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Marketing and promotion of potentially harmful products: the case of hookah pipe smoking in South Africa

Oba, Joy

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Marketing and promotion of potentially harmful products: the case of hookah pipe smoking in South Africa

Master of Business Administration (MBA)

A research report submitted by:

Joy Oba

Student number: 0009233R

Supervisor:

Professor Courtenay Sprague

Wits Business School

October 2012

Marketing and promotion of potentially harmful products: the case of hookah pipe smoking in South Africa

A research report submitted to the Faculty of Commerce, Law and Management, University of the Witwatersrand, in partial fulfilment of the requirements for the degree of Master of Business Administration

Johannesburg, 2012

DECLARATION

I declare that this research report is my own unaided work. It is being submitted for the degree of Master of Business Administration at the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in any other University.

_____

Mrs Joy Oba

15th October 2012

ABSTRACT

An increasing phenomenon in South Africa is hookah pipe or “hubbly bubbly” smoking among young adults. It is not uncommon to see groups of young people in restaurants, bars, cafes and campus corners puffing at hookah pipes and passing them on to the group.

The purpose of this research was to ascertain from a selected group of hookah pipe smokers (specifically, a sample of university students in Johannesburg, South Africa) what common marketing and promotional factors influenced their uptake of hookah pipe smoking. .

A total of 96 students from two universities in Johannesburg participated in the study. They completed a short anonymous questionnaire requesting their basic demographic details, as well as selected hookah and cigarette smoking knowledge, attitudes and behaviours. Using the marketing mix approach, ten common factors that could influence hookah pipe smoking activity among this population were identified. The participants were required to indicate how these factors influenced their uptake of hookah pipe smoking on a five-point Likert scale.

The results of this study present two factors of key importance – the communal nature of the hookah smoking experience (p value 0.001) and the perception that the bubbling and movement of the smoke through water removes the “bad” stuff (p value 0.046) - as significant factors in the marketing and promotion of hookah pipe smoking among this group of post-secondary students in South Africa. Lastly, the participants disagreed that the price of hookah tobacco influenced their use of hookah pipes (p value 0.030).It is recommended that educational, regulatory, as well as marketing and promotional interventions that target and address these factors be carried out to arrest the increasing popularity and uptake of this harmful product. Suggested areas of further research include large scale studies which target high school students with a view to prevention and early intervention.

DEDICATION

To my darling husband, Dr Pius Oba – for always bringing out the best in me

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1 INTRODUCTION

Purpose of the study

The purpose of this research was to ascertain factors commonly perceived as effective (from the users' point of view) in the marketing and promotion of hookah pipe smoking among young adults in South Africa.

Context of the study

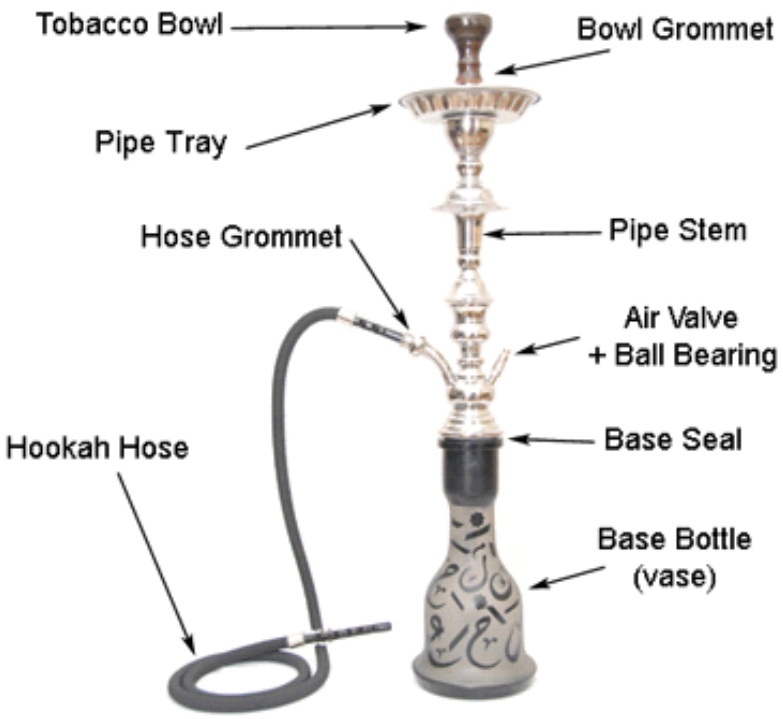
Humans consume tobacco in many ways, all of which are toxic. Tobacco may be combusted (e.g. cigarettes, bidis, kretes); heated (e.g. waterpipes, hookah, narghile); or taken orally or nasally (e.g. snuff, betel quid, chewing tobacco) (Hammond 2009; Khater et al 2008).

An increasing phenomenon in South Africa is hookah pipe (see Figure 1) or "hubbly bubbly" smoking among young adults in South Africa. It is not uncommon to see groups of young people in restaurants, bars, cafes and campus corners puffing at hookah pipes and passing it on to the group, often gathered for a particular social event. This is a pernicious trend, with negative effects on public health whereby "at a time when the link between cigarette smoking and lung disease has been clearly established and campaigns to stop smoking are finally having some effect, this ancient tradition is becoming fashionable again (Ward et al 2006; Maziak et al 2005). Unfortunately, many hookah smokers are convinced that the beautiful bubbling of the pipe results in all the carcinogens being

deposited in the water. According to Kandela, “it will take a very powerful health-education campaign to persuade them otherwise” (Kandela 2000 p.1175).

This study employed the marketing mix theory to ascertain common factors that encourage users of the hookah pipe to engage in this activity. The study also investigated whether this trend is replacing cigarette smoking among young adults at a time when studies demonstrate that tobacco use (i.e., traditional cigarette smoking) is declining in South Africa (Medical Research Council Technical Report 2006).

Figure 1: Diagram of the Hookah pipe



Source: http://habeshadiaspora.files.wordpress.com/2010/01/shisha_pipe_hookah_pipe.jpg. Accessed 30 May 2010

Problem statement

1.3.1 *Research problem and question*

Hookah smoking remains a threat to the health and well-being of young South Africans. Many young people take up hookah smoking during teenage years with the possibility of continuing the activity into adulthood (Page, 2011; Combrink et al 2010). However, there is a paucity of empirical studies and literature that states the facts objectively and identifies the underlying drivers (or common factors) associated with this behaviour.

The research problem was to determine which common marketing and promotional factors drive the use of hookah pipes among post-secondary school smokers in South Africa, Johannesburg, from the users' point of view.

1.3.2 *Sub-problem 1*

Who is smoking the hookah pipe?

Describe the target population that are more commonly involved in this practice and identify the basic demographic characteristics of the post-secondary hookah pipe smoker.

1.3.3 *Sub-problem 2*

Why are they smoking hookah pipe?

What are the most common factors (as perceived by the users) that markets and promotes hookah pipe smoking among post-secondary school smokers?

1.3.4 *Sub-problem 3*

How does hookah pipe smoking interact with other forms of substance use – specifically cigarette smoking?

Is this trend a type of substitution (i.e., is it an alternative type of tobacco use which is replacing the use of cigarettes by smokers)? Are the same marketing and promotional strategies used in earlier times to promote the use of cigarettes also promoting hookah pipe smoking?

1.4 Objectives of the study:

(a) The first study objective was to characterise hookah pipe smokers in post-secondary institutions of learning

(b) The next objective was to explore various marketing factors that may promote the use of hookah pipe smoking among youths in South Africa, with a view to generating new knowledge in this area. The factors explored include:

- The physical appearance of the hookah pipe i.e., it could be perceived as ‘trendy’ or ‘cool’
- The price of hookah pipes
- The price of hookah tobacco

- The availability of different tobacco flavours for example, hookah pipe tobacco are advertised with exotic fruity flavours in an attempt by advertisers to associate fruit with good health
- The perception of hookah pipe smoking being “healthier” than cigarette smoking (or other forms of tobacco use) because the tobacco filters through water before being inhaled
- The communal nature of the hookah pipe smoking activity
- The absence of health warnings on the hookah tobacco pack
- The apparent lack of governmental laws or social regulations against this practice at present
- The role the advertisements play un the uptake of hookah pipe smoking

(c) Are hookah pipe smokers also cigarette smokers or is this habit preferred to and thus replacing cigarette smoking?

This study employed quantitative research methods, with the aim of introducing new knowledge of hookah pipe smoking by young South Africans from a marketing and promotional perspective, while informing future studies on this important public health concern in South Africa.

1.5 Significance of the study

The significance of the research is that a number of studies have recently demonstrated that hookah pipe smoking is a dangerous form of tobacco use

(Kandela 2000; Ward et al 2006; Rice 2012). It may even be more harmful than traditional cigarette smoking (Prignot et al 2008). The study sought to investigate the perceptions and behaviours of a sample of people involved in this form of tobacco use, and to highlight the notion that hookah pipe smoking may be a silent epidemic in South Africa, if similar thought patterns exist among their peer group.

South Africa has no specific legislation on hookah pipe smoking. Thus, this study aimed to capture the marketing strategies that have proved to be most effective in forming the common perceptions of those that engage in this form of tobacco use. This research, in consequence, contributes to the evidence base and serves as a resource to support future awareness and prevention messages by anti-tobacco (specifically hookah pipe smoking) efforts in the country.

1.6 Delimitations of the study

The study was limited to opinions and perceptions of post-secondary students in Johannesburg, South Africa only. The perspectives of post-secondary students of other regions or countries and also the perceptions of younger, e.g., high school or non-schooling users were not included in the present analysis. The study did not carry out an exhaustive enquiry about the use of other drug substances to determine the relationship this might have with hookah use and the questions asked of respondents related to hookah pipe smoking were not exhaustive.

1.7 Definition of terms

Hookah pipe: Also called waterpipe, narghile, hookah, shisha, hubble-bubble, hubbly bubbly – is a generic name for a device in which tobacco smoke passes through water, prior to inhalation (Maziak et al 2005).

Group smoke: The communal nature of hookah pipe smoking activity whereby the same hookah pipe can be shared among friends or family in an event.

1.8 Assumptions

In this study, hookah pipe smokers were approached in groups where they were actively engaging in the act of smoking. The researcher assumed she would gain access to a large enough sample of respondents while they smoke and that their views would be information-rich.

2 LITERATURE REVIEW

2.1 Background

Tobacco use is the most significant cause of preventable morbidity, disability and premature mortality globally. Epidemiological research over several decades has identified the harmful effects of tobacco use, including various types of cancers, coronary heart disease, chronic obstructive pulmonary disease, peripheral vascular disease and stroke (Bartal 2001). In its 2008 Bulletin, the World Health Organization (WHO) recorded that smoking is responsible for 5.4 million deaths yearly, with 4 million of those deaths occurring in developing countries – countries that can least afford the health-care burden. This figure is expected to rise to 10 million deaths a year by 2030, with 70% of these deaths occurring in developing countries (Tobacco Control 2002).

The use of hookah pipes to smoke tobacco and other substances has gained increasing worldwide popularity in recent years (Khater et al 2008). Adolescents and young adults have been particularly affected by its growing popularity (Ward et al 2006; Tobacco Policy Trend Alert 2007; Noonan and Kulbok 2009). Current research studies document countries in the eastern Mediterranean, Southeast Asia, and North Africa as having the highest smoking rates globally (Meleigy 2007). However, use in various parts of the world has been gaining momentum in recent years. In the last decade or two, the United States(U.S.), United Kingdom, Canada and South Africa have seen increasing usage of this form of tobacco use in young people (Rastam et al 2004; Roskin and Aveyard 2009; Jackson and

Aveyard 2008; Grekin and Ayna 2008; Medical research Council 2009). For example, in the United States (U.S.), hookah bars have opened near many U.S. college campuses, and hookah pipes have become common at college parties (Primack et al 2006; Tobacco Policy Trend Alert 2007).

Hookah smoking presents nicotine to youth, often using flavoured and sweetened products, in settings with pro-social, positive messages (Klein 2008). Addition of marijuana, and vodka to the tobacco inhaled have also been reported (Balducci et al 2009). Other names for the hookah pipe depending on the region include shisha, hookah, hubbly bubbly, hubble bubble, okka, water pipes, narghile, goza, sheesha, madaáh, arghile, and argila (Khater et al 2008; Chaouachi 2007; Al-Kubati et al 2006).

Many hookah pipe smokers believe that, relative to cigarettes, hookah pipes are less addictive (Asfar et al 2005), and that they are associated with lower smoke toxicant levels and fewer health risks (Knishkowy and Amitai 2005). Studies have, however, shown that relative to cigarette smoking, hookah pipe use is associated with greater carbon monoxide (up to 30 times the carbon monoxide of a single cigarette), similar nicotine, and dramatically more smoke exposure (Eissenberg and Shihadeh 2009; Chaouachi 2007; Daher 2010; Khater et al 2008; Shihadeh and Saleh 2005). In a study conducted in Brno, Czech Republic, readings of twenty normotensive (i.e. having regular blood pressure) volunteers aged 21 - 33 years were taken five minutes after a 45 minutes hookah pipe smoking session. The readings showed increases in the heart rate, systolic, mean and diastolic blood pressure, and markedly impaired baroreflex sensitivity were observed. All of these markers are known risk factors in cardiovascular diseases. It is important to

note that prior to the readings being taken, the participants had not smoked anything else for more than 12 hours, in addition to this, they were made to undergo a complete stopping of alcohol, coffee or tea consumption (Al-Kubati et al 2006).

Furthermore, a waterpipe session may expose the smoker to more smoke over a longer period of time than occurs when smoking a cigarette. Cigarette smokers typically take eight to twelve 40-75 millilitre puffs over five to seven minutes and inhale 0.5 to 0.6 litres of smoke (Djordjevic et al 2000). In contrast, waterpipe smoking sessions typically last 20 – 80 minutes, during which the smoker may take 50 – 200 puffs which range from about 0.15 to 1 litres each (Shihadeh et al 2004). The waterpipe smoker may therefore inhale as much smoke during one session as a cigarette smoker would inhale consuming 100 or more cigarettes (World Health Organization 2005).

A major reason for the lengthy smoking sessions of hookah pipe users is that unlike smoking cigarettes, traditional pipes or a cigar, smoking a hookah pipe is a communal experience. This communal experience is apparent in Syria: the majority of students who smoke hookah pipes (commonly called narghile in this region) initiate smoking, currently smoke, and even share the same hookah pipe with friends (Maziak et al 2004b). For this reason, hookah pipe smoking has been associated with various communicable diseases such as tuberculosis, herpes, swine-flu and most periodontal disease and cancers (Dar-Odeh and Abu-Hammad 2009; Medical Research Council 2009; Meleigy 2007). People in the Eastern Mediterranean region seem to perceive hookah pipe smoking as a culture bound ritual (Maziak et al 2004[a]). Offering guests a hookah pipe or sharing of hookah

pipes with sons or daughters is not unusual (Maziak et al 2004[a]). This is further complicated by the fact that in some regions hookah pipe tobacco and equipment costs less than cigarettes and is not uniformly regulated by laws.

The experience can also be modified by the different tobacco flavour offerings and addition of juice, vodka, wine, marijuana and other elements to the tobacco smoked (Tobacco Policy Trend Alert 2007; Balducci et al 2009; Al-Kubati et al 2006; Star Newspaper 2009; MSN News 2010). As a result, more than one million people in Asia, Africa, and the Middle East smoke water pipes (Weglicki et al 2008).

Some evidence from spot studies has shown that hookah pipe smoking is widely practiced in South Africa (Medical Research Council 2009). Despite its growing use, there exists a paucity of research studies that have been carried out on tobacco smoking specifically to characterize the prevalence and practice of hookah pipe smoking in South Africa. A ban on hookah pipe smoking is only addressed in the current legislation under the general prohibition of tobacco and tobacco products usage in public settings (Tobacco Products Control Amendment Act, 2008). However, more specific policies, education and awareness on this specific form of tobacco use is crucially required due to the alarming number of misconceptions about hookah pipe smoking, which is leading to its growing use and thus posing a public health threat.

Although on the decrease, general tobacco smoking prevalence in South Africa is high: 8.9% of women and 27.1% of men (Burki 2008). In a study to document the prevalence of cigarette, alcohol, and cannabis use among high school students in

Cape Town, smoking prevalence of 27.1% for recent use (previous month) was reported (Flisher et al 2003). Another study by Madu and Matla (2003) among a sample of high school students in the Pietersburg area of Northern Province, South Africa, cigarette smoking prevalence was 10.6% and the mean age for first cigarette smoking was 14.54 years (S.D. = 1.80).

The proposed study sought to understand what individual and product (marketing and promotional) factors (from the users' point of view) have triggered the growing popularity of tobacco usage in the form of hookah pipe smoking in South Africa. The study also investigated if hookah pipe smoking is resulting in cigarette smokers quitting cigarette smoking and taking up hookah pipe smoking and the issues or perceptions leading to this.

2.2 Factors that affect consumer behaviour

Lamb et al (2005) presented the fact that individual factors are unique to particular persons, e.g. demographic factors like sex, race, age etc. Young people purchase things for different reasons than older people. These factors are based on perception (what they see); motives (an internal energizing force that orients a person's activities toward satisfying a need or achieving a goal); physiological (examples are sense of security), emotional (love and belonging), self-efficacy (esteem) and self-actualization.

Lamb et al, 2005 suggests that marketers need to determine what unique features characterize their consumers to determine what motivates their purchases.

In the South African substance use market, marketers strategically work on the individual's capacity to learn (ability and knowledge) and aim at ensuring they take

up this habit on first trial – if possible (Lamb et al, 2005). To do this, the marketer has to ensure that with each use, the user appreciates the experience and all that goes along with it. Learning can be seen as changes achieved in a person's behaviour, caused by information and experience. Therefore to change consumers' behaviour about your product, there is a need to give them new information. The information you give them as a marketer will go a long way in affecting their attitudes, values and beliefs. Knowledge and positive and negative feelings about an object or activity -maybe tangible or intangible, living or non-living and also drives perceptions. Consumers buy and/or use products that are consistent with their self-concept. Lifestyles are the consistent patterns people follow in their lives. Recent trends in lifestyles are a shift towards personal independence and individualism and a preference for a healthy, natural lifestyle Consumer wants, learning, motives (and related factors) in the South African market are influenced by opinion leaders, family, reference groups, social class and culture (Lamb et al, 2005). Marketers try to attract opinion leaders. They actually use (pay) spokespeople to market their products. Users that identify with or admire the individual used to market the product are lured to purchase or use the product (Lamb et al, 2005).

‘Role’ is seen as things people do based on the expectations of themselves from their position within a group. For example, friendship and peer pressure may be a strong factor among hookah pipe users in post-secondary schools (Lamb et al, 2005; Srnka, 2004). Families that engage in hookah smoking at home may explain why some post-secondary users smoke.

Individuals identify with the group to the extent that they take many of the values, attitudes or behaviours of the group members. The degree to which a reference group will affect a purchase or use decision depends on an individual's susceptibility to reference group influence and the strength of his/her involvement with the group (Lamb et al, 2005).

Social class is defined as a group of individuals who have similar social rank (Lamb et al, 2005). Social class determines to some extent, the types, quality, and quantity of products that a person buys or uses.

Culture refers to the set of values, ideas, and attitudes that are accepted by a homogenous group of people and transmitted to the next generation. Culture also determines what is acceptable with product advertising. What people wear, eat, reside and travel. Some cultural values include good health, education, individualism, communal lifestyle and freedom (Lamb et al, 2005).

Understanding consumer behaviour in the substance use market offers consumers greater satisfaction (utility). It is therefore important to adopt the consumer oriented approach to be able to make good success in promoting a new product in this sector (Zikmund, 2006; Lamb et al, 2005) .

2.3 The marketing mix

The fact that tobacco is harmful to health is a well-established phenomenon. In 2003, cigarette sales fell for the twelfth consecutive year in South Africa (Medical Research Council Technical Report 2006). By law, cigarette packets include this information to ensure that users are well aware that they are engaging in a

practice dangerous to their health (See figure 2). However, hookah pipe smoking has not gained this kind of public attention or concern; and is not being regulated.

Figure 2: Government health warning on cigarette packs



Source: http://flickeflu.com/photos/redspotted/interesting. British cigarette packets by redspotted © All Rights Reserved. Accessed 12 October 2012

The marketing mix is probably the most famous marketing term. Its elements are the basic, tactical components of a marketing plan. Also known as the Four Ps, the marketing mix elements are price, place, product, and promotion (Marketing Teacher 2010). The term was coined by Neil H. Borden in his article *The Concept*

of the Marketing Mix in 1965. Some commentators will increase the marketing mix to the Five Ps, to include people. Others will increase the mix to Seven Ps, to include physical evidence (such as uniforms, facilities, or livery) and process (i.e. the whole customer experience e.g., a visit the Disney World) (Marketing Teacher 2010). The current research will employ the Seven Ps approach to attempt to uncover the marketing and promoting successes of this harmful product.

2.3.1. Price and Hookah pipe smoking

According to Weglicki et al (2008), hookah pipe tobacco and equipment cost less than cigarettes and are not uniformly regulated by law. It is commonly reported that once the actual hookah pipe is purchased, smoking hookah is cheaper than cigarettes in the long run, due to the affordability of hookah tobacco. In South Africa, a pack of 4 AL FAKHER Pipe flavour for all Hookah-Hubbly Bubbly costs R250. A brand new hookah/hubbly bubbly Egyptian with two pipes can be bought for just R395 (Bid or Buy 2010). Considering the lengthy smoking hours one can derive from a single hookah pipe smoking session, the costs are comparatively less than that of cigarettes. Price as a marketing mix factor was explored as one of the factors possibly driving the hookah pipe smoking increase in South Africa.

2.3.2 Place and Hookah pipe smoking

Place is also known as channel, distribution, or intermediary. It is the mechanism through which goods and/or services are moved from the manufacturer/service provider to the user or consumer. A unique feature of hookah pipe smoking is the existence of hookah bars or cafes where hookah pipes –with the option of various flavours - are offered as one of the items in the menu. This is a distinctive

marketing outlet for this form of smoking and the fact that it can be passed from one user to another as it is being smoked can further increase it's allure for young experimenting users out on an event. This feature was explored in this discourse.

2.3.3 Product analysis – The Hookah pipe

For many users, a product is simply the tangible, physical entity that they may be buying or selling. The mere appearance of the hookah pipe in itself is intriguing. The bright colours from which they are made and its lovely shape is indeed an attraction and beauty for both users and non-users. The role that the hookah pipe as a product in itself plays in encouraging its use was also explored in this study.

2.3.4 Promotion analysis – the Hookah pipe

This includes all of the tools available to the marketer for 'marketing communication'. Hookah pipe usage has been promoted as a "sacred" activity, healthy, herbal, relaxing, ideal for team building or as something sleek and classic (See Figure 3).

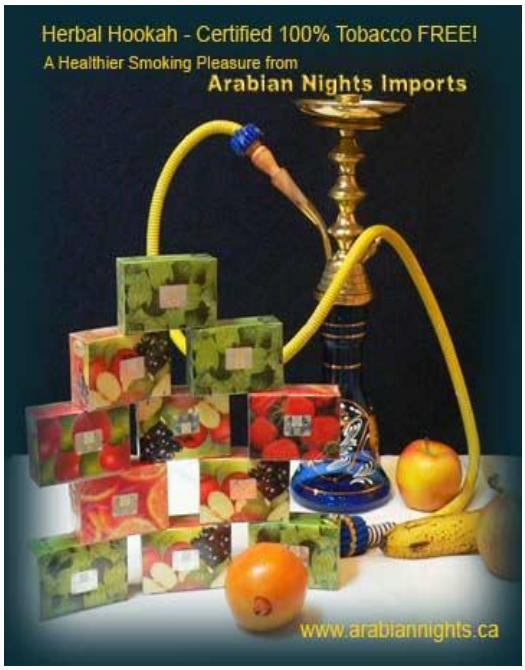
2.3.5 People and Hookah pipe smoking

People are the most important element of any service or experience. Services tend to be produced and consumed at the same moment, and aspects of the customer experience are altered to meet the 'individual needs' of the person consuming it. An exclusive feature of hookah pipe usage is the people or communal experience associated with it. Most hookahs come with 2 or 3 pipes attached to the same hookah or better still, one pipe is passed around a group of family or friends seated in a circle around the hookah pipe and each taking a puff

at it and passing on to the next individual. No other tobacco smoking device delivers this unique people centered experience in its offering. The communal nature of hookah pipe smoking was explored as a possible marketing advantage encouraging its users.

Figure 3: Hookah pipe advertisements







Source:http://www.google.co.za/images?q=hookah+pipes+advert&um=1&hl=en&rlz=1R2RNTN_enZA348&tbs=isch:1&ei=5g-KTOfwIoG88wSejrCpBg&sa=N&start=40&ndsp=20. *Accessed 3 September 2010*

2.3.6 Physical evidence and Hookah pipe smoking

There are many examples of physical evidence, including some of the following: attractive packaging of the hookah tobacco, internet/web pages messages, bubbling of water as the smoke passes water while the user smokes etc. Most hookah pipe smokers will argue that hookah pipe smoking is healthier than cigarette smoking. There is a physical evidence to this based on the fact that cigarette packs come with the warning dangerous to health (See figure 2) while hookah pipe tobacco packs do not (See figure 4). Infact what you can see on hookah pipe tobacco packaging is different types of exotic fruit labels which may serve to psychologically inform the user that he is smoking healthy, herbal or fruity stuff (James, 2007).

Figure 4: Packaging of Hookah pipe tobacco



Source:http://www.google.co.za/images?q=hookah+pipes+advert&um=1&hl=en&rlz=1R2RNTN_enZA348&tbs=isch:1&ei=5g-KTOfwIoG88wSejrCpBg&sa=N&start=40&ndsp=20. Accessed 3 September 2010

2.3.7 Process and Hookah pipe smoking

Process is another element of the extended marketing mix, or 7Ps.There are a number of perceptions of the concept of process within the business and marketing literature. Some see processes as a means to achieve an outcome. Another view is that marketing has a number of processes that integrate together to create an overall marketing process, for example - telemarketing and Internet marketing can be integrated. A further view is that marketing processes are used to control the marketing mix, i.e., processes that measure the achievement of marketing objectives. For the purposes of the marketing mix, process is an element of service that sees the customer experiencing an organisation's offering. It's best viewed as something that your customer participates in at different points in time (Srnka 2004)

For purposes of the hookah pipe discourse, process is linked to the people marketing factor. Process here can be seen as the current fad of hookah pipe smoking cafes and restaurants that stylishly include a hookah ‘bar’ as one of their product offerings. This is a unique marketing route, peculiar to hookah pipe and promoting its communal and event driven usage. The bonding and communal smoking process characteristic of hookah pipe smoking can also serve as a marketing channel factor for this product.The study sought to document what users deem will to be the most powerful prevention message focus that will encourage users to quit smoking hookah pipes (Kandela 2000)

3 PROPOSITIONS

Based on the literature reviewed, the following propositions were put forward and tested in the study:

Proposition 1:

Hookah pipe smoking marketers employ messages that target post-secondary school students' habits and lifestyle hence hookah pipe smoking is mostly utilized among this group in South Africa.

Proposition 2:

Hookah pipe smoking is associated with some factors that attract its young users and that has been utilized as key tools by its manufacturers in the marketing and promotion of its use.

Proposition 3:

Hookah pipe smoking is replacing cigarette smoking

4 RESEARCH METHODOLOGY

4.1 Research Design

Quantitative research methods were utilized in the study. Quantitative research is appropriate for measuring both attitudes and behaviour. If you want to know how many people use a product or service or have interest in a new product concept, then quantitative research is what you need (Urban Wallace Associates 2012). Purposive sampling at hookah smoking venues on the campuses was utilized. If a group of hookah smokers were seen by the researcher at these venues, they were approached in no particular order, to participate in the study. The researcher explained the purpose of the research to the potential participants and those who agreed to participate and sign the consent forms were given the questionnaires to complete.

4.2 Research methodology / paradigm

Questionnaires were completed by 96 participants. Quantitative analysis, which consists of descriptive analysis and chi square tests, were used to describe and analyse the responses. Questionnaires are often useful in gaining insight into perceptions of users, in this case, in relation to hookah pipe use (Bulmer, 2004).

4.3 Population and sample

4.3.1 *Population*

Post-secondary students aged 18 years and above comprised the sample population. A purposive sample of participants consisting of university students from the University of the Witwatersrand and the University of Johannesburg were approached to take part in the study.

4.3.2 *Sample and sampling method*

A sample of 96 participants who were seen actively smoking hookah pipes in a group was selected for this study. The sample size was calculated as follows. Prior studies to determine the prevalence of hookah pipe smokers in post-secondary schools were not found in the South African literature. We will therefore estimate 50% prevalence of hookah pipe use among post-secondary students. The following sample size formula will be used:

$$n = \frac{t^2 \times p(1-p)}{m^2}$$

Description:

n = required sample size

t = confidence level at 95% (standard value of 1.96)

p = 50% i.e. estimated prevalence of post-secondary hookah pipe users

m = margin of error or precision at 10%

4.4 The research instrument

A questionnaire was completed by the study participants (see Appendix C).

4.5 Procedure for data collection

Two field workers – (1 University undergraduate of UJ and 1 postgraduate student of Wits University) were trained in the data collection process. Information on bars, restaurants or spots where hookah pipe smokers hang out was sought. Visits to these spots on Johannesburg university campuses – University of the Witwatersrand and University of Johannesburg – were made by the field workers. Participants were approached as they were actively smoking. They were informed of the purpose of the study, and asked to participate in completing a short questionnaire for the research. They were then required to sign the consent forms. The questionnaire was individually completed by the participants and handed over to the researcher and field worker.

4.6 Data analysis and interpretation

The responses generated from the questionnaire were analysed using descriptive statistics and chi square tests to determine if hookah pipe smokers are influenced by factors such as price, various flavour options of hookah tobacco, communal nature of hookah pipe smoking activity, etc.

4.7 Limitations of the study

The findings of this type of study will likely not be generalizable to other youths in this age-group in South Africa because other factors such as socio-economic status, educational level, lifestyle factors may play a role and warrant consideration. However, this study documents the demographics and common factors affecting the use of hookah pipes for the specific population studied in the two selected universities.

4.8 Validity and reliability

4.8.1 External validity

Validity can be defined as “the extent to which an empirical measure adequately reflects what humans agree on as the real meaning of a concept (Neuedorf 2002, p12). In asking the question “are we really measuring what we want to measure?” a study meets the condition for validity. External validity relates to the “generalizability” of learning to groups other than the population researched (Neuedorf 2002). The study is relevant for other South African research endeavours by individuals or institutions investigating the marketing and use of the hookah pipes among youths in South Africa. It contributes to the knowledge base needed for tobacco use policy development in South Africa.

4.8.2 Internal validity

Internal validity ensures the data collection process is uniform throughout. This study ensured internal validity by replicating the same questionnaire structure with each participant. The non-ambiguity of the questions asked drew similar understanding from the participants; however, the researcher ensured internal validity was not compromised by being present while the questionnaires were being filled to answer any clarification questions. (Golafshani 2003).

4.8.3 Reliability

Reliability is the extent to which results are consistent and yield the same results on repeated trials (Neuendorf 2002). Reliability was assured by testing the research instrument (questionnaire) prior to the main data collection process at the two universities selected. This was done by administering the questionnaire to one hookah smoker in each university where the main study was to be carried out and receiving feedback on how they understood the questions which were asked. Refinements and clarifications were made to elicit appropriate data from the respondents.

5 RESULTS AND INTERPRETATIONS

The results of this study are presented in three parts:

Part 1 is a description of study participants. Part 2 is a description of factors promoting hookah pipe use among study participants. Part 3 is the analysis of Chi square and Fisher exact tests.

Part 1: Description of study participants

The participants for this study were university undergraduates at the University of the Witwatersrand (Wits) and University of Johannesburg (UJ), who were found among the group to be actively smoking hookah pipes on the school premises. Two trained field workers identified participants hanging out with their group of friends around the school hostels, lawns, bars, restaurants and malls – e.g. the Matrix, the villa, cyber centre at Wits and UJ. Ninety six participants accepted to complete the questionnaires (of this number, 57 or 59% were at Wits and 39 or 41% at UJ). All students approached were willing to complete the short anonymous questionnaire. The researcher had intended to conduct some interviews with student participants: however, participants declined to be interviewed, and these were not conducted as a result. Age profiles of participants are presented below.

Age:

Mean = 20

Standard deviation = 2.9

Range = 18 – 32 years

The pie chart presented in Figure 5 gives the further breakdown of age

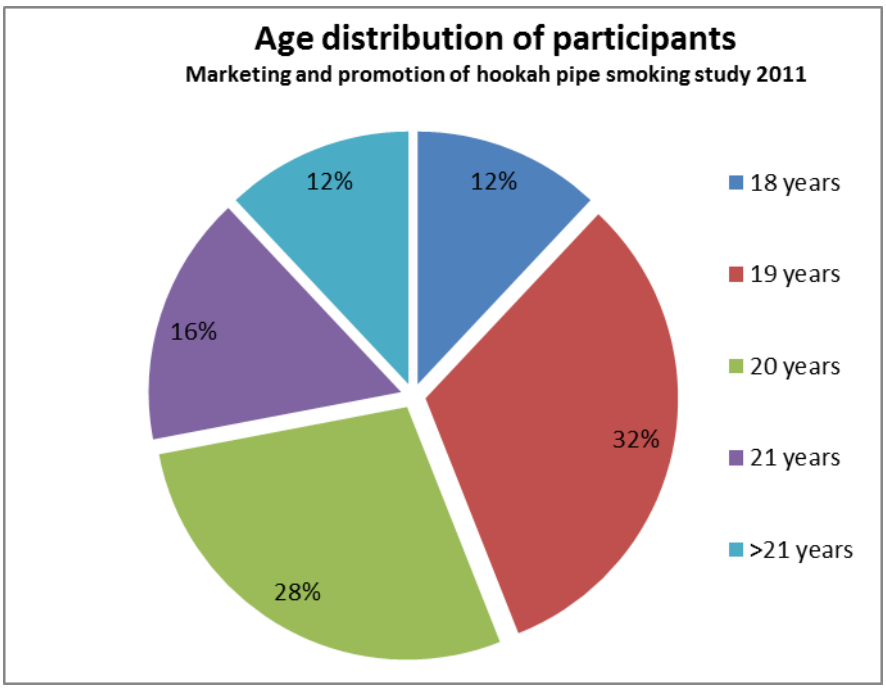


Figure 5: Age distribution of participants

The largest percentage (32%) of hookah pipe smokers in this study was 19 years of age. The next highest percentage (28%) of hookah smokers were aged 20. The lowest percentage (12%) among this group of hookah pipe respondents was users aged 18 years old.

Gender:

Among the 96 participants in the study, only 12 (13%) were female while 84 (87%) were male.

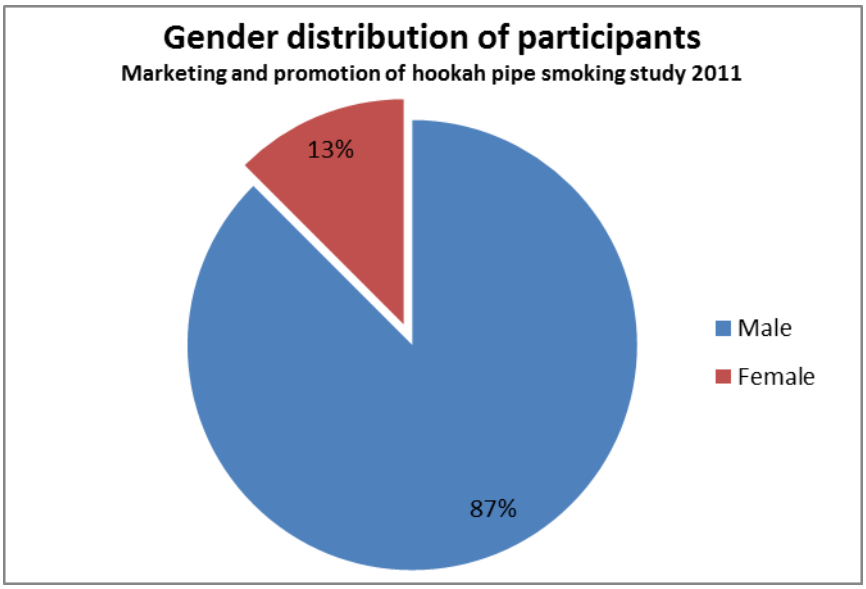


Figure 6: Gender distribution of participants

This indicates that like most other substances used, hookah pipe smoking is more common (almost seven times more) among males than females. It should be noted though, that females do engage in this type of smoking.

Race:

All of the traditional race groups in South Africa, blacks, coloureds, Indians (and Asians, i.e. Chinese) and whites were approached to participate in this study. The pie chart below portrays the distribution of the races involved in the study.

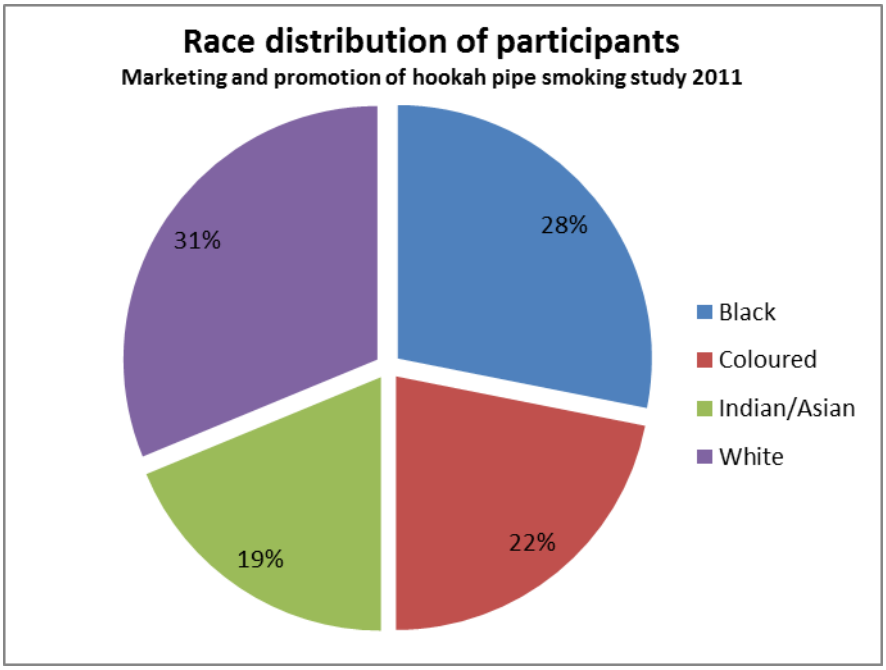


Figure 7: Race distribution of participants

It was interesting to observe that the highest percentage (31%) of active hookah pipe smokers who participated in the study were among the white race. This was followed closely (28%) by participants from the black population. The lowest race percentage (19%) involved in the study was among Indian/Asians. Caution must be exercised in interpreting the data, as data were collected by people of the black race who might have felt more comfortable with approaching certain racial groups of smokers than those belonging to other races. This is especially so because the researcher and field workers did not experience any refusals to participate in the questionnaire completion aspect of the study. Hence sample bias may have occurred in this instance. What is clear however is that hookah pipe smoking cuts across racial barriers and no racial group is exempt from this activity.

Language spoken at home:

Participants were required to complete a question on what language they spoke at home. This was not necessarily linked to their race. The question was meant to investigate how much involvement in hookah pipe smoking was carried out by participants who come from the different cultures in South Africa.

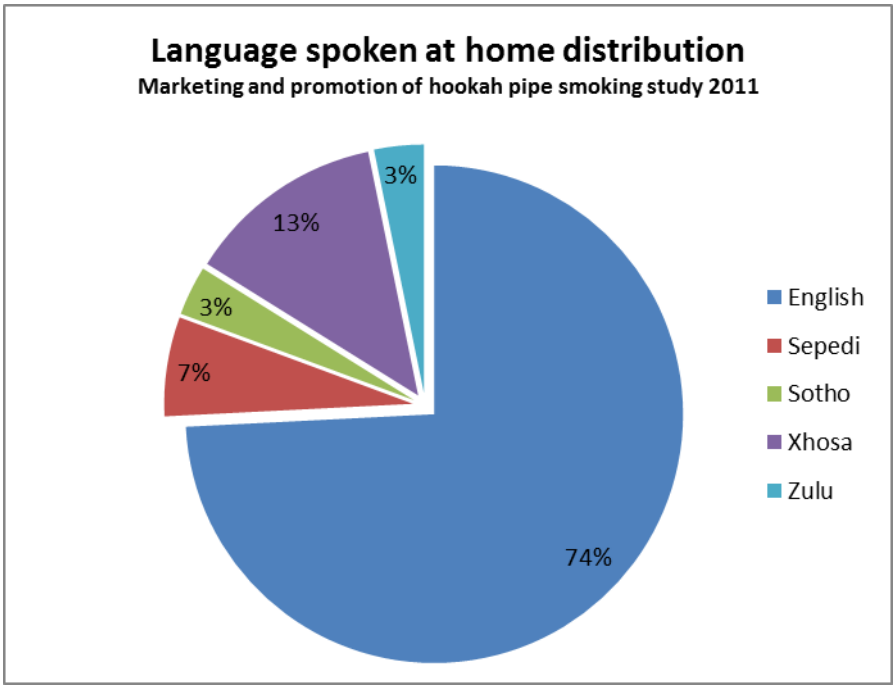


Figure 8: Language spoken at home by participants

Using language spoken at home as a proxy measure, the obvious finding in this study was that hookah pipe smoking was more common (74%) in homes where English is the dominant means of communication (almost three times more than the other languages spoken combined). Among homes where a local South African language was the main means of communication, participants who speak Xhosa at home were more (i.e. 13% - almost two and more than four times) likely

to be actively involved in hookah pipe smoking, among those who participated in the study. Only 3% of the participants spoke either Zulu or Sotho at home. It must be noted that those who spoke English at home where from a range of cultures as well.

Hookah smoking pattern:

The study sought to investigate how often hookah pipe smokers engaged in the activity. Figure 9 shows the distribution in the population studied

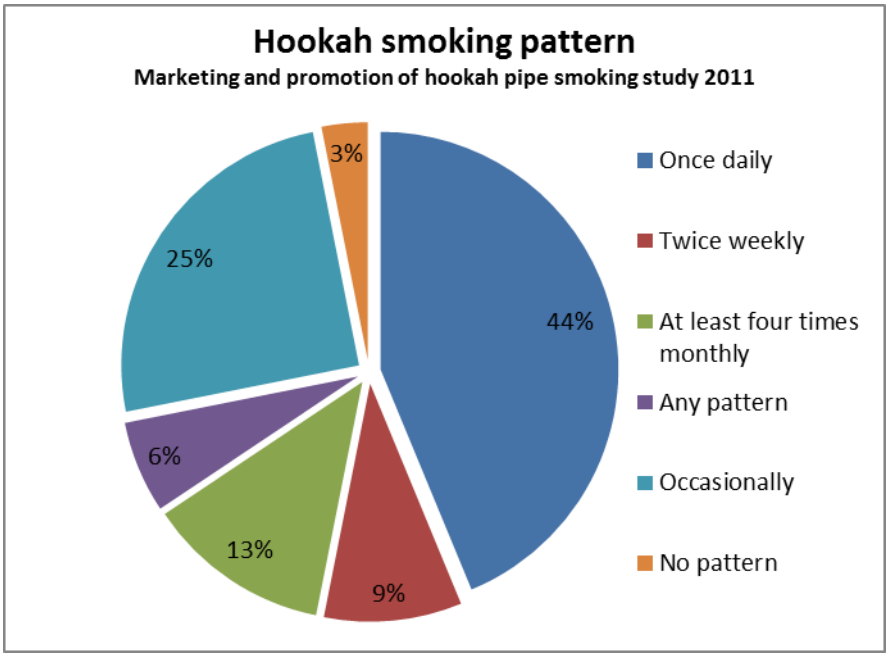


Figure 9: Hookah smoking pattern

The study showed large percentage on the extreme patterns of use. Almost half of the population studied (44%) documented daily use of hookah pipe while the next highest percentage (25%) which constituted a quarter of the population studied claimed they smoked hookah pipes only occasionally. What this shows is that hookah smoking activity among this study group is likely linked to activities that take place daily - such as hanging out with friends around the campus premises. This suggests that users of this product have effectively employed the 'place' marketing mix stategy in linking of hookah smoking to past time or leisure activities, which may or may not be the exact determination of marketers and promoters of this product.

Age started hookah pipe smoking:

The study examined when exactly hookah pipe smoking commenced among participants in the study.

Age started smoking hookah:

Mean = 16

Standard deviation = 2.1

Range = 12 – 22 years

The age range of the study participants was 18 to 32 years, while the age participants started smoking hookah pipes ranged from 12 to 22 years.

Participants in this study have likely practiced hookah pipe smoking for at least six years. The pie chart presented in Figure 10 provides the breakdown of age at which participants started smoking hookah pipes.

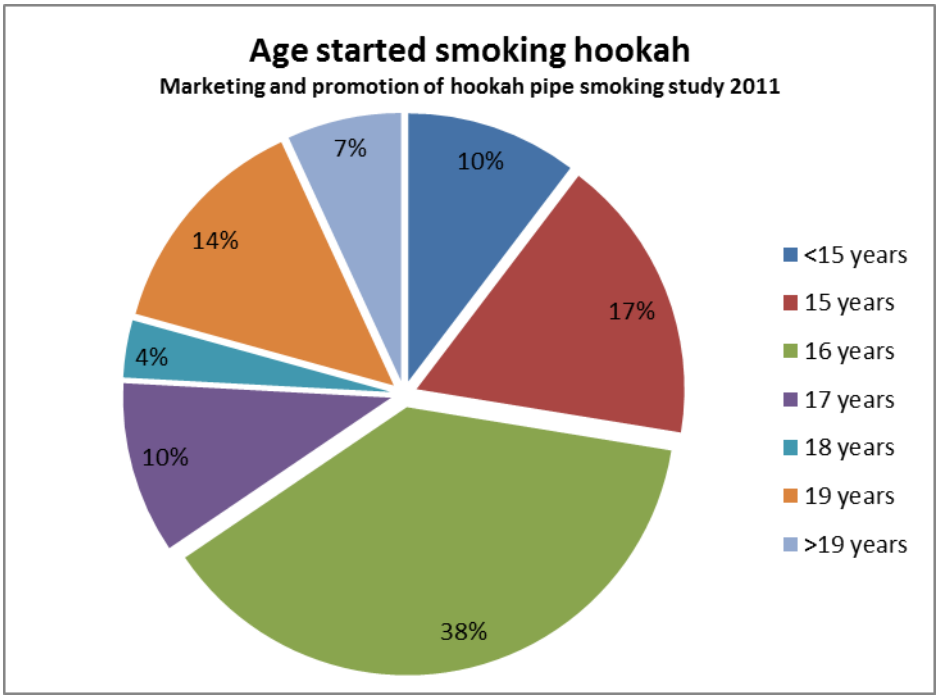


Figure 10: Age started smoking hookah pipe

This figure suggests that the hookah pipe smoking habit is generally taken up during high school (i.e., at 15 and 16 years – as noted by 17% and 18% of participants respectively) and also again at mid post secondary school, i.e., at 19 years – indicated by 14% of participants.

Ever smoked cigarettes:

Participants were asked if they had ever smoked cigarettes. Figure 11 describes the response.

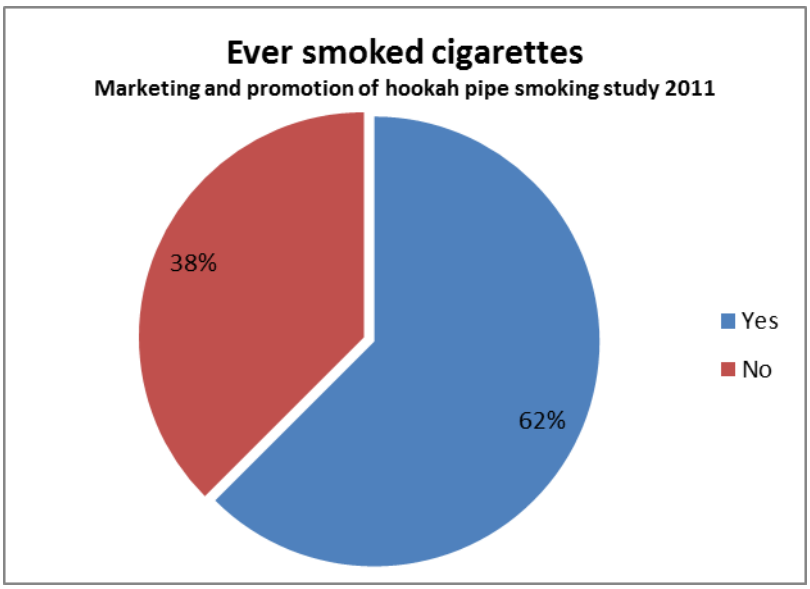


Figure 11: Ever smoked cigarettes

More than half of the participants claimed to have smoked cigarettes at one time or the other. This indicates that the cigarette smoking habit may feed into hookah pipe smoking as well. Marketing and promotion messages that appeal to cigarette smokers may most likely appeal to potential hookah pipe smokers as well.

Currently smoke cigarettes:

Participants were asked if they currently smoked cigarettes in addition to hookah pipe smoking. Figure 12 describes the response.

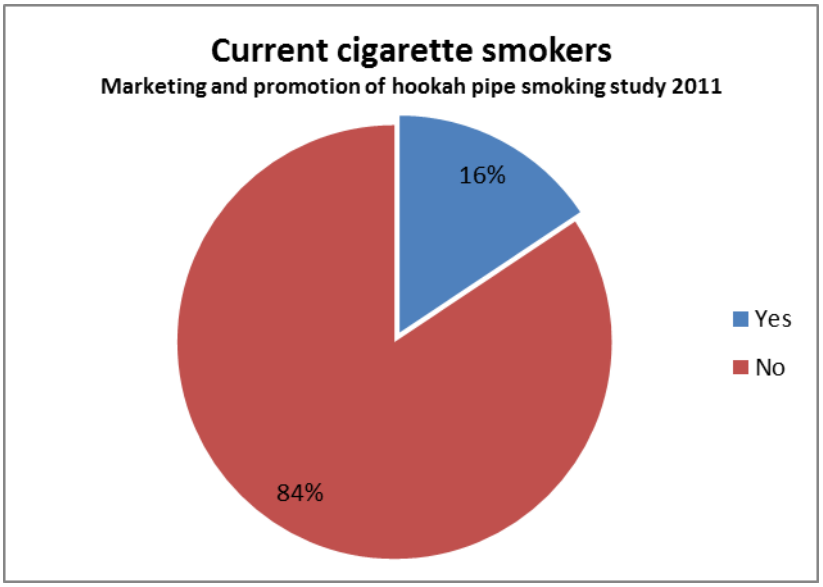


Figure 12: Current cigarette smokers

It is obvious that many participants in this study have attempted cigarette smoking. However, at the time of the study, a huge percentage had either never taken up cigarette smoking as a habit, or had kicked the habit while still holding on to hookah pipe smoking. Tobacco use by hookah pipe smoking could be slowly replacing the traditional cigarette smoking among post secondary school smokers as is the case among these study participants. This study investigated further – using chi square tests, if this observation was significant.

Part 2: Description of factors promoting hookah pipe use among study participants

The factors that were investigated are as follows: the appearance of the hookah pipe; the various hookah pipe tobacco flavours; the price of the hookah pipe; the price of the hookah tobacco; the fact that hookah tobacco packs, unlike cigarette

packs, have no health warnings; the perception that the bubbling of the hookah tobacco smoke through water makes it safer than traditional cigarette smoking; the unique communal or group smoke hookah pipe smoking experience; there is no specific government law or legislation against hookah pipe smoking; the brilliant and classy hookah pipe advertisements; hookah as a substitute to cigarettes. They were tested on a Likert scale where 1 = strongly disagee, 2 = disagree, 3 = no infuence, 4 = agree and 5 = strongly agree. Response three was not included in the analyses because people in this category were interpreted as being undecided. Responses one and two were grouped together and reported as the participants who disagreed and responses four and five were grouped together as “agree”.

Appearance

In terms of Table 1, shown below, appearance refers to the physical product, i.e., the look of the hookah pipe. This question tested whether the appearance of the hookah pipe itself is a marketing and promotional tool that acts to encourage and lure its users. Only 30% of the respondents agreed with this notion. More than half (51%) of the study participants disagreed with the statement that the appearance of the hookah pipe played a role in their hookah pipe smoking involvement.

Table 1: Frequency distribution of appearance of the hookah pipe

APPEARANCE	Freq.	Percent	Cum.
1	24	25.00	25.00
2	27	28.13	53.13
3	15	15.63	68.75
4	21	21.88	90.63
5	9	9.38	100.00
Total	96	100.00	

Key: 1 = strongly disagee, 2 = disagree, 3 = no infuence, 4 = agree and 5 = strongly agree.

Tobacco Flavours

As shown in Table 2 below, hookah tobacco is presented in various exotic flavours, e.g., apple, mint mix and liquorice. The names do not only reflect fruity flavours but also some intriguing names that have been given to hookah tobacco flavors, such as Red Bullfor example. One need only walk through a place where hookah is being smoked to perceive the very enticing aroma emitted from the hookah tobacco being smoked. A large percentage (81%) of the respondents agreed that the flavour variety of the hookah tobacco had an influence on their engagement in this activity.

Table 2: Frequency distribution of the flavour of the hookah pipe tobacco

FLAVOURS	Freq.	Percent	Cum.
1	3	3.13	3.13
2	6	6.25	9.38
3	9	9.38	18.75
4	54	56.25	75.00
5	24	25.00	100.00
Total	96	100.00	

Key: 1 = strongly disagee, 2 = disagree, 3 = no infuence, 4 = agree and 5 = strongly agree

Hookah pipe price

The cost of a regular hookah pipe can range from R175 – R750. As shown in Table 3, 41% were undecided whether this factor had an influence on their use of hookah pipes. This may suggest that most of them may not even know how much a hookah pipe costs, since the one they smoke more often than not, belongs to someone else. Also more than half (53%) did not think the price of a hookah pipe had any influence on their hookah smoking habit.Only 6% agreed it was an issue.

Table 3: Frequency distribution of the price of the hookah pipe

PRICE PIPE	Freq.	Percent	Cum.
1	24	25.00	25.00
2	27	28.13	53.13
3	39	40.63	93.75
5	6	6.25	100.00
Total	96	100.00	

Key: 1 = strongly disagee, 2 = disagree, 3 = no infuence and 5 = strongly agree

Hookah pipe tobacco price

Price ranges from R7 – R70 depending on the type and size of the tobacco. About 22% of the respondents agreed that hookah tobacco price had an influence on their use of hookah pipes,while 59% did not think so.

Table 4: Frequency distribution of the price of the hookah pipe tobacco

PRICE HOOKAH T	Freq.	Percent	Cum.
1	18	18.75	18.75
2	39	40.63	59.38
3	18	18.75	78.13
4	21	21.88	100.00
Total	96	100.00	

Key: 1 = strongly disagee, 2 = disagree, 3 = no infuence, 4 = agree

Perception of Water

In terms of the perception of water rendering hookah pipe smoking "healthier" than cigarettes, roughly 41% of the respondents believed that hookah tobacco bubbling through water before they inhaled the smoke was healthier than cigarette smoking, and thus influenced their practice of hookah smoking. Half (50%) the respondents did not think it had any influence. This shows the water does have some influence in the minds of a significant proportion of people.

Table 5: Frequency distribution of water in the hookah pipe

WATER	Freq.	Percent	Cum.
1	27	28.13	28.13
2	21	21.88	50.00
3	9	9.38	59.38
4	30	31.25	90.63
5	9	9.38	100.00
Total	96	100.00	

Key: 1 = strongly disagee, 2 = disagree, 3 = no infuence, 4 = agree and 5 = strongly agree

Communal

The communal nature of the hookah smoking experience was shown to play a huge role in the appeal of hookah pipe smoking among its users. A majority 84% of the respondents thought so. This, if nothing else, is the strongest factor that appears to make hookah pipe smoking so alluring to its users. The relaxation and socialization feature attached to the hookah experience makes it unique and acts to increase its popularity.

Table 6: Frequency distribution of the communal nature of the hookah pipe experience

COMMUNAL	Freq.	Percent	Cum.
1	6	6.25	6.25
2	6	6.25	12.50
3	3	3.13	15.63
4	27	28.13	43.75
5	54	56.25	100.00
Total	96	100.00	

Key: 1 = strongly disagee, 2 = disagree, 3 = no infuence, 4 = agree and 5 = strongly agree

No law

The same percentage (35%) of the study participants did not think the fact that there was no specific government law or legislation against hookah pipe smoking had any influence on their smoking hookah, as did the percentage of participants that thought it did have an influence. Conversely, if 65% might be influenced by laws or legislationk, government intervention, if applied correctly, might affect the behaviour of some users.

Table 7: Frequency distribution of the absence of law/regulation against the hookah pipe

NO LAW	Freq.	Percent	Cum.
1	15	16.13	16.13
2	18	19.35	35.48
3	27	29.03	64.52
4	21	22.58	87.10
5	12	12.90	100.00
Total	93	100.00	

Key: 1 = strongly disagee, 2 = disagree, 3 = no infuence, 4 = agree and 5 = strongly agree

Advertisement

56% of users in this study did not think hookah advertisements have had any influence on their taking up the habit. This can be attributed to the fact that most hookah adverts, if not all, can only be found online. Importantly, however, hookah is self advertising. It is rare to take a walk through the cafes, malls, bars, lawns and other public spaces on the two campuses studied and not see a group or more of students puffing at a hookah pipe while they study, chat or hang out together. The perceived flavoured tobacco aroma and the intriguing look of the product will naturally cause any enquiring mind to seek to know more about what hookah is and perhaps have a puff at it.

Table 8: Frequency distribution of the advertisements of hookah pipe

ADVERT	Freq.	Percent	Cum.
1	30	31.25	31.25
2	24	25.00	56.25
3	27	28.13	84.38
4	6	6.25	90.63
5	9	9.38	100.00
Total	96	100.00	

Key: 1 = strongly disagee, 2 = disagree, 3 = no infuence, 4 = agree and 5 = strongly agree

Substitute for cigarettes

In the descriptive analyses captured in the pie charts earlier in this report, it was demonstrated that more than half of hookah smokers in this study group have attempted cigarette smoking. The scope of this study did not ascertain how long

respondents had been smoking cigarettes before they stopped. What this factor tried to describe was whether participants were giving up cigarettes and taking on hookah smoking instead (i.e., as a substitution or replacement). Sixty three percent of participants did not think hookah could be perceived as a substitite or replacement for cigarettes. An explanation for this could be because hookah pipe smoking is such a uniquely different experience from cigarette smoking – thus such conclusion are seen not really applying.

Table 9: Frequency distribution of the hookah pipe substituting cigarettes

SUBSTITUTE	Freq.	Percent	Cum.
1	51	53.13	53.13
2	9	9.38	62.50
3	9	9.38	71.88
4	21	21.88	93.75
5	6	6.25	100.00
Total	96	100.00	

Key: 1 = strongly disagee, 2 = disagree, 3 = no infuence, 4 = agree and 5 = strongly agree

Part 3: Chi square and Fisher exact test analysis

The tables above were merely a description of the responses received by all the study participants. This study went further to carry out statistical analyses to ensure the observations above were not merely chance findings. With the statistical tests that are carried out below - if significant differences are seen, it can be inferred that a similar group of students from another post secondary institution will have identical outcomes.

A Chi-square test is used to compare responses of study participants and test for significance levels using p-values. If any internal column or row has a figure less than 5, the Fisher exact test value is read. Any value less than 0.05 is significant. This means the observation is a true observation and not merely a chance finding. The following factors were significant:

The communal nature of hookah pipe smoking, the belief that water removes the “bad stuff” and makes hookah smoking healthier and advertisement.

Table 10: Chi-square tests for communal experience of the hookah pipe

comm_ana	current smokd hookah N	Y	Total
0	6	6	12
	50.00	50.00	100.00
	40.00	7.69	12.90
1	9	72	81
	11.11	88.89	100.00
	60.00	92.31	87.10
Total	15	78	93
	16.13	83.87	100.00
	100.00	100.00	100.00

```
          Pearson chi2(1) =  11.6846   Pr = 0.001
           Fisher's exact =                 0.003
  1-sided Fisher's exact =                 0.003
```

As table 10 above shows, 92.3% of those who considered themselves hookah pipe smokers reckon that the communal experience offered by hookah pipe smoking is a strong marketing factor which enhances their participation in this activity. This is a strongly significant finding with a p value of 0.001.

The next factor that was tested for significant results was the price of hookah pipe tobacco.

Table 11: Chi-square tests for price of hookah pipe tobacco

prich_ana	current smokd hookah N	Y	Total
0	12	45	57
	21.05	78.95	100.00
	100.00	68.18	73.08
1	0	21	21
	0.00	100.00	100.00
	0.00	31.82	26.92
Total	12	66	78
	15.38	84.62	100.00
	100.00	100.00	100.00

Pearson chi2(1) = 5.2249 Pr = 0.022
Fisher's exact = 0.030
1-sided Fisher's exact = 0.016

Sixty-eight percent of those who considered themselves hookah pipe smokers are of the opinion that the price of hookah pipe tobacco is not a marketing factor which enhanced their participation in this activity. Only 32% thought it was a critical factor. The p value of the Fisher's exact test is 0.03, which is significant. This response shows that price of hookah tobacco does not play a role and thus is not one of the contributing factors in the uptake of the habit among the study group. In other words, interventions on price of hookah tobacco may not necessarily change consumer behaviour. in this community.

Table 12: Chi-square tests for water takes away "bad stuff" from hookah pipe tobacco

water_ana	current smokd hookah N	Y	Total
0	12	36	48
	25.00	75.00	100.00
	80.00	50.00	55.17
1	3	36	39
	7.69	92.31	100.00
	20.00	50.00	44.83
Total	15	72	87
	17.24	82.76	100.00
	100.00	100.00	100.00

Pearson chi2(1) = 4.5173 Pr = 0.034
Fisher's exact = 0.046
1-sided Fisher's exact = 0.030

Water is regarded as important by its users as it creates the perception that hookah smoking is a “healthier” option than cigarettes. Half the hookah pipe smokers (50%) thought water plays a role in their uptake of hookah smoking and 50% did not think so. The finding is significant at a fisher exact value of 0.046.

Analyses using all other factors were insignificant. From the results of this study, it can be stated that from the users’ point of view, the marketers and promoters of hookah pipe smoking have succeeded in increasing the uptake of this activity by employing two significant factors – linking hookah smoking to communal activities and promoting the perception that hookah smoking is healthy because the “bad stuff” from the tobacco and smoke is removed by the bubbling water. However, for the third significant factor, a large percentage of hookah smokers did not agree that the price of hookah tobacco had influenced their uptake of the activity. A deeper enquiry into the reason for this response on hookah pipe tobacco price may assist anti-hookah pipe smoking endeavours.

Proposition 1: Hookah pipe smoking marketers employ messages that target post-secondary school students’ habits and lifestyle hence hookah pipe smoking is on the increase among this group in South Africa.

The results demonstrate that proposition 1 can be supported. Post-secondary students like most other peer groups hang out together socially and communally. It is a known fact that the behaviour of individuals in the age group studied is affected by the behaviour of their peers (Othero 2009; Mandil et al 2010). The life of a student can be hectic. Relaxation and leisure activity in peer groups is

therefore common among students in higher institutions. Students use such events to ease stress and also as a platform for exchange of ideas and learning. Respondents indicated that the communal feature of hookah smoking plays a large role in their uptake of this type of smoking.

Proposition 2:

Hookah pipe smoking has some unique features that attract its young users and that has been used as key tools by its manufacturers in the marketing and promotion of its use.

Proposition 2 was confirmed in this study. The communal nature of the hookah pipe smoking activity and the water in which the tobacco smoke bubbles through before being inhaled have been statistically shown to influence hookah pipe smoking among the population studied.

Proposition 3:

Hookah pipe smoking is replacing cigarette smoking This proposition cannot be supported, based on the findings of this research. A large percentage of the participants (71%) disagreed that hookah would serve as a substitute to cigarettes for them. This finding was not significant – p value 0.409 (i.e. it is possibly a chance finding). See Table 13 below

Table 13: Hookah pipe as a substitution to cigarettes anmong current hookah smokers

sub_ana	current smokd hookah N	Y	Total
0	9	51	60
	15.00	85.00	100.00
	60.00	70.83	68.97
1	6	21	27
	22.22	77.78	100.00
	40.00	29.17	31.03
Total	15	72	87
	17.24	82.76	100.00
	100.00	100.00	100.00

Pearson chi2(1) = 0.6807 Pr = 0.409
Fisher's exact = 0.540
1-sided Fisher's exact = 0.296

This means from the point of view of hookah pipe smokers, hookah pipe smoking cannot be said to be replacing cigarettes. All the current cigarette smokers in the study population were also of that opinion (p value 0.052). See Table 14 below.

Table 14: Hookah pipe as a substitution to cigarettes anmong current cigarette smokers

sub_ana	current smok cigarett N	Y	Total
0	51	9	60
	85.00	15.00	100.00
	65.38	100.00	68.97
1	27	0	27
	100.00	0.00	100.00
	34.62	0.00	31.03
Total	78	9	87
	89.66	10.34	100.00
	100.00	100.00	100.00

Pearson chi2(1) = 4.5173 Pr = 0.034
Fisher's exact = 0.052
1-sided Fisher's exact = 0.029

6 CONCLUSIONS AND RECOMMENDATION

The results of this study have indicated the factors that promote the marketing of harmful a product, in this case hookah pipe smoking in South Africa. The study participants agreed that the communal nature of hookah pipe smoking, as well as the perception that the bubbling of the tobacco smoke through the water removes the “bad stuff” and makes it healthier than cigarette smoking. These two factors were found to be significant in influencing the uptake of the hookah pipe university users sampled. Respondents disagreed that the price of the hookah pipe tobacco had an influence on their uptake of hookah pipe smoking. All other factors tested were statistically insignificant.

It is recommended that the two key factors be utilized to arrest the sale of this product to youths in South Africa. Specific recommendations are as follows.

Recommendations

Resulting recommendations encompass education, regulation, marketing and advertising.

Educational

Peer education among high school students concerning the health risks of hookah pipe smoking should be promoted.

Regulatory

The Department of Health should consider the evidence base and move to increase the price of hookah pipes, in line with the increase in price in cigarettes.

Department of health regulations to place a health warning on each product, whether online or in the store, should be developed.

Marketing and Advertising

University advertisements in strategic areas on campus could inform students of the health effects of hookah pipe smoking. Informational pamphlets distributed in health clinics on campus, instructing students of the negative effects of hookah pipe smoking could be provided, for instance.

TV and radio could be ,mobilized for public health messaging, outlining the life-time risks and costs associated with ill health through this type of smoking.

7 SUGGESTIONS FOR FUTURE RESEARCH

Further research is needed to investigate the patterns of use and perceptions of use of hookah pipe smoking among high school students. Research is also needed to investigate the extent to which hookah pipe smoking could be even more detrimental to human health than cigarette smoking. A new field trial shows that carbon monoxide (CO) levels were three times higher in people visiting hookah cafes than in people who visited traditional bars (Barnett et al, 2010). A cohort study of hookah pipe smoker health outcomes is needed. In terms of marketing research, more in-depth studies should be carried out to determine the hookah pipe tobacco effect on users of this product. Also, cost-benefit ratio analytical studies that educate the user on the true costs of maintaining the habit could be conducted and would add to the knowledge and evidence base related to hookah pipe smoking.

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APPENDIX A

HOOKAH PIPE SMOKING STUDY

QUANTITATIVE STUDY INFORMATION SHEET

2010

Research in Partial Fulfilment of Wits MBA Degree

Good day. My name is Joy Oba. I am a student and researcher from Wits Business School, University of the Witwatersrand, Johannesburg. I am exploring how students experience a form of tobacco smoking known as hookah pipe smoking. I would like to invite you to participate. I have a 2 page questionnaire with some questions that will take you about 5-10 minutes to answer. I will not need to write your name in this process. Everything you say will be confidential. This means nobody will know what you said. The information will be used for research purposes only. Also I will like to have a brief interview of 15 short questions with this group here. To make the interview easier for us, we will also ask if we can tape the interview. This is to help me remember what you have said. If you do not want the interview to be taped that is your right, and it will not influence the interview or the research in any way. If you give us permission to tape the interview we will listen to the tape and write down everything that you say but not use your name. We will then destroy the tape. By participating, you will be contributing to the knowledge we have as South Africans about the use of hookah pipes among youths in South Africa.

The questionnaire will give us your individual thoughts about Hookah pipe smoking and how you grade the different factors the practice involves.

It is entirely up to you whether or not you participate. It is your right to refuse to participate. No benefits or harm will come to you by participating in the study. If you do agree to participate, you are still permitted to discontinue filling out the questionnaire at any time. You don't have to tell us why. If you don't want to answer any of the questions that you are asked you are free not to, and that will not be a problem in any way.

At the end of the research project we will write up a report. This report will include information that you have given us, but your name will not be used. No one involved will know that it was you who gave us the information that you did. If you are willing to participate, I now kindly ask you to sign the consent form.

APPENDIX B

HOOKAH PIPE SMOKING STUDY

CONSENT FORM

2010

Research in Partial Fulfilment of Wits MBA Degree

I have read the information sheet or it has been properly explained to me and I understand that I am being asked to give my consent to participate in the study. I understand that I am free to stop filling out the questionnaire at any time. I also understand that no benefits or harm will come to me as a result of my participation in the study.

It has been made clear to me that the researcher J. Oba and her colleague are not here to judge me and that there are no right or wrong answers. I am free to accept or refuse to participate in this study, and I am free to answer or refuse to answer any of the questions in the questionnaire. I also understand that I am required to sign this consent form for the research team records.

I hereby agree to be interviewed for this study.

Signature of participant .....…….date…….....

Signatures of researcher as witness .....date.....

To be filled in by interviewer:

Venue of Interview: .....

Date of Interview: .....

APPENDIX C: QUESTIONNAIRE

HOOKAH PIPE SMOKING STUDY

2010

Research in Partial Fulfilment of Wits MBA Degree

Introduction by Interviewer:

Good day everybody. My name is Joy Oba. I am from the Wits Business School, University of the Witwatersrand, Johannesburg. I am a conducting research on Hookah pipe smoking in Johannesburg. I am exploring how students experience and perceive this form of tobacco smoking. I have a 2 page questionnaire with few questions requiring your answers. The information you provide will only be used for research purposes and will not identify you by name. All comments will be anonymised in the study. There are no monetary or other benefits to the study. By participating, you will be contributing to the knowledge we have as South Africans about the use of hookah pipes among youths and this school will be duly acknowledged when the report is being produced.

Demographic data:

Gender: Male ☐ Female ☐

Age (on most recent birthday): .....years

Race: Black ☐ Coloured ☐ White ☐ Indian/Asian ☐ Other: .....

Language spoken at home: .....

Ever smoked hookah pipe? (even one or two puffs)	Yes ☐	No ☐
Are you a current smoker of hookah pipe?	Yes ☐	No ☐
Pattern of hookah pipe smoking:		
-at least once daily	Yes ☐	No ☐
-at least twice weekly	Yes ☐	No ☐
-at least 4 times monthly	Yes ☐	No ☐
-occasionally	Yes ☐	No ☐

Age when started smoking hookah pipe: .....

Have you ever smoked cigarettes	Yes ☐	No ☐
Do you currently smoke cigarettes	Yes ☐	No ☐

Factors promoting hookah use:

Please rate on a scale of 1 to 5 the influence that the following statements have on your hookah smoking

1 = **strongly disagree**

2 = disagree

3 = neither agree nor disagree (no influence)

4 = agree

5 = **strongly agree**

I SMOKE HOOKAH PIPES BECAUSE I AM INFLUENCED BY.....

1. The physical appearance of the hookah pipe

1	2	3	4	5

2. The availability of different tobacco flavours for example, exotic fruity and herbal flavours.

1	2	3	4	5

3. The price of hookah pipes

1	2	3	4	5

4. The price of hookah tobacco

1	2	3	4	5

5. The hookah pipe tobacco package has no “dangerous for health” warning

1	2	3	4	5

6. The perception that the hookah smoke filters through water and the water removes the “bad” stuff in the smoke before being inhaled

1	2	3	4	5

7. The communal nature of the hookah pipe smoking activity (smoking in groups with my friends, at parties, cafes, restaurants, other nice venues and events etc)

1	2	3	4	5

8. The apparent lack of social regulations against this practice at present (no specific South African law against Hookah pipe smoking in public)

1	2	3	4	5

9. The inviting advertisement of hookah pipes on the internet etc:

1	2	3	4	5

10. For me, it is a substitute to cigarette smoking

1	2	3	4	5

Thank you for your time.

APPENDIX D: TIME LINES

Time-plan for completion of research report

	September 2010	October 2010	January 2011	September 2011	November 2011	January 2012	March 2012
Finalise proposal							
Gain approval							
Gather data							
Do data analysis							
Write report							
Finalise report							

APPENDIX E: CONSISTENCY MATRIX

Research problem stated here The research problem was to determine the most common factors driving the use of hookah pipes among post-secondary school smokers in South Africa, Johannesburg, from the users' point of view					
Sub-problem	**Literature Review**	**Hypotheses or Propositions or Research questions**	**Source of data**	**Type of data**	**Analysis**
Who is smoking the hookah pipe? Describe the target population that are more commonly involved in this practice and identify the basic demographic characteristics of the post-secondary hookah pipe smoker.	Eissenberg, T. and Shihadeh, A. (2009) Waterpipe Tobacco and Cigarette Smoking: Direct Comparison of Toxicant Exposure, American Journal of Preventive Medicine 37(6), pp. 518-523. Jackson D. And Aveyard, P. (2008) Waterpipe smoking in students: prevalence, risk factors, symptoms of addiction and smoke intake. Evidence from one British University. BMC Public Health 8(174). Kandela, P. (2000) beirutNargile smoking keeps Arabs in Wonderland, The Lancet, 356(9236), pp. 1175-1175. Madu, S. N. and Matla, M.Q. P. (2003) Illicit drug use, cigarette smoking and alcohol drinking behaviour among a sample of high school adolescents in the Pietersburg area of the Northern Province, South Africa, Journal of Adolescence, 26(1), pp. 121-136.m. Accessed on 3 June 2010. Meleigy, M. (2007) Waterpipe and communicable diseases link, says WHO, The Lancet Infectious Diseases, 7(7), pp. 448-448. Miles, M. B. and Huberman, A. M. (1984) Qualitative Data Analysis, Sage Publications Ltd, London.	Proposition 1: Hookah pipe smoking marketers employ messages that target post-secondary school students' habits and lifestyle hence hookah pipe smoking is on the increase among this group in South Africa.	Questionnaire questions	nominal	Descriptive analysis

Research problem stated here The research problem was to determine the most common factors driving the use of hookah pipes among post-secondary school smokers in South Africa, Johannesburg, from the users' point of view					
Sub-problem	**Literature Review**	**Hypotheses or Propositions or Research questions**	**Source of data**	**Type of data**	**Analysis**
Why are they smoking hookah pipe? What are the most common factors (as perceived by the users) that markets and promotes hookah pipe smoking among post-secondary school smokers?	Eissenberg, T. and Shihadeh, A. (2009) Waterpipe Tobacco and Cigarette Smoking: Direct Comparison of Toxicant Exposure, American Journal of Preventive Medicine 37(6), pp. 518-523. Jackson D. And Aveyard, P. (2008) Waterpipe smoking in students: prevalence, risk factors, symptoms of addiction and smoke intake. Evidence from one British University. BMC Public Health 8(174). Kandela, P. (2000) beirutNargile smoking keeps Arabs in Wonderland, The Lancet, 356(9236), pp. 1175-1175. Madu, S. N. and Matla, M.Q. P. (2003) Illicit drug use, cigarette smoking and alcohol drinking behaviour among a sample of high school adolescents in the Pietersburg area of the Northern Province, South Africa, Journal of Adolescence, 26(1), pp. 121-136.m. Accessed on 3 June 2010. Meleigy, M. (2007) Waterpipe and communicable diseases link, says WHO, The Lancet Infectious Diseases, 7(7), pp. 448-448. Miles, M. B. and Huberman, A. M. (1984) Qualitative Data Analysis, Sage Publications Ltd, London.	Proposition 2: Hookah pipe smoking has some unique features that attract its young users and that has been used as key tools by its manufacturers in the marketing and promotion of its use.	Questionnaire questions	nominal	Descriptive analysis Chi square tests

Research problem stated here The research problem was to determine the most common factors driving the use of hookah pipes among post-secondary school smokers in South Africa, Johannesburg, from the users' point of view					
Sub-problem	**Literature Review**	**Hypotheses or Propositions or Research questions**	**Source of data**	**Type of data**	**Analysis**
How does hookah pipe smoking interact with other forms of substance use – specifically cigarette smoking? Is this trend a type of substitution (i.e., is it an alternative type of tobacco use which is replacing the use of cigarettes by smokers)? Are the same marketing and promotional strategies used in earlier times to promote the use of cigarettes also promoting hookah pipe smoking?	Eissenberg, T. and Shihadeh, A. (2009) Waterpipe Tobacco and Cigarette Smoking: Direct Comparison of Toxicant Exposure, American Journal of Preventive Medicine 37(6), pp. 518-523. Jackson D. And Aveyard, P. (2008) Waterpipe smoking in students: prevalence, risk factors, symptoms of addiction and smoke intake. Evidence from one British University. BMC Public Health 8(174). Kandela, P. (2000) beirutNargile smoking keeps Arabs in Wonderland, The Lancet, 356(9236), pp. 1175-1175. Madu, S. N. and Matla, M.Q. P. (2003) Illicit drug use, cigarette smoking and alcohol drinking behaviour among a sample of high school adolescents in the Pietersburg area of the Northern Province, South Africa, Journal of Adolescence, 26(1), pp. 121-136.m. Accessed on 3 June 2010. Meleigy, M. (2007) Waterpipe and communicable diseases link, says WHO, The Lancet Infectious Diseases, 7(7), pp. 448-448. Miles, M. B. and Huberman, A. M. (1984) Qualitative Data Analysis, Sage Publications Ltd, London.	Proposition 3: If a strong public health intervention - aimed at eroding the manufacturers' marketing and promotional messages– is not promulgated, hookah pipe smoking will gradually serve to replace cigarette smoking	Questionnaire questions	nominal	Descriptive analysis Chi square tests