved that consumers would ignore information that doesn't interest them even if its intention could be beneficial.(McCarty and Perreault,1993:206)
- **Selective Perception:** We screen out or modify ideas, messages, and information that conflict with previously learned attitudes and beliefs. (Kotler, 2000:173, Assael, 1998:219, Schiffman and Kanuk, 1997:216 and Wilkie, 1994:216).
- **Selective Retention:** We remember only what we want to remember. (Kotler 2000:173, Assael,1998:219, Schiffman and Kanuk, 1997:164, Wilkie,1994:216 and McCarthy and Perreault, 1993:207)

The above selective processes help us in getting to know how consumers get and use information hence contribute to defining appropriate marketing strategies.

2.5.3.3 *Learning*

“Learning is a process by which experience leads to change in knowledge, attitudes, and/or behaviour.” (Engel *et al*, 1995:514) Learning is a process obtained by observing the environment. (Hawkins *et al* 2001:324) Therefore we learn even if there is no intention to learn. For example, “consumers recognise many brand names and can hum many product jingles, even for those product categories they themselves do not use.” (Bamossy *et al*, 1999:65)

The focus here is teaching consumers to prefer one brand from another. Du Plessis *et al* (1994:97) mention that the two major learning theories of interest to marketers are classical conditioning and instrumental or operant conditioning. The two will now be explained to gain further insight.

2.5.3.3.1 *Classical Conditioning*

Classical conditioning occurs when a stimulus that elicits a response is paired with another stimulus that initially does not elicit a response on its own.” (Bamossy *et al*, 1999:66) According to Assael (1998:107) the secondary stimulus will elicit the same reaction as the primary stimulus. For example, an effective advertising campaign such as the Marlboro cowboy resulted in many people viewing the cowboy as reflecting strength and security although many were opposed to cigarette advertising. In this case the cowboy is the primary stimulus while the positive feeling the cowboy portrays, such as strength and security, is the secondary stimulus. (Assael, 1998:107) The primary focus of classical conditioning is “visual and olfactory cues that induce hunger, thirst or several arousal and when these cues are consistently paired with conditioned stimuli, such as brand names, consumers may learn to feel hungry, thirsty or aroused when later exposed to the brand cues.” (Bamossy *et al*, 1999:66)

Research done by Janiszewski and Warlop (1993:171) investigated the influence of conditioning procedures on attention to a conditioned stimulus. The first experiment

showed that conditioning procedures encouraged attention to the advertised product displays while the second experiment suggested conditioning could signal properties a brand acquires. For example, experiment one used soft drink television commercials to investigate if attention to brand choice could be influenced by conditioning procedure. The results suggested that the conditioning procedure was effective at getting participants to look at the brand presented with a forward conditioning procedure sooner than brands presented with a random conditioning procedure. (Janiszewski and Warlop, 1993:178) The overall conclusion from the research was that there may be a need to update the current recommendations on the use of conditioning procedures. (Janiszewski and Warlop, 1993:171-189) Another example to explain classical conditioning is the Marlboro cigarettes that are presented in billboards and in some countries supported by a media advertisement showing the brand name and a beautiful outdoor scene. The advertisement aims at associating the outdoor scene with the brand in order to create a positive emotion or conditioned response. This will then transfer the individual in liking the brand and hence result in more purchase. (Hawkins *et al*, 2001:328)

2.5.3.3.2 *Operant Conditioning*

Operant conditioning is based on how the consequences of a particular behaviour will affect the frequency or probability of the behaviour being performed again. (Antonides and Fred van Raaij, 1998:231) For example, the satisfaction the consumer gets from a cereal will increase the chance of repeat purchase than if dissatisfaction was experienced from eating the cereal. (Engel *et al*, 1995:539) Consumers are more likely to purchase the product again if they use it frequently and are happy with it.

The different perspectives on learning all aim at determining how best to understand how consumers learn about a product. The ultimate goal of marketers is therefore to teach consumers that their product is the best and eventually develop brand loyalty. (Du Plessis *et al*, 1994:104) To illustrate operant, also known as instrumental, conditioning from a marketing perspective we refer to 3M Company's initial promotional strategy for the well-known Yellow Post-It notes in South Africa. The company was of the opinion that

its product would be received very well by consumers and mailed free samples in thousands and different sizes. Since most South Africans do not usually throw away something which is free they ended up using the product which is what the company wanted. Since the product is useful it resulted in the continued usage of the product by consumers. (Du Plessis *et al*, 1994:99)

2.5.3.4 *Beliefs and Attitudes*

Kotler (2000:174) defines a belief as a “descriptive thought that a person holds about something and may be based on knowledge, opinion or faith.” Marketers are interested about a belief a consumer holds regarding a particular product because the product’s success depends on the belief the consumer has for the product. Assael (1998:284) explains that consumers’ beliefs about a brand are the characteristics they ascribe to it. An example given by Assael is a consumer survey conducted to rate soft drinks on product attributes and benefits. Consumers could be asked to rate soft drinks on attributes such as sweetness and carbonation, and also on nutritional benefits. The results could then point out the strengths/weaknesses of the company’s product compared with competitors. For instance if the results reveal that teenagers regard Pepsi as sweeter and more carbonated drink than coke then the marketer might need to reposition the drink in order to change this belief. (Assael, 1998:284) However, McCarthy & Perreault (1993:209) say that although belief may help shape a consumer’s attitudes, it doesn’t necessarily involve any liking or disliking. For example many people believe exercise helps to maintain a healthy life style but this doesn’t necessarily mean a like or dislike attitude towards exercise.

Schiffman and Kanuk (1997:235) define attitude as a “learned predisposition to behave in consistently favourable or unfavourable way with respect to a given object.” Attitudes toward brands and consumers’ evaluations of a particular brand are determined on an overall basis from poor to excellent. (Assael, 1998:282) Three observations are made to the above definition by Du Plessis to better understand the concept. The first is that attitude is learned and is not born within the person as well as learned through time;

secondly because an attitude is a predisposition it can influence consumer behaviour and thirdly the characteristics of attitudes are consistent and hence result in buying of a product for at least the immediate future. (Du Plessis *et al*, 1994:106) However, attitudes do change overtime and marketers will have to follow up on all possible changes in consumer attitudes. Hence it is worth mentioning the unique characteristics of attitudes in order to gain a further insight into the subject.

2.5.3.4.1 *Characteristics of Attitude*

Attitudes have several important characteristics, which are listed by MacDonagh and Weldridge, (1994:80-81)

- ***They are Learned:*** We are not born with our attitudes and we usually learn them from our environment like our home and school.
- ***They are Persistent:*** Attitudes will continue to persist over time.
- ***They are Predictive Behaviour:*** Our attitude can influence and shape our future behaviour. Therefore we will usually first buy products that have formed positive attitude in our minds.
- ***They can exist at low levels of Consciousness:*** We might not be aware of the extent we feel about something until we engage in a discussion or some form of interaction.
- ***They retain the uniqueness of Human Experience:*** Our individuality can play a major role in determining our expression of attitudes.

(MacDonagh & Weldridge, 1994:80-81)

Research done by Bhuain (1997) on consumer attitudes towards product attributes and country of origin perceptions found that in Saudi Arabia consumers had more positive

evaluations of products from the USA, Japan, Germany, Italy, the UK and France. Other research done by Klein *et al* (1998) in the republic of China on their attitudes towards Japanese products discovered that the Chinese consumers' willingness to buy Japanese products is affected by the economic and military rivalry between the two countries.

2.5.4 Personal Factors

A fourth factor greatly affecting consumer behaviour is personal characteristics of the individual. These factors are consumers' age, occupation, income, and personality & self-concept. (Kotler, 2000:167) Other demographic variables discussed are education, gender, race and marital status.

2.5.4.1 Age

"Age is a powerful determinant of consumer behaviour. It influences a person's interests, tastes and purchasing ability."(Du Plessis *et al* 1994:155) People's consumption patterns change over their lifetime. Their taste and preferences in clothes, furniture and entertainment is all linked to their age. (Kotler, 2000:167) What a 50-year-old will look for when purchasing a car is totally different from what a 25-year-old will look for. Schiffman & Kanuk (1997:453) say that important shifts occur in the demand for specific types of products and services as a consumer ages. Age therefore plays an important role in determining consumption and behaviour patterns.

Research done by Cole and Balasubramanian (1993:167) investigated whether consumers in their sixties and above are able to use nutritional information as accurately as younger consumers. The research was carried out in a supermarket setting and in a meeting room setting. The results showed that in a supermarket when consumers were instructed to select a cereal according to specific nutritional criteria, older consumers were less likely than younger consumer to search extensively in order to select the ideal cereal. This findings show that age influences consumer's use of information to select a product and ultimately influencing purchase.

2.5.4.2 *Occupation* ✓

A consumer is defined to a great extent by what he or she does for living. Occupation is usually used as a way to evaluate the 'worth' of people. (Bamossy *et al*, 1999: 337) For example a Blue-collar worker will buy clothes, work shoes, and lunch boxes while an executive will buy suits, go for overseas holiday and buy other luxury items that reflect his/her occupation. (Kotler, 2000:168)

Since occupation influences the clothes we wear, cars we drive, food we eat and all products we use, it is an important factor in determining consumer behaviour. (Hawkins *et al*, 2001:16) Differences in consumption amongst various occupational classes have been found for products such as shampoo, foodstuffs and many others. For example, research done by Media Mark Research Inc (1997) found significance differences between those who occupy administration/managerial jobs to those who hold precision/craft jobs for cigarette and diet colas. While cigarettes had a high level of use amongst precision/craft workers, there was a below average level of use in managerial/administration posts. On the other hand diet colas had above average use amongst managers while it was below average amongst craft workers. Likewise the research also found that there were significant differences for activities such as sailing, shopping places and the use of media between the two groups. (Media Mark, 1997 cited in Hawkins *et al*, 2001:117)

2.5.4.3 *Income* ✓

Income, like occupation has the ability to determine which groups have the greatest buying power and market potential. (Schiffman and Kanuk, 1997:55) People need money to allow them to obtain the goods and services that they need to express their tastes, so income is also an important factor in determining consumer behaviour. (Bamossy *et al*, 1999:337) Marketers consider people with more money as "cash cows" for their products. Changes in disposable income can result in changes in the market demand for many durable products. For example the demand for houses and cars tend to

fall when disposable income decreases and likewise rises as disposable income increases. (Du Plessis, *et al* 1994:155) Therefore income can actually determine how a consumer will respond to certain products. Kotler (2000:168) summarises the impact of income in one statement by saying that “product choice is greatly affected by economic circumstances.” Research done by Suddards (1976) on expenditure patterns in South Africa concluded that income is a significant determinant of household expenditure. Income was found to be the most important factor to explain the major expenditure variations in the four race groups.

2.5.4.4 Education

Assael (1998:406) mentions that education is “directly related to purchasing power, as there is a high correlation between education and income.” High-level occupations that produce high incomes usually require advanced educational training. (Schiffman and Kanuk, 1997:55) Hence education is becoming extremely important in determining the level of income and the job a person holds. Hawkins *et al* (2001:117) explains that education influences what one can purchase as well as influencing one’s tastes and preferences for a product. Education shapes the way a consumer behaves because it influences how one thinks, make decisions and relates to others. (Smith, 1996:61) For example research done by Russo *et al* (1975:33) investigating the effectiveness of unit price information discovered that in making purchase decisions, the less educated are not likely to use unit price information in stores while those with better education use relevant information to look for low priced products.

2.5.4.5 Gender

Gender is usually taken as a variable in determining many aspects of life. Consumer behaviour is no different and gender has always been used to segment a market for a product. For example women have traditionally been the main users of products such as hair colouring and cosmetics while men have been associated with tools and shaving preparations. (Schiffman and Kanuk, 1997:54) The ever increasing proportion of working

women has resulted in different changes in the consumer behaviour for many products. (Assael, 1998:404)

For example, a USA study done in 1995 showed that women were the principal buyers of 46 percent of all cars which has a total market value of 65 billion dollars annually. (Advertising Age, 1995: 24 cited in Assael, 1998:382) This proves that women in recent years have been able to penetrate into product categories that were traditionally male dominated. This has resulted in gender being used as a market segment to be confined only to a limited number of product categories. Research by Bellizzi and Milner (1991:78) discovered that many products are shifting away from traditional gender segmentation and products such as cars, motorcycles, golf equipment and other traditional masculine products are now manufactured with women in mind. However, certain products will still continue to be segmented on gender basis.

2.5.4.6 Marital Status

Marketers give attention to the marital status of the consumer because they are “interested in determining the demographic and media profiles of household decision makers” (Schiffman and Kanuk, 1997:55) Marital status determines how the information and purchase decision for a product are made as well as influencing each other’s choice. Reindfleisch *et al* (1997:323) reinforces the above by saying that household structure is of importance to marketers not only because it influences both needs and resources of the primary consumer purchasing unit, but also influences the role of children as a consumer. Research done by Webster (1994:323) investigated the extent to which Hispanic-American have embraced general American values and attitudes. The results were that Hispanic-American couples who have adapted to the American values and attitudes were found to have husbands and wives who shared equally in decision making while in traditional setting the husband basically made the purchase decisions.

2.5.4.7 *Race*

The South Africa population is divided into four race categories: namely Whites, Blacks, Indians, and Coloureds. (Du Plessis *et al*, 1994:159) In order to investigate whether race influenced consumer behaviour research was conducted in Soweto by Soweto Research. Out of 100 men and women of all ages in the survey, 53 respondents said there was a separate black market while 44 respondents claimed products are all the same for Blacks and Whites. Other findings of the research were that the Black market is not identical and some products such as mealie meal, skin lighters and hair strengtheners are specifically targeted at the Black consumer. (Soweto Research cited in Du Plessis *et al*, 1994:161)

Research was also done by Du Plessis (1987) to determine the relative importance of various evaluation criteria used by consumers when buying a car. It investigated whether there are differences between race groups, age groups and sexes in the purchase of a car. Other objectives of the study were to determine whether a relationship exists between personality dimensions of the consumers and their evaluation criteria and finally investigated if there are any differences or similarities between buyers of new cars and buyers of used cars in regard to the relative importance of evaluation criteria.

The results showed that there were significant differences between the various race groups (in internal and external feature of the car such as built-in stereo, shaded glass, colour etc), male and female consumers, and the various age groups with respect to the importance attached to the evaluation criteria. On the other hand the result found no major significance existed between personalities of consumers. (Du Plessis, 1987) Again this study clearly supports the theory that social and personal factors do actually influence the purchase behaviour while the study also found that psychological factors such as personality had little significance in influencing the purchase behaviour in a motor vehicle.

2.5.4.8 *Personalities and Self-Concept*

Schiffman and Kanuk (1997:114) define personality as “those inner psychological characteristics that both determine and reflect how a person responds to his or her environment.” “Personality is best understood in terms of goals that people pursue in their lives and the effects that these goals have on personal outcomes such as well being.” (Baumgartner, 2002:287) Personality is simply how we live and respond to the environment. (Blackwell *et al*, 1978:196) Hence our surroundings and environment influence our personal characteristics (personality) which will then have an impact on our purchase behaviour and how we respond to products.

Schiffman and Kanuk (1997:114) in explaining how consumer behaviour is affected by personality continue by saying that “deeply ingrained characteristics that we call personality are likely to influence the individual’s product choices (and even certain brand choices) and they will also affect the way the consumer responds to a firm’s promotional efforts, and when, where, and how they consume particular products or services.” (Schiffman and Kanuk, 1997:114) For example insurance companies in South Africa have used personality profiles of potential clients to determine marketing opportunities. (Du Plessis *et al* 1994:140) Research done by Schouten *et al* (1995:51) investigating consumers of Harley-Davidson motorcycles also discovered that every biker identified strongly with the motor cycle as a symbol of freedom that contrasts with the automobile as a symbol of confinement.

Another example is a study conducted in the USA in an attempt to test the assumption that automobile buyers differ in personality structure. A standard personality inventory was carried out on owners of Chevrolet and Fords. The study found very few differences between the two groups of owners. Evans through the use of discriminate analysis was able to predict correctly a Ford or Chevrolet owner in only 63% of the cases. This could still also have been obtained through a 50% chance and is therefore could not be taken as a reflective of the car owners. He used variables such as age of car, income and other demographics, which increased his prediction slightly to 70%. Therefore Evans

conclusion was that personality is an insignificant factor in predicting specific type of car ownership. (Evans, 1959:340-369 cited in Du Plessis *et al*, 1994:127)

2.6 Conclusion

This chapter explained consumer behaviour is influenced both by external and internal factors. External factors are those controlled by marketers or the environment while internal factors deal on the character of the consumer. These were discussed in detail together with relevant prior research in the area. Personal factors were discussed in more depth because one of the main objectives of the research was to investigate if demographic variables influence the purchase of toothpaste. The main reasons the other factors were not investigated further was due to the difficulty in measuring and analysing that would have been encountered if cultural, social and psychological variables were considered. The following chapter deals briefly at the toothpaste industry globally and in South Africa as well as the various product attributes consumers look for in toothpaste.

3. THE TOOTHPASTE INDUSTRY

3.1 Introduction

The purpose of this chapter is to provide brief background information on the history of toothpaste and the industry in the world and South Africa. Due to the limited information the researcher was able to obtain, the section that deals with the toothpaste industry is covered very briefly. The main obstacles the researcher encountered when gathering information for this chapter were financial requirements needed to obtain various reports and researches. There are a number of researches and analyses done by various research companies for the industry, but the finance required to obtain these reports was beyond the researcher's reach. For example, research done in 2003 by AC-Nielsen Research on the South Africa toothpaste industry trends for the years 2003-2008 currently costs 3500 US dollars. (Public Servant 1, no date) Another research done by Euro monitor on the oral hygiene market in 2004 for South Africa also costs 2100 US dollars. (Public Servant, 2004) Other attempts to obtain the relevant information through contacting brand managers of companies were also unsuccessful. Therefore the information provided in this chapter about the toothpaste industry for the countries is indeed very brief. This was mainly obtained from a search done on the internet.

The chapter although limited by the information available, never-the-less still provides good background information to support the research. The second section of the chapter deals with the various product attributes of the toothpaste and classification of toothpaste as a product. Consumers usually choose products based on attributes and recently great emphasis is being put on what goes into a product. Therefore product attributes are very important when determining who to target.

3.2 Brief History of Toothpaste

Toothpaste was used as long as 500 B.C in China and India. Modern toothpastes were developed in the 1800's. A dentist called Peabody was the first to add soap to toothpaste

in 1824. John Harris first added chalk to toothpaste in the 1850's. In 1873, nice smelling toothpaste in a jar was produced. (Public Servant 2, no date) In 1896 Colgate dental cream was the first to be packaged in collapsible tubes similar to those in use today. (Public Servant 2, no date)

Before World War II, soap was used as emulsifying agents such as sodium Lauryl Sulphate and Sodium Ricinoleate. (Grobler, no date) Today's toothpastes have come a long way since World War II. Many formulas are gentler on the teeth and more effective for the prevention of tooth decay. One big achievement in this regard is the addition of fluoride in the 1950's, which reduced tooth decay substantially. (Public Servant 3, no date) "The discovery that fluoride and fluoride compounds in toothpaste strengthened the enamel against tooth decay was a significant step forward." (Grobler, no date)

3.3 The Toothpaste (Oral Care) Industry

The brief description of the oral care industry for three major markets and South Africa will be explained in this section. The three countries covered are the USA, India and China. These were selected because they represent big markets for the industry globally.

3.3.1 The USA Oral Care Market

The USA oral care market in 2002 stood a \$ 7.4 billion. (Public Servant 4, no date) The total toothpaste market for 2002 was \$1.66 billion. Out of this \$1.26 billion or 483 million units came from supermarket sales while the remaining came from pharmacies. Consumers are continuously looking for new and unique oral care products which has forced marketers to market their products to different consumer segments. The two major companies in the industry are Colgate-Palmolive and Procter and Gamble. (Public Servant 3, no date)

3.3.2 The Indian Oral Care Market

Globally the oral care market usually consists of toothpaste and toothbrush. However, in India there is a significant presence of toothpowder which includes mouth-wash, sprays and oral rinses. In India awareness about care products is almost 100% in urban areas and 80% in rural areas. The level of penetration of toothpaste in India is 44% up from 36% a few years ago. The total oral care market in 2001 was estimated to be \$553.19 million US dollars with an annual growth of 8-10%. The toothpaste market accounts for an estimated 340 million dollars and has recorded an 8% growth over the last five years. (Sherigar, 2001:2-3)

The Indian toothpaste market is dominated by two major players namely: Colgate and Hindustan Lever. The two almost control 90% of the market with Colgate's share being 50% and with Hindustan controlling 36% of the market. The rest of the market is shared between small players such as Hygiene and Vicco Laboratories. New players such as SmithKline Beecham have launched the Aqua-fresh brand but they will have to engage in extensive marketing and promotional strategies before they are able to penetrate a great share of the market. (Sherigar, 2001:4)

3.3.3 The Chinese Oral Care Market

The Oral Care industry in China has seen a tremendous growth over the past 10 years. This is attributed to the development of the economy and peoples living conditions. In 1991 the market stood at 250 million US dollars while in 2001 the sales figure was 1 billion US dollars, showing a growth rate of 12.2% per year over the ten years. Just like in many countries the main compositions of the oral industry are toothpastes, toothbrushes and mouth rinse. (Public Servant, 2003)

3.3.4 The South African Oral Care Market

The South Africa toothpaste market was estimated to be around Rand 180 million in December 1990 and was growing at 5% percent per annum. The market is dominated by few large companies. Colgate, just like in most part of the world, is also a major player in the South African toothpaste industry and at the time controlled 39% of the market. Aqua-fresh follows second with a market share of 34% while Close-Up and Mentadent P which are produced by Unilever accounted for 26% of the market. (AC-Nielsen Report, December 1990 cited in Sauders, 1991:9)

The distribution for the products is dominated by supermarkets. Price competitiveness coupled with the increasing range of cosmetics and toiletries kept supermarkets dominant in distribution resulting in the majority of South Africans buying their cosmetics and toiletries requirements from supermarkets. (Public Servant 5, no date)

3.4 Product Attributes of Toothpaste

Most toothpaste basically contains similar ingredients while each brand maintains a unique formula. The various attributes are discussed in this section.

3.4.1 Whitening

These toothpastes contain abrasive ingredients that lighten teeth. Contrary to what many people think, whitening toothpaste do not increase the whiteness of the tooth, what they actually do is that they remove stains plaque so that the tooth becomes shinier. (Public Servant 6, no date)

3.4.2 Fresh Breath

Most toothpastes in the market aim at providing fresh breath by adding anti-bacteria agent in the ingredients. (Namrata, 2000:1) Most toothpastes in the market are positioned

using this attribute and is regarded as an important factor by the consumer when purchasing a toothpaste. (Public Servant 6, no date)

3.4.3 Fluoride

Fluoride is considered to be the most important component of toothpaste. It incorporates itself into tooth enamel making your teeth more resistant to acids produced by plaque bacteria. It also gives protection from acids found in fruit juices, soda and particular foods. (Public Servant 6, no date)

3.4.4 Tartar Control

The key ingredient in tartar-control toothpastes is sodium pyrophosphate that will keep tartar from forming above the gum line. However, these toothpastes cannot remove tartar once it has formed which will then require a professional cleaning from a dentist. (Kolpakov, no date)

3.4.5 Sensitivity

In the case of sensitive teeth, desensitising toothpaste should be used with key ingredients of strontium chloride or potassium nitrate, which protect the tubules in the teeth that are connected to the nerves. This occurs when the gums recede or tooth enamel is stripped and the underlying dentin and its open pores are exposed. This gives way for pressure, hot stimuli, and cold stimuli to trigger the tooth nerve, which causes a lot of pain and discomfort. (Public Servant 6, no date)

3.4.6 Colouring Agents

Colouring agents are added to make the toothpaste look nice and avoid consumers being put off by the unattractive colour the original ingredient may have. Usually artificial dyes are used to make red, green and blue toothpastes. (Public Servant 6, no date)

3.4.7 Flavouring Agents

These are usually used to make the toothpaste taste nice. It is mainly used to cover the bad taste of the detergents used. (Public Servant 6, no date)

3.4.8 Detergents

The detergents form the foam that helps in keeping the toothpaste in our mouth during brushing. The most commonly used detergent is Sodium Lauryl Sulfate. Usually a strong flavouring is required to counter bad tasting ingredients. (Public Servant 6, no date)

3.4.9 Preservatives

This mainly helps in preventing the growth of micro organisms. This also eliminates the need to refrigerate our toothpastes. Most common preservatives used in toothpaste are Sodium Benzoate, Methyl Paraben and Ethyl Paraben. (Public Servant 6, no date)

3.4.10 Humectants

Humectants aim at giving the toothpaste its texture and prevent it also from drying out. Most common humectants are glycerine, sorbitol and water. (Public Servant 6, no date)

3.4.11 Sweeteners

Sweeteners aim at giving a good taste to the toothpaste. Common sweeteners are usually artificial and do very little to cavity formation. (Public Servant 6, no date)

All of the above attributes form the toothpastes that are in the market. Consumers are continuously bombarded with different information about the benefits of these attributes. The focus is therefore to determine which attributes are important to the consumer and

then develop those attributes in order to build a strong customer base and bigger market share.

3.5 Positioning

Kotler (2000:298) defines positioning as “the act of designing the company’s offering and image to occupy a distinctive place in the target market’s mind.” When planning products position one must consider issues such as the competition and how their products are perceived, the needs and desires of the target market and the specific elements of the products. (Obringer, no date: 13) The main challenge marketer’s face in the toothpaste industry is how to best point out the specific attributes the consumer is looking for and then position the product different from the competition. They specifically need to focus on the differences that will most appeal to consumers in order to build strong brand loyalty.

The important underlying principle is the recognition that the marketing battle today is fought not so much on the shelf of supermarkets but rather in the consumer’s mind and to the extent the product is positioned uniquely from that of the competition. (Du Plessis *et al.*, 1994:218) Hence, positioning is the heart of brand building and is directly linked on how a product is set in the consumer’s mind. (Du Plessis *et al.*, 1994:219)

3.6 Product Classification

Toothpaste is classified as a convenience product. Lamb *et al* (2000:211) define a convenience product as “a relatively inexpensive item that merits little shopping effort.” This means a consumer wants to spend as little time as possible shopping for these goods. Further Lamb *et al* (2000:211) classify convenience products into three sub-groupings: namely staples, impulse and emergency products. Toothpaste falls under staples category. Staples are products that consumers buy routinely and without much shopping efforts, such as toothpaste and cigarettes. (Lamb *et al*, 2000:211) The implication in marketing convenience goods is that there is rapid turnover and gross margin for sellers can be

relatively low, hence resulting in sellers' reluctance to promote these products. (Skinner, 1994:316)

Most convenience products are promoted through packaging because there are mostly available only on self-service retail supermarkets and other stores. (Skinner, 1994:316) Further more convenience products are distributed through intensive distribution. According to Skinner (1994:485) intensive distribution means that all available outlets that can be used to distribute the product are utilised to the maximum.

3.7 Conclusion

This chapter briefly dealt with a history of the toothpaste, provided a description of markets globally and in South Africa and the specific attributes of toothpaste. The attributes serve as a base for the consumer when choosing particular toothpaste and hence are regarded as important to the manufacturer and marketer. These attributes help the marketer to design an effective positioning strategy in order to reach the target consumer. However as mentioned in the introduction the reader is reminded to bear in mind the limitation that could arise from using limited resources for certain sections of this particular chapter. The next chapter will cover the methodology used to conduct the survey.

4. RESEARCH METHODOLOGY

4.1 Introduction

This chapter focuses on the research methodology and the design used to collect and analyse the data from the questionnaires. Each question is briefly explained in order to clarify the context in which it was being asked. The data collection, data analysis and its presentations as well as the explanation on the significance test used are all part of this chapter.

4.2 Statement of the Problem

Consumer behaviour is all about understanding how a consumer satisfies a specific need. Being able to understand the consumer well helps marketers to design an effective marketing mix for a product. A continuous follow up on how a consumer behaves is essential because "buying behaviour does not remain a constant pattern but changes over a period of time." (Brits and Reekie, 1985:93) This according to Brits and Reekie is due to changes in buyer's income, tastes, preferences, and needs as well as other changes that occur as he/she moves from one stage of life to another. (Brits and Reekie, 1985:93) The purpose of this research was then to investigate in particular if demographic factors and product attributes influence PMB consumers on their purchase of toothpaste. Another focus of the research was to investigate if marketing stimuli (marketing mix) influence the purchase and also to find out which brand has preference amongst PMB toothpaste consumers.

4.3 Research Questions

The research questions ask what specific information is required to achieve the research purpose. (Aaker *et al*, 2002:54)

The specific questions the research looked at were:

- Which demographic variables have the most influence on the purchase?
- What are the attributes consumers look for in toothpaste purchasing?
- Which marketing stimuli affect the purchase of toothpaste?
- Which brand of toothpaste has preference amongst PMB consumers?

4.4 Research Objectives

According to Aaker *et al* (2002:54) “the research objective is a statement, in as precise terminology as possible, of what information is needed.” The general purpose of the study was to mainly identify a set of brand attributes that influence consumers in PMB when purchasing a particular type of toothpaste.

The specific objectives were:

- To evaluate which marketing stimuli affect the purchase of toothpaste in PMB
- To evaluate the attributes consumers look for in toothpaste purchasing
- To identify the various demographic variables that influence the purchase
- To identify which brand of toothpaste has preference amongst PMB consumers

4.5 Research Design

McDaniel and Gates (2001:28) define research design as “the plan to be followed to answer the research objectives or hypothesis.” The research was carried out through descriptive studies. “Descriptive studies are conducted to answer who, what, when, where, and how questions.” (McDaniel and Gates, 2001:28) The research method for gathering the data was through a survey. According to Sudman and Blair (1998:84) surveys are widely used in consumer research and are usually carried out through a standardised questionnaire.

The main advantages of a survey are:

- The use of a structured questionnaire means that all respondents are asked the same questions in the same order, which facilitates data analysis.
- The use of a structured questionnaire allows the researcher to control the interview without being present.
- The use of a structured questionnaire allows survey interviews to be done by mail or telephone which is cheaper than personal interaction.
- A large number of people could be interviewed from a broader cross section of the market. (Sudman and Blair, 1998:85)

According to McDaniel and Gates (2001:30) “survey research involves an interviewer interacting with respondents to obtain facts, opinions and attitudes.” This was carried out through mall-intercept interviewing. The interviewing was done by the researcher through mall-intercept in shopping centres because this provided access to the general consumer.

4.6 Questionnaire Design

In order to collect answers to the research questions a questionnaire was designed. “A questionnaire is a set of questions designed to generate the data necessary for accomplishing the objectives of the research project.” (McDaniel and Gates, 2001:289) The questions were designed through consultation of relevant marketing research books and past research done in the area of consumer behaviour. The research questions were mostly multiple-choice questions. These are questions that require participants to choose from a list of more than two answers. (McDaniel and Gates, 2001:299) There were also a few dichotomous questions.

According to McDaniel and Gates (2001:289) a questionnaire provides consistency in the data gathering process because it standardises the wording and sequencing of the

questions for all respondents. Since every participant gets the same question it prevents the discrepancy that would emerge from unsystematic questioning.

4.7 Discussion of the Questionnaire

The following questions were developed with the aim of meeting the specific research objectives. The questions were formulated after extensive referring of the relevant consumer literature and previous research done in the area. Adjustments to the questions were also made after consultation with the researchers' supervisor.

4.7.1 Question One

Do you use toothpaste?

This question was one of the few dichotomous questions in the questionnaire. According to McDaniel and Gates (2001:299) dichotomous questions are questions that require participants to choose between two choices. Therefore this question asked if respondents used toothpaste or not. Those who answered no to this question had to only answer questions pertaining to their demographic information.

4.7.2 Question Two

What brand of toothpaste do you use?

In order to design this question, the researcher visited seven supermarkets in PMB in order to see which brands are available to consumers. From the observation at Pick n' Pay (Hayfield), Checkers (Scottsville), Boxer (Long market St.), Spar (Long market St), Shoprite (Church St), Pick n' Pay and Woolworth at Midlands Liberty Mall and finally Checkout supermarket in town, there were in total over twenty different types of toothpastes on the shelf of these stores. However Colgate and Aqua-fresh with their 6 and 4 types of toothpaste respectively mostly dominated the shelf space of the stores. From this observation a list was drawn of the various types of toothpaste available and

respondents were asked to mark the brand they use in order to determine which brand has preference amongst PMB consumers.

4.7.3 Question Three

What criteria are the most important to you when choosing particular toothpaste?

The purpose of this question was to determine the various products attributes as well as external factors that influence the choice of toothpaste. The contents of the different types of toothpaste on the shelf and literature were used in order to come up with a list of product attributes. These were Whitening, Fresh Breath, Fluoride, Tartar Control, Sensitivity, Taste, and South Africa Dental Association Approval. Marketing stimuli which were low price, packaging, coupons in store and availability (place) were also listed. Respondents were asked to score on scale from 1 to 5 with 1 being completely unimportant and 5 being very important. In order to allow participants to respond in varying degrees to each variable, a Likert-type response format was used. Hayes (1992:57) mentions that in 1932 Likert developed a “scaling procedure in which the scale represents a bipolar continuum.” In this question a scale of 1 meant completely unimportant, 2-unimportant, 3-neutral, 4-important and a scale of 5 meant very important. According to Zikmund (1997:348) the Likert scale has become extremely popular means of measuring attitudes amongst marketing researchers’ is mainly due to its’ simplicity when administering surveys.

4.7.4 Question Four

How often do you use toothpaste?

The purpose of this question is to determine the frequency of use amongst the different consumer groups. This helps marketers to know which group consumes more than the other and could contribute in designing an effective strategy.

4.7.5 Question Five

How often do you purchase toothpaste?

The purpose of this question was to find out the frequency of purchase. This could help the marketer determine when to intensify their promotional and advertising campaign.

4.7.6 Question Six

Who purchases the toothpaste you use?

This question aimed at finding out if the actual buying of the toothpaste a respondent uses was done by self or someone else. The researcher felt that this was important because if the person is not involved in the buying of the product then he/she might actually not have the opportunity to choose on the type to use. This will force a person to use whatever is available in the house. This is usually relevant in a household setting whereby commodities usually are purchased by the wife or a mother.

4.7.7 Question Seven

Where do you buy your toothpaste?

This question might sound a bit obvious considering the fact that most consumers use supermarkets for their convenience goods. However, the researcher felt that certain consumers would prefer to buy their toothpaste at a chemist rather than a supermarket in order to get a professional opinion about the product.

4.7.8 Question Eight

Do commercial campaigns such as adverts on TV influence your choice of toothpaste?

The aim of this question was to simply see if respondents were influenced by the different advertisements on their choice of toothpaste. This helps in determining the extent promotion impacts on a particular purchase.

4.7.9 Question Nine

Are you influenced by family members or friends in your choice of toothpaste?

The purpose of this question was to investigate if the respondents' use of toothpaste is influenced by specific people he/she interacts with. This again is particularly relevant in a family setting where members are likely to share their toothpaste as well as the bathroom to brush their teeth.

4.7.10 Question Ten to Seventeen

Questions 10-17 dealt with demographic information about the respondents. This included respondent's gender, race, age, language, income level, education level, marital status and occupation. The purpose of these demographic variables was to determine if similarities or differences emerge on the choice of toothpaste amongst the various demographic groups.

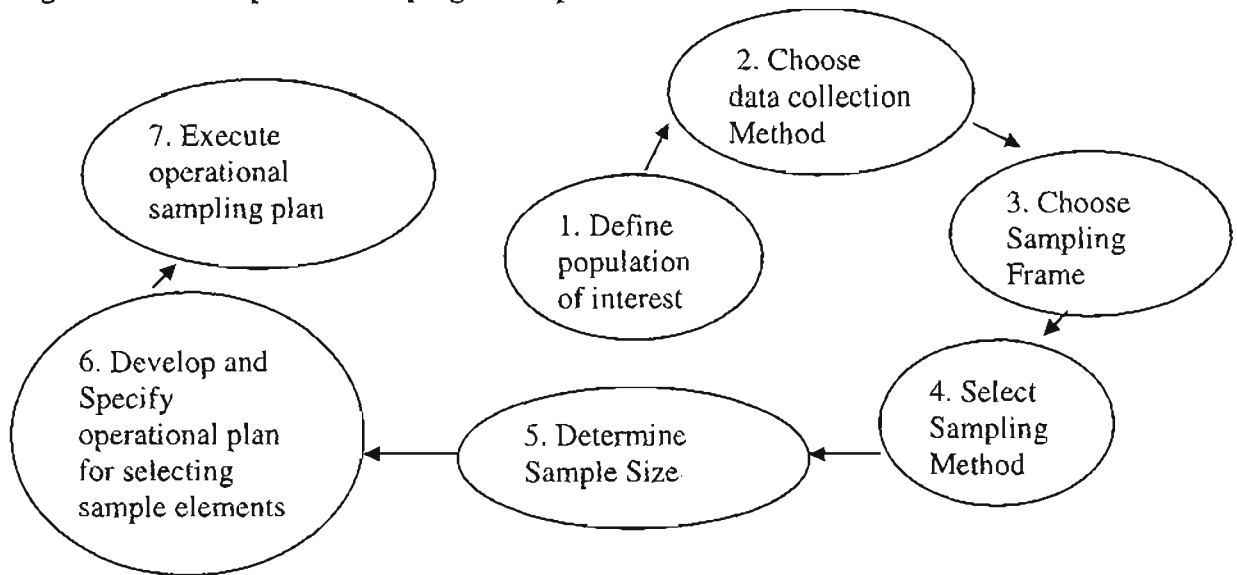
To illustrate the significance of demographic variables Du Plessis *et al* (1994:216) mention that "we gain a good insight into the target market if we know whether we are focusing our efforts at the young or the old, at the affluent or poor, educated or illiterate, Black or White." However it is essential to know that there is significance difference within the same demographic group. For example all Whites are not the same, nor are all Blacks, in a sense that age, language, income, culture, and other differences can divide these groups into various segments. (Du Plessis *et al*, 1994:216)

Overall the above questions were believed to be comprehensive in meeting the research objectives and answering the research questions. The questions were also significant in a sense that they were designed to provide a clear picture on the different segments of the market.

4.8 Sample Design

According to McDaniel and Gates (2001:329) the process of designing a sample involves seven steps. These are shown in the figure below:

Figure 4.1 Steps in developing a Sample Plan



Source: (McDaniel and Gates, 2001:329)

The steps used in the research are explained next.

4.8.1 Defining the population of Interest

McDaniel and Gates (2001:328) define the population of interest as “the total group of people from whom we need to obtain information.” The population of interest for this research were PMB toothpaste consumers. Since it is impractical to obtain information from the entire population of interest a specific sample was selected to actually participate in the survey.

4.8.2 Data collection Method

Data collection was done through a questionnaire. A survey was administered through mall-intercept interviewing at various locations. This was done by interrupting consumers inside and around supermarkets and requesting them to fill in the questionnaire. A self-administered interviewing was also used by going to various shops in the mall and asking people to fill in the questionnaires. The purpose of this was to randomly capture people from all walks of life.

4.8.3 Sampling Frame

According to McDaniel and Gates (2001:333) the “sampling frame is a list of the population elements or members from which we select units to be sampled.” This research focused on the people at various shopping centres and also staffs and students at the University. The University of KwaZulu-Natal and the following shopping places in PMB were chosen for the survey:

- Pick n’ Pay (Hayfield)
- Scottsville area (Around Checkers)
- Boxer and Spar supermarkets in Long market Street
- Shoprite in Church Street
- Midlands Liberty Mall
- Manchester shopping area

The above places were believed to be a representative of residents in PMB. The University was mainly chosen because it is a place where many people from different cultural, social and personal background come together. The sampling method forms the next discussion.

4.8.4 Sampling Method

According to Cooper and Schindler (2001:165) the sampling method selected for the research depends on the requirements of the project, its objectives, the funds available and time constraints. There are two types of sampling method: namely probability sampling methods and non probability sampling methods. Probability sampling is based on "random selection-a controlled procedure that assures that each population element is given a known non zero chance of selection. (Cooper and Schindler, 2001:166) The second method non-probability samples include "elements from a population that are selected in a random manner." (McDaniel and Gates, 2001:335) For example if a survey is conducted on university students and every student has an equal chance of being selected from the survey then it could be said that probability sampling was used. On the other hand if the survey is conducted and the sample of students is divided by year of study and a quota is given for 1st, 2nd and 3rd year students respectively, then a non-probability sampling technique is used because the sample would not have been selected on the basis of statistical randomness.

For the purpose of this research mainly a non probability sampling method was selected. The two main reasons the researcher decided on this method was due to financial and time constraints. There are four types of non-probability samples that are usually used: these are convenience, judgment, quota, and snowball samples. (Aaker *et al*, 2002:313) The quota samples were chosen as a method in order to obtain a fair representative of the demographic variables. McDaniel and Gates (2001:348) define a quota sample as a "non-probability sample in which a population subgroup is classified on the basis of research judgment." The 2001 census report was used to give the composition of the population in PMB in order to use as a base to determine the appropriate sample for the different demographic groups.

4.8.5 Sample Size

The research was carried out by interviewing 400 participants at different locations. Race was used for stratifying the sample because this was believed to cover all sectors of society in South Africa. Also by obtaining samples from each group it was believed appropriate conclusions could be drawn by incorporating other demographic variables that would explain certain purchasing patterns and brand selection. In order to show the research was a fair representation of the four racial groups, the census of 2001 is shown in the table below. The table below shows the total and urban population of KwaZulu-Natal. The figures were used to roughly estimate the number of respondents to interview from each racial group.

Table 4.1 Population Composition of KwaZulu-Natal

Race	Total Population(000)	Percentage Of Total	Urban Residents	Percentage Of Urban	Actual Survey conducted
White	483,448	5.1%	449,123	12%	70
Black	8,002,407	84.9%	2,560,770	65%	184
Indian	798,275	8.5%	775,923	20%	113
Coloured	141,887	1.5%	131,955	3%	33
	9,426,017	100%	3,917,771	100%	400

Source: (Statistics South Africa, 2001)

The specific places and number of samples where the questionnaire were filled out were approximately in the following numbers:

- University of Kwazulu Natal 200 Respondents
- Hayfield Shopping Centre 30 Respondents
- Scottsville Mall 30 Respondents
- Central Town 50 Respondents
- Midlands Liberty Mall 60 Respondents
- Manchester shopping area 30 Respondents

The above places more or the less were able to capture a representative of the PMB consumer. Once the sample was determined the next step was to actually administer the filling out of the questionnaire. Hence the next discussion explains how the actual data was collected.

4.8.6 Data Collection

In order to collect the data for this research, the researcher had to walk around shopping centres and the university requesting people to spare a minute to fill in the questionnaire. The overall response was positive and most people voluntarily filled the questionnaire. The presence of the researcher in administering the questionnaire also contributed to clarifying to some respondents on how to fill the questionnaire as well as providing a pen for those who didn't have one with them.

Respondents were randomly selected by the researcher bearing in mind the specific objectives of the research. This meant that the researcher had to assess various demographic variables before approaching a potential respondent. Never-the-less since the questionnaire was conducted in public areas; the researcher was able to get a good representation from all sectors of society.

4.9 Data Analysis

The researcher followed a five-step procedure for the data analysis listed in McDaniel and Gates (2001:386). These are:

- Validation and Editing (Quality control)
- Coding
- Data Entry
- Machine Cleaning Data
- Tabulation and Statistical Analysis

4.9.1 Validation and Editing

The researcher checked all the questionnaires to make sure that they were filled in as specified and contained no mistakes. According to Cooper and Schindler (2001:423) editing detects errors and omissions, and corrects them when possible so that the possible data quality is obtained. The researcher through editing confirmed that the data were accurate, complete, and properly entered.

4.9.2 Coding

McDaniel and Gates (2001:393) refer to coding as “the process of grouping and assigning numeric codes to the various responses of a particular question.” For the purpose of this study, numerical values were assigned to each question in the questionnaire.

4.9.3 Data Entry

A spreadsheet was designed and all the data were entered directly from the questionnaires as to avoid mistakes that would occur by transferring data to a sheet before actual entry. The process of going directly from the questionnaire to the data entry device has proved to be more efficient and accurate. (McDaniel and Gates, 2001:396)

4.9.4 Machine Cleaning Data

The data that were entered into the computer were finally checked for any error. This was done by running the data into the program several times that was able to check for any obvious errors in the data before the final output.

4.9.5 Tabulation and Analysis of Survey Results

Once all the above procedure was done as effectively and efficiently as the researcher could in the spreadsheet, an SPSS (Statistical Package for the Social Science) was used to

generate the relevant graphs, charts, and tables that enabled the researcher to interpret the results into concrete facts and figures. Finally a non-parametric test (Mann Whitney U test) was done to investigate if there are significant differences between demographics and brand choice. This test is used to test the null-hypothesis that two populations have identical distribution functions against the alternative hypothesis that the distributions might differ from the media. (Public Servant 7, no date) For example let say the following hypothesis were formulated to test the perception of a product across both genders

H_0 :- There are no differences in the perceptions across both genders

H_1 :- There are differences in the perceptions across both genders

Hence if the calculated P value is smaller than the significance level testing then the idea that the difference is a coincidence, can be rejected and conclude that the medias in the sample differ while if the P value is large, it means there are no reasons to conclude that the medias differ from each other. (Public Servant 8, no date)

4.10 Conclusion

This chapter dealt with the overall methodology used for the research. It focused on the development of the questionnaire, why each question was asked and how the data was collected and analysed. The questionnaire specifically aimed at answering the research objectives. The researcher is of the opinion that this was achieved. However the various constraints mentioned should not be taken for granted as to certain extent have an impact on the findings and results of the study. Although the researcher exerted much effort to limit the effect of the various constraints, it never-the-less still had an influence on the findings. Thus everyone who makes use of this research is once again reminded to bear in mind that these limitations were a hindrance to the research.

5. RESEARCH FINDINGS

5.1 Introduction

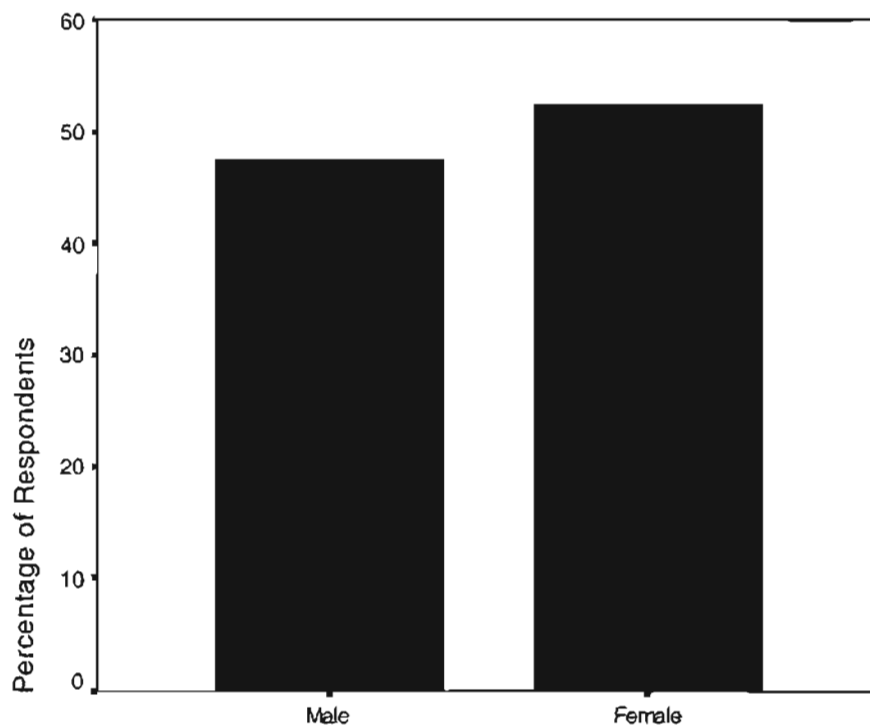
This chapter covers the findings that emerged from the survey. The research's main objectives were:

- To evaluate which marketing stimuli affect the purchase of toothpaste in PMB
- To evaluate the attributes consumers look for in toothpaste purchasing
- To identify the various demographic variables that influence the purchase
- To identify which brand of toothpaste has preference amongst PMB consumers

The results for each question are discussed first then followed by the significance testing done between brand choice and the various demographic variables.

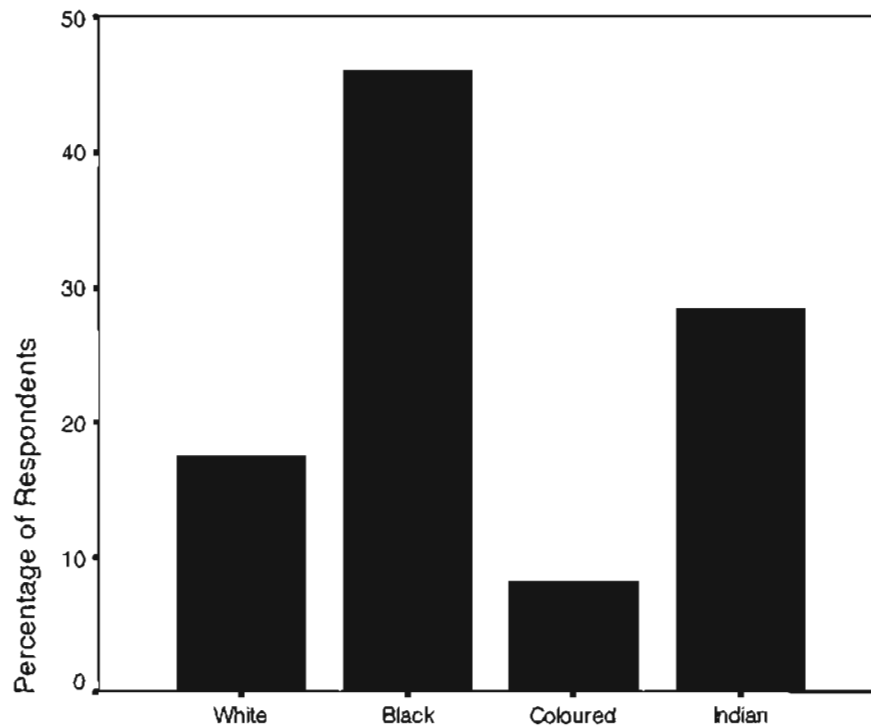
5.2 Profile of the Sample

5.2.1 Graph 5.1 Gender of Respondents



The survey was evenly distributed amongst both genders. 47.5% of respondents were males while females accounted for 52.5% of the survey. Therefore we could comfortably say that the research has equal representation from both genders.

5.2.2 Graph 5.2 Race of Respondents

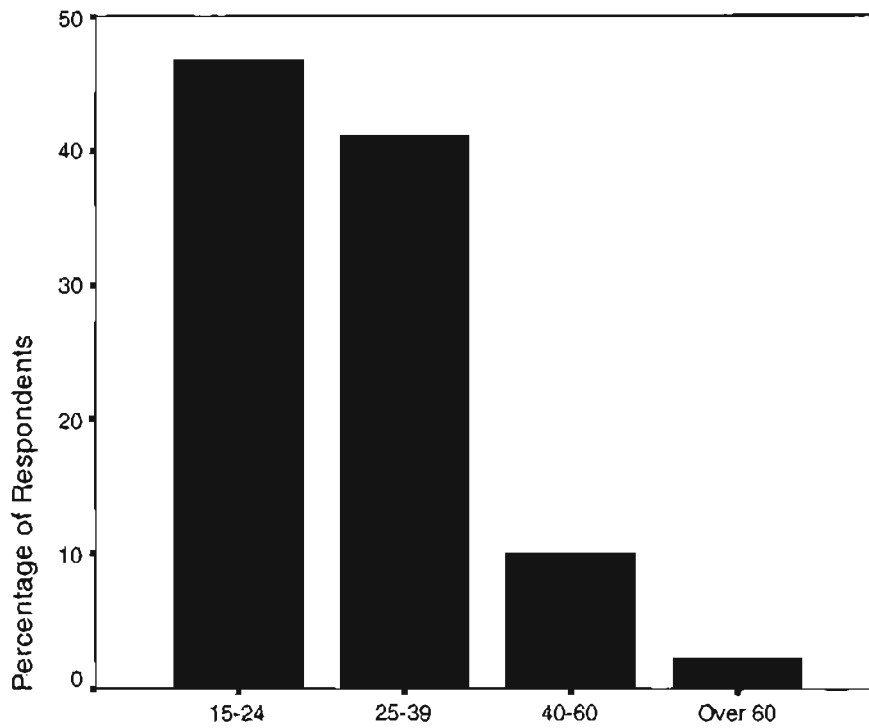


Racial distribution for the survey was also good in a sense that the research was able to achieve good representation from the four major racial groups in South Africa. 46% and 17.5% of the survey were Blacks and Whites respectively. Indians accounted for 28.3% of the survey while 8.3% of the surveys were from the Coloured community.

Table 5.1 Frequency for Race of Respondents

	Frequency	Percent	Valid Percent	Cumulative Percent
White	70	17.5	17.5	17.5
Black	184	46.0	46.0	63.5
Coloured	33	8.3	8.3	71.8
Indian	113	28.3	28.3	100.0
Total	400	100.0	100.0	

5.2.3 Graph 5.3 Age Group of Respondents

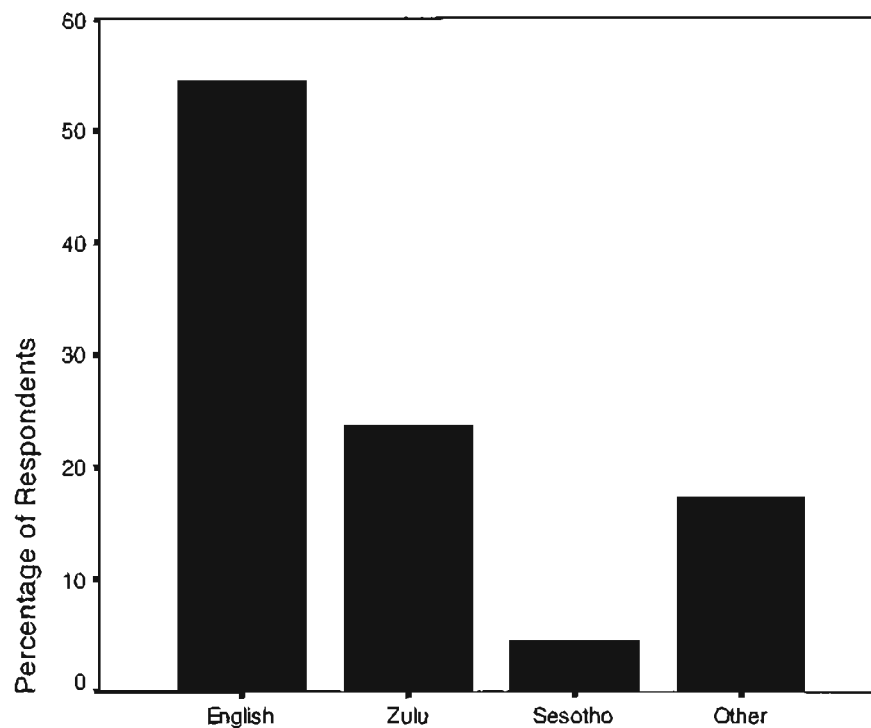


87.8% of respondents were between the ages of 15-39. The researcher is of the opinion that this was mainly due to the fair amount of the survey being conducted at the university where most of its population falls under 15-24 age group. However even the survey that was conducted outside the university, the majority of the respondents still fall under the age group of 15-39.

Table 5.2 Frequency for Age of Respondents

	Frequency	Percent	Valid Percent	Cumulative Percent
15-24	187	46.8	46.8	46.8
25-39	164	41.0	41.0	87.8
40-60	40	10.0	10.0	97.8
Over 60	9	2.3	2.3	100.0
Total	400	100.0	100.0	

5.2.4 Graph 5.4 Home Language of Respondents

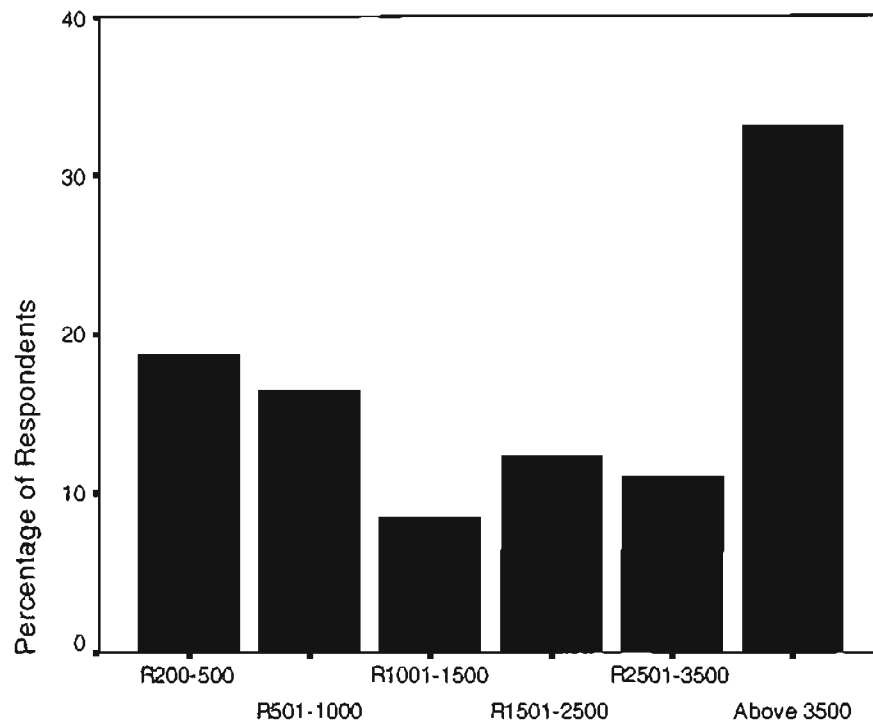


54.5% respondents said their home language was English while 23.8% respondents' home language was Zulu. The 17.3% accounted for languages such as Afrikaans and many other languages of respondents who come from outside of South Africa. The responses included languages such as, Shona (Zimbabwe), Portuguese, French, Italian, Tigrina (Eritrean), Chinese and so on.

Table 5.3 Frequency for Home Language of Respondents

	Frequency	Percent	Valid Percent	Cumulative Percent
English	218	54.5	54.5	54.5
Zulu	95	23.8	23.8	78.3
Sesotho	18	4.5	4.5	82.8
Other	69	17.3	17.3	100.0
Total	400	100.0	100.0	

5.2.5 Graph 5.5 Monthly Income Range of Respondents

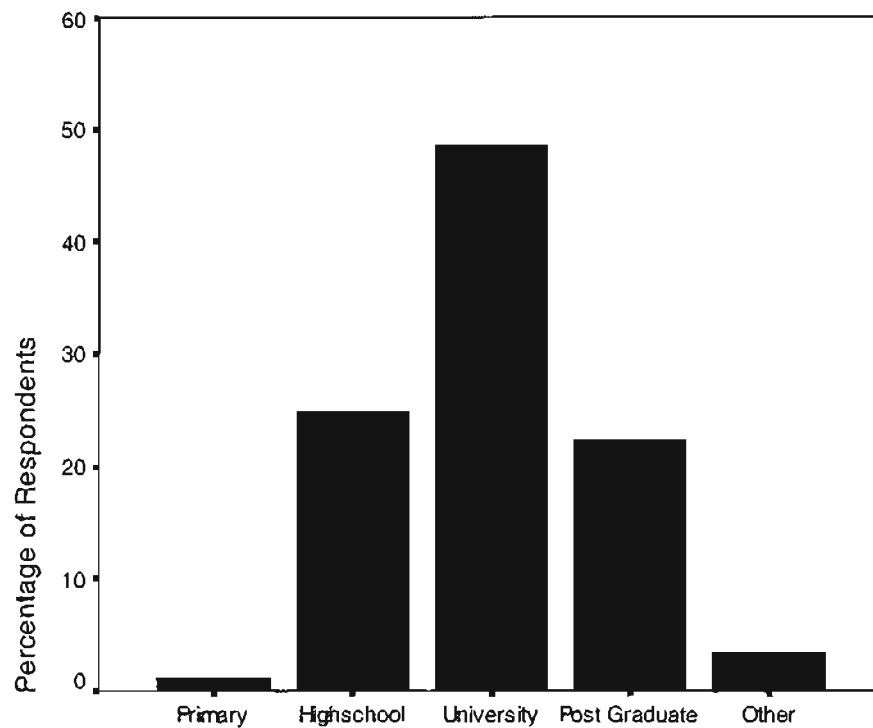


33% respondents have a monthly income of Rand 3500 and above. These were mostly people interviewed at the University and Liberty Mall. The 18.8% who earned between R200-500 were mostly students who lived away from home in order to study at the University. The table below shows the percentages for the other income categories.

Table 5.4 Frequency for Monthly Income Range of Respondents

	Frequency	Percent	Valid Percent	Cumulative Percent
R200-500	75	18.8	18.8	18.8
R501-1000	66	16.5	16.5	35.3
R1001-1500	34	8.5	8.5	43.8
R1501-2500	49	12.3	12.3	56.0
R2501-3500	44	11.0	11.0	67.0
Above 3500	132	33.0	33.0	100.0
Total	400	100.0	100.0	

5.2.6 Graph 5.6 Education Level of Respondents

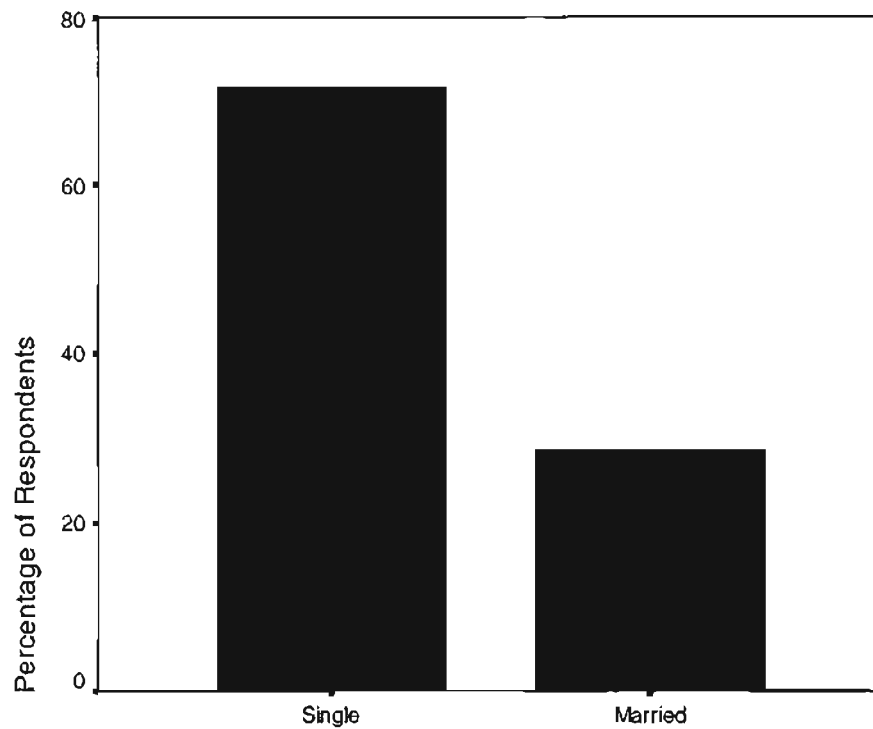


73.3% respondents' level of education was between high school and university. 22.3% also either completed or were in the process of completing their postgraduate studies. Hence it could be said that the survey respondents represented the literate portion of society.

Table 5.5 Frequency for level of Education of Respondents

	Frequency	Percent	Valid Percent	Cumulative Percent
Primary	4	1.0	1.0	1.0
High school	99	24.8	24.8	25.8
University	194	48.5	48.5	74.3
Post Graduate	89	22.3	22.3	96.5
Other	14	3.5	3.5	100.0
Total	400	100.0	100.0	

5.2.7 Graph 5.7 Marital Status of Respondents

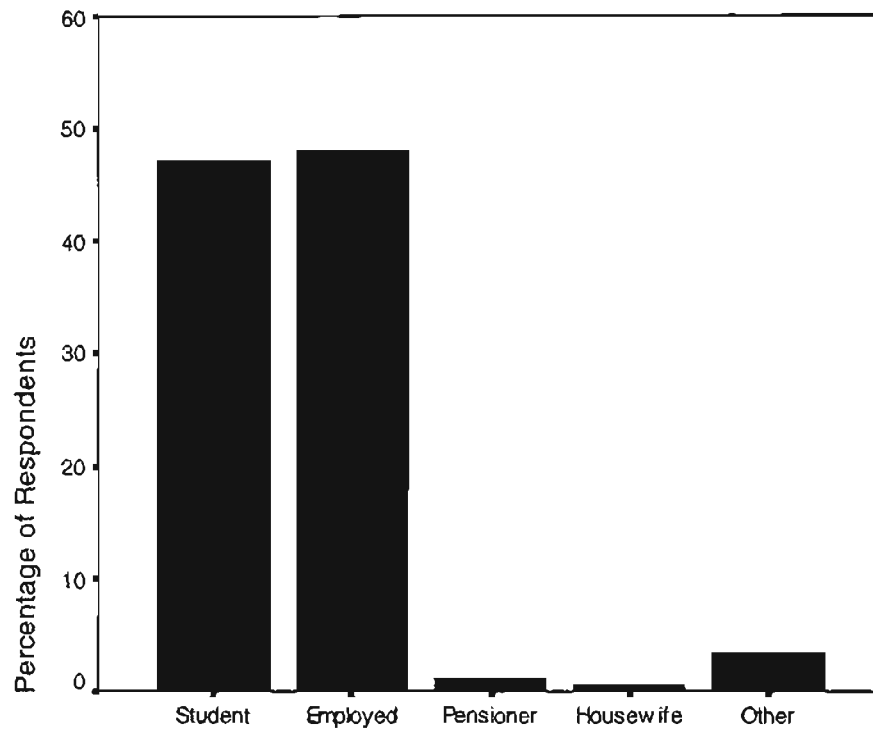


71.5% of respondents' marital status was single while 28.5% were married. An explanation to this could be that the survey consists of large number of students from the university who were mostly single.

Table 5.6 Frequency for Marital Status of Respondents

	Frequency	Percent	Valid Percent	Cumulative Percent
Single	286	71.5	71.5	71.5
Married	114	28.5	28.5	100.0
Total	400	100.0	100.0	

5.2.8 Graph 5.8 Occupation of Respondents

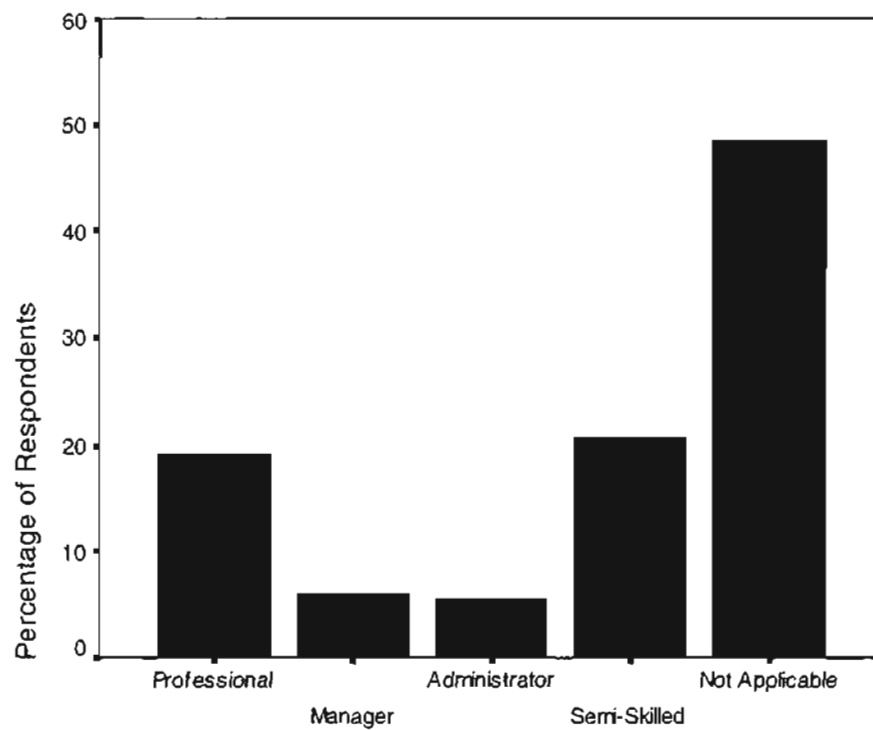


Of those surveyed 48% were employed while 47% were students. This allows making comparison if differences exist between those employed and students in their choice of toothpaste.

Table 5.7 Frequency for Occupation of Respondents

	Frequency	Percent	Valid Percent	Cumulative Percent
Student	188	47.0	47.0	47.0
Employed	192	48.0	48.0	95.0
Pensioner	4	1.0	1.0	96.0
Housewife	2	.5	.5	96.5
Other	14	3.5	3.5	100.0
Total	400	100.0	100.0	

5.2.9 Graph 5.9 Employment Type of Respondents



19.3% of respondents were professionals in various fields. Some of the fields in this category include professors, engineers, accountants and etc. 20.8% were semi-skilled workers which included cashiers at supermarkets, security guards, reservation clerks, and beauty consultants at cosmetic shops and so on.

Table 5.8 Frequency for Employment Type of Respondents

	Frequency	Percent	Valid Percent	Cumulative Percent
Professional	77	19.3	19.3	19.3
Manager	24	6.0	6.0	25.3
Administrator	22	5.5	5.5	30.8
Semi-Skilled	83	20.8	20.8	51.5
Not Applicable	194	48.5	48.5	100.0
Total	400	100.0	100.0	

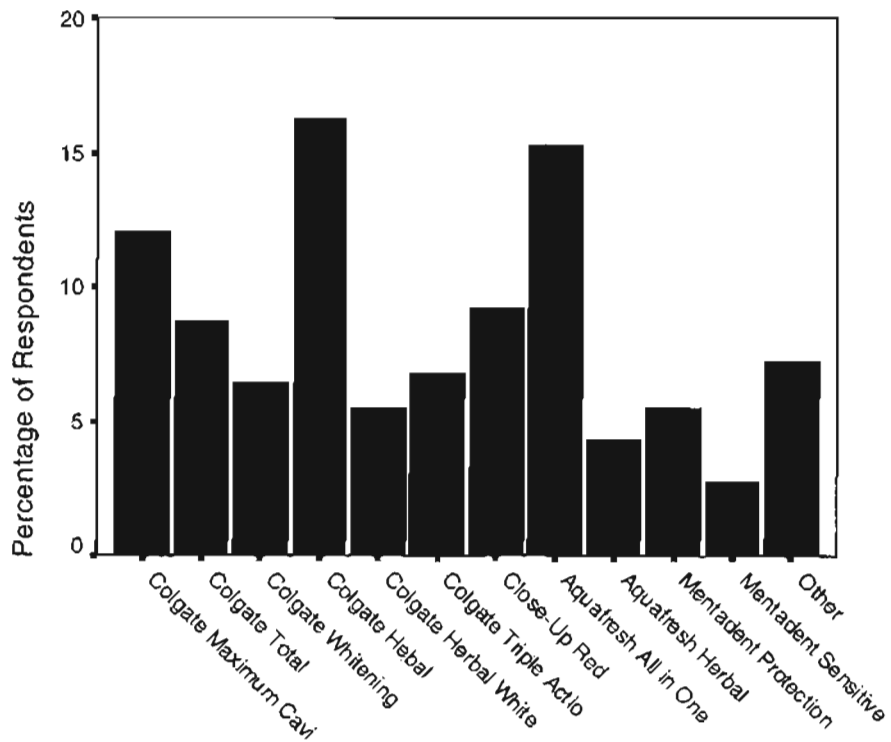
5.3 Questionnaire Discussion:-Part One

5.3.1 Table 5.9 Usage of Toothpaste

	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	400	100.0	100.0	100.0

Everyone approached for the survey said they used toothpaste. This could have resulted due the survey being carried out inside PMB city and not rural areas.

5.3.2 Graph 5.10 The Various Brands of Toothpaste chosen by Respondents



This question investigated which particular brand is popular amongst consumers in PMB. Out of the eighteen different brands listed in the questionnaire 16.3% respondents chose Colgate Herbal while 15.3% selected Aquafresh All-in-One. This placed the two brands in first and second position amongst PMB consumers. Colgate Maximum Cavity, Close Up-Red and Colgate Total followed in third, fourth and fifth position by 12%, 9.3% and

8.8% respectively. Overall the Colgate group with its various types of brands accounted for 55.8% of the sample surveyed. There were also other types of Colgate brands, which were included in the other category. This was done because very few respondents selected these specific brands. This included brands such as Colgate Gel and Colgate Propolis. Although the initial question had 18 different categories of toothpaste to choose from, when doing the analysis those that were not selected by respondents were taken out while brands selected by only few respondents were all categorised as others. Therefore the other category accounted for 7.3% of the survey, which resulted in greater share than some of the brands. These were distributed amongst various types of toothpaste such as Macleans, Aquafresh extreme clean, Colgate Propolis, Sensodyne and etc. The table below shows number of times brands were selected and the respective percentages.

Table 5.10 The Percentage Share of the Different Brands used by Respondents

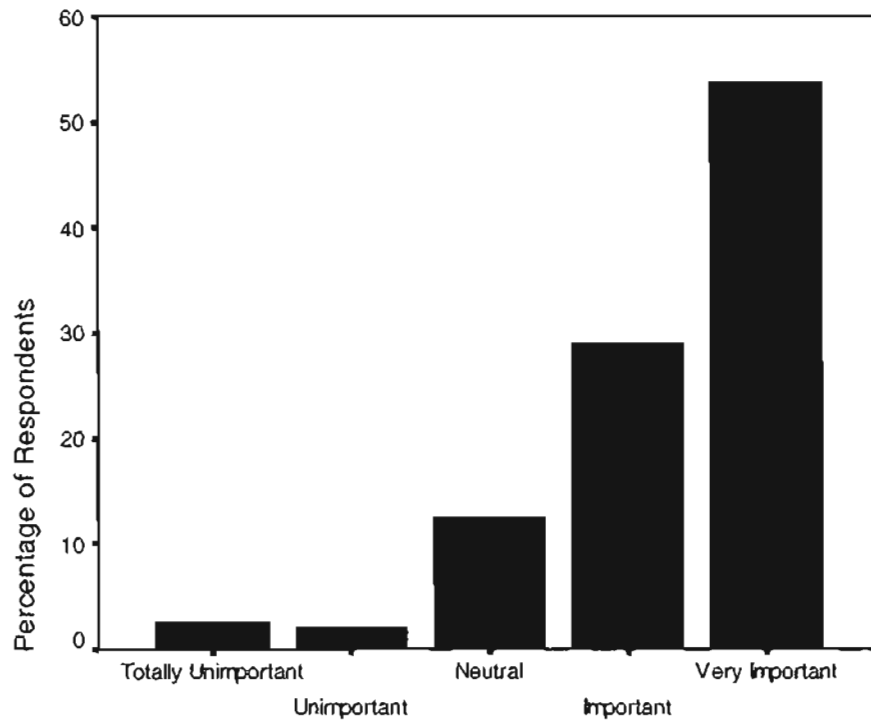
	Frequency	Percent	Valid Percent	Cumulative Percent
Colgate Maximum Cavity	48	12.0	12.0	12.0
Colgate Total	35	8.8	8.8	20.8
Colgate Whitening	26	6.5	6.5	27.3
Colgate Herbal	65	16.3	16.3	43.5
Colgate Herbal White	22	5.5	5.5	49.0
Colgate Triple Action	27	6.8	6.8	55.8
Close-Up Red	37	9.3	9.3	65.0
Aquafresh All in One	61	15.3	15.3	80.3
Aquafresh Herbal	17	4.3	4.3	84.5
Mentadent Protection	22	5.5	5.5	90.0
Mentadent Sensitive	11	2.8	2.8	92.8
Other	29	7.3	7.3	100.0
Total	400	100.0	100.0	

5.3.3 What criteria are important when choosing toothpaste?

Question three focused on the various criteria that would influence the choice of toothpaste. These included product attributes and marketing stimuli. The product attributes listed in the question were whitening teeth, fresh breath, fluoride content,

ability to control tartar, usability for sensitive teeth, taste of the toothpaste and approval by Dental Association. The marketing stimuli were low price, attractive packaging, coupons given in store and the availability of toothpaste everywhere. The responses for each with their relevant graphs and frequency tables are covered in the next section.

5.3.3.1 Graph 5.11 Rating of Toothpaste on Whitening Teeth

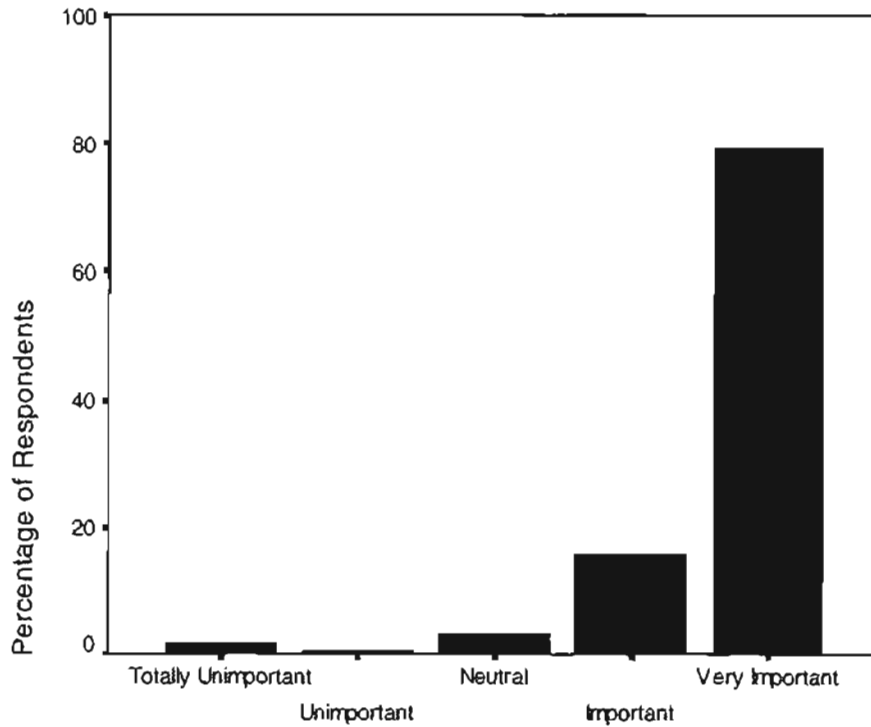


82.8% ranked whiter teeth as a very important factor while only 12.5% were neutral about it. Hence this factor plays a great role in consumer choice of toothpaste. This tends to explain the aggressive commercial campaign toothpaste producers engage in to capitalise on this variable. (Public Servant, 2003) However, the literature consulted for this research confirms that toothpaste doesn't actually make a person's teeth whiter but rather only removes any foreign element in the teeth so that the original colour of the teeth can be maintained. (Public Servant 9, no date) The table on the next page shows all the responses with its corresponding percentages of the total sample for this variable.

Table 5.11 Frequency Rating of Toothpaste on Whitening Teeth

	Frequency	Percent	Valid Percent	Cumulative Percent
Totally Unimportant	11	2.8	2.8	2.8
Unimportant	8	2.0	2.0	4.8
Neutral	50	12.5	12.5	17.3
Important	116	29.0	29.0	46.3
Very Important	215	53.8	53.8	100.0
Total	400	100.0	100.0	

5.3.3.2 Graph 5.12 Rating of Toothpaste on Fresh Breath

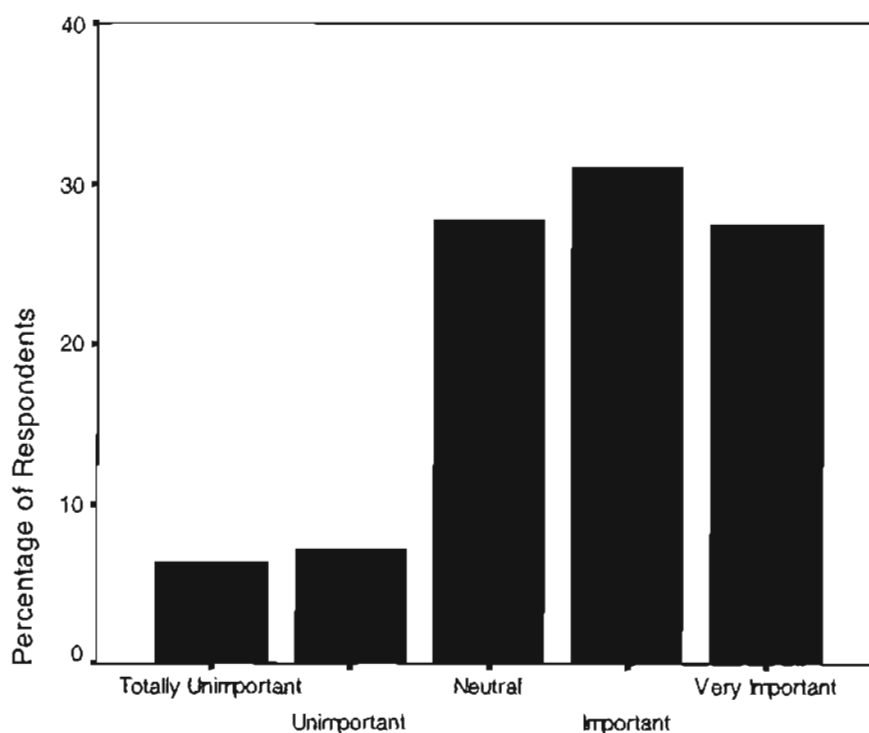


Fresher breath is also an important factor consumers look for in toothpaste purchasing. One obvious reason for this is that nobody wants to have a bad odour coming from their mouth especially in presence of others. Hence as shown in the above graph and shown in the table next page, 79% and 15.8% ranked this variable as very important and important respectively.

Table 5.12 Frequency Rating of Toothpaste on Fresh Breath

	Frequency	Percent	Valid Percent	Cumulative Percent
Totally Unimportant	6	1.5	1.5	1.5
Unimportant	2	.5	.5	2.0
Neutral	13	3.3	3.3	5.3
Important	63	15.8	15.8	21.0
Very Important	316	79.0	79.0	100.0
Total	400	100.0	100.0	

5.3.3.3 Graph 5.13 Rating of Toothpaste on Fluoride Content



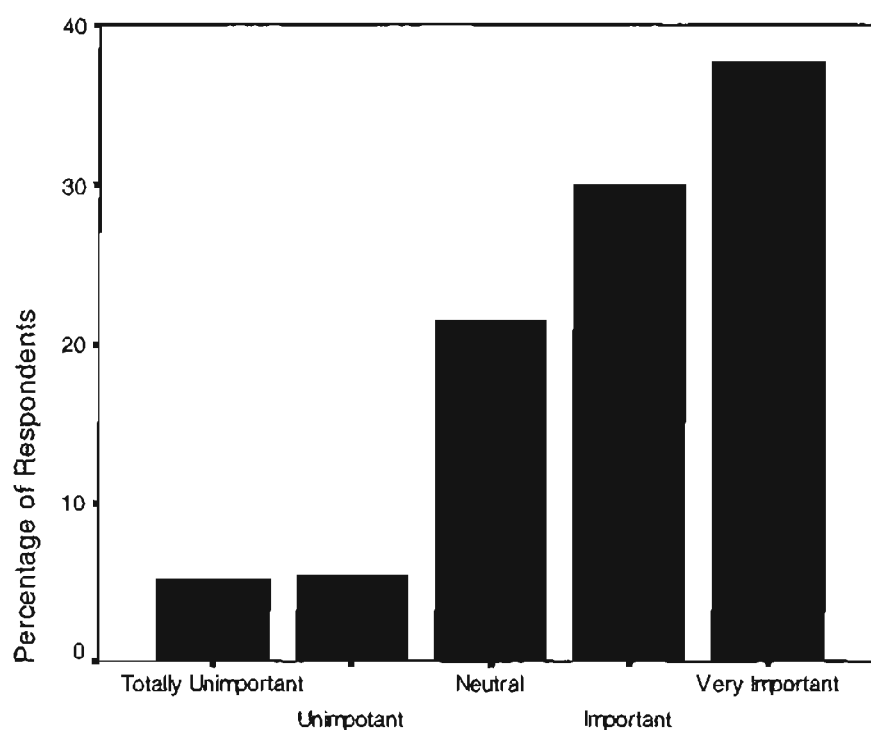
Almost all toothpastes contain fluoride in their ingredients. 27.5% and 31% respondents ranked content of fluoride as very important and important respectively. The interesting observation from this was that 27.8% respondents said they were neutral about the content of fluoride. During the survey the researcher was able to observe that many people from all walks of life have never really been bothered to investigate the contents

of their toothpaste. As a result there were also many neutral responses for this variable as shown in the table below.

Table 5.13 Frequency Rating of Toothpaste on Fluoride Content

	Frequency	Percent	Valid Percent	Cumulative Percent
Totally Unimportant	26	6.5	6.5	6.5
Unimportant	29	7.3	7.3	13.8
Neutral	111	27.8	27.8	41.5
Important	124	31.0	31.0	72.5
Very Important	110	27.5	27.5	100.0
Total	400	100.0	100.0	

5.3.3.4 Graph 5.14 Rating of Toothpaste on Tartar Control



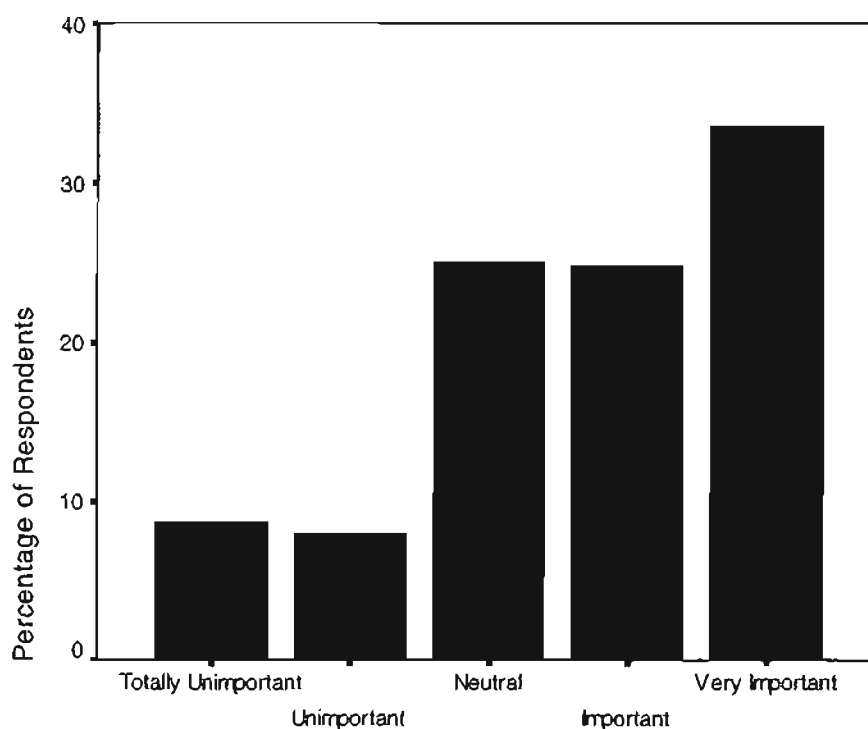
37.8% and 30% of the respondents ranked tartar control as very important and important respectively. This shows that a large portion of the respondents also want their toothpaste

to prevent any teeth or gum diseases. This illustrates that many in the sample were also health conscious consumers who would look for a product based on its ability to prevent any gum diseases than just freshen breath or give whiter teeth.

Table 5.14 Frequency Rating of Toothpaste on Tartar Control

	Frequency	Percent	Valid Percent	Cumulative Percent
Totally Unimportant	21	5.3	5.3	5.3
Unimportant	22	5.5	5.5	10.8
Neutral	86	21.5	21.5	32.3
Important	120	30.0	30.0	62.3
Very Important	151	37.8	37.8	100.0
Total	400	100.0	100.0	

5.3.3.5 Graph 5.15 Rating of Toothpaste on Usability for Sensitive Teeth



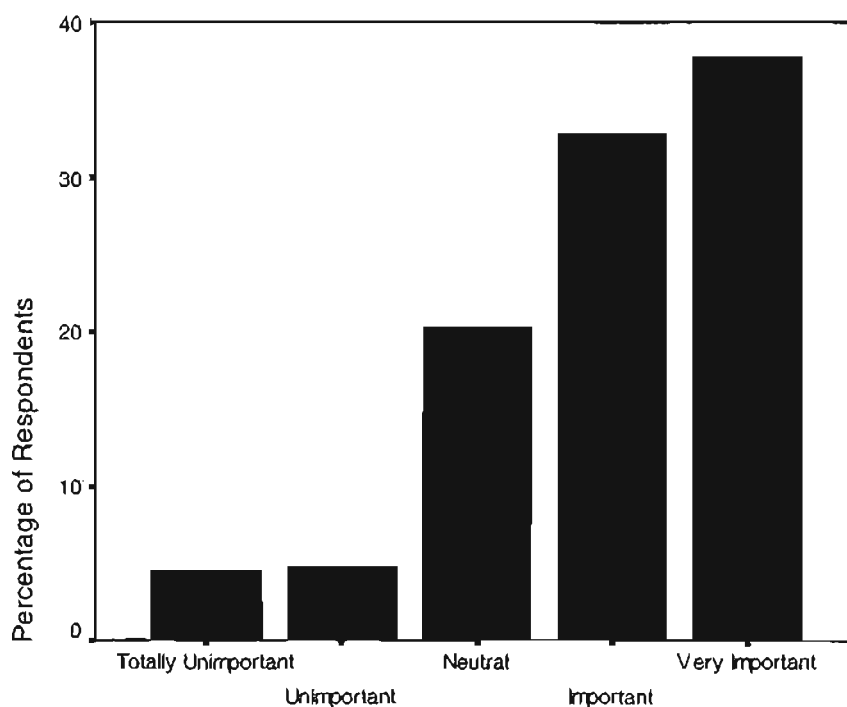
58.3% of respondents jointly ranked sensitivity as very important or important attribute. This shows that consumers also look for toothpaste that protects sensitive teeth. It is also worth mentioning that 25% actually were neutral and 16% ranked it as either totally

unimportant or unimportant. Hence there were also a fair portion of respondents who felt sensitivity was not a major factor when choosing their toothpaste.

Table 5.15 Frequency Rating of Toothpaste on Usability for Sensitive Teeth

	Frequency	Percent	Valid Percent	Cumulative Percent
Totally Unimportant	35	8.8	8.8	8.8
Unimportant	32	8.0	8.0	16.8
Neutral	100	25.0	25.0	41.8
Important	99	24.8	24.8	66.5
Very Important	134	33.5	33.5	100.0
Total	400	100.0	100.0	

5.3.3.6 Graph 5.16 Rating of Toothpaste on Taste

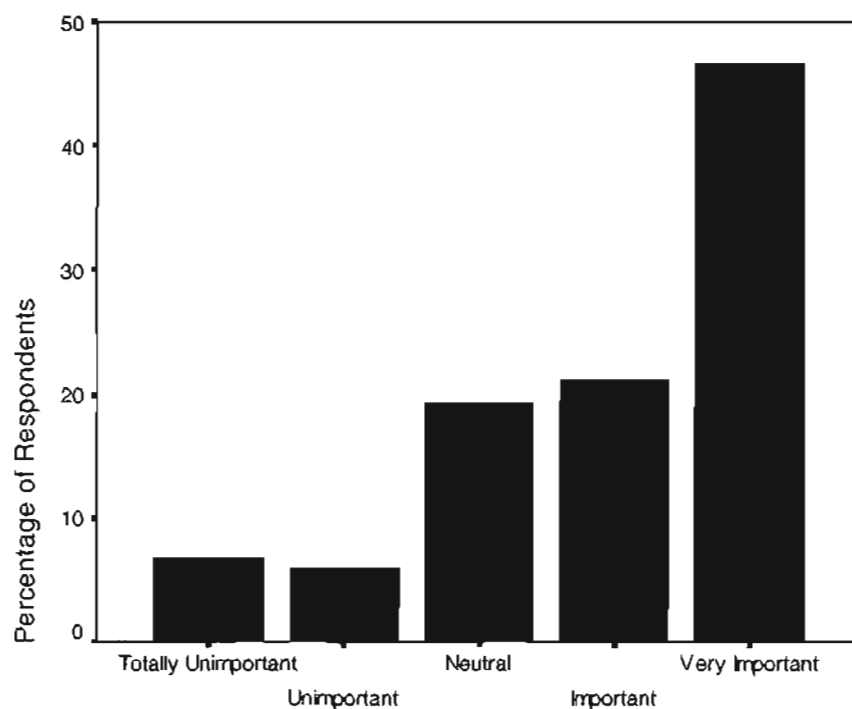


70% of the respondents rated taste as a very important or important factor for their toothpaste. It could then be said that the taste of toothpaste does actually determine which toothpaste a consumer will decide to buy.

Table 5.16 Frequency Rating of Toothpaste on Taste

	Frequency	Percent	Valid Percent	Cumulative Percent
Totally Unimportant	18	4.5	4.5	4.5
Unimportant	19	4.8	4.8	9.3
Neutral	81	20.3	20.3	29.5
Important	131	32.8	32.8	62.3
Very Important	151	37.8	37.8	100.0
Total	400	100.0	100.0	

5.3.3.7 Graph 5.17 Rating of Toothpaste on Dental Association Approval



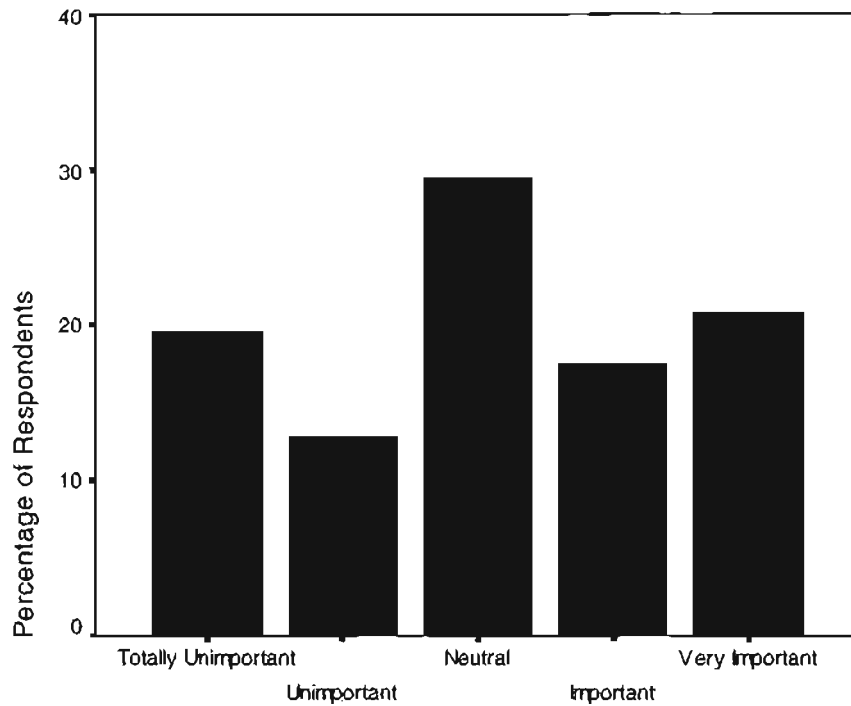
68.1% of respondents said approval by the Dental Association was very important or important. Today many products are approved by various organisations that engage in product research and declare the product fit for human consumption. Toothpaste is no exception as illustrated in the graph on the previous page. For example the British Dental Association (BDA) confirms that “a product has been proven to do what it says it does.”

(Public Servant 10, no date) With the increasing health-conscious consumer it is not surprising that consumers ranked approval by Dental Association as a requirement for their toothpaste. The table below shows the ranking for all the responses.

Table 5.17 Frequency Rating of Toothpaste on Dental Association Approval

	Frequency	Percent	Valid Percent	Cumulative Percent
Totally Unimportant	27	6.8	6.8	6.8
Unimportant	24	6.0	6.0	12.8
Neutral	77	19.3	19.3	32.0
Important	85	21.3	21.3	53.3
Very Important	187	46.8	46.8	100.0
Total	400	100.0	100.0	

5.3.3.8 **Graph 5.18 Rating of Toothpaste on Low Price**

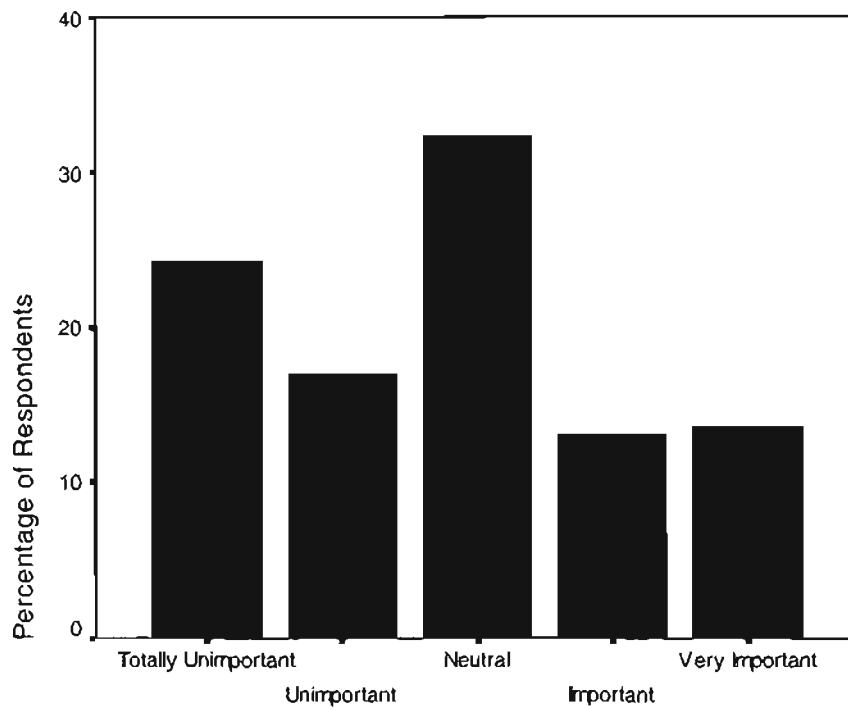


Price is not really a contributing factor when consumers decide to purchase their toothpaste. This is manifested by 61.8% of respondents ranking low price between neutral and totally unimportant. Hence the conclusion from this is that price plays an insignificant role in consumers' choice of particular brand of toothpaste. The significance test done between price and brand choice shown in appendix 3 also proves that price doesn't significantly affect toothpaste brand preference.

Table 5.18 Frequency Rating of Toothpaste on Low Price

	Frequency	Percent	Valid Percent	Cumulative Percent
Totally Unimportant	78	19.5	19.5	19.5
Unimportant	51	12.8	12.8	32.3
Neutral	118	29.5	29.5	61.8
Important	70	17.5	17.5	79.3
Very Important	83	20.8	20.8	100.0
Total	400	100.0	100.0	

5.3.3.9 Graph 5.19 Rating of Toothpaste on Attractive Packaging

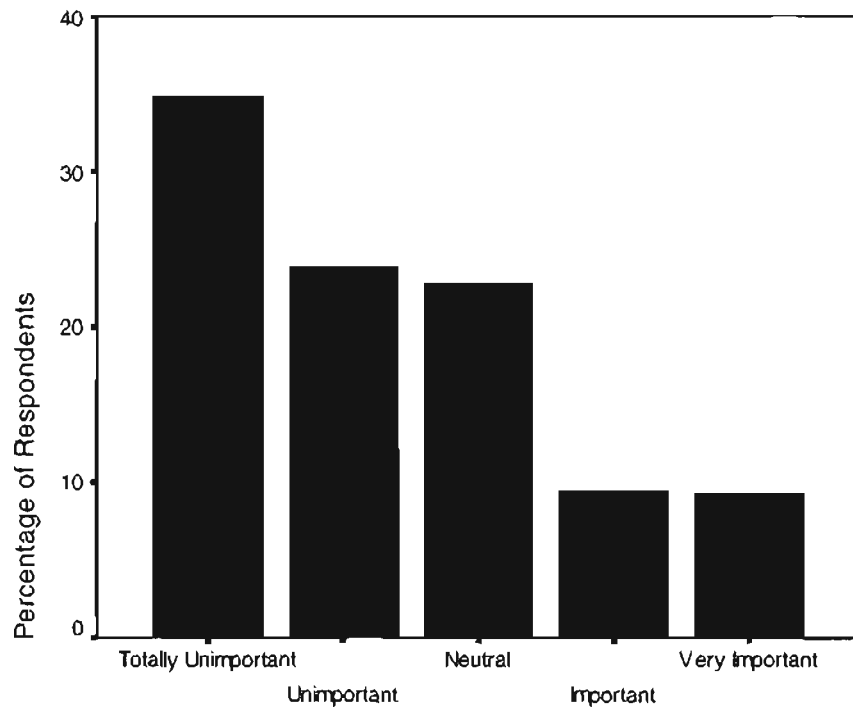


Again packaging was also not an important factor to those who participated in the survey. 73.5% ranked attractive packaging between neutral and totally unimportant. The conclusion could only be then that consumers are more interested in the internal component of the toothpaste than the external look such as packaging.

Table 5.19 Frequency Rating of Toothpaste on Attractive Packaging

	Frequency	Percent	Valid Percent	Cumulative Percent
Totally Unimportant	97	24.3	24.3	24.3
Unimportant	68	17.0	17.0	41.3
Neutral	129	32.3	32.3	73.5
Important	52	13.0	13.0	86.5
Very Important	54	13.5	13.5	100.0
Total	400	100.0	100.0	

5.3.3.10 Graph 5.20 Rating of Toothpaste on Coupons given in Store

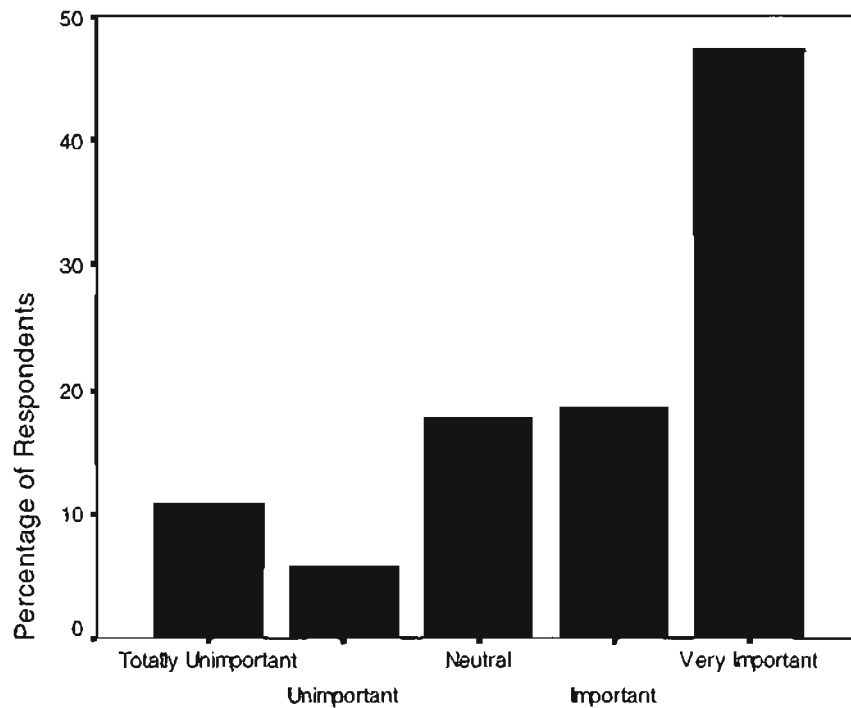


58.5% of respondents' ranked coupons given in store as totally unimportant and unimportant while 22.8% said they were neutral about it. This again shows that consumers don't really care about coupons given in store and definitely will choose their preferred brand whether coupons are given or not. From the findings so far we can comfortably say that marketing stimuli such as packaging, price and promotion plays little or no role in respondent's choice of toothpaste.

Table 5.20 Frequency Rating of Toothpaste on Coupons given in Store

	Frequency	Percent	Valid Percent	Cumulative Percent
Totally Unimportant	139	34.8	34.8	34.8
Unimportant	95	23.8	23.8	58.5
Neutral	91	22.8	22.8	81.3
Important	38	9.5	9.5	90.8
Very Important	37	9.3	9.3	100.0
Total	400	100.0	100.0	

5.3.3.11 Graph 5.21 Rating of Toothpaste on Available Everywhere



65.8% of the respondents rated toothpaste should be available everywhere as very important and important. 17.8% and 10.8% rated this as neutral and totally unimportant respectively. The results show the majority felt that their toothpaste should be available everywhere. In reality this is not a hindrance as almost all the toothpaste brands used by consumers had shelf space in all major supermarket outlets where most consumers do their shopping. As toothpaste is a convenience product, consumers try to keep the shopping time to the minimum. This means it must be available everywhere requiring intensive distribution. According to Skinner (1994:485) "Intensive distribution means that all available outlets are used at each level of the channel to distribute a product."

Table 5.21 Frequency Rating of Toothpaste on Available Everywhere

	Frequency	Percent	Valid Percent	Cumulative Percent
Totally Unimportant	43	10.8	10.8	10.8
Unimportant	23	5.8	5.8	16.5
Neutral	71	17.8	17.8	34.3
Important	74	18.5	18.5	52.8
Very Important	189	47.3	47.3	100.0
Total	400	100.0	100.0	

5.3.3.12 Summary and Evaluation of Product Attributes

In order to determine the importance of the various product attributes consumers look for in toothpaste purchasing, the means for each were calculated according to the consumer's ratings. The table on the next page depicts these results.

Table 5.22 Means of Product Attributes and Marketing Stimuli

	N	Minimum	Maximum	Mean	Std. Deviation
Rating of Toothpaste on Whitening Teeth	400	1.00	5.00	4.2900	.95298
Rating of Toothpaste on Freshens Breath	400	1.00	5.00	4.7025	.69657
Rating of Toothpaste on Fluoride Content	400	1.00	5.00	3.6575	1.14607
Rating of Toothpaste on Tartar Control	400	1.00	5.00	3.8950	1.13012
Rating of Toothpaste on Usable for Sensitive Teeth	400	1.00	5.00	3.6625	1.25799
Rating of Toothpaste on Taste	400	1.00	5.00	3.9450	1.08393
Rating of Toothpaste on Dental Association Approval	400	1.00	5.00	3.9525	1.22842
Rating of Toothpaste on Low Price	400	1.00	5.00	3.0725	1.38276
Rating of Toothpaste on Attractive Packaging	400	1.00	5.00	2.7450	1.32263
Rating of Toothpaste on Coupons given in Store	400	1.00	5.00	2.3475	1.29264
Rating of Toothpaste on Available Everywhere	400	1.00	5.00	3.8575	1.35343
Valid N	400				

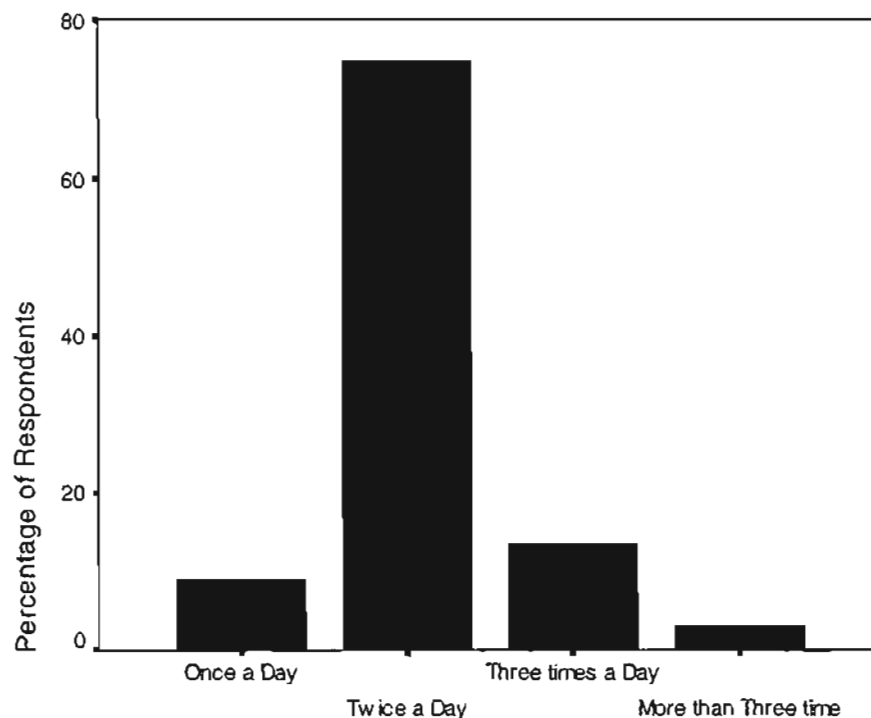
From the table above Fresher Breath with a mean value of 4.70 is the most important product attribute consumers look for in toothpaste while Whitening Teeth and Dental Association Approval follow in second and third places with mean value of 4.29 and 3.95 respectively. These results are interesting in a sense as the top three attributes PMB consumers look for are actually external benefits such as the desire to have whiter teeth. Furthermore the findings show that marketing stimuli have no or little influence in the consumers' choice. This could have resulted due to easy affordability of toothpaste by

major segment of society and the need to take care of one's oral care. Again from the table, availability of toothpaste everywhere is the most relevant of the marketing stimuli.

The importance consumers attach to the availability of toothpaste everywhere is due the product being convenience product whereby consumers want to spend as little possible time as shopping for it. (Lamb *et al*, 2000:211) Hence consumers expect toothpaste to be available wherever they choose to shop requiring marketers and manufacturers to engage in distributing the product intensively. Intensive distribution simply means that all possible outlets to sell the product are utilised to the maximum efficiency. (Skinner, 1994:485) However this is not seen as a major problem as explained earlier that the majority of PMB consumers purchased their toothpaste in supermarkets and most supermarkets investigated for this research had on their shelves a wide range of brands and types of toothpaste preferred by PMB consumers.

5.4 Questionnaire Discussion: - Part Two

5.4.1 Graph 5.22 Number of Times Toothpaste is Used

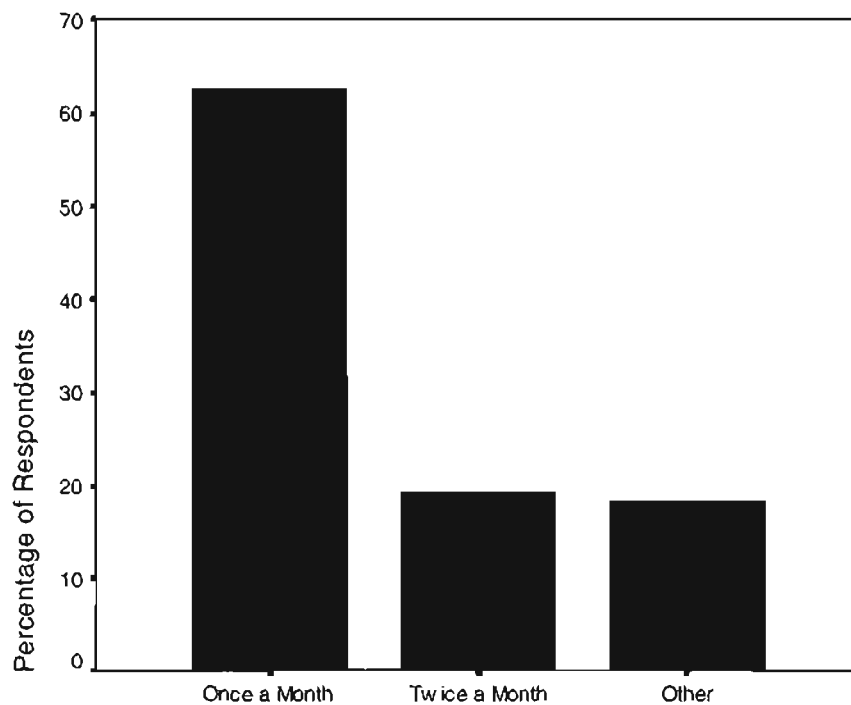


74.8% of the respondents said they used toothpaste twice a day. This is not surprising as most toothpaste in the package even recommend the use of toothpaste twice a day and usually most people tend to brush their teeth in the morning and in the evenings after dinner.

Table 5.23 Frequency Number of Times Toothpaste is Used

	Frequency	Percent	Valid Percent	Cumulative Percent
Once a Day	35	8.8	8.8	8.8
Twice a Day	299	74.8	74.8	83.5
Three times a Day	54	13.5	13.5	97.0
More than Three times	12	3.0	3.0	100.0
Total	400	100.0	100.0	

5.4.2 Graph 5.23 Frequency for Purchase of Toothpaste



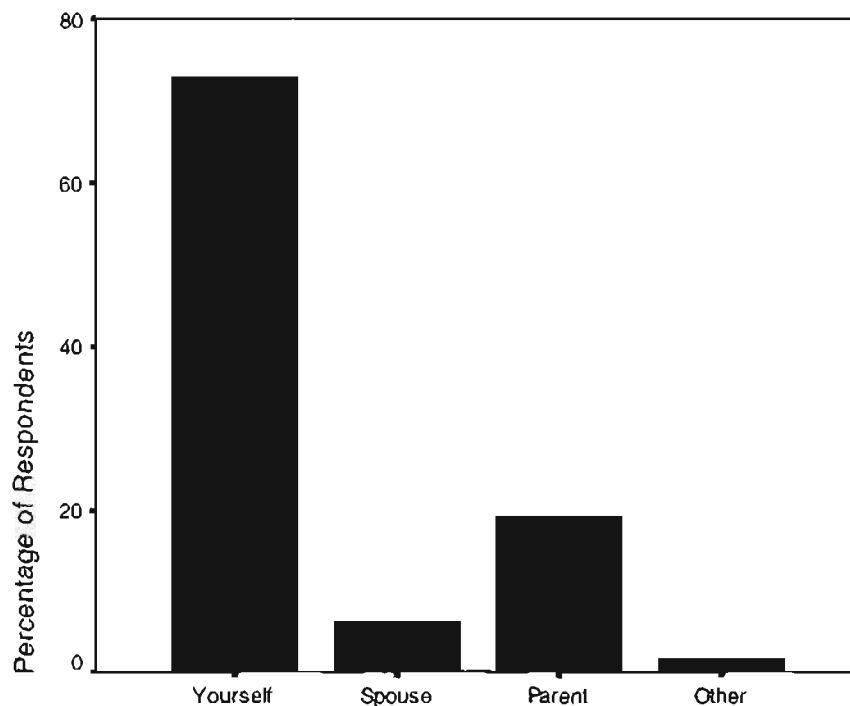
62.5% of the respondents said that they purchased their toothpaste on average on a monthly basis while 19.3% purchased twice a month. Most toothpaste is packed in 100ml

tube or 50ml tube and hence the frequency of purchase also depended on whether consumers purchased the 100ml or the 50 ml and how many in the household use it. The 18.3% in other category were for those who neither purchased once a month or twice a month. Some of the responses for this were once in two month, once in three month, once a week, twice a year and so on.

Table 5.24 Frequency for Purchase of Toothpaste

	Frequency	Percent	Valid Percent	Cumulative Percent
Once a Month	250	62.5	62.5	62.5
Twice a Month	77	19.3	19.3	81.8
Other	73	18.3	18.3	100.0
Total	400	100.0	100.0	

5.4.3 Graph 5.24 Person Purchasing the Toothpaste



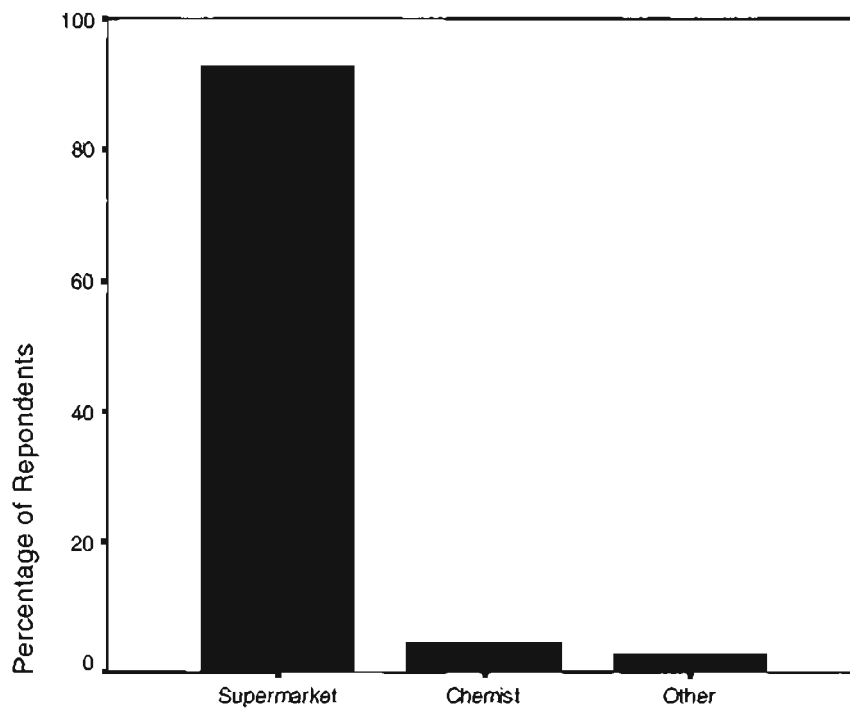
72.8% of respondents said that they purchased their toothpaste themselves. This meant that most respondents also had the chance to choose the brand to use. The 19.3% who

said that their parents purchased the toothpaste were mostly students surveyed at the university who went home in the evenings.

Table 5.25 Frequency for Person Purchasing the Toothpaste

	Frequency	Percent	Valid Percent	Cumulative Percent
Yourself	291	72.8	72.8	72.8
Spouse	25	6.3	6.3	79.0
Parent	77	19.3	19.3	98.3
Other	7	1.8	1.8	100.0
Total	400	100.0	100.0	

5.4.4 Graph 5.25 Place for Purchase of Toothpaste



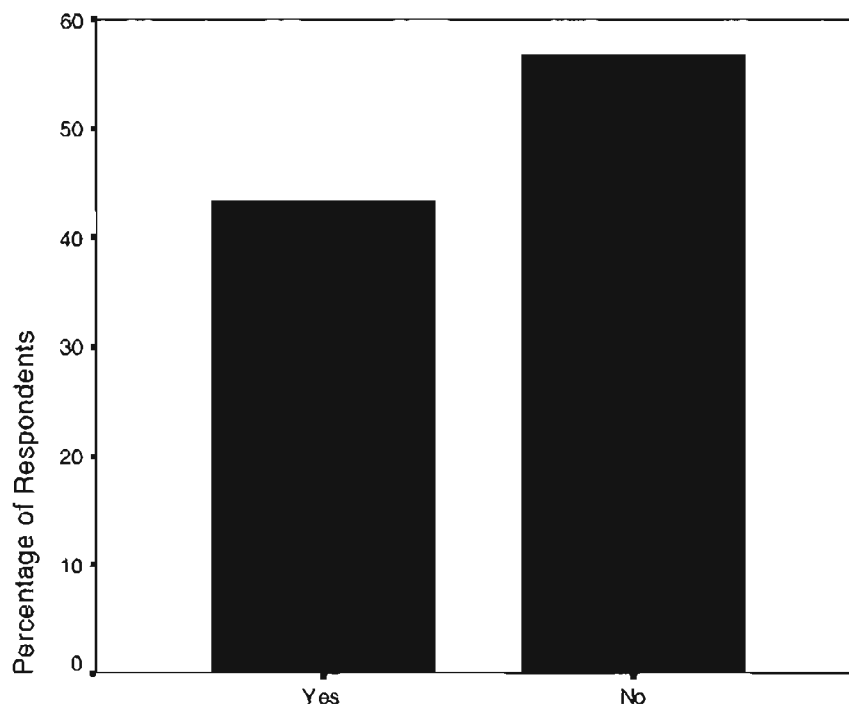
92.8% of respondents said that they purchased their toothpaste at a supermarket. This is not surprising because in South Africa major supermarket outlets mainly dominate distribution of consumer goods. Price competitiveness coupled with an increasing range

of cosmetics keeps supermarkets dominant in distribution and the majority of South African consumers tend to buy from supermarkets. (Public Servant 11, no date)

Table 5.26 Frequency for the Place of Purchase

	Frequency	Percent	Valid Percent	Cumulative Percent
Supermarket	371	92.8	92.8	92.8
Chemist	18	4.5	4.5	97.3
Other	11	2.8	2.8	100.0
Total	400	100.0	100.0	

5.4.5 Graph 5.26 Effects of Advertisements on Toothpaste Choice

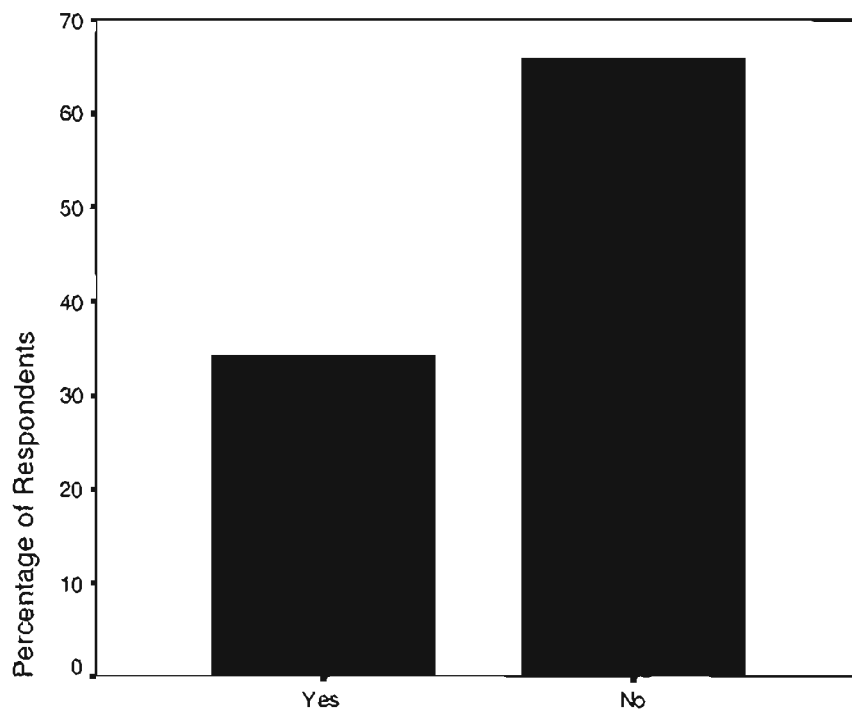


The influence of advertisements on choice of toothpaste is somewhat evenly distributed amongst respondents by 56.8% saying that they were influenced by advertisements and 43.3% saying that advertisements didn't influence their choice.

Table 5.27 Frequency for the Effectiveness of Advertisements

	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	173	43.3	43.3	43.3
No	227	56.8	56.8	100.0
Total	400	100.0	100.0	

5.4.6 Graph 5.27 Influence of Friends or Family on Toothpaste Choice



65.8% respondents said friends or family did not influence them on their choice of toothpaste while 34.3% respondents said they were influenced. Hence influence by others is not considered as a major factor in determining the choice of toothpaste.

Table 5.28 Frequency for the Influence of Friends/Family on choice of Toothpaste

	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	137	34.3	34.3	34.3
No	263	65.8	65.8	100.0
Total	400	100.0	100.0	

In summary the section above discussed the responses from the survey and evaluated the importance consumers attach to the various product attributes. The next section covers the significance test done between demographic variables and brand preference for any relationship that may exist between the two.

5.5 Significance Test of Demographic Variables versus Brand Preference

The Mann-Whitney U test, also called the rank sum test, is a nonparametric test that compares two unpaired groups. (Public Servant 8, no date) This test was used to test if the various demographic variables significantly influence the choice of toothpaste.

5.5.1 Influence of Race on Brand Preferences

White and Black Respondents

(See Appendix 2-A)

H_0 : - There are no differences between race groups in the choice of toothpaste

H_1 : - There are differences between race groups in the choice of toothpaste

From the table in appendix 2-A the calculated P value of 0.120 is greater than 0.05 and hence the null hypothesis that there are no differences in the choice of brands between Whites and Blacks respondents, was accepted.

White and Coloured Respondents**(See Appendix 2-B)**

H_0 : - There are no differences between race groups in the choice of toothpaste

H_1 : - There are differences between race groups in the choice of toothpaste

From the table in appendix 2-B the calculated P value of 0.029 is less than 0.05 and hence we reject the null hypothesis that there are no differences in the choice of brands between White and Coloured respondents. Therefore there are significant differences between Whites and Coloureds in the choice of brands.

White and Indian Respondents**(See Appendix 2-C)**

H_0 : - There are no differences between race groups in the choice of toothpaste

H_1 : - There are differences between race groups in the choice of toothpaste

From the table in appendix 2-C the calculated P value of 0.003 is less than 0.05 and hence we reject the null hypothesis that there are no differences in the choice of brands between White and Indian respondents. Therefore there are significant differences between Whites and Indians in the choice of brands.

Black and Coloured Respondents**(See Appendix 2-D)**

H_0 : - There are no differences between race groups in the choice of toothpaste

H_1 : - There are differences between race groups in the choice of toothpaste

From the table in appendix 2-D the calculated P value of 0.252 is greater than 0.05 and hence we accept the null hypothesis that there are no differences in the choice of brands between Black and Coloured respondents.

Black and Indian Respondents

(See Appendix 2-E)

H₀: - There are no differences between race groups in the choice of toothpaste

H₁: - There are differences between race groups in the choice of toothpaste

From the table in appendix 2-E the calculated P value of 0.070 is greater than 0.05 and hence we accept the null hypothesis that there are no differences in the choice of brands between Black and Indian respondents.

Coloured and Indian Respondents

(See Appendix 2-F)

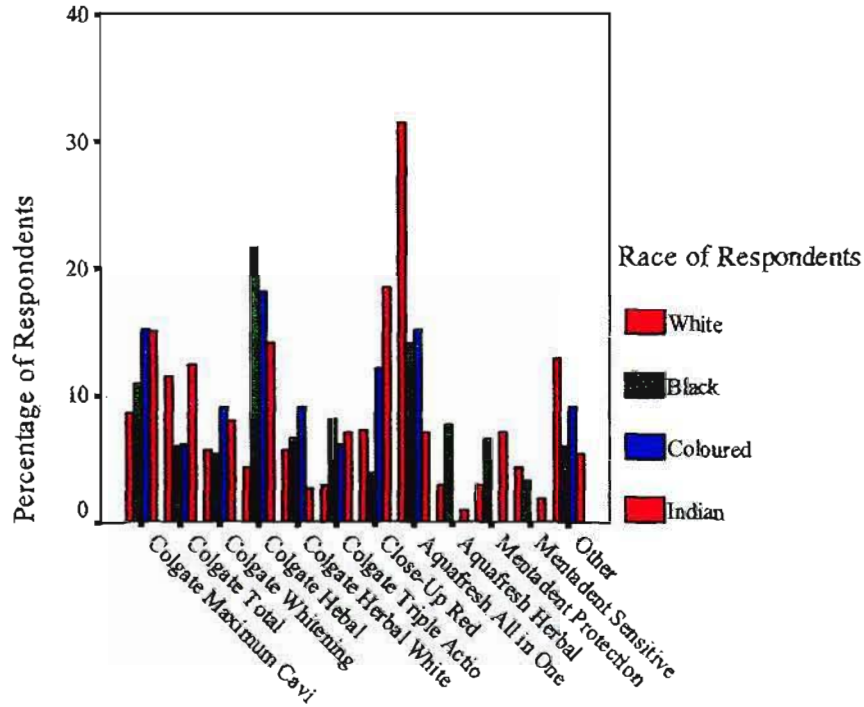
H₀: - There are no differences between race groups in the choice of toothpaste

H₁: - There are differences between race groups in the choice of toothpaste

From the table in appendix 2-F the calculated P value of 0.929 is greater than 0.05 and hence we accept the null hypothesis that there are no differences in the choice of brands between Indian and Coloured respondents.

Overall the significance test done between race and brand preference revealed that there were significant differences between Whites and Indians, and between Whites and Coloureds. Hence the conclusion is that race is a significant factor and can actually influence brand choice. The graph on the next page show the different brands selected across the racial groups to show respondents choice of the various brands.

Graph 5.28 Brand Choice versus Race of Respondents



The above graph shows the brands that were selected by the various race groups in the survey. From the table on the next page we can see Aquafresh All-in-One was chosen by 31.4% of White respondents. Close-up seems to top amongst Indians while Coloureds surveyed chose Colgate Herbal. 18.6% of Indian respondents and 18.2% of Coloureds chose the brands respectively. The brand that was chosen the most by all racial groups was Colgate Herbal with 16.3% respondents followed by Aquafresh All-in-One with 15.3% of respondents. The significance test done also revealed that there were significant differences between Whites and Indians and also between Whites and Coloureds. This could also explain the differences in the choice of brands amongst the different groups.

Table 5.29 Different Brand Choice versus Race of Respondents

		Race of Respondents				Total
		White	Black	Coloured	Indian	
The Different Brands Used by Respondents	Colgate Maximum Cavity	8.6%	10.9%	15.2%	15.0%	12.0%
	Colgate Total	11.4%	6.0%	6.1%	12.4%	8.8%
	Colgate Whitening	5.7%	5.4%	9.1%	8.0%	6.5%
	Colgate Herbal	4.3%	21.7%	18.2%	14.2%	16.3%
	Colgate Herbal White	5.7%	6.5%	9.1%	2.7%	5.5%
	Colgate Triple Action	2.9%	8.2%	6.1%	7.1%	6.8%
	Close-Up Red	7.1%	3.8%	12.1%	18.6%	9.3%
	Aquafresh All-in- One	31.4%	14.1%	15.2%	7.1%	15.3%
	Aquafresh Herbal	2.9%	7.6%		.9%	4.3%
	Mentadent Protection	2.9%	6.5%		7.1%	5.5%
	Mentadent Sensitive	4.3%	3.3%		1.8%	2.8%
	Other	12.9%	6.0%	9.1%	5.3%	7.3%
	Total	100.0%	100.0%	100.0%	100.0%	100.0%

5.5.2 Influence of Gender on Brand Preference (See Appendix 2-G)

H₀: - There are no differences between gender and brand preference

H₁: - There are differences between gender and brand preference

From the table in appendix 2-G the calculated P value of 0.212 is greater than 0.05 and hence we accept the null hypothesis that there are no differences in the choice of brands between both genders. Hence gender is insignificant as a factor influencing toothpaste brand preference.

5.5.3 Influence of Age on Brand Preferences (See Appendix 2-H)

H₀: - There are no differences between age and brand preference

H₁: - There are differences between age and brand preference

From the table in appendix 2-H the calculated P value of 0.394 is greater than 0.05 and hence we accept the null hypothesis that there are no differences in the choice of brands between both age groups of 15-24 and 25-39. Likewise there are no differences between

the age group 40 and above as the calculated P value is 0.990, which is greater than 0.05 as, depicted in the appendix. A third test was done between the age group 25-39 and 40-60 to check if any differences exist. The calculated P value is 0.543 for this group, therefore reinforcing the above two tests and hence accepting the null hypothesis for all age groups that there are no differences between age and the choice of particular brand of toothpaste. Therefore age is an insignificant factor in influencing toothpaste brand preference.

5.5.4 Influence of Income on Brand Preferences (See Appendix 2-I)

H_0 : - There are no differences between income and brand preference

H_1 : - There are differences between income and brand preference

In order to determine if income influences the choice of a brand a test was done between respondents whose income is at the lowest (R201-500) and those who had a monthly income of above R.3500. The calculated P value for this test was 0.684 that is greater than 0.05 leading to the acceptance of the null hypothesis and concludes that there are no differences between level of income and brand preferences. Another test between monthly income group of R1001-1500 and R2501-3500 was done to further support the first test. The P value for this was 0.471 and hence again conclude that there are no differences between level of income and brand preference. That is income is insignificant as a factor influencing toothpaste brand preference.

5.5.5 Influence of Education on Brand Preferences (See Appendix 2-J)

H_0 : - There are no differences between level of education and brand preference

H_1 : - There are differences between level of education and brand preference

The calculated P value for High School and University level of education is 0.810 as shown in appendix 2-J. Hence as this is greater than 0.05 we accept the null hypothesis and conclude that there are no differences between High School and University levels of

education of respondents in their choice of toothpaste. Also a test between those with high school level of education and those with post graduate also revealed a P value of 0.654 resulting in the acceptance of the null hypothesis and we can comfortably conclude that there are no differences between level of education and brand preferences. Hence level of education does not significantly affect toothpaste brand preference.

5.5.6 Influence of Marital Status on Brand Preferences (See Appendix 2-K)

H₀: - There are no differences between marital status and brand preferences

H₁: - There are differences between marital status and brand preferences

The calculated P value for this test is 0.493 which is greater than 0.05. Therefore we accept the null hypothesis and conclude that there are no differences between marital status and brand preferences. Therefore marital status does not significantly affect toothpaste brand preference.

5.5.7 Influence of Occupation on Brand Preferences (See Appendix 2-L)

H₀: - There are no differences between occupation and brand preferences

H₁: - There are differences between occupation and brand preferences

The calculated P value between respondents who are students and respondents who are employed is 0.502 and hence leading to an acceptance of the null hypothesis that there are no differences between occupation and brand preferences. Hence occupation doesn't significantly affect toothpaste brand choice. This test was sufficient as students and employed respondents totally consisted of 95% of the survey.

In conclusion from all the Mann-Whitney U tests performed on the various demographic variables we can conclude that demographic variables have no or insignificant impact on the choice and purchase of toothpaste amongst PMB consumers other than race.

5.6 Conclusion

This chapter covered the profile of the sample used in the survey and the results for each question in the survey. The results were summarised in various frequency tables and bar charts in order to give a clear picture of the research's findings. The key findings of the survey could then be summarised as follows:

- Colgate Herbal was top on the list with 16.3% consumers surveyed having selected it. Aquafresh All-in-One was chosen by 15.3% of the survey which places it on the second position.
- Fresher breath is the most important product attribute amongst Pietermaritzburg consumers.
- Marketing stimuli have very little or no impact on the consumers surveyed. However availability of the toothpaste everywhere (place) was considered to be relatively important compared to other marketing stimuli.
- The significance tests done revealed demographic variables other than race have insignificant impact on the choice and purchase of particular type of toothpaste.

6. DISCUSSION AND CONCLUSION

In order to make use of the various findings presented in the previous chapter, it becomes vital to look at the findings in relation to the specific research objectives. Hence the focus of this chapter is a discussion of the findings in relation to the research objectives.

6.1 To Evaluate which Marketing Stimuli affect the Purchase of Toothpaste in PMB

Marketing stimuli are a combination of the marketing mix. The marketing mix is the “product, price, communications, distributions, and services provided to the target market.” (Hawkins *et al*, 2001:19) For the purpose of this research the product was any type of toothpaste available to the PMB consumers. An investigation into the shelves of the various supermarkets in PMB revealed that there were over 20 different types of toothpastes.

According to Skinner (1994:314) the product is a core aspect in the marketing mix while promotion, distribution, and price must be coordinated with product decisions. Kotler (2000:394) shares the same view by stating that a product is a key element in the market offering because the first step in formulating the marketing mix is designing how to meet customer needs and wants. Since toothpaste is a product consumers want to spend as little time as possible shopping for it, its packaging plays a greater role in influencing the consumer. According to Lamb *et al* (2000:158) “packaging is a powerful communication tool and is capable of turning the buyer (on) or (off)”. However for PMB consumers packaging was not an important factor. This research investigated if attractive packaging was an important factor for PMB consumers. The results show that for PMB consumers attractive packaging was not an important factor. This is revealed by 73.5% of the respondents rating attractive packaging between neutral and totally unimportant. Two conclusions that could be drawn to explain why consumers think packaging is not an important factor are first since all toothpastes currently use the same format of packaging

consumers don't really pay attention to it and secondly it could be that consumers are more interested in the internal ingredient of the toothpaste than the external packaging.

Another marketing stimuli the research investigated was price. Price is simply the amount paid when goods or services are exchanged and involves anything with perceived value and not necessarily only money. (Lamb *et al*, 2000:368) It is also the only marketing stimuli that produce revenue while the others involve only costs. (Kotler, 2000:456) Price (as depicted in appendix 3) for this survey was considered as an insignificant factor in influencing toothpaste purchasing. This is proved by 61.8% of the respondents ranking this variable between neutral and totally unimportant. The calculated mean on table 5-22 also show that price was one of the least rated from the attributes. According to Lamb *et al* (2000:168) from a marketing perspective price is an important means of differentiating a product. The various prices charged by retailers in PMB are close in range. For example a 100ml tube Close-Up costs R3.99 in Spar, Pick'n Pay, Shoprite and Boxer supermarkets while a 100ml tube Colgate Triple Action costs R5.45 at Pick n' Pay, 4.99 at Spar and 4.95 at Shoprite Checkers and 5.85 at Boxer supermarket. These prices are in close range for a consumer who purchases one or two tubes. Hence price can't really play a big role as the products are affordable by those who have some form of income and are unlikely to waste much time searching for lower prices when purchasing toothpaste.

Consumers rated coupons given in store as the least important attribute that made any difference in their choice of toothpaste. Coupons are one of promotional methods of communicating with the consumer. According to Skinner (1994:586) there are four promotional components that make up the promotional mix: these are advertising, personal selling, sales promotion and publicity. Coupons given in store are part of sales promotion. "Sales promotion is an activity or material that offers consumers' salespersons or resellers a direct inducement, which adds incentives for purchasing a product and this, could be in the form of a coupon, refund, demonstration, or display." In the survey 81.3% of respondents' rated this variable as neutral, unimportant and totally unimportant. This shows PMB consumers didn't really care about coupons given in store when purchasing their toothpaste. This could be again due to the affordability of

toothpaste by all those who are economically active. The calculated mean shown on table 5-22 which is 2.3475 for this attribute was the lowest from all the product attributes. This reflects the value consumers attach to coupons given in store. However even though coupons in store were found to be irrelevant in this research, there are instances consumers have been influenced by it. For example in USA consumers increased their use of coupons by 14 percent in 1991, which resulted in savings of \$4 billion. (Marketing news, (1992) cited in Skinner, 1994:589) Another reason that could explain the lack of importance of price and coupons in store could be brand loyalty by consumers. According to Assael (1998:130) "brand loyalty represents a favourable attitude toward a brand resulting in consistent purchase of the brand over time." Consumers develop brand loyalty by continuously purchasing a specific brand. Therefore brand loyal consumers are unlikely to request extra information when making a purchase and are also resistant to competitors marketing efforts such as coupons. (Hawkins *et al*, 2001:647)

Another attribute investigated in the research which is a marketing stimuli was the availability of toothpaste everywhere. This is the place or distribution channel in the marketing mix. Lamb *et al* (2000:263) illustrate the importance of distribution by stating "no matter how good our physical product is (product strategy), if it is not within reach of the people who want to buy it (distribution strategy), it will not be sold." In the survey 65.8% of respondents indicated that toothpaste being available everywhere is very important or important. This meant that most consumers felt that their toothpaste should be available wherever they shop. Of the marketing stimuli this variable had the highest mean. This is also a reflection that consumers put more importance on availability (place) than any of the other marketing stimuli. Toothpaste is therefore a product that requires maximum outlet coverage which results from being a convenience product. "If buyers are unwilling to search for a product (as is true of convenience goods and operating supplies) the product must be very accessible to buyers." (Lamb *et al*, 2000:270) Hence marketers are forced to use intensive distribution where all available outlets are used at each level of the channel to distribute the product. (Skinner, 1994:485)

6.2 To Evaluate the Attributes Consumers look for in Toothpaste Purchasing

“A product is anything a consumer acquires or might acquire to meet a perceived need” (Hawkins *et al*, 2001:19) Consumers chose a product based on the value it offers and the need it fulfils. When selecting toothpaste consumers look for the different attributes it offers. The survey conducted required respondents to indicate the importance they attach to the product attributes discussed in chapter three. The purpose of this rating was to determine the important attributes consumers look for when purchasing their toothpaste. The results are shown on table 5-22. The table shows that respondents have selected fresher breath with a mean value of 4.70 to be the most important attribute. Whitening teeth and Dental Association Approval follow in second and third place respectively. These were followed by taste, tartar control, useable for sensitive teeth, and fluoride content. Almost all toothpastes in supermarket shelves have fresher breath and whitening teeth as a product attribute on their packaging. One other interesting finding is that although Dental Association Approval was rated third from the attributes, most toothpaste didn't have a logo or sign of any organisations approvals. Never-the-less this is a manifestation that consumers actually rely on the opinion of a professional body to acknowledge the product they choose to use.

Another interesting finding that emerged from the calculated means of the attributes was that fluoride ranked last from the attributes. Most toothpaste is advertised as containing fluoride and 58.8% of respondents in the survey actually rated this variable as important and very important. Fluoride is “the most important ingredient to look for in a toothpaste and is extremely effective in protecting teeth against decay.” (Public servant 7, no date) However participants of this research rated fluoride the least important from the product attributes. This might have resulted from the limited knowledge the average person has about fluoride and its uses or it could be that consumers regard all toothpaste to obviously contain fluoride so it doesn't really affect the brand choice because it is taken as a given that all toothpaste should obviously contain fluoride.

6.3 To Identify the various Demographic Variables that Influences the Brand Choice

Hawkins *et al* (2001:112) define demographics as description of a population in relation of its size, structure, and distribution. Size refers to the number of individuals in a population; structure is the division of the population in terms of age, gender, income, education, and occupation while distribution is the location of individuals in terms of cities, townships and so on. (Hawkins *et al*, 2001:112) Race is one of the demographics variables that could be used to segment a market. According to Lamb *et al* (2000:134) in the USA researchers have found some differences in consumption patterns between African-Americans and other groups. For example although African-Americans drink less coffee than average, they are likely to use more sugar and cream, which encouraged Coffee-Mate to start marketing to Blacks by advertising in national magazines like Ebony and Essence. In South Africa for example South African Breweries specifically targets Blacks with the Black Label brand and particularly the large “quart” bottle. (Lamb *et al*, 2000:35).

The significance test done between race and brand choice revealed that differences existed amongst White and Coloured respondents and between White and Indian respondents. This information is vital for marketers when they segment their markets. For example Carson is one of the most successful companies in South Africa with its hair care range of products for blacks. (Lamb *et al*, 2000:135) Hence there is a possibility that toothpaste manufactures based on the findings and the significant tests could effectively design different marketing strategies that would segment and target different racial groups.

Gender is a commonly used demographic variable for segmentation of markets and products such as clothes, cosmetics, toiletries, magazines and cigarettes are generally segmented on the basis of gender. (Skinner, 1994:189) For example Unilever markets its Brut fragrance to men and Pears to women while Ego deodorant targets men and magazines such as Cosmopolitan and Femina aim at capturing the female market. (Lamb

et al, 2000:134) However the significance test done for this survey found no differences existed between genders with regards to toothpaste brand preferences.

According to Lamb *et al* (2000:134) “income is a popular demographic variable for segmenting markets because income level influences consumers’ wants and determines their buying power.” For example in the USA Campell soup company’s Le menu frozen dinner line is aimed at the consumers with higher incomes while its budget Gourmet frozen dinners are targeted at consumers earning lower incomes. (Skinner, 1994:189) The significance test revealed that no differences existed between income levels with regard to toothpaste preferences. An explanation to this could be that toothpaste is affordable by almost everyone who has some form of income and their level of income has no impact whatsoever on their use of toothpaste. Hawkins *et al* (2000:119) also mentions that “income is generally more effective as a segmentation variable when used in conjunction with other demographic variables.” This is supported by Schiffman and Kanuk (1997:54) who mention that “education, occupation, and income tend to be closely correlated in almost a cause and effect relationship: that is high-level occupation that produce high incomes usually require advanced educational training.” However, in the case of toothpaste purchasing the relationship between income, education and occupation has no relevance. The significance tests done also showed that these variables; income, occupation, and education either separately or jointly have no influence in the consumer brand choice.

Age is also a commonly used demographic variable to segment markets. (Skinner, 1994:188) For example Cadillac’s research revealed that the needs of older and younger prospective clients were different when considering purchasing a luxury car. (Hawkins *et al*, 2001:114) However the significance test done for the survey showed age was insignificant in toothpaste purchasing. Also the significance test done on the other variables of education, marital status and occupation all revealed that these variables didn’t influence the choice of particular toothpaste. Therefore the conclusion is that all demographic variables with the exception of race (for two categorical groups) were insignificant in toothpaste brand choice.

6.4 To Identify which Brand of Toothpaste has Preference amongst PMB Consumers

In order to investigate which brand or type of toothpaste has preference amongst PMB consumers, question two on the survey listed most of the toothpastes available to consumers on the shelves of PMB supermarkets. Respondents were then asked to choose the brand they prefer. The results were that 16.3% of respondents chose Colgate Herbal while 15.3% selected Aquafresh All-in-One. This meant that the two brands were the two most preferred amongst PMB consumers. Colgate Maximum Cavity, Close Up Red and Colgate Total followed in third, fourth, and fifth position by 12%, 9.3% and 8.8% respectively. (Refer to Graph 5-10 and Table 5-10 for more details) The conclusion from this is Colgate with its different types of toothpaste dominates the PMB toothpaste market. Attempts to get other statistics by the researcher in order to compare this result were unsuccessful.

6.5 Conclusion

This chapter discussed the findings from the survey in relation to the research objectives. The research discovered that from marketing stimuli the availability of toothpaste everywhere has the most importance to PMB consumers. In relation to product attributes, fresher breath was the most important attribute consumers looked for when purchasing their toothpaste. Whitening teeth and Dental Association approval also followed in second and third places. The various significance tests done to identify if demographic variables influence brand choice revealed that differences were only found on race between two groups. These were between Whites and Coloureds and between Whites and Indians. Finally amongst all respondents of the survey Colgate Herbal and Aquafresh All-in-One with 16.3% and 15.3% of respondents having chosen them were the most preferred types of toothpaste amongst PMB consumers. In light of these findings the next chapter will outline and make recommendations that could be useful to those in the industry.

7. RECOMMENDATIONS

An understanding of today's consumer behaviour has become an essential part for all businesses because "marketers have come to realise that their effectiveness in meeting consumer needs directly influences their profitability."(Assael, 1998:3) Although Colgate with its various types of toothpaste accounted for 55.8% of the market in the survey, all manufacturers could direct their segmenting and positioning activities on specific product attributes which could help satisfy consumer needs and wants to the optimum.

7.1 Market Segmentation

According to Lamb *et al* (2000:130) "the process of dividing a market into meaningful, relatively similar and identifiable segments or groups is called market segmentation." The purpose of market segmentation is to enable companies to design an effective marketing strategy. Skinner (1994:184) explains this by saying companies divide markets into different segments for the main purpose of meeting specific consumers' needs. This research identifies benefits sought to be the most effective way to segment PMB consumers. The various benefits customers seek could be grouped into two groups for the purpose of segmenting a market. These are consumers who seek health benefits and consumers who seek cosmetic benefits from their toothpaste. Hence the attributes that were identified under these two groups were:

- **Health benefits:** Fluoride content, Tartar control, Useable for sensitive teeth and Dental Association approval
- **Cosmetic benefits:** Whiter teeth, Freshness breath and Taste

The above segmentation is very important to manufacturers as well as retailers in designing their marketing strategies. The product attributes evaluation revealed that consumers ranked fresher breath, whitening teeth and Dental Association approval as the most three important attributes they look for in their toothpaste. The significance test done between race and brand choice also showed that there are differences between

certain racial groups in their choice of toothpaste. Manufacturers then need to focus on the benefits they offer to consumers. "Benefit segmentation is the process of grouping customers into market segments according to the benefits they seek from the product."(Lamb *et al*, 2000:139) Therefore manufactures and retailers could emphasise the specific attributes when segmenting and marketing to the different racial groups in order to maximise the use of their products.

7.2 Positioning

Walker *et al* (2003:171) refer to "positioning as the place a product or brand occupies in the consumers' mind relative to their needs and how marketers intend to create such a position." Lamb *et al* (2000:173) mentions two things companies should know when positioning their product: first is to determine the attributes consumers look for in the product and secondly is to know how competitors' products are perceived relative to those attributes. This research identified the following attributes of toothpaste that are important to the PMB consumer. These, in order of importance, were fresher breath, whiter teeth, Dental Association approval, taste, tartar control, useable for sensitive teeth and fluoride content. Manufactures could design their marketing mix according to these attributes to increase their market share. One interesting attribute consumers regarded as important which ranked third but which most toothpaste didn't have was approval by Dental Association. Based on the findings the following general marketing stimuli strategies could then be recommended to all those in the industry.

Product

Manufactures need to continuously engage in product development in order to meet the specific needs of the consumer. For example the research discovered product attribute fresher breath as the most important attribute while approval by Dental Association was also important to consumers. Therefore there is a need to continuously research on ways of improving the specific attributes and to also obtain approval by a recognised authority

and put an endorsing label on the packaging. Manufacturer's main focus should then be on how to wholly integrate the important attributes into the product.

Price

Although the research discovered price was not a major determinant in consumers choice of toothpaste, manufacturers still need to make sure that consumers feel they are getting the most for their money. Again their focus should be to incorporate the product attributes consumers look for at the lowest cost possible in order to charge lower prices. According to Skinner (1994:58) price is "important in the design of marketing strategy because customers are concerned about the value obtained in the purchase." Hence the pricing strategy should focus on providing greater value for a differentiated product as well as providing a generic product for consumers who are price conscious.

Promotion

The promotional campaign should focus on offering special coupons in specific places. The survey showed that consumers don't actually search for coupons in store when purchasing their toothpaste. However offering special coupons in schools, sport venues and other public gatherings will make consumers remember the type or brand of toothpaste to buy when shopping. This is mainly due to toothpaste being under product category where there are large numbers of potential buyers, the product is less complex, the buyers are dispersed, and the product is low in value and is also highly standardised. (Lamb *et al*, 2000:359) This will eventually build brand awareness and hence increase market share. Another effective way to promote their products, manufacturers could engage in product displays in places such as the dental clinics and other medical centres. This would prove to be effective as the research showed consumers value professional opinion by requiring approval of Dental Association. Having product displays in such places will also give the consumer the chance to get a professional opinion about the product and hence build positive perception. The main promotion strategy should focus

on continuously persuading and informing consumers about the various product attributes that could benefit and satisfy the consumers need.

Place

Availability of the product wherever the consumer shops is an important matter especially for products like toothpaste. Being a convenience product where consumers want to spend as little time as possible shopping for it, it becomes vital that manufacturers continuously search for more shelf space and outlets to make the product available everywhere. This is also important for PMB consumers who demand their toothpaste should be available at all outlets. Therefore intensive distribution needs to be continuously used in order to reach all targeted consumers. According to Lamb *et al* (2000:269) the aim in intensive distribution is maximum market coverage in order to reach all potential consumers who might be purchasing the product.

Overall manufacturers need to aim on how to best combine the marketing stimuli that would effectively and efficiently meet customer needs and provides customer's with a value. The marketing stimuli should be based on the target market which should take into account the competition, regulation, politics, society, economic conditions and the technology. (Skinner, 1994:20)

7.3 Avenues for Further Research

- Future research could be done by covering more areas in PMB to provide a more realistic reflection of the consumer.
- In future researchers could establish a relationship with manufacturers in order to minimise the various limitations encountered in this research.
- A study investigating the influence of children on toothpaste purchase could be of great value to marketers.

- A similar study with a larger sample or different products could also produce useful and relevant information for marketers to use in the process of segmenting, targeting and positioning of their market.

- A Study investigating how brand loyal consumers are that would give a further insight into the consumer behaviour could also be of great value to marketers.

7.4 Conclusion

With increasing levels of customisation at an accelerating rate, marketers today more than ever before want to know what particular brand of toothpaste a consumer buys, what type they buy, why they buy it (to prevent tartar, for fresher breath etc.), where they buy it (supermarket, chemist), how often they use it (morning, evening or after meals), and how often they buy it (weekly, biweekly or monthly). This is essential information that could determine the success of the business. The research attempted to cover all areas that were essential for marketers to understand in terms of the various aspects of the consumer. It also identified product attributes that need to be developed to meet the consumer needs as well as demographic variables that influence the purchase. Therefore the study could be of great use for all in the industry and other interested parties although any user of the research is once again reminded to take into consideration the various limitations encountered during the research which are summarised in the next chapter.

8. RESEARCH LIMITATIONS

There were several limitations the researcher encountered during the research but only the main ones will be mentioned here.

8.1 Resource Constraints

Resource constraints were a significant limitation. The researcher was unable to get information such as regional market share, overall industry trends and other relevant information that would have added great value to the research. Several attempts to contact research centres and company representatives through e-mail and phone were not successful. Never-the-less the researcher tried to provide as accurate information as possible to support the objectives and findings of the research. However the lack of information relevant to the South African market was a big obstacle for the researcher.

8.2 Financial Constraints

This was very obvious when the researcher tried to particularly obtain a research done by AC Nielsen on the South Africa toothpaste industry trend for the years 2003-2008. This information was very vital for the research but costs 3500 US dollars, which was beyond the reach of the researcher. The costs of other reports also ranged between 500 to 1500 US dollars. Also the research was confined to limited areas due to limitations in finance.

8.3 Location Constraint

The research was done in PMB main areas. Although this was sufficient for this study, a more comprehensive coverage of various areas in PMB would have provided a bigger picture for the market.

8.4 Time Constraints

Time constraints were also a limitation to the research because they limited the researcher to specific areas. The researcher feels that more time would have allowed for gathering of a bigger sample that would be more representative of the population. However, the researcher to the best of his ability has tried to obtain data that is accurate and comprehensive for this particular study.

8.5 Participants Biasness

The research was mostly carried out on one-to-one basis by intercepting consumers. Hence some respondents tended to answer the questions as quickly as possible in order to get rid of the interviewer as fast as possible. Although these were few, the responses for these participants may not have reflected his/her actual response.

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APPENDIX ONE

Consumer Survey	Date	No.
------------------------	-------------	------------

Hello, I am doing research on consumer behaviour in toothpaste purchasing. I would very much appreciate it if you would take a few minutes to answer the following questions. Thank you, in advance for your time. Please mark with an **X** next to **Your answer** for all questions except for question **Three** where you have to **Circle** the relevant number.

- 1) Do you use toothpaste?

Yes	NO
-----	----

If you answer **NO** to the above, you only have to answer questions **10-17**.

- 2) What brand of toothpaste do you use?
- | | |
|--|--|
| 1. Colgate Maximum Cavity ----- <input type="checkbox"/> | 10. Aquafresh All in One----- <input type="checkbox"/> |
| 2. Colgate Total----- <input type="checkbox"/> | 11. Aquafresh Extreme Clean-- <input type="checkbox"/> |
| 3. Colgate Whitening----- <input type="checkbox"/> | 11. Aquafresh with Actisan---- <input type="checkbox"/> |
| 4. Colgate Herbal----- <input type="checkbox"/> | 12. Aquafresh Herbal----- <input type="checkbox"/> |
| 5. Colgate Herbal White ----- <input type="checkbox"/> | 13. Mentadent Protection----- <input type="checkbox"/> |
| 6. Colgate Triple Action----- <input type="checkbox"/> | 14. Mentadent Sensitive----- <input type="checkbox"/> |
| 7. Colgate Fresh Confidence-- <input type="checkbox"/> | 15. Macleans (Specify Type) ----- <input type="checkbox"/> |
| 8. Close Up-Red----- <input type="checkbox"/> | 16. Dentazyme----- <input type="checkbox"/> |
| 9. Close Up-Blue----- <input type="checkbox"/> | 17. Sensodyne----- <input type="checkbox"/> |
| | 18. Other (Specify type) _____ |

- 3) What criteria are the most important to you when choosing toothpaste? **Please Rate using the following scale.**

1= Totally Unimportant 2= Unimportant 3= Neutral 4= Important 5=Very

Important

1. Toothpaste gives you whiter teeth	1	2	3	4	5
2. Toothpaste freshens your breath	1	2	3	4	5
3. Flouride Content of toothpaste	1	2	3	4	5
4. Toothpaste controls Tartar	1	2	3	4	5
5. Usable for Sensitive teeth	1	2	3	4	5
6. Taste	1	2	3	4	5
7. Dental Association Approved	1	2	3	4	5
8. Low Price	1	2	3	4	5
9. Attractive Packaging	1	2	3	4	5
10. Coupons given in store	1	2	3	4	5
11. Toothpaste is Available everywhere	1	2	3	4	5

4) How often do you use toothpaste?

Once a Day	Twice a Day	Three times a day	More than three times
------------	-------------	-------------------	-----------------------

5) How often do you purchase toothpaste? _____

6) Who Purchases the toothpaste you use?

Yourself	Spouse	Parent	Other
----------	--------	--------	-------

7) Where do you buy your toothpaste?

Super Market	Chemist	Other (Please Specify)
--------------	---------	------------------------

8) Do Commercial campaigns such as adverts on TV influence your choice of toothpaste?

Yes	No
-----	----

9) Have you ever been influenced by friends or family on your choice of toothpaste?

Yes	No
-----	----

10) What is your Gender?

Male	Female
------	--------

11) What is your Race?

White	Black	Coloured	Indian
-------	-------	----------	--------

12) Which Age group do you fall into?

15-24	25-39	40-60	Over 60
-------	-------	-------	---------

13) What is your home language? Please Specify _____

14) What range does your monthly Income fall into?

R201-500	R500-1000	R1001-1500	R1501-2500	R2501-3500	Above 3500
----------	-----------	------------	------------	------------	------------

15) What is your level of Education?

Primary	High School	University	Post Graduate	Other
---------	-------------	------------	---------------	-------

16) What is your Marital Status?

Single	Married
--------	---------

17) What is your Occupation?

Student	Employed	Pensioner	Housewife	Other
---------	----------	-----------	-----------	-------

If Employed Please Specify type of Employment _____

Thank You so Much for Your Time

APPENDIX TWO

Mann-Whitney U Test between Demographic Variables and Brand Preference

Appendix 2-A *White and Black Respondents*

Ranks

	Race of Respondents	N	Mean Rank	Sum of Ranks
The Different Brands Used by Respondents	White	70	139.04	9733.00
	Black	184	123.11	22652.00
	Total	254		

Test Statistics (a)

	The Different Brands Used by Respondents
Mann-Whitney U	5632.000
Wilcoxon W	22652.000
Z	-1.556
Asymp. Sig. (2-tailed)	.120

a Grouping Variable: Race of Respondents

Appendix 2-B *White and Coloured Respondents*

Ranks

	Race of Respondents	N	Mean Rank	Sum of Ranks
The Different Brands Used by Respondents	White	70	56.35	3944.50
	Coloured	33	42.77	1411.50
	Total	103		

Test Statistics(a)

	The Different Brands Used by Respondents
Mann-Whitney U	850.500
Wilcoxon W	1411.500
Z	-2.178
Asymp. Sig. (2-tailed)	.029

a Grouping Variable: Race of Respondents

Appendix 2-C**White and Indian Respondents****Ranks**

	Race of Respondents	N	Mean Rank	Sum of Ranks
The Different Brands Used by Respondents	White	70	106.92	7484.50
	Indian	113	82.76	9351.50
	Total	183		

Test Statistics (a)

	The Different Brands Used by Respondents
Mann-Whitney U	2910.500
Wilcoxon W	9351.500
Z	-3.019
Asymp. Sig. (2-tailed)	.003

a Grouping Variable: Race of Respondents

Appendix 2-D**Black and Coloured Respondents****Ranks**

	Race of Respondents	N	Mean Rank	Sum of Ranks
The Different Brands Used by Respondents	Black	184	111.05	20433.50
	Coloured	33	97.56	3219.50
	Total	217		

Test Statistics (a)

	The Different Brands Used by Respondents
Mann-Whitney U	2658.500
Wilcoxon W	3219.500
Z	-1.146
Asymp. Sig. (2-tailed)	.252

a Grouping Variable: Race of Respondents

Appendix 2-E**Black and Indian Respondents****Ranks**

	Race of Respondents	N	Mean Rank	Sum of Ranks
The Different Brands Used by Respondents	Black	184	156.02	28707.50
	Indian	113	137.57	15545.50
	Total	297		

Test Statistics (a)

	The Different Brands Used by Respondents
Mann-Whitney U	9104.500
Wilcoxon W	15545.500
Z	-1.809
Asymp. Sig. (2-tailed)	.070

a Grouping Variable: Race of Respondents

Appendix 2-F**Coloured and Indian Respondents****Ranks**

	Race of Respondents	N	Mean Rank	Sum of Ranks
The Different Brands Used by Respondents	Colored	33	74.08	2444.50
	Indian	113	73.33	8286.50
	Total	146		

Test Statistics (a)

	The Different Brands Used by Respondents
Mann-Whitney U	1845.500
Wilcoxon W	8286.500
Z	-.090
Asymp. Sig. (2-tailed)	.929

a Grouping Variable: Race of Respondents

Appendix 2-G Gender and Brand Preference

Ranks

	Gender of Respondents	N	Mean Rank	Sum of Ranks
The Different Brands Used by Respondents	Male	190	192.97	36663.50
	Female	210	207.32	43536.50
	Total	400		

Test Statistics (a)

	The Different Brands Used by Respondents
Mann-Whitney U	18518.500
Wilcoxon W	36663.500
Z	-1.247
Asymp. Sig. (2-tailed)	.212

a Grouping Variable: Gender of Respondents

Appendix 2-H Age and Brand Preferences

Test for Ages between 15-24 and 25-39

Ranks

	Age of Respondents	N	Mean Rank	Sum of Ranks
The Different Brands Used by Respondents	15-24	187	171.70	32108.00
	25-39	164	180.90	29668.00
	Total	351		

Test Statistics (a)

	The Different Brands Used by Respondents
Mann-Whitney U	14530.000
Wilcoxon W	32108.000
Z	-.853
Asymp. Sig. (2-tailed)	.394

a Grouping Variable: Age of Respondents

Significance Test for Age Group 40-60 and Over 60

Ranks

	Age of Respondents	N	Mean Rank	Sum of Ranks
The Different Brands Used by Respondents	40-60	40	24.99	999.50
	Over 60	9	25.06	225.50
	Total	49		

Test Statistics (b)

	The Different Brands Used by Respondents
Mann-Whitney U	179.500
Wilcoxon W	999.500
Z	-.013
Asymp. Sig. (2-tailed)	.990
Exact Sig. [2*(1-tailed Sig.)]	.990(a)

a Not corrected for ties.

b Grouping Variable: Age of Respondents

Significance Test for Age Group 25-39 and 40-60

Ranks

	Age of Respondents	N	Mean Rank	Sum of Ranks
The Different Brands Used by Respondents	25-39	164	103.73	17012.50
	40-60	40	97.44	3897.50
	Total	204		

Test Statistics (a)

	The Different Brands Used by Respondents
Mann-Whitney U	3077.500
Wilcoxon W	3897.500
Z	-.608
Asymp. Sig. (2-tailed)	.543

a Grouping Variable: Age of Respondents

Test for income level between R200-500 and above 3500

Ranks

	Monthly Income Range of Respondents	N	Mean Rank	Sum of Ranks
The Different Brands Used by Respondents	R200-500	75	106.23	7967.50
	Above 3500	132	102.73	13560.50
	Total	207		

Test Statistics (a)

	The Different Brands Used by Respondents
Mann-Whitney U	4782.500
Wilcoxon W	13560.500
Z	-.407
Asymp. Sig. (2-tailed)	.684

a Grouping Variable: Monthly Income Range of Respondents

Significance Test for income level between R1001-1500 and above 3500

Ranks

	Monthly Income Range of Respondents	N	Mean Rank	Sum of Ranks
The Different Brands Used by Respondents	R1001-1500	34	84.81	2883.50
	Above 3500	132	83.16	10977.50
	Total	166		

Test Statistics (a)

	The Different Brands Used by Respondents
Mann-Whitney U	2199.500
Wilcoxon W	10977.500
Z	-.179
Asymp. Sig. (2-tailed)	.858

a Grouping Variable: Monthly Income Range of Respondents

Significance Test for Income level between R1001-1500 and R2501-3500

Ranks

	Monthly Income Range of Respondents	N	Mean Rank	Sum of Ranks
The Different Brands Used by Respondents	R1001-1500	34	41.59	1414.00
	R2501-3500	44	37.89	1667.00
	Total	78		

Test Statistics (a)

	The Different Brands Used by Respondents
Mann-Whitney U	677.000
Wilcoxon W	1667.000
Z	-.721
Asymp. Sig. (2-tailed)	.471

a Grouping Variable: Monthly Income Range of Respondents

Appendix 2-J Level of Education and Brand Preferences

Test for level of Education between High School and University

Ranks

	Level of Education of Respondents	N	Mean Rank	Sum of Ranks
The Different Brands Used by Respondents	High school	99	145.34	14389.00
	University	194	147.85	28682.00
	Total	293		

Test Statistics (a)

	The Different Brands Used by Respondents
Mann-Whitney U	9439.000
Wilcoxon W	14389.000
Z	-.241
Asymp. Sig. (2-tailed)	.810

a Grouping Variable: Level of Education of Respondents

Test for Level of Education between High School and Post Graduate

Ranks

	Level of Education of Respondents	N	Mean Rank	Sum of Ranks
The Different Brands Used by Respondents	High school	99	92.83	9190.00
	Post Graduate	89	96.36	8576.00
	Total	188		

Test Statistics (a)

	The Different Brands Used by Respondents
Mann-Whitney U	4240.000
Wilcoxon W	9190.000
Z	-.448
Asymp. Sig. (2-tailed)	.654

a Grouping Variable: Level of Education of Respondents

Appendix 2-K Marital Status and Brand Preferences

Ranks

	Marital Status of Respondents	N	Mean Rank	Sum of Ranks
The Different Brands Used by Respondents	Single	286	202.99	58054.00
	Married	114	194.26	22146.00
	Total	400		

Test Statistics (a)

	The Different Brands Used by Respondents
Mann-Whitney U	15591.000
Wilcoxon W	22146.000
Z	-.685
Asymp. Sig. (2-tailed)	.493

a Grouping Variable: Marital Status of Respondents

Appendix 2-L Occupation and Brand Preferences

Ranks

	Occupation of Respondents	N	Mean Rank	Sum of Ranks
The Different Brands Used by Respondents	Student	188	194.30	36527.50
	Employed	192	186.78	35862.50
	Total	380		

Test Statistics (a)

	The Different Brands Used by Respondents
Mann-Whitney U	17334.500
Wilcoxon W	35862.500
Z	-.671
Asymp. Sig. (2-tailed)	.502

a Grouping Variable: Occupation of Respondents

APPENDIX THREE

Significance Test done between Price and Brand Choice

1. *Price versus Colgate Maximum Cavity and Colgate Total*

Ranks

	The Different Brands Used by Respondents	N	Mean Rank	Sum of Ranks
Rating of Toothpaste on Low Price	Colgate Maximum Cavity	48	42.09	2020.50
	Colgate Total	35	41.87	1465.50
	Total	83		

Test Statistics(a)

	Rating of Toothpaste on Low Price
Mann-Whitney U	835.500
Wilcoxon W	1465.500
Z	-.043
Asymp. Sig. (2-tailed)	.966

a Grouping Variable: The Different Brands Used by Respondents

2. *Price versus Colgate Whitening and Colgate Herbal*

Ranks

	The Different Brands Used by Respondents	N	Mean Rank	Sum of Ranks
Rating of Toothpaste on Low Price	Colgate Whitening	26	53.33	1386.50
	Colgate Herbal	65	43.07	2799.50
	Total	91		

Test Statistics(a)

	Rating of Toothpaste on Low Price
Mann-Whitney U	654.500
Wilcoxon W	2799.500
Z	-1.717
Asymp. Sig. (2-tailed)	.086

a Grouping Variable: The Different Brands Used by Respondents

3. *Price versus Colgate Herbal White and Colgate Triple Action*

Ranks

	The Different Brands Used by Respondents	N	Mean Rank	Sum of Ranks
Rating of Toothpaste on Low Price	Colgate Herbal White	22	26.93	592.50
	Colgate Triple Action	27	23.43	632.50
	Total	49		

Test Statistics(a)

	Rating of Toothpaste on Low Price
Mann-Whitney U	254.500
Wilcoxon W	632.500
Z	-.874
Asymp. Sig. (2-tailed)	.382

a Grouping Variable: The Different Brands Used by Respondents

4. *Price versus Close-Up Red and Aquafresh All-in-One*

Ranks

	The Different Brands Used by Respondents	N	Mean Rank	Sum of Ranks
Rating of Toothpaste on Low Price	Close-Up Red	37	52.81	1954.00
	Aquafresh All in One	61	47.49	2897.00
	Total	98		

Test Statistics(a)

	Rating of Toothpaste on Low Price
Mann-Whitney U	1006.000
Wilcoxon W	2897.000
Z	-.925
Asymp. Sig. (2-tailed)	.355

a Grouping Variable: The Different Brands Used by Respondents

5. *Price versus Aquafresh Herbal and Mentadent Protection*

Ranks

	The Different Brands Used by Respondents	N	Mean Rank	Sum of Ranks
Rating of Toothpaste on Low Price	Aquafresh Herbal	17	22.26	378.50
	Mentadent Protection	22	18.25	401.50
	Total	39		

Test Statistics(b)

	Rating of Toothpaste on Low Price
Mann-Whitney U	148.500
Wilcoxon W	401.500
Z	-1.118
Asymp. Sig. (2-tailed)	.263
Exact Sig. [2*(1-tailed Sig.)]	.279(a)

a Not corrected for ties.

b Grouping Variable: The Different Brands Used by Respondents

6. *Price versus Mentadent Sensitive and Other Brands*

Ranks

	The Different Brands Used by Respondents	N	Mean Rank	Sum of Ranks
Rating of Toothpaste on Low Price	Mentadent Sensitive	11	17.36	191.00
	Other	29	21.69	629.00
	Total	40		

Test Statistics(b)

	Rating of Toothpaste on Low Price
Mann-Whitney U	125.000
Wilcoxon W	191.000
Z	-1.076
Asymp. Sig. (2-tailed)	.282
Exact Sig. [2*(1-tailed Sig.)]	.308(a)

a Not corrected for ties.

b Grouping Variable: The Different Brands Used by Respondents