

**KNOWLEDGE, ATTITUDE AND PRACTICE OF SKIN  
LIGHTENING AMONG FEMALE STUDENTS AT  
KAMAPALA INTERNATIONAL UNIVERSITY-  
WESTERN CAMPUS, UGANDA**

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**A RESEARCH THESIS SUBMITTED IN PARTIAL  
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## **DECLARATION**

I, Apak Lino, declare that this thesis entitled; Knowledge, Attitude and Practice of Skin Lightening among female students at Kampala International University-Western Campus Uganda is my original work except where stated otherwise.

This thesis has not been submitted for any degree or examination at any other university.

This thesis does not entail other people's work unless specifically attributed as such, in which case their words have been rephrased and referenced. However, where their exact words have been used, their writings have been placed in quotation marks and referenced.

Signed

Date

## **APPROVAL**

I confirm that this thesis entitled; Knowledge, Attitude and Practice of Skin Lightening among female students at Kampala International University-Western Campus Uganda was written by the candidate (Apak Lino) under my supervision.

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Date

## **DEDICATION**

I dedicate this thesis to my parents Mr. Anjelo Okello Ajoka and Mrs. Emmy Ajoka; they have been source of inspiration, engine of courage and secret of my achievements since my childhood. I also dedicate it to my sisters; Agnes Akite and Ajok Pricilla; brothers; Ayo Bernard, Patrick Adar and Oree Andrew for all the support. Last but not least, this work is dedicated to my son Apak Ricky.

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## **ABBREVIATIONS AND ACRONYMS**

- KIU-IREC:** Kampala International University Institutional Research and Ethics Committee
- KIU-WC:** Kampala International University-Western Campus
- KIUSHS:** Kampala International University School of Health Science

## **OPERATIONAL DEFINITION OF TERMS**

**Colonialism:** Acquisition of political dominion over a group of people with the primary goal of economic advancement.

**Colorism:** Preference for and privileging of lighter skin and discriminating against those with darker skin.

**Coloured:** Any person of mixed blood and includes children as well as descendants from Black-White, Black-Asian, White-Asian and Black-Coloured unions.

**Skin lightening:** The use of substances, mixtures, or physical treatments to whiten skin color

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## ABSTRACT

**Introduction:** Skin lightening is the act of lightening the skin complexion by using substances that are applied on the skin or administered into the body by other means. The use of skin lightening agents has its drawback in terms of causing harmful effects such as skin disorders like depigmentation, rashes, pimples, discolorations, kidney damage, cancer, neurological and psychiatric disorders depending on how the agents for skin lightening are used.

**Objective:** The paper examines the knowledge, attitude and practice of skin lightening by female university students at Kampala International University, where some dark skinned women in particular tend to lighten their skin.

**Method:** A cross sectional descriptive study.

**Results:** The awareness level of the students about skin lightening agents and their harmful effects was found to be high among the students and more than half of them are already users of such agents mainly for beautification. Few of them think the use of skin lightening agents can be addictive and lead to social stigma but they don't believe that the use of such agents should be restricted to medical uses only.

**Conclusion:** the female students in Kampala international university –western campus who apply skin lightening products on their skin with potentially dangerous chemical agents meant for other reasons do so mainly to attract the opposite sex despite having high knowledge of the harmful effects.

**Recommendation:** Many students are using skin lightening agents. They seem to have knowledge of the harmful effects of these agents. The best way to curb the use of skin lightening agents is for government to restrict and ensure information that is used for advert and education in regards to skin lightening agents is correct. We recommend further studies on the effects of skin lightening agents currently in use by students or other group of people.

# **CHAPTER ONE**

## **INTRODUCTION**

### **1.1 Background**

#### **1.1.1 Historical background**

The phenomenon of skin lightening has been traced back to the era of slavery and colonialism, black people then were oppressed by white people and through socialisation, they assimilated the identity of British and American value systems into their cognition. This way, skin lightening is perceived as ‘a contemporary evidence of deep-rooted and lingering psychological scars of slavery in particular and colonisation in general’ (Blay Y A., 2011). However, the perplexing thing is that even after a century following the abolition of slavery and decades after the end of colonialism, skin lightening practice appears to have become a norm among people of various backgrounds, age and gender despite the fact that such practice appears to be associated with some devastating consequences on its practitioners’ physical and psychological wellbeing (Durosaro A I, Ajiboye S K, Oniye A O., 2012).

#### **1.1.2 Theoretical background**

Skin lightening used interchangeably with skin lightening or skin whitening is the act of brightening of the skin complexion using substances, mixtures or physical treatments. Skin lightening is used for aesthetic or cosmetic reasons to increase skin glow, radiance and vibrancy in addition to the lightening. Skin lightening mechanism influences the amount of melanin in the skin to cause effect. Melanin is a pigment produced within the skin to impart its color as well as provide protection against ultraviolet rays of sunlight. Agents used for skin lightening are clinically prescribed for certain medical conditions but are also commercially and widely available without prescription and are obtainable for cosmetic or other reasons from vendors across the streets and across the counter in medicine or cosmetics shops with no control (Gillbro J, Olsson M J., 2011).

#### **1.1.3 Conceptual background**

There seem to have been numerous driving forces that have contributed to people, especially black people, desiring to engage in the body modification practice of skin

lightening. For instance, it might be speculated that amongst such forces must include the problems of colonialism and perceptions of skin colour as advertised by the media (Edmonds J D., 2014).

It was through colonialism that many African nations lost their cultural way of life, which inevitably led to the collapse of the African social structure, because African lifestyle came to be perceived as inappropriate in comparison with the Western standards. In this way, many Africans had to adopt Christianity introduced by missionaries who accompanied the colonisers. The new religion demanded not only exclusivity and renouncement of traditional practices such as ancestral worship and shamanistic health rituals as well as non-sedentary lifestyles, polygamy and open promiscuity. This suggested that African people's way of life and identity was considered unacceptable (Ziltener and Künzler., 2013).

#### **1.1.4 Contextual background**

Practice of skin lightening is also common in other parts of the world such as Middle East and India. The culture of skin lightening is intertwined with personal identity, self-image and racial supremacy. Colonial masters have influenced the colored races especially the ones they have colonized to believe that the white skin is ideal color that matches superiority and power. That perception impacted widely created obsession with use of skin lightening agents among the colored races and shaped the practice of skin lightening by Negroid and other dark skinned to emulate the fair skinned Caucasians in many aspects of life including skin color. The media also portrays the fair skinned as more prosperous than the black skin through adverts and other productions (Toure A., 2012).

#### **1.2 Problem Statement**

There is wide growth of availability and use of skin lightening products worldwide, particularly in African countries. Ugandan women consume these products with ruthlessness; as a result they suffer from side such as dermatitis. Studies have shown that there is high prevalence of use of these harmful products, (containing



corticosteroid, mercury and hydroquinone) especially among younger women (Alshima S A., 2016).

Adverse effects of the skin lightening products have been reported by Doctors of Makerere University Medical School. The adverse effects reported are both physical and psychological due to disfigurement of the face. Some doctors believe that skin lightening is common among the uneducated and that those who lighten their skin have low self-esteem. Kidney damage (Nephrotic syndrome) and nerve damage (Nephropathy) from the use of skin lightening chemicals have been reported in Uganda (Olumide Y M., 2016).

### **1.3 Objective of the Study**

#### **1.3.1 General objective**

To determine the factors influencing skin lightening practice among female students at Kampala International University-Western Campus Uganda.

#### **1.3.2 Specific objectives**

- I. To determine the knowledge of skin lightening among female students at Kampala International University-Western Campus Uganda.
- II. To determine the attitude towards skin lightening among female students at Kampala International University-Western Campus Uganda.
- III. To determine the practice of skin lightening among female students at Kampala International University-Western Campus Uganda

### **1.4 Research Questions**

- I. What is the level of knowledge of skin lightening among female students at Kampala International University-Western Campus Uganda?
- II. What are the attitudes towards skin lightening among female students at Kampala International University-Western Campus Uganda?
- III. What are the practices of skin lightening among female students at Kampala International University-Western Campus Uganda?

## **1.5 Significance of the study**

Problems related to skin lightening are relevant to all people across the globe. We do not have sufficient data on knowledge, attitude and practice of skin lightening among female university students in Uganda. Exploring students' knowledge and motivations for engaging in skin lightening practices could be helpful in the establishment of effective public health campaigns aimed to combat the practice of skin lightening.

## **1.6 Scope of the study**

### **1.6.1 Geographical scope**

The school's campus is located in the town of Ishaka, in Bushenyi District, Western Uganda, approximately 330km by road, southwest of Kampala, Uganda's largest city and capital. The campus is also referred to as Kampala International University School of Health Sciences to distinguish it from the main campus, located in Kansanga, Makindye Division, Kampala.

### **1.6.2 Content scope**

The study was limited to assessing awareness, belief and users of skin lightening agents among female students at Faculty of Dentistry/Clinical Medicine; Faculty of Pharmacy; Faculty of Biomedical Science; Faculty of Allied Health/Nursing and Faculty of Social Science at Kampala International University-Western Campus Uganda.

### **1.6.3 Time scope**

Ethical approval for this study was obtained in September 2018. Data was collected in October 2018. Data was analyzed in October 2018. The final thesis was submitted for examination in December 2018.

## **1.7 Conceptual Frame Work**

Many theories have been proposed to explain people's indulgence in skin lightening practices regardless of the side effects. The theory of Colorism assumes that due to negative experiences of racial discrimination, black people have been conditioned to

believe that a lighter skin tone is more beautiful and worthy of privileges (Wilder J, Cain C., 2011).

Black people often bleach their skin because a lighter skin seems to be more fashionable and it is also perceived as lucrative because it is a form of social capital with which a person can secure a job, marriage partner and status in their community (Njoki L C, Robkin N, Gaska K *et al.*, 2011). It is on this basis that an individual would be motivated to bleach their skin because of the value attached to skin lightness.

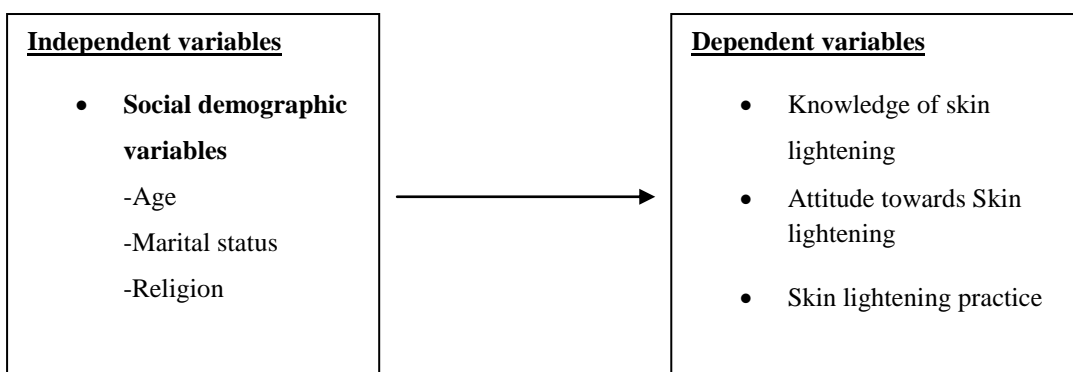


Figure 1: Conceptual Framework

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Agents used for skin Lightening**

Market for skin lightening agents is booming across the world. In Britain, The Observer uncovered multi-million Pounds market for highly toxic chemicals meant for skin lightening being sold to mostly Asians and Africans (Olajide O., 2017).

Skin lightening agents commonly used include steroids such as clobetasol, benzene derivatives such as hydroquinone, and metals such as mercury. Others include Kojic acid which inhibits melanin, Azelaic acid, Glutathione, ascorbic acid which increase levels of glutathione all of which have adverse effects in the body one way or the other (Sonthalia S, Daulatabad D, Sarkar, R., 2016).

Toxic skin lightening agents manufactured in Britain are seen in many countries such as Middle East countries, Nigeria, Ghana, Tanzania, Uganda, Zimbabwe, North Africa and South Africa. These substances are to date very common in all these countries and are freely sold across the counter while they are under serious control or illegal in Britain (Olajide O., 2017).

Recently in a review on skin lightening property of plant extracts, many are considering use of herbal extracts or natural agents of skin lightening which are less expensive and less toxic or free of toxins. These include honey, cow's milk, turmeric, gram flour, milk of tender coconut, liquorice, mint, asafetida, orange and other citrus fruits, cucumber, almond, papaya, tomato, potato, strawberry, blueberry, blackberry, milk thistle, carrot and others (Abhishri S B, Stephe C M, Shalini B U *et al.*, 2012).

##### **2.1.1 Hydroquinone**

Hydroquinone is a strong inhibitor of melanin production hence lightening the skin color. Hydroquinone even in small amounts is associated with health risk ranging from skin irritations, itching, and discolorations to cancers (Abhishri S B, Stephe C M, Shalini B U *et al.*, 2012).

### **2.1.2 Mercury**

Mercury is a common ingredient used in skin lightening soaps and creams serving to lighten the skin color. It gets deposited in tissues like skin, nervous systems, kidneys and lungs to cause dangerous health related conditions such as darkness of nails and skin, kidney and neurological damage, inflammation of the lungs and stomach discomfort (Olumide Y M, Akinkugbe A O, Altraide D *et al.*, 2017).

### **2.1.3 Steroids**

Corticosteroid is very common in the market. Clobetasol is a powerful skin lightening steroid that leads to disorders of skin color, high blood pressure, hormonal imbalance just to mention a few (Olajide O., 2017).

## **2.2 Prevalence of Skin Lightening Globally**

Studies have indicated that the skin lightening phenomenon is widely practiced amongst different age groups, gender, socio-economic backgrounds and races. People from across the world use skin lightening products for various reasons, mostly to improve physical appearance (Olumide Y M, Akinkugbe A O, Altraide D *et al.*, 2008).

In one of the studies of skin lightening, it was found out that many women but few men confessed to skin lightening. The World Health Organization states that Nigeria has the highest percentage of women using skin lightening (Rambaran A., 2013).

A cross-sectional done in Saudi Arabia found out that the degree of skin lightening practice has increased in the country. Many people were not informed about the negative effects that skin lightening products could cause, nor were they knowledgeable about the degree of toxicity of certain chemicals found in lightening creams. Hence, it was found that many disagreed with the fact that lightening creams were detrimental to a person's overall health. Surprisingly, about half of them considered corticosteroids as the most hazardous substances contained in lightening creams, whereas only few selected mercury indicative of misinformation. It is worth

noting that in Saudi Arabia, skin lightening products are legal (AlGhamdi K M., 2010).

In Europe, white women utilise lightening creams to maintain radiant skin free from hyperpigmentation brought about by the aftermath of being subjected to heat or the often dreaded process of maturation (Durosaro A I *et al.*, 2012).

A review of literature from countries where the use of skin lighteners is a common, slavery, colonialism is a precursor for the prominence of skin lightening (Julien N., 2014).

### **2.3 Prevalence of Skin lightening in Uganda**

Uganda is one of the first countries to ban the skin lightening products in 1972, yet skin lightening has continued to thrive in the country. The products are easily accessible anywhere in Uganda as over the counter products in pharmacy shops, roadside or by hawkers and vendors. Cross border smuggling from neighboring countries is big business in Uganda. Both men and women use the products in Uganda not only on the visible parts but also on the genitalia and perineal area. The Uganda National Bureau of standards has tried to crack down on lightening cosmetics, but this effort has not been successful. The trend is actually going up as homemade cosmetic and dermatological products have become easily accessible. Ugandan celebrities have been known to lighten their skin (Olumide Y M., 2016).

Some Ugandan people believe that skin lightening in Uganda is due to Ugandans internalizing Eurocentric ideals and failure to bring up their children to appreciate their own skin color and to value themselves and others by their personalities and not by how they look. Some others believe that it is the effect of the media promoting Eurocentric culture (Olumide Y M., 2016).

### **2.4 Knowledge**

Knowledge of the effects of skin lightening products to one's health is imperative, particularly for the lightening activists themselves. In a study of perceptions of skin

lightening in South Africa by students at University of KwaZulu-Natal found that the majority of their study participants were less knowledgeable about the negative consequences related to the practice of skin lightening (Mpengesi & Nzuzi., 2014).

In one of the studies done in Jamaica, individuals were more knowledgeable on the consequences of skin lightening as they reported that it was costly, addictive, time consuming, causes stigma and exposes an individual to possible name calling (Robinson, P.A., 2011)

During a preliminary study in Malaysia, majority of the respondents among the undergraduate students knew about the active ingredients in skin lightening agent they use before buying because of safety reasons. Majority of them knew about the health effect attributed to skin lightening agents which agrees with a South African study in which majority of respondents had knowledge of adverse effects related to skin lightening agents. Many students were able to mention examples of the dangerous ingredients such as mercury, hydroquinone, tretinoin in skin lightening agents and the consequences of using skin lightening agents such as skin damage, discoloration and infections (Rusmadi *et al.*, 2015).

## **2.5 Attitude**

Possessing light skin is believed to carry many privileges. A qualitative study investigating motivations for skin lightening among urban women engaging in skin lightening practices in Tanzania yielded six thematic motivations into indulgence in skin lightening. The themes are as follows: (a) to be white, beautiful, and more European looking; (b) to satisfy at partner and/or attract male mates; (c) to satisfy and impress peers; (d) to have soft skin; (e) to remove the adverse effects of extended skin lightening use on the body; and (f) to remove pimples, rashes, and other skin disease (Njoki L C *et al.*, 2011).

A study in Nigeria established that many Nigerians felt that skin lightening has become highly predominant in the country. Various reasons were given for using lightening products. Some of these were to look more attractive to the opposite sex,

just to feel beautiful and to remove feeling of inferiority. A study showed that most common perception of respondents in Lahore was that majority of men considers women with lighter skin appearance to be more beautiful and have greater chance of getting married. There is perception that women with lighter skin tone implies that they belong to a higher social class. A group of researchers reported that some respondents have the perception of lighter skin color implies that the user belongs to higher social class.

In a study of among South African women, it was found that more women reported that a lighter skin tone increased self-esteem. In addition, the study found that a woman with a lighter skin tone is considered to be more beautiful. This is not surprising given the media preference for either White or Black models and celebrities who possess Eurocentric ideals of beauty to run adverts on television and magazines, thus suggesting that whiteness is beautiful and hence, worthy of preserving its “purity” (Njoki *et al.*, 2011)

A qualitative study aimed at examining the psychological and cultural factors that influence skin lightening in the post-colonial society of Jamaica, one male reported, the girls love it. These findings clearly indicate that skin lightening is a means to attract the opposite sex, gain their appraisal and maintain the relationship (Robinson P A., 2011).

## **2.6 Practice**

The practice of skin lightening has been reported among adults in the past but the trend has changed now with involvement of large number of female adolescent group. This practice is on the rise due to socialization. It is true that skin lightening practice cuts across all ages, races, beliefs and ideologies (Kouotou *et al.*, 2017).

It is evident that facial lightening is more frequently practiced than any other patterns. However, the reason for choosing which type or pattern of skin lightening depends largely on the individual and the purpose of doing it. At the initiation of the practice, a total body surface application is often used for maximum effect. This is then



maintained with daily application of the products. Multiple products containing different agents may be used concurrently or sequentially (NOIPoll., 2014).

Nigeria has the highest proportion of women using agents of skin lightening world over. A study conducted in Edo state located in South Nigeria revealed that many females and males actually use skin lightening agents (Burger P, Landreau A, Azoulay S *et al.*, 2016).

In Nigeria, the practice is common place at all ages; both among men and women. However, studies indicate a much higher prevalence in young, unmarried and educated women (Sule S T *et all.*, 2014).

Skin lightening was found to be practiced by prostitutes as a method of attracting the opposite sex. This happens to be very common among commercial sex workers and many of those who camouflage as fashion designers because of the stigma associated with prostitution. Some who are already fair in complexion by nature are found to use skin lightening agents to avoid tanning of the skin by sun (NOIPoll., 2014).

## **CHAPTER THREE**

### **METHODOLOGY**

#### **3.1 Study Design**

This was a descriptive, cross sectional institutional based study using structured self-administered questionnaire.

#### **3.2 Sample Size**

The sample size was determined using Krejcie & Morgan sample size formula for finite population:

$$S = \frac{X^2 NP (1-P)}{d^2(N-1) + X^2 P (1-P)}$$

Where:

S = required sample size.

X = the z value on the table value of chi for 1 degree of freedom at the desired confidence level

(1.96 for a 95% confidence level).

N = the population size (>5000).

P = the population proportion (assumed to be .50 since this would provide the maximum sample size).

D = the error margin (.05).

Krejcie & Morgan simplified the process of determining the sample size by coming up with a table developed basing on the above formula. Therefore 357 participants were considered for the study and this was evaluated using Morgan's Table (Appendix III).

#### **3.3 Study Variables**

##### **3.3.1 Independent variables**

- I. Social demographic variables includes; Age, Marital status and Religion.

##### **3.3.2 Dependent variables**

- I. Knowledge
- II. Attitudes

### III. Practices

#### **3.4 Study Population**

##### **3.4.1 Inclusion criteria**

- I. Registered students of Kampala International University-Western Campus
- II. Students equal to or above the age of 18 years old
- III. Students engaging or not engaging in the practice of skin lightening

##### **3.4.2 Exclusion Criteria**

- I. Non students of Kampala International University Western Campus
- II. Students under 18 years of age
- III. Students who did not consent

#### **3.5 Sampling**

Simple random sampling method was used for quantitative data collection. Folded papers was assigned “yes” and “no”, and then mixed in the box and each respondent was given a chance to pick one. Those who randomly picked “yes” were given questionnaires to fill. A respondent who picked “no” was not an eligible to participant and when the sample size was not realized, this was replaced by another round of picking assigned “yes” or “no” by those who were not selected in the first round.

#### **3.6 Data Collection**

The study will use both quantitative and qualitative methods of data collection and analysis in the Faculty of Dentistry/Clinical Medicine; Faculty of Pharmacy; Faculty of Biomedical science; Faculty of Allied Health/Nursing and Faculty of Social Science.

A pilot study of 36 of respondents (who were not part of the major study) was carried out in October 2018 at KIUSHS. Following the pilot study, the questionnaire was adjusted accordingly before embarking on the definitive study. Three research assistants were recruited to assist with the data collection. They were trained on interviewing techniques (including ethical considerations) prior to data collection.

They were consistently monitored by the principle investigator during data collection period.

### **3.7 Validity and Reliability**

The potential errors and biases were minimized by:

- I. Training research assistants so as to make sure that they understand the questions well.
- II. Pre-testing the questionnaires and any ambiguity was corrected before actual collection of data through pilot study.
- III. Having the participants understand the informed consent fully and highlighting especially on confidentiality.

### **3.8 Data Processing and Analysis**

The completed questionnaires were checked daily to ensure each question has been filled out correctly and that there are no gaps. The questionnaires were numbered and coded for ease of handling. Data from structured questionnaires were entered, checked, cleaned and analyzed using SPSS version 20.

### **3.9 Informed consent**

All participants were informed of the purpose of the study and what is required of them. Each participant had to consent to participate in the study by signing the informed consent accompanying the questionnaire. The investigators treated the information provided during the study with utmost confidentiality. The identities of the participants were not captured, and only a code that was supplied by the participant was used as an identifier. Participants were assured that no harm would come to them as a result of participating in this study.

### **3.10 Study Limitation**

An anticipated limitation of study was restriction to female students of one representative university of Uganda only out of the many tertiary institutions.

### **3.11 Dissemination of Study Findings**

Results from the study were shared among the researcher, supervisor, examiners and KIUSHS university administrators.

### **3.12 Ethical Considerations**

The formal procedure was carried out to ensure no harm was elicited to the participants in this study as shown in section 3.9. This study was reviewed and approved by the Kampala International University Institutional Research and Ethics Committee (KIU-IREC) before collection of data. The investigator also obtained approval from the university administration to collect data before conducting the study.

## CHAPTER FOUR

### RESULTS

#### 4.1 Socio-demographic characteristics of the study population

Table 1: Socio-demographic characteristics of the study population (n=357)

Variable	Frequency	Percentage (%)
<b>Age</b>		
15 - 19	61	17
20 - 24	185	52
25 - 29	82	23
30 - 34	25	7
35-39	4	1
<b>Marital status</b>		
Married	71	20
Divorced	4	1
Separated	4	1
Widowed	7	2
Single	271	76
<b>Religion</b>		
Islam	75	21
Catholic	186	52
Protestant	29	8
Pentecostal	29	8
Seventh-day Adventist	38	11

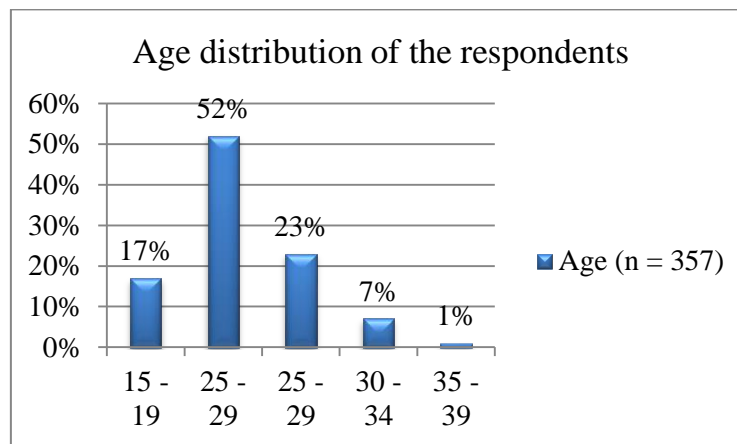


Figure 2: Age distribution of the respondents

As shown in table 1 above, most respondents are in the age bracket of 20 to 24 years. Seventy six percent (76%) of the respondents are single. Most of the respondents were Christians 282 (79%) with Catholics making up the majority 186 (52%) while 75 (21%) of the respondents were Moslems.

## 4.2 Knowledge about skin lightening

Table 2: Knowledge about skin lightening (n=357)

Variable	Frequency	Percentage (%)
<b>Ever heard of skin lightening agents</b>		
Yes	343	96
No	14	4
<b>Source of information about skin lightening agents</b>		
Friends	178	50
Family member	62	17
Media	82	23
Chemist	10	3
Vender	7	2
None	18	5
<b>Know active ingredients</b>		
Yes	151	42
No	206	58
<b>Source of knowledge of ingredients</b>		
Labels or leaflets	72	20
Friends	58	16
Advertisement	17	5
Health worker	4	1
Non	206	58
<b>Who uses skin lightener more</b>		
Married women	41	11
Unmarried women	298	83
Don't know	18	5
<b>Has side effect</b>		
Yes	305	85
No	27	8
Don't know	25	7
<b>Recognition of users</b>		
Yes	268	75
No	89	25
<b>How to recognize users</b>		
Beautiful & fair looking	13	4
Depigmentation	113	32
Sun burn, pimples & rashes	46	13
Very fair skin	40	11
Dark spot & knuckle	46	13
Smooth & shinning	3	1
Body odour	7	2
Don't know	89	24

As shown in table 2 in the previous page, majority 343(96%) of the respondents know about skin lightening agents. Majority of the respondents heard about skin lightening agents mainly from friends 178(50%) and media 82(23%). About half 151 (42%) of the students knew the active ingredients in skin lightening agents. Up to 72(20%) of them knew the active substances in skin lightening creams through reading the leaflets or were told by friends 58(16%). Most 298(83%) of respondents are concerned single ladies use skin lightening agents more than the married ones. Up to 305 (85%) of the respondents knew that skin lightening agents have side effects. Many 268(75%) could identify a user of skin lightening agent because of certain typical features. Some of the striking features seen on user of skin lightening agents include depigmentation 113(32%), features of sun burn, pimples and rashes 46(13%), dark spots and knuckles 46(13%) and very fair skin 40(11%).

#### **4.3 Attitudes towards skin lightening**

As shown in table 3 in the next page, by way of attitude, only 254(71%) of the respondents agree that the habit of skin lightening has anything to do with environmental conditions while 89(25%) disagree. A significant proportion 274(77%) view skin lightening as a beautification factor compared to 69(19%) who disagree. Up to 257(72%) of users of skin lightening agents think of getting better treatment from others with fairer skin unlike the greater proportion who do not think so. Many 257(72%) of the respondents asserted that the use of skin lightening should not be restricted to medical use only while the remaining do not think the same way. Skin lightening can lead to getting a suitor faster according to 268(75%) of the respondents. Up to 220(62%) believe that there is no stigmatization attached to use of skinning lightening agents. However, 123(34%) of respondents agree that stigmatization is an issue in use of skin lightening agents. Up to 268(78%) believe that addiction to use of skin lightening agent can occur while 75(22%) were opposed to such believe. Up to 209(59%) of the respondents recommended the use of skin lightening agents.



Table 3: Attitudes towards skin lightening (n=357)

Variable	Frequency	Percentage (%)
<b>Women use skin lightening agents because of the environment that they are located</b>		
Agree	254	71
Disagree	89	25
Don't Know	14	4
<b>Skin lightening more a beauty factor</b>		
Agree	274	77
Disagree	69	19
Don't Know	14	4
<b>If a woman had a lighter complexion, she would be treated better</b>		
Agree	257	72
Disagree	86	24
Don't know	14	4
<b>Skin lightening products should be used only for medical purposes</b>		
Agree	86	24
Disagree	257	72
Don't know	14	4
<b>Use of skin lightening products would make a woman have more suitors</b>		
Agree	268	75
Disagree	75	21
Don't know	14	4
<b>Use of skin lightening products would make a woman be stigmatized</b>		
Agree	123	34
Disagree	220	62
Don't know	14	4
<b>Skin lightening can be addictive</b>		
Agree	268	75
Disagree	75	21
Don't know	14	4
<b>Recommend the use of skin lightening agents</b>		
Agree	209	59
Disagree	134	37
Don't know	14	4

#### 4.4 Practices of skin lightening

Table 4: Practices of skin lightening (n=357)

Variable	Frequency	Percentage (%)
<b>Ever used skin lightening agents</b>		
Yes	202	57
No	82	23
Don't Know	73	20
<b>Duration</b>		
<1 year	101	28
1 – 4 years	85	24
5 – 9 years	14	4
>10 years	2	1
Don't know	155	43
<b>Time</b>		
Once a day	89	25
Twice daily	79	22
Weekly	16	4
If available	18	5
Don't know	155	43
<b>Use more than one agent</b>		
Yes	125	35
No	51	14
Don't Know	181	51
<b>Type of agent</b>		
Creams	125	35
Soaps	37	10
Syrups	0	0
Injectable	0	0
Pills	0	0
Herbs	40	11
Don't know	155	43
<b>Choice of skin lightening agent</b>		
Brand name	43	12
Friends	117	33
Advertisement	20	6
Sample	22	6
Don't know	155	43
<b>Use in all body parts</b>		
Yes	168	47
No	34	10
Don't know	155	43
<b>Most preferred part</b>		
Face	24	7
Upper part	10	3
Lower part	0	0
Don't know	323	90

As shown in table 4 in the previous page, fifty seven percent 202 (57%) of the respondents were active users of skin lightening agents as the time of the study. Half 101(28%) of those that use the skin lightening agents did so for a period of less than one year followed by about 85(24%) of the respondents who used it for a period of between one to four years. The finding of this study showed that majority of the users of the skin lightening agents do so at least once 89(25%) or twice 79(22%) daily. some students use more than one agent 125 (35%). Up to 40 (11%) admitted of using herbs. Creams are the skin lightening agents that are most frequently used 125(35%). Others agents used are in form of soap 37(10%). Majority of the respondents, 117(33%) choose the product by friend's recommendation, while others go by reading the brand name on labels 42(12%) or through advertisements 20(6%) and samples 22(6%). Most of the respondents 168(47%) include the whole of the body for skin lightening. Among the students who do not apply skin lightening agents on the whole body majority preferred the face.

## CHAPTER FIVE

### DISCUSSION CONCLUSIONS AND RECOMMENDATIONS

#### 5.1 DISCUSSION

##### 5.1.1 Knowledge

Majority of the respondents heard about skin lightening agents mainly from friends. This is in line with one study which found out that most users of skin lightening agents were encouraged to engage in the practice by their friends (Malangu N, Ogunbanjo G A., 2006).

Most of the respondents knew that skin lightening agents have side effects. This is consistent with the existing literature that skin lightening creams cause harmful effects on the skin (AJose F O., 2005). The literature furthermore outlines that skin lightening products lead to absorption of harmful chemicals such as hydroquinone which may result in organ failure or death (de Souza M M., 2008). However, these results are incongruent with the findings of a study which found that most of their participants were less aware of the risks and negative impact that skin lightening products have on the user's life (Mpengezi A, Nzuzi N., 2014). Similarly, a study found that although participants self-reported to be knowledgeable about the negative effects of skin lightening products, they were actually not knowledgeable (Dlova N, Hamed S, Gwegweni J *et al.*, 2014). This study was also consistent with a preliminary study in Malaysia whereby majority of the respondents among the undergraduate students knew about the active ingredients in skin lightening agent they use before buying because of safety reasons. Majority of them knew about the health effect attributed to skin lightening agents which agrees with a South African study in which majority of respondents had knowledge of adverse effects related to skin lightening agents (Rusmadi S Z, Syed I S N, Praveena S M., 2015).

About half of the students knew the active ingredients in skin lightening agents. This is similar to one study in South Africa where many students were able to mention examples of the dangerous ingredients such as mercury, hydroquinone, tretinoin in skin lightening agents and the consequences of using skin lightening agents such as

skin damage, discoloration and infections (Rusmadi S Z, Syed I S N, Praveena S M., 2015).

Therefore, KIU students' full awareness of the negative consequences associated with the practice of skin lightening is a possible indicator that information relating to the skin lightening is dispersed. In addition, because KIU students have achieved higher education, this could have positively influenced their knowledge levels with regard to skin lightening consequences. This could mean that the more educated a person is, the more likely they are to be knowledgeable about certain issues of social interest. However, in one study, researchers did not find a correlation between level of education and knowledge of skin lightening consequences (AlGhamdi K M., 2010).

### **5.1.2 Attitude**

A significant proportion of respondents feel that skin lightening as a beautification factor. This is congruent with the existing literature that skin lightening is perceived as a body beautification practice performed by people who are determined to achieve a flawless skin complexion. That literature also found out that many people often bleach because they want to remove facial blemishes so that they appear beautiful (Mpengesi A, Nzuza N., 2014). Similarly, a study found that people lighten their skin to even out and improve their complexion (AJose F O., 2005). For this reason one researcher on skin lightening practice stated that having a smooth skin is one of the benefits of skin lightening because an even toned, blemish free skin is everyone's dream (de Souza M M., 2008). Therefore, this study and the existing literature demonstrates the value attached to possessing a radiant, even toned and perfect skin complexion as it is deemed attractive, and thus, admirable. The latter may motivate an individual to employ all means possible to achieve this esteemed attribute. In the Indian Caste system, a woman is considered classy and worthy if she is light skinned and a man is considered elite if he marries a light skinned woman. These findings mean that some families and communities hold the ideology that fairness or lightness equates to beauty and status, hence, highly favorable (Franklin I., 2013).

Many of the respondents asserted that the use of skin lightening should not be restricted to medical use only however some do not think the same way which is similar to one study which found out that respondents utilised skin lightening creams to treat various skin disorders, indicative that they can be used for medicinal purposes (AlGhamdi K M., 2010).

Skin lightening can lead to getting a suitor faster according to majority of the respondents. These findings corroborate with existing literature on similar themes (Durosaro, A I, Ajiboye S K, Oniye A O., 2012). According to one study, people are obsessed with facial attractiveness and, as result, resort to lightening their skin with the aim to secure romantic relationships. For this reason people bleach their skin to look appealing, hence, attractive (Charles C A., 2011).

Some of respondents agree that stigmatization is an issue in use of skin lightening agents. This is consistent with existing literature that people who practice skin lightening are at times negatively evaluated by societies, families and peers. In this same study one participant explained that skin lightening activists do so because they are not physically appealing (Gwaravanda, E T., 2011). Therefore, skin lightening activists are at times unfavorably stereotyped as people who dislike their physical appearance and as a result, employ various means as an attempt to disguise their unattractiveness. For this reason, users usually stop engaging in the skin lightening practice because of critique by significant others (Ajose F O., 2005). On the contrary, a study found that most users of skin lightening agents were encouraged to engage in the practice by their friends, suggesting that predictor factors may vary from case to case (Malangu N, Ogunbanjo G A., 2006). This study is also consistent with one study in Jamaica whereby respondents were more knowledgeable on the consequences of skin lightening as they reported that it was costly, addictive, time consuming, causes stigma and exposes an individual to possible name calling (Robinson, P.A., 2011)

Most students believe that addiction to use of skin lightening agent can occur. One study found similar results in that some of the participants reported that skin

lightening practice is addictive in nature and a lengthy process that requires dedication (Robinson P A., 2011).

### **5.1.3 Practice**

Over half of the respondents were active users of skin lightening agents at the time of the study. This is evident with a study that found out that Nigeria has the highest proportion of women using agents of skin lightening world over. A study conducted in Edo state located in South Nigeria revealed that many females and males actually use skin lightening agents (Burger P, Landreau A, Azoulay S *et al.*, 2016).

Most respondents are in the age bracket of 20 to 24 years which is the typical age of undergraduate students (Essence., 2016).

Some students use more than one agent. This is not surprising as there is report in which some users of skin lightening agents that go beyond mere combinations to add substances like lemon juice, potash, tooth paste, milk, pulverized naphthalene balls and detergents (Sule S T *et al*, 2014).

In our study most of the respondents include the whole of the body for skin lightening. The finding of this study showed that majority of the users of the skin lightening agents do so at least once or twice daily. This study also found out that some students use more than one agent. Among the students who do not apply skin lightening agents on the whole body majority preferred the face. This is consistent with a recent study which found out that that facial lightening is more frequently practiced than any other patterns. However, the reason for choosing which type or pattern of skin lightening depends largely on the individual and the purpose of doing it. At the initiation of the practice, a total body surface application is often used for maximum effect. This is then maintained with daily application of the multiple products containing different agents concurrently or sequentially (NOIPoll., 2014).

## **5.2 CONCLUSIONS**

Majority of the female students in this study at Kampala international university – western campus apply skin lightening products with potentially dangerous chemical agents meant for other reasons on their skin (despite having high knowledge of the harmful effects) mainly to appear attractive to the opposite sex and also to be treated better.

## **5.3 RECOMMENDATIONS**

Many students are using skin lightening agents. They seem to have knowledge of the harmful effects of these agents. The best way to curb the use of skin lightening agents is for government to restrict and ensure information that is used for advert and education in regards to skin lightening agents is correct.

We recommend further studies on the effects of skin lightening agents currently in use by students or other groups of people.



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## APPENDICES

### APPENDIX I: STUDENTS CONSENT FORM

I am a fifth year undergraduate student of Bachelor of Medicine and Bachelor of Surgery at KIUSHS. I am carrying out a study on Knowledge Attitude and Practice of Skin lightening among female students at Kampala International University-Western Campus Uganda. I request you to take part in a study that will form part of my undergraduate course. The study will include filling out a questionnaire. Only the students who consent will participate in the study. I will assist all the students in filling the questionnaire. There is no material gain after participation in the study and the results will be used for research purposes only and no invasive procedure will be done on the students.

We are trying to find out better ways of improving skin health. Your responses are of great value and will help to keep people in this country healthy. Please help us by filling in this questionnaire.

It is voluntary for you to participate in this study. You can withdraw from the study at any time. Please do not write your name on this questionnaire. All the information you give us was kept private;

This is not a test and there is no right or wrong answer.

If you need more information, here is the contact address of the principal researcher.

**Tell: 0775-298-663**

**Email: apaklino@gmail.com**

#### **Consent Statement of respondent:**

I do hereby freely consent to take part in the study. The procedure has been explained to me and i understand that no harm was caused to me and there was no material gain from the study. I can also withdraw from participating in this study at any time without any harm. Am informed and understand that all the information gathered from me was treated with confidentiality.

Signed

Date

## APPENDIX II: QUESTIONNAIRE

### Knowledge, Attitude and Practice of Skin Lightening

SERIAL NUMBER.....

Please MARK [√] one alternative per question

#### A. SOCIO-DEMOGRAPHIC CHARACTERISTICS OF THE STUDY SUBJECTS

##### 1. Age

- a) 15-19 [ ]    b) 20-24 [ ]    c) 25-29 [ ]    d) 30-34 [ ]    e) 35-39 [ ]

##### 2. Marital Status

- a) Married [ ]    b) Divorced [ ]    c) Separated [ ]    d) Widowed [ ]  
e) Single [ ]

##### 3. Religion

- a) Islam [ ]    b) Catholic [ ]    c) Protestant [ ]  
d) Pentecostal [ ]    e) Seventh-day Adventist [ ]    f) Baptists [ ]  
g) Non-religious    h) Other? Specify.....

#### B. KNOWLEDGE ABOUT SKIN LIGHTENING

##### 4. Have you ever heard of skin lightening agents?

- a) Yes [ ]    b) No [ ]

##### 5. If yes, what was the source of information about skin lightening agents?

- a) Friends [ ]    b) Family member [ ]    c) Media [ ]  
d) Chemist [ ]    e) Vender [ ]    f) Don't know [ ]

##### 6. Do you know the active ingredients?

- a) Yes [ ]    b) No [ ]

##### 7. If yes, what was the source of knowledge of ingredients?

- a) Labels or leaflets [ ]  
b) Friends [ ]  
c) Advertisement [ ]  
d) Health worker [ ]  
e) Don't know [ ]

##### 8. Who uses skin lightener more?

- a) Married women [ ]  
b) Unmarried women [ ]

c) Don't know [ ]

**9. Skin lightening agents has side effect**

a) Yes [ ] b) No [ ] c) Don't know [ ]

**10. Can you recognize of users of skin lightening agents?**

a) Yes [ ] b) No [ ] c) Don't know [ ]

**11. How do you recognize users?**

a) Beautiful and fair looking [ ] b) Depigmentation [ ]  
b) Sunburn pimples and rashes [ ] d) Very fair skin [ ]  
d) Dark spot and knuckle [ ] f) Smooth and shining [ ]  
f) Body odor [ ] h) Don't know [ ]

**C. ATTITUDES TOWARDS SKIN LIGHTENING**

**12. Do women use skin lightening agents because of the environment that they are located?**

a) Agree [ ] b) Disagree [ ] c) Don't know [ ]

**13. Do you find skin lightening more a beauty factor?**

a) Agree [ ] b) Disagree [ ]

**14. Do you think if a woman had a lighter complexion she would be treated better?**

a) Agree [ ] b) Disagree [ ] c) Don't know [ ]

**15. Do you think the use of skin lightening products should be used only for medical purposes?**

a) Agree [ ] b) Disagree [ ] c) Don't know [ ]

**16. Do you think the use of skin lightening products would make a woman have more suitors?**

a) Agree [ ] b) Disagree [ ] c) Don't know [ ]

**17. Do you think the use of skin lightening products would make a woman be stigmatized?**

a) Agree [ ] b) Disagree [ ] c) Don't know [ ]

**18. Can skin lightening be addictive?**

a) Agree [ ] b) Disagree [ ] c) Don't know [ ]

**19. Do you recommend the use of skin lightening agents?**

a) Yes [ ] b) No [ ] c) Don't know [ ]

#### **D. PRACTICES OF SKIN LIGHTENING**

**20. Have you ever used skin lightening agents? (If NO/ don't know, stop here!)**

- a) Yes [ ]      b) No [ ]      c) Don't know [ ]

**21. For how long have you used skin lightening agents?**

- a) <1 year [ ]      b) 1-4 years [ ]      c) 5-9 years [ ]  
d) 10 years [ ]      e) Over 10 years [ ]      f) Don't know [ ]

**22. How frequent do you use skin lightening agents?**

- a) Daily [ ]      b) Twice daily [ ]      c) Weekly [ ]  
e) If available [ ]      f) Don't know [ ]

**23. Do you use a many forms of skin lightening agents?**

- a) Yes [ ]      b) No [ ]      c) Don't know [ ]

**24. What kind of skin lightening agent do you use?**

- a) Creams [ ]      b) Soaps [ ]      c) Syrups [ ]  
d) Injectable [ ]      e) Pills [ ]      f) herbs [ ]  
f) Don't know [ ]

**25. How do you choose a type of skin lightening agent?**

- a) Brand name [ ]      b) Friends [ ]      c) Advertisement [ ]  
d) Sample [ ]      d) Don't know [ ]

**26. Do you use the skin lightening agent for all body parts?**

- a) Yes [ ]      b) No [ ]      c) Don't know [ ]

**27. Which is the most preferred part you apply the skin lightening agent?**

- a) Face [ ]      b) Upper part [ ]      c) Lower part [ ]  
d) Don't know [ ]

**Thank You for Participating In this Study**

### APPENDIX III: MORGAN'S TABLE

**Morgan's Table for Determining Sample Size from a Given Population**

N	S	N	S	N	S
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	1000000	384

Where N= population size, S= sample size. Source: Morgan, & Krecjie (1970)



## APPENDIX IV: PERMISSION TO CARRY OUT THE STUDY



**KAMPALA INTERNATIONAL  
UNIVERSITY – WESTERN CAMPUS**

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**OFFICE OF THE DEAN  
FACULTY OF CLINICAL MEDICINE & DENTISTRY**

08/10/2018

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

**RE: APAK LINO (BMS/0034/132/DU)**

The above named person is a fifth year student at Kampala International University pursuing a Bachelor of Medicine, Bachelor of Surgery (MBChB) Programme.

He wishes to conduct his student research in your community.

**Topic:** Knowledge Attitude and practice of skin lightening among female students at Kampala International University-Western Campus

**Supervisor:** Dr. Mirembe Stephen Kizito

Any assistance given will be appreciated.

Yours Sincerely,

**Dr. Akib Surat O**  
Deputy Executive Director/ Assoc Dean (FCM & D)



“Exploring the Heights”

Assoc. Prof Ssebuufu Robinson, Dean (FCM & D) 0772 507248 email: [rssebuufu@gmail.com](mailto:rssebuufu@gmail.com)  
Dr. Akib Surat Associate Dean FCM & D) email: [doctorakib@yahoo.com](mailto:doctorakib@yahoo.com)