

## Personal, Socio-Cultural and Environmental Factors Associated with Smoking Among Female Students at University of Lusaka, Zambia

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### Abstract

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Tobacco use is one of the most preventable causes of premature death globally, yet statistics show that there has been an increase of female smokers. Hence a need to understand why smoking prevalence continues despite the overwhelming data on adverse health effects. The aim of this study was to explore personal, socio-cultural, and environmental factors that are associated with smoking among female university students of University of Lusaka. A qualitative case study design was conducted with a sample 12 female students from the University of Lusaka. Snowball sampling was utilized. Female students smoking tobacco were predominantly associated with the desire for personal gratification, to feel accepted by their peers who smoke, to express female independence and freedom and exposure to a male family member who smokes at younger age. Socio-cultural factors such as peer influence, family influence and female modernity in society were the major influencers of smoking in the female students, and environmental factors such as the lack of responsiveness to Zambia's anti-smoking campaigns and a gap in the enforcement of anti-smoking legislation in Zambia also played an indirect role in facilitating smoking among female student. Anti-smoking campaigns could try and consider evaluating interventions from a male and female perspective respectively.

**Keywords:** *Female students; tobacco; smoking; University of Lusaka*

## INTRODUCTION

Tobacco smoking is one of the major preventable causes of death in the world. Smoking is a risk factor for cardiovascular disease, lung cancer, and other forms of cancer, and it contributes to the severity of pneumonia, emphysema, and chronic bronchitis symptoms. The contribution of tobacco use to ill-health in the developing world has been growing [1]. Some scholars argue that developing countries are in the first stage of the tobacco epidemic as number of women smokers rises [2]. Statistics show that approximately 176 million adult women worldwide are daily smokers and in the last 50 years, a woman's risk of dying from smoking has more than tripled [3]. There has been an increase in the number of women who smoke today. It has been estimated that in Zambia, 22 women die due to tobacco related diseases every week [3]. WHO states that smoking in young girls has increased in the last decade in Zambia. This is a public health concern due to the multiple diseases that result from smoking [4]. The initiation of tobacco smoking by most adults occurs early in life as adolescents or young adults. Various studies also show that it is significantly harder to stop smoking when individuals start at a younger age. This suggests that the number of smoking adults in Zambia will rise in the future.

The tobacco epidemic is one of the biggest public health threats facing the world currently, It has killed more than 7 million people a year. 6 millions of those deaths are the result of direct tobacco use and nearly 80% of the more than 1 billion smokers worldwide live in low- and middle-income countries; where the burden of tobacco-related illness and death is heaviest [5]. Zambia is one of the top 20 exporters of tobacco. As a result, the tobacco industry plays quite a significant role in the country's economy. According Goma [6], one of the most common reasons against tobacco control efforts is the alleged threat to the economic livelihoods of tobacco farmers posed by these policies and activities. Fear of this threat by farmers and the rest of the community is said to be a major cause for poor controls on tobacco use. This situation does not apply to Zambia alone; multiple countries across the world face the same complicated and very political constraints. In America for example, despite the growing awareness of health risks associated with tobacco smoking, the tobacco industry continues to thrive and reign in huge profits for stakeholders, making it increasingly difficult to impose policy. Essentially the tobacco industry has a significant hold on the world's economy and in turn

policymaking.

Scholars also feel that the tobacco industry advertises and promotes their product in clubs, karaoke establishments and bars. Sep et al.[7] for instance, argue that young adults are not immune to late initiation of smoking as a result of industry promotional focus in bars, night clubs, and similar venues. Ling and Glantz [8] add that the industry marketers encourage solidification of smoking habit and increases in cigarette consumption by focusing on key transition moments when young adults adopt new behaviours such as entering new workplaces, school, military and especially leisure and social activities. For example, according to Kaufman [9] in Asian cities, young women are encouraged to smoke as a sign of being modern, fashionable and Western, although traditionally it has been considered inappropriate for women to smoke and drink.

A study by Menon et al., [10] looked at alcohol and tobacco usage in students in higher education in Lusaka Zambia. This study found that 2% of females were found to be taking tobacco products. Students aged 15-20 were more likely than the other age groups taking tobacco products. Those in year one were more likely to be taking tobacco products (3.8% of females) compared to those in year 4 (1% of females). Students from higher socio economic status were found to be more likely to be taking tobacco products. Overall the study also found that smoking rates were higher in females than males and female smoking rates weren't as high as expected. Menon et al., [10] suggests that the lower rate of smoking among females could be due to cultural reasons, since smoking is considered inappropriate behaviour for women. However the study admitted that it is also possible that some females who did actually smoke may not have reported their habit during the survey for fear of being stigmatized.

Another study carried out in Zambia by Olowski and Michelo [11] investigated the prevalence and factors associated with tobacco smoking in the Zambian general population, and how they changed over time. The study used the Zambia Demographic and Health Survey conducted in 2002 and 2007 as their method of data collection and extracted data on women aged 15-49. The study's results stated that older age, drinking alcohol, and lower education levels were common factors associated with higher odds of tobacco smoking in both 2002 and 2007 survey rounds.

According to Lopez et al.'s [12] In stage 1 of the four stage Descriptive Model of the Tobacco Epidemic, men's smoking prevalence

rates rise first, and 10 to 20 years later, there is a more modest rise in women's rates. In stage 2, men and women's prevalence rates continue to rise, with the increase in prevalence among men slightly outpacing the increase in prevalence among women. In stage 3, men's prevalence rates level off and then drop sharply to resemble women's rates; during the same stage, women's rates increase moderately and then decrease, although not as sharply as men's. In stage 4, women's and men's smoking rates continue to fall until they are nearly equal.

A study by Zulu et al. on tobacco smoking prevalence among in-school adolescents aged 13-15 years supports this theory. The study was carried out in Lusaka, Zambia, and used survey data from the 2002 and 2007 Global Youth Tobacco Surveys (GYTS) to estimate the prevalence of tobacco use in the students. Zulu et al. found that Lusaka district was in the first stage of the tobacco epidemic. Considering the tobacco epidemic model proposed by Lopez et al [12], the rates of smoking identified in the students during the study suggested to researchers that the tobacco epidemic is in its infancy in Zambia, and in its neighbouring countries.

As expressed above, is tobacco use is one of the most preventable causes of premature death in the world. There is a need to understand why smoking prevalence has continued despite the overwhelming data on adverse health effects. This research provides insight on tobacco use among female university students in Lusaka. These data points provide greater insight for targeting public health campaigns and aid marketing of public health efforts designed to focus on smoking in female university students.

#### **Theoretical framework**

##### **Social Cognitive Theory (Bandura 1986)**

Social cognitive theory (SCT) is a theory of behavior that combines the cognitive formulation of social learning theory. The theory assumes that human behavior is influenced in terms of a three-way dynamic, between, personal factors, environmental influences, and behavior continually. A basic premise of SCT is that people learn not only through their own experiences, but also by observing the actions of others and the results of those actions.

Based on this theory of behaviour, Khor et. al., [13] suggests that there are core factors associated with smoking behaviour; personal factors and socio-cultural factors and environmental factors. These core factors can overlap or link to the outcome of smoking

behaviour. However, in order to gain an in-depth understanding of the factors associated of tobacco smoking in female university students, the research will examine the three core factors independently. In order to assess these core factors associated with tobacco smoking interview questions will include questions about attitudes towards smoking such as "How do you feel after smoking?" To assess socio-cultural factors, questions will include, "Do you have family member(s) who smoke?" An examples of a question to assess environmental factors is, "How do you feel about anti-smoking campaigns in Zambia?"

This study set out to explore personal, socio-cultural and environmental factors associated with smoking among female students at University of Lusaka, Zambia.

## **METHODS AND MATERIALS**

### **Design and setting**

This study utilized a qualitative case study design. This was chosen because qualitative studies provide a comprehensive method of measuring human behaviour in detail. The research was carried out in Lusaka, Zambia at the University of Lusaka.

The researcher purposively included the first and initial female student smoker, while the 11 remaining students were selected using a snowball sampling, this involved identifying participants in the population and then asking them to provide more participants for the study. This was done because most female students who smoke ensure their smoking is a secret for fear of stigma and that certain individuals or groups may not wish to share their personal information freely and in such cases the researcher may use a non-probability method. In total, interviews with 12 female smokers led to richness, saturation, and repetition of data. Through data analysis, 228 codes were extracted that were classified in 16 subcategories and 3 main categories and included personal factors, socio-cultural factors, environmental factors, of which some themes came as emerging themes. Data collection was done with the assistance of an interview guide and an audio recorder and the data later transcribed.

A systematic Interpretative Phenomenological analysis approach was used as a method of data analysis. Coding was also used for data analysis. Data were transcribed into English whilst at the same time ensuring that there is no loss of meaning during translation for parts were different languages was expressed. Themes were

identified, coded and categorized. Once all interviews were completed, each interview was transcribed on to the paper from the tape recorder which was used and each interview was coded on a line by line basis in terms of classifying themes and events. Content was analysed to explore in detail common themes which brought meaning to the data. Field notes and information documented were also regularly reviewed.

The transcripts were analyzed thematically in order to identify commonalities and variances among the participants’ responses. The Nvivo software programme was used to aid the analysis. According to Creswell, organizing qualitative data involves being initially faced with completely uncategorized data. The primary task is to look for patterns in the data. The researcher therefore engaged in careful observations which led to the uncovering of connections and patterns in the data.

Three predetermined themes were identified using Interpretative Phenomenological Analysis (IPA). These are: The personal factors which describes the nature of personal inherent factors provoking one to smoke as well as trends and attitudes that influence youth smoking behaviour. Some of the sub-themes that were identified include, beliefs, attitude, knowledge and age. The second theme is the social factors, which includes social and perceived norms for and against smoking, and emerging cultural practices. The sub-themes include family and peers. The third theme is environmental factors, where the effects of a non-comprehensive and largely non-operational tobacco law are explored. Three main sub-themes that emerged were; non-operational tobacco laws, availability of cigarettes and the influence of the activities of tobacco companies.

**RESULTS**

**Table 1: Classification of main categories and subcategories**

Main Categories	Sub Categories
Personal factors	Personal interest and desire Beliefs and attitudes Knowledge of negative health effects
Socio-cultural factors	Peer pressure and acceptance Social learning Community norms about smoking Expressing Independence
Environmental factors	Availability and cost of tobacco Campaigns against smoking

**Personal factors**

Interviews with some of the participants revealed that personal factors influencing smoking as one of the categories that resulted in smoking tobacco. In the participant’s responses it was established that smoking tobacco as a result of personal factors, comprises subcategories of

imitation, a desire to ‘show off’ independence, inexperience, curiosity, personal interest and desire, improved mood, and social defiance. Some of the participants expressed imitation of popular family members, community reference groups such as intellectuals, movie stars, and

poets. For instance, some of the participants had this to say:

A01: “I was curious. He would do it all the time and there was always these cigarette butts on the floor. I used to wonder what does this man do?...”

Some participants revealed reasons for their smoking as a result of peer pressure; because their friends or boyfriends were also doing it, with one of them saying;

A03: “I think it was just the curiosity of why people were smoking and why my friends did it so  
“ ”

Other explained they smoke just for the sake of it, narrating;

A04: “...I just do it sometimes just for fun. Just do it for fun...”

### Knowledge of negative consequences of smoking

A01: “The negative effects I know are cancers, lots of different types of cancers; the mouth, the lungs, the throat. There is also infections as well, increases the risks of infections. It does age you, it changes the color of your features on your face and body, your skin changes color and goes yellow, I believe”

A02 “It's a difficult question. I think people should do what they want, but then I know it's harmful to health. We all know this. It hurts your lungs or whatever it is. But if people smoke then they should, you know, if they like smoking they should smoke”

A03: “I guess it's because of the damage to health. But, like I said, alcohol, drugs, smoking, same

She further added by saying;

A03: “Something will kill you. Something will kill you fast and something will kill you slower. Smoking is one of those things that will

### Family and Socio-cultural factors

Results also show that the family environment is an important factor regarding the tobacco smoking behaviour of the participants in the study. A few of the participants confirmed that at least one of their family members smoked and this could be a reason why they in turn also smoked. Participants narrated the following:

A10: “...just clubs, because that's where you find a lot of people smoking, unlike home, like how are you going to smoke with [inaudible 00:02:40] that's contradict you, at home. But when you're that side, like your peers, everyone is doing it, just looks right”

A11: “...Cause I've grown up like that, like you see people are smoking and, initially, the uncle I stayed with, and my dad, who smokes. So like, I just thought it was normal...”

A11: “My brother, older brother. He was smoking with his friends. I just thought it was ... I've always seen it be something cool, so I used to watch him do it with his friends”

### Peers and Socio-cultural factors

Some participants smoked because of smokers who were friends or any friend related factors. Most of the participants agreed that smoking of friends had a great influence on their smoking. This in turn makes a participant to smoke because of a smoker who is a friend makes smoking the norm for their friend. Just as three participants expressed:

A02: "...my friend told me I should just try it. It helps when you're drunk. Like, it helps reduce the drunkenness and it makes you sober, a little bit sober. So I tried it and it wasn't that bad."

A03: "...My friends would smoke a lot. I got curious. I'm like, "Okay, this is something I want to try" because they did it a lot. That's the first time I had actually smoked cigarettes."

A08: "...it was with three of my friends actually and a lady used to smoke because I had a roommate who was a smoker and she had a tendency to avoid smoking in front of me, so I think I became a serious passive smoker, but she was a chain smoker"

#### Socio-cultural factors in society's opinions

Participants were asked express how they thought the Zambian public viewed them for smoking. On the whole the female students concurred that smoking among women was not accepted in society as normal or appropriate behaviour. They stated:

A10: "I feel like society is using their; cause certain things just don't suit a girl child you know? Like a girl child who smokes. Even just looking at a girl child smoking just doesn't look right"

A12: "In general, it's always been shunned... But I think it's worse for girls... I literally witnessed a girl being told off and all that in a market cause she was smoking"

A11: "Some people have told me that, if I go to smoke, it's really not ladylike... They said a girls shouldn't smoke, anyway, It goes the same with drinking"

A01: "Girls, no. Just a big no, no. It's not allowed, it's not acceptable, it's going to kill your ova-ries. I've heard stuff. I think people in Zambia don't approve of girls smoking at all.

Some even expressed a difference in how they felt men/ boys were viewed by the public for smoking, stating:

A02: "... men can get away with doing anything in Zambia or Africa, wherever it is they are in the world..."

A01: "In general in Zambia... it seems like something that is just for men... the general thing is men go out and have a cigarette, and everybody is cool with that. Even though everyone agrees that smoking is bad for you, but... men do whatever they want.

A03: "There's a double standard. When it's a man doing it or it's a boy doing it it's not a big deal. When it's a girl it's like you automatically become unattractive when you're smoking."

#### Anti-tobacco campaigns, advertising and Price and purchasing of tobacco

When participants were asked about anti-tobacco campaigns in Zambia the responses were varied. However, all agreed that the existing campaigns were not having a major impact on people's choices about smoking tobacco.

A03: "The anti-tobacco campaigns in our country don't really have that big of an effect. I people want to smoke, they still smoke"

A12: "No. Maybe. Not on a wide scale. Everyone knows tobacco is harm ... Everyone knows"

A02: "the statistic I read somewhere ... A lot of people die from passive smoking and actual smoking, so I think that should be addressed. If people are going to smoke, they shouldn't do it in public where other people are. Like, try and confine it to a certain environment"

When it came to advertising participants stated:

A01: “Just a couple of posters in the shops where I buy the cigarettes, which actually act as re. minders, like by the way, don't forget to buy your packet of cigarettes. I always have one in the house for the emergency I'm going out moment, so those act as don't forget you need to buy your cigarettes, as well as the alcohol...”  
 A03: “Yes. It's in most supermarkets. It's on billboards when you're moving. It's everywhere really”  
 A04: “It's everywhere. You see it on, like, small billboards, and whatever.”  
 A05: “It's sort of everywhere. Even in the small, small shops where they only sell sweets.”

A09: “Take for instance... cigarettes are very cheap, so you find that when people do not enough drugs, they'll add it to tobacco, to make it more. Because it's so cheap, it could easily purchase, compared to alcohol. You can't buy alcohol with 1 kwacha, but you buy a cigarette with 1 kwacha”

**Root cause analysis of smoking influencers of UNILUS female students**

The decision to smoke tobacco among participants in this study was shown to be influenced by social and individual level characteristics that are proximal to that behavior, including parental and peer models for smoking, stronger positive smoking outcome expectancies, and weaker negative smoking outcome expectancies. The environment in which the female students exist is also a factor including how available the tobacco products are. Not being fully aware of the smoking consequences is also another factor that may influence smoking behavior. Most female students actually smoked due to a social drive, especially in an environment of friends who smoke or family members but more often in alcohol related environments. Overall, university female student smoking tobacco was mostly due to peer pressure, independence and also linked to stress.

On the whole the participants all believed that tobacco products were inexpensive. One stated:

A10: “I think tobacco is too cheap, everyone can afford it. And initially now, 'cause the cigarette they are removing, which are like 15 ngwee...”  
 A04: “... it's cheap so anyone can afford it.”  
 A07: “If it was expensive, people wouldn't smoke so much”

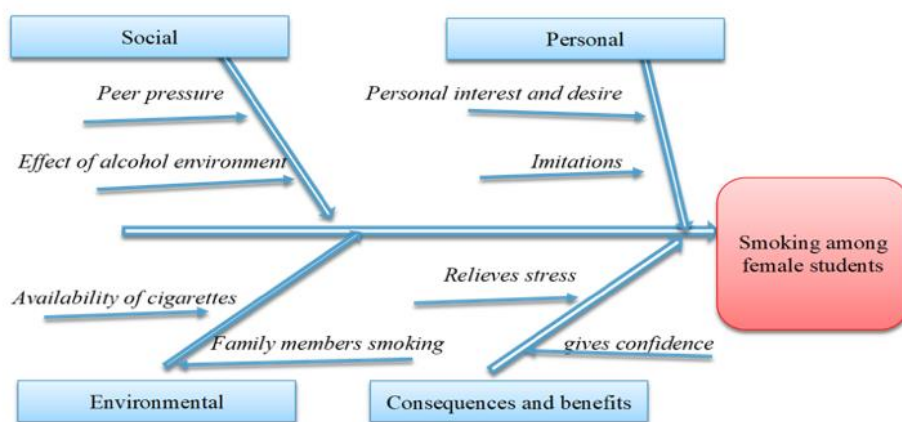


FIGURE 1: Root cause analysis of factors Influencing smoking among female students from UNILUS

## DISCUSSION

The study found that female students smoke tobacco for personal gratification, because tobacco makes them feel happy, confident and relieves stress. The study also establishes that female students continue to smoke tobacco in order to experience such euphoria, despite knowing that there are dangers associated with tobacco smoking. A study to support this view was done by Fotuhi et al., [14] and found that smokers are motivated to rationalize their behaviour through the endorsement of more positive beliefs about smoking, and these beliefs only change with changes in smoking status. Another study done by McMaster et al. [15] on cognitive dissonance in tobacco smokers looked at smokers and non-smokers and reported that despite smokers estimating their risk of contracting lung cancer as greater than the risk non-smoker or ex-smokers, the smokers still significantly endorsed more rationalizations and distortions of the logic behind smoking. These studies support the findings of show female students rationalize smoking tobacco by emphasizing positive feelings that they have after smoking.

The study illustrates that the female students smoking tobacco regardless of the dangers, is not merely due to cognitive dissonance but it could also be the result of age, as most of the students in the study are between the age of 20 and 25. Young people in general, tend to have little concern for the consequences associated with risky behaviors. As suggested by Graham et al., [16] young people may feel the consequences of risky behavior are intangible, particularly if they occur later in life, as is the case for tobacco smoking. It may become difficult for them to derive a suitable emotional response to the risks associated with their decision. It may also be that the female students don't fully understand the consequences of the behavior; perceiving themselves 'immune' or in some way 'invulnerable' to these dangers of smoking. Furthermore, it appears that the desire for the perceived positive feelings of smoking tobacco, far outweighs the female student's fear of the known dangers of smoking tobacco.

The study also reveals an interesting phenomenon in that female students who smoke tobacco also consume and smoke other substances such as marijuana or shisha to achieve the similar effects they feel when they smoke tobacco. This confirms ideas that suggest that tobacco smoking is linked to other risky behaviors, such as alcohol abuse. In support of this view, a study by Mello et al. [17] on cigarette smoking by women and

interactions with alcohol use found that heavy smokers would increase smoking significantly when they were drinking alcohol. Mello et al. [17] also found that when analyzing tobacco smoking by level of alcohol consumption, both heavy and moderate alcohol users increased smoking significantly when they were drinking alcohol. This study is supported by findings from this study, as they illustrate that a number of female students in Lusaka smoke tobacco when they visit bars and clubs, where alcohol is evidently freely available.

The findings of the study show that smoking in female students is predominantly influenced by their close relationships with friends or family. A number of the female students in this study only smoke tobacco with peers who also smoke tobacco or those that have no issue with them smoking. In most cases female students initiated smoking tobacco with their peers at a younger age. A study with similar findings was done by Fay et al., [18] found that friends' smoking affects initiation into smoking both directly and indirectly. There are peers around when most female students try to smoke especially for the first time, this suggests that female students initiate smoking because they want to feel accepted or fit in with their friends who smoke. In support of this view, a study done by [19] found that young people may view smoking as a vehicle for entering a desired friendship group and that they were more affected by the smoking of their best friend.

Findings further illustrate that female students will try smoking when they are young in order to fit in with a group of friends who smoke. It is common for young people to imitate their peers in order to feel accepted or to avoid conflict. This is supported by Young et al. [19] who found that in young people who smoked tobacco, peer influence was strongest for those who were very concerned about their friends' reactions to their substance use. A WHO report also suggest that females with a best friend who smokes are nine times likelier to become smokers themselves than those with non-smoking best friends [20].

The results of this study show that the family environment is also an important factor regarding smoking behavior of the participants of the study. Participants were more likely to smoke in families where their father, siblings or extended family members smoked. A great majority of the interviews done show that at least one of their family members smoked, usually the father or brother. As it has been consistently observed in the current study, the most common reason to start smoking was actually friends apart from



observing a family member smoke. In agreement with the current study findings, previous studies on students in Japan and Albania also reported that friends were the most important factor associated with smoking behavior [21,22,23].

The study reveals that most female students smoke tobacco in very social environments such as bars and clubs. This shows just how significant a role such places in Lusaka play in encouraging or facilitating tobacco smoking. These entertainment areas facilitate smoking behaviour by promoting and selling the products as well as providing specific areas for smoking. A study done by Gilpin [24] found that social smokers would smoke with others in places such as bars and clubs and these were easy environments for groups of people to smoke.

Furthermore, the study importantly reveals that laws and policies in Zambia responsible for regulating the purchase and distribution of tobacco are not strongly enforced. This was evident in that most female students purchase tobacco easily and from anywhere, even at a much younger and unlawful age. There is clearly a lot of freedom given to the manner in which tobacco is distributed, supplied and sold in Zambia, as well as to whom products are sold. A study done by Warren et al. [25] found that ease of access to substances has a direct and significant relationship with substance use for young people.

Another finding in the study is that existing campaigns are not reaching or having a significant impact on female students in Lusaka who smoke tobacco. This is shown in that the majority of female students express that they have little exposure to campaigns discouraging smoking tobacco. This may also explain why most of the students could share little in-depth knowledge of the harmful consequences of tobacco smoking. WHO [5] concur with this impression, stating that a recent official report showed that women seem to be less influenced by the anti-smoking campaigns as compared to their male counterparts. However, a study by Gil-Lacruz [26] concluded that anti-smoking campaigns targeting cigarette prices and pictorial labels are good tools for reducing smoking rates among women. This suggests that women can be responsive to anti-smoking campaigns if they target their interests and motives.

The study also finds that the cost of tobacco products appear to have a minimal influence on whether the female students purchase them. Further the study reveals that tobacco is fairly inexpensive in Zambia.

Interestingly, Gil-Lacruz's [26] study on women and smoking, prices and health warning messages, found that highly educated women are more sensitive to prices and less educated women are more sensitive to pictorial labels. This may explain why women at university in Zambia continue to smoke, because they are able to buy the tobacco products using their allowance. The products are affordable and therefore far more accessible. Furthermore, tobacco products are inexpensive and maybe this is because tobacco is a big part of Zambia's agricultural industry.

Surprisingly, the study further reveals that respondents believed tobacco was indirectly heavily advertised in Zambia, predominantly in shops. The female students expressed regular exposure to pictures of cigarette packets in supermarkets and small shops and how these images acted as reminders to purchase the products. Going by this, WHO's [5] claims that selling tobacco products to women is currently the largest product-marketing opportunity in the world. However, WHO [27] also admit that marketing tobacco to women in the developing world is a relatively recent phenomenon.

The university environment could be a very appropriate environment for women to smoke, propagated by multiple factors such as stress, peer pressure and most importantly freedom as most of the students are far from their parents and guardians. As mentioned above, this study highlights a link between feeling stressed and smoking. In support of this, a study by Nichter et al. [28] on reconsidering stress and smoking among college students found that smoking served multiple functions during times of stress for college students. The study also found that there was need for smoking and socializing during examination time, smoking was a way to take a break and refocus. Contrary to this however, multiple studies argue that people with higher education are less inclined to smoke. According to an article by Sternheimer [29, 30] the Centers for Disease Control and Prevention in 2009 found that just 5.6% of those 25 and older with graduate degrees smoked compared with nearly 49% out of those with general educational diplomas.

## **CONCLUSION**

In conclusion the study has given valued awareness of the mechanisms behind women at university smoking tobacco. This study has also illustrated that it is important to consider a gendered approach when assessing factors associated with smoking tobacco. Overall, tobacco smoking among female university

students in Lusaka is the result of a combination of personal, socio-cultural and environmental factors throughout the women's lives; with socio-cultural factors such as peer influence, family influence and female modernity in society being the major influencers for female smoking in Lusaka. Interestingly, environment factors also play an indirect but significant role in facilitating smoking among female students, as there is an evident gap in anti-smoking campaigns and their capacity to reach and influence women at various universities in Zambia, as well as a gap in the enforcement of anti-smoking legislation in Zambia which should safeguard these young females from tobacco smoking and its inevitable harmful effects.

## DECLARATION

**Contributors** FCK conceived the study design, FCK conducted the data collection and BCC analyzed the data. The manuscript was drafted by BCC, DM and TLC. All authors read and approved the final manuscript

**Competing interests** There were no competing interests from all authors in this study.

**Ethics approval** Ethical clearance for the study was granted by the University of Lusaka, research ethics Committee. Informed consent was obtained from all the informants who participated in the study. Informants were assured that their identities would be kept confidential, and privacy during the interview was maintained. Permission to record the interview was also sought from the informant, and the purpose of recording was explained. Although participation in the study did not directly benefit, the broader benefits of the study was explained and appreciated.

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