

**PREVALENCE OF SKIN BLEACHING AGENTS' USAGE AMONG YOUTHS
IN TERTIARY INSTITUTIONS IN KWARA STATE, NIGERIA**

Aiyedun, O. S. (MB.BS; FMCP) ¹; Aiyedun, O. L. ²; Ajokpaniovo, M. ³

Dermatology Unit, Department of Medicine,
University of Ilorin, Teaching Hospital ¹

Department of Educational Guidance and Counselling
Faculty of Education, University of Ilorin ^{2&3}
olawale.aiyedun@npmcn.edu.ng
ajokpaniovo.m@unilorin.edu.ng

Abstract

Skin bleaching or toning is a serious problem among youths particularly in the contemporary Nigerian society. Skin bleaching agents are rampant and readily available in many cosmetic shops. This study investigated prevalence of skin bleaching agents' usage among youths in tertiary institutions in Kwara State, Nigeria. Descriptive survey research was adopted for the study. Simple random sampling techniques was used to select a sample size of 379. The instrument used was entitled "Prevalence of Skin Bleaching Questionnaire (PSBQ)". The instrument was validated and subjected to a test re-test reliability technique. A co-efficient of 0.79 was obtained using Pearson's Product Moment Correlation statistics. Chi-Square statistical method was used to analyse the data collected at 0.05 level of significance. The findings revealed that the prevalence of skin bleaching agents' usage among youths in tertiary institutions in Kwara State, Nigeria is high. There is no significant difference in the prevalence of skin bleaching agents' usage among youths in tertiary institutions in Kwara State, Nigeria based on gender and religion. It was recommended that managements of tertiary institutions should regularly sensitize the youths on what skin bleaching and its agents' entails; the prevalence as well as some of the resultant effects of engaging in them. Parents should endeavour to be more observant and caution their wards' as soon as they notice some signs of skin bleaching agent usage.

Introduction

The skin is the largest organ in the body by surface area which covers the entire external surface of the human. It is a biological material which is made up of three-layered tissue comprising of epidermis, dermis and subcutaneous tissues with several kinds of chromophores like melanin and hemoglobin. When the biological layers are destroyed, this can lead to serious health problems such as cancer of the skin and others. It has been observed that people in the course of trying to look attractive, appreciated and accepted by their peers, tend to make use of skin bleaching agents to bleach or tone their skin to a different complexion of their choice.

Skin bleaching is the use of very harsh and possibly dangerous chemical substances to brighten the skin, while skin lightening is the process of using skin products

that lightens the dark spots caused by hyperpigmentation (Jacobs, Meagan, Levine, Susan, Abney, Kate & Davids, Lester. 2016). Skin bleaching is a practice that has created significant health problems and social issue. This practice has become widespread due to unfettered access to various brands of bleaching creams. Skin bleaching also known as skin lightening, skin toning, skin whitening refers to the cosmetic misuse of toxic agents or abuse of skin lightening agents primarily to change one's normal and natural skin color. Skin bleaching can also be described as the practice of using chemical substances to lighten the skin, which works in a pigment called melanin in the skin. Bleaching is done through the use of dangerous and household chemicals. Many skin bleaching practitioners reported experiencing benefits such as increase in attractiveness, confidence and self-esteem, relief from bodily blemishes, and better appreciation from spouses (Shroff, Diedrichs & Craddock, 2018).

Skin bleaching cuts across geographic regions of the world and cultures. Reasons could be to become white, beautiful, satisfy one's partner, attract male partners among others. People all over the world especially countries like Togo, Mali, Senegal, South Africa, Nigeria and others practice various forms of skin bleaching throughout history and this is done for different motives among which were stated earlier. Skin bleaching is the cosmetic application of topical ointments, gels, soaps and household chemicals to depigment or lighten the skin complexion, or any other substance that is strong enough to cause a quick change of the skin colour (Street, Gaska, Lewis & Wilson, 2014).

Skin lightening has been widely reported for both Asia and Africa, with a quarter of women in Japan and two-thirds of Indian women using bleaching products (Street, 2014). It was noted that the prevalence rate varied from country to country. In Mali, twenty five percent of women are involved in skin beaching while in Ghana fifty percent of people enjoy using whitening creams. Senegal, Togo and Nigeria ranked high (70%) among countries using bleaching substances (Durosaro, Ajiboye & Oniye. 2012; Kpanake, Munoz Sastre & Mullet 2010). Skin bleaching 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 youths' physical and psychological wellbeing, the number of people using complexion cream has continued to increase on a daily basis (Durosaro, Ajiboye & Oniye, 2012).

Several studies have been conducted in sub-Saharan Africa to determine the prevalence and use of skin-whitening products. For example Osei Ali, Owusu, and Baiden, (2018) reported the incidence of skin bleaching among high school students in Ghana and Benin. The researchers found that 60% of female secondary school students that participated in the study engaged in skin-lightening practices. Equally, Atadokpede, Adegbedi, Koudoukpo, Teclessou, Aholoukpe, Degboe and Yedomon (2015) revealed that 36.6% of high school students in Malaysia, Nigeria and Zimbabwe engaged in depigmentation. Rusmadi, Ismail, Praveena, (2015) reported that 63.6% of university students in Malaysian and Nigeria universities are using skin-lightening items. Faronbi, Oyediran, Adebisi, Adereti, Faronbi, Famakinwa, (2018) explained that 41.5% of university students in Southwest Nigeria had used lightning products at one point or the other.

Despite the consequences attached to this practice, many Nigerians use different types of bleaching creams because they believed that it makes them more beautiful. Skin

bleaching has become an important practice among youths in movie, photography, printing, medical, retail, cosmetics industries. For most of these industries, the reproduction of skin color is essential with the goals of making one look attractive to clients and potential customers. This has led many to wrongly apply skin-bleaching chemicals all in the name of wanting to look exactly like what is seen in photography or the print media, not knowing that there were lots of computers works that has gone into making people look different from reality when seen in pictures.

The side effects of skin-bleaching include skin inflammation, fragile skin, tissue discoloration, acne, eczema, poor wound healing, body odor, and more serious health risks like hypertension, diabetes, skin cancer, blindness, birth defects and death (Olumide, Akinkugbe, Altraide, Mohammed, Ahamefule & Ayanlowo, 2008). Skin bleaching has been established to have serious health-related outcomes among users, especially those who subjected their bodies to creams formulated without proper safety precautions regarding chemical contents used in their production (Durosaro, *et al* 2012). The growing concern about the use of skin bleaching calls for a detailed examination of the motivations and uses of skin bleaching formulas, especially among youths.

There are other local bleaching products that are common among Africans and the use of uncertified products sourced locally has caused a lot of damage to the beautiful, coloured skin of many women. The youths are not left out in this, as majority of them are easily influenced by peer pressure and other vices all in the name of being given the sense of belonging and wanting to look attractive, they eventually get entangled in the web of skin bleaching which has lots of aftermath effects.

The active ingredients like mercury can lead to poisoning because it is very toxic and contains toxic agents that can cause serious psychiatric, neurological and kidney problems (Durosaro, Ajiboye & Oniye, 2012). These chemicals irritate the skin and causes redness, patchiness, and acne breakout to the face and the skin at large. Skin bleaching agents slowly kill one without knowing (Adegboye, Abayomi & Adewoyin, 2020). Melanin which protects the skin from the sun Ultra violet rays is been hampered by skin bleaching agents. Thus, melanin will no longer be produced in the body or formed in the skin cells and this all result from blockage of the formation of the enzymes that helps to produce it naturally in the body. When melanin is no longer being produced to replace the dead skin cell that falls off, the resultant effect is skin toning and lightening (Yousef, Alhajj & Sharma, 2021). These all result in premature skin aging among many other vices.

Health-related issues as a result of skin bleaching going wrong can result in a lot of medical challenges. Skin bleaching also has a tremendous impact on participants' personality development, self-esteem, and identity formation (Azibo, 2011). Both men and women are involved in skin lightening; however, women are generally said to engage in the practice than men (Rusmadi et al., 2015). For example, in a study carried out by Olumide et al. (2008), out of 450 Nigerians who confessed to the use of lightening creams, 73.3% were women, and 27.6% were men. The high percentage can be compared with other parts of the world where skin bleaching is a notable practice. Studies by Adebajo (2002) and Ravichandran (2013) also pointed out that women aged between 20 and 30 years are more active in the use of skin lightening creams. While not disregarding the practice of skin bleaching among men.

According to the World Health Organization report in 2018, 77% of Nigerian women use skin lightening products which is the world's highest percentage. Regardless of the benefits that the users claim, bleaching has life-threatening side effects such as skin cancer, liver damage and kidney failure among others. Some possible reasons in which users of skin bleaching products bleach their skins include: boosting their confidence, getting better employment opportunities, being able to cope with peer pressure among others (Punch, 2022).

The media and corporate world's influence cannot be left out in the race as most of them present fair coloured people in adverts on the television screen and billboards. The Nigerian movie and music industry aggravated the situation by promoting a Eurocentric picture to Nigerians by correlating light skin to beauty and success as most movies and musicals feature protagonist who are light skinned people which in effect has a ripple impact on the die-hard fans and admirers.

Kpanake, Sastre and Mullet (2009) reported that 73.3% of women and 27.6% of men raises serious questions about the role of policy makers and administrators in stemming the skin-bleaching phenomenon. Policy makers in Nigeria appear to have no reliable records of the devastation caused by skin bleaching. There is a need to understand whether awareness of existing policies at different levels of governance impacts distribution and easy access to skin bleaching chemicals among the youths. Conversely, it has been argued that individuals who frequently use skin bleaching cream bleaches their skin in opposition to African culture and for other obvious reasons that include appearance, attraction, style, and satisfaction (Kpanake, Sastre & Mullet, 2009). Different dermatological adverse reactions and consequences have been recorded with the use of different whitening products for examples e.g Ochronosis, (patchy skin darkening especially on the face), skin infections as erysipelas (bacteria skin infection) and dermatophytes (Fungal Skin Infection), striae (uneven thinning of the skin), telangiectasia (dilatation of the Skin capillaries) and acne (pimples). Also, prolonged use of these creams has always been associated with cushing's syndrome (combination of obesity), hypertension, Striae and diabetes mellitus. Excessive steroid use in bleaching cream or in tablets can lead to renal impairment (kidney disease). (Al-Saleh, Shinwari & Al-Amodi, 2010). Despite the negative influence of skin lighting agents, the prevalence rate remains high in Nigeria.

Concept of Skin Bleaching

Skin bleaching is the changing of the skin colour of the human being with the use of items like chemicals, soaps, herbs, fade creams and any other substance that is strong enough to cause a quick change of the skin colour. Durosaro, Ajiboye and Oniye (2012) submitted that in Nigeria, the history of skin bleaching may be traced to the period when the race for skin bleaching first appeared on the face of the country. The main explanation for the practice of skin lightening in antiquity is that women sought to maintain and increase the lightness of their skin as a sign of femininity, and thus a tool of seductive charm. Indeed, in ancient Egypt, as in other parts of the ancient Mediterranean world where people with different levels of skin pigmentation mingled together, women were always represented with a clearer skin than their male counterparts. (Antione, 2019). It is the use of chemical products in whitening the skin colour and it might be for

fashion, therapeutic and cosmetic purposes. However, the method and degrees at which skin bleaching was practiced in those days would definitely be different from the present. Skin lightening is the act of using steroids and chemical containing products to lighten the skin. Hydroquinone and kojic acid are often used in skin bleaching creams (Owolabi, Fabiyi, Adelakin & Ekwerike, 2020)

The use of skin lightening cream is common and widespread among the African, Asian and North American population and the use of skin bleaching agents has been reported in a few studies in Nigeria. Durosaro et al (2012) reported that female secondary school students' perception towards skin bleaching in Ibadan metropolis adduce that skin bleaching helps female to get the desired male partner. This is because they become more attractive and appealing. Amodu, Bolori, Ahamad, Kale and Kuchichi (2018) reported that majority of the female students in North Eastern Nigeria bleached their skin with dangerous chemical agents meant for other reasons mainly to attract the opposite sex. The prolonged use of these products may cause neither coetaneous nor systemic side effects. The impression of skin bleaching is to look beautiful, classic and accepted. This is majorly based on a notion that almost everybody likes or love white skin.

Skin bleaching cream covers a wide range of products designed to bleach and lighten the skin. These creams can be use on the face or remove spot or acne scars on the skin. Most of these creams are used mainly to change the colour of the skin or make it look brighter. The original intention of some people might be to use it to treat skin problems like spots, acne among many other related things (Amodu, Bolori, Ahamad, Kale & Kuchichi, 2018).

The youths are at the front line in the use of social media and technology and as such are influenced by imported cultures demonstrated by the connected world. Eyo, (2019) said "what happens in the west has gain popularity and serves a great influence on how Nigerian youths conduct their everyday affairs". other findings indicated that African women have over the decade been subjected to misrepresentation by the western media and are seen as being stereotypes to this on a daily bases. African youths are faced constantly with an image that promotes ideals of beauty in white skin through the social media, print media and the tubes.

Common Dangerous Skin Lightning Agents

The active ingredients in skin bleaching creams and soaps include but not limited to: hydroquinone; Kojic acid, mercury, costic agents and local bleaching agents.

Hydroquinone: Harmful product such as Hydroquinone is present in many skin lightening products. (Ferreira, Polonini, Candido da Silva, Brandaio, Raposo, 2018). Hydroquinone is considered as a primary topical ingredient for inhibiting melanin production because it reduces the skin's production of melanin which is responsible for skin color. However, because of the carcinogenic nature of hydroquinone, it has been banned in some countries in a bid to reduce the risks of skin cancer (Al-saleh, 2016).

Kojic Acid: Kojic acid on the other hand, known as Koji in Japan, is a fungal metabolic product which has the advantage of not being oxidized in skin lotions (Al-saleh. 2016). It is a chelation agent that is produced by several fungi including *Aspergillus oryzae*. It inhibits and prevents the formation of tyrosine and it contains some antimicrobial properties against several common bacterial stains even in small dilutions. Poligone,

Hayden, Chen, Pentland, Jimi, Ghosh. 2013). Kojic when combined for typical treatment were effective in treating facial melasma.

Mercury: Mercury is used as skin bleaching agents because it block the production of melanin which gives dark colour to the skin. Mercury containing skin bleaching products are hazardous to health and as a result had been band in many countries (WHO, 2019). When applying mercury-based creams for bleaching, mercury can be absorbed, leading to mercury poisoning, this may result in a range of symptoms, including psychiatric, neurological, and kidney problems (Engler, 2005). Some skin diseases (e.g., Tinea incognito) are observed in babies whose mothers used mercury-based creams during pregnancy and/or breast feeding (Olumide *et al.*, 2008).

Local bleaching agents: A review in Ethno pharmacology details the processes traditionally used to lighten the complexion in different societies. It involves the use of mineral substances (ceruse, sublimate, etc.), animal products (crocodile dung, intestines of hedgehogs, veal droppings, etc.) or plants (lemon, celery, etc.), only some of which possess minor lightening power, such as bearberry, which contains arbutin. Kamagaju, Bizuruet *al* (2013). These traditional processes been increasingly supplanted by other topical agents of moderate efficacy such as vitamin C, kojic acid, arbutin, alpha hydroxy acids, and so on.

More recently, glutathione and corticosteroid therapy have been introduced, although they have not proven as effective as high-potency dermal corticosteroids or concentrated hydroquinone. The depigmenting use of radiotherapy, which has never really developed and is known mainly through the media success of an unjustifiable experiment conducted at the beginning of the twentieth century in the USA. (Harriet 2006). Surveys conducted in Africa among both men and women practicing skin bleaching show that a lighter skin is also sought as a sign of a high social status. This motivation is generally related to the reality of differences in social position observed locally

Prevalence of Skin Bleaching

Many health professionals have embarked on an enquiry to discern the degree to which people indulge in this self-harming practice (Lewis *et al.*, 2011). Studies have indicated that the skin bleaching phenomenon is widely practiced amongst different age groups, gender, socio-economic backgrounds and races (Olumide *et al.*, 2008). People from across the world use skin whitening products for various reasons, mostly to improve physical appearance (Charles, 2003a). In Nigeria, Olumide *et al.* (2008) found that out of 450 participants who confessed to skin bleaching, 73.3% were women, whereas 27.3% were men. Moreover, the World Health Organization states that Nigeria records the highest percentage of women using skin bleaching products with an estimate of 77% worldwide (Rambaran, 2013). In addition, a cross-sectional study of 910 women in Togo conducted by Pitché *et al.* (2005) found that 58.9% of women used skin bleaching cosmetic products, and that 30.9% used products containing mercury, 24% used products containing hydroquinone and 18.5% used products 11 containing topical corticosteroids.

A study conducted by Pitché *et al.* (2005) suggested high rates of cosmetic use of skin bleaching products among Togolese women. Moreover, it has been found that 25% of women in Bamako, Mali and 52% in Dakar, Senegal use skin lighteners (Adebajo,

2002; Del Guidice & Yves, 2002; Mahe, Ly, Aymard, & Dangou, 2003). A cross-sectional study of knowledge, attitudes and practices towards the use of topical bleaching agents amongst 509 Saudi Arabian women by AlGhamdi (2010) found that the degree of skin bleaching practice has increased in the country, with an estimation of 38.9% reporting to be actively bleaching their skin. It is worth noting that in Saudi Arabia, skin bleaching products are legal (AlGhamdi, 2010). Furthermore, East Asia has a long history of valorised practice of skin bleaching and Nielson (2007) found that 30% Chinese, 20% Taiwanese, 18% Japanese and 8% Koreans frequently used skin lighteners (as cited in Glenn, 2008). In Europe, White women utilize bleaching creams to maintain radiant skin free from hyperpigmentation brought about by the aftermath of being subjected to heat (Durosaro et al., 2012) or the often-dreaded process of maturation (Glenn, 2008). Interestingly, a review of literature from countries where the use of skin lighteners is a commonly held practice points to slavery, colonialism or westernisation as a precursor for the prominence of skin bleaching (Charles, 2003a; Glenn, 2008; Blay, 2011; Rambaran, 2013; Julien, 2014).

The prevalence is reportedly higher in Nigeria where up to 77% of women are documented to have used skin bleaching products (Kpanake, Sastre, & Mullet, 2009). Recent studies done among some selected groups in Nigeria showed high though differing prevalence rates. For instance, while 77.3% of traders in Lagos State practiced skin lightening (Adebajo, 2002), 48.1% of university undergraduates in Maiduguri used Skin Lightening product (Amodu *et al.*, 2018). Although, the use is global, African women are biggest consumers of skin bleaching products, this include potentially harmful local concoctions made from household chemicals (e.g. automotive battery acid, bleach, laundry detergent, toothpaste), and over-the-counter creams, putting them at greater risk for a variety of negative health outcomes. The increasing sales/boom of cosmetic industries and advertisements also seems to suggest that “spot free skin or a flawless complexion” is necessary for success in life’s endeavors such as business and friendship with the opposite sex (Amodu *et al.*, 2018).

The global skincare market scenario is in a state where there is a high rise in the demand for natural and organic skincare products and the industry seems to grow at a rapid Phase. Hence, companies are focusing on manufacturing innovative products that will keep the consumers vibrant in choosing various options for their skin care routine. The global skin lightening products market size was valued at USD 9.96 billion in 2021 and is expected to expand at a compound annual growth rate of 5.5% from 2022 to 2030. The breakout of Covid-19 has resulted in changing consumer preferences who are proactively seeking active and functional skin care products which in turn, is expected to accelerate the market growth in the forecast period. Synthetic products include hydroquinone, topical cortico steroids among others. Organically and naturally cultivated products such as aloe vera, sea kelp, argan oil and Jobola oil are some of the key raw materials and ingredients used for manufacturing skin lightening products. Furthermore, the growing importance of self-care in recent years has driven consumers to proactively create relaxing self-care routines at home. This trend is driving the demand for products with active ingredients that have lightening and brightening properties including creams and lotions, repair creams, peels, masks, serums, powders and scrubs.

Statement of Problem

Skin bleaching is a cosmetic practice that people indulge in with the aim of lightening their skin. Some use it to lighten specific areas or dark spots, while others may want to lighten their overall skin tone. Both men and women use skin lightening products, not only to lighten their skin but to fade freckles, blemishes, age spots and treat acne. Consumers of skin bleaching agents are often unaware that many of these products contain harmful chemicals including mercury, a toxic substance which poses risks to human health and contaminates the environment. Amodu, Bolori, Ahmad, Kale, and Kuchichi (2018) carried out a study on the knowledge, attitude and practice of skin whitening among female university students in Northeastern Nigeria. They found out that the awareness level of the students about skin whitening agents and their harmful effects was very high among the student mainly for beautification. Some of the respondents agreed that skin whitening agents can be addictive. Faronbi, Oyedira, Adebisi, Adereti and Famakinwa (2018) conducted a study on perceived risk and consequences of bleaching practices among university students in Southwest Nigeria. Findings from their study showed that 41.5% of the respondents had used bleaching agents, and 70.5% have a negative perception of its risks and consequences. This study intends to add more value to the body of existing knowledge and thus deems it fit to conduct a study on the prevalence of skin bleaching agents' usage among youths in tertiary institutions in Kwara State, Nigeria.

Research Question

1. What is the prevalence of skin bleaching agents' usage among youths in tertiary institutions in Kwara State, Nigeria?

Research Hypotheses

In line with the research questions, the following null hypotheses have been formulated:

1. There is no significant difference in the prevalence of skin bleaching agents' usage among youths in tertiary institutions in Kwara State, Nigeria based on gender.
2. There is no significant difference in the prevalence of skin bleaching agents' usage among youths in tertiary institutions in Kwara State, Nigeria based on religion.

Methodology

The descriptive survey design was adopted. The population for this study comprised of youths in Kwara State, while the target population consists of selected youths in the three senatorial districts (Kwara Central, Kwara North and Kwara South) of Kwara State. Multi-stage sampling procedure was used to select 379 respondents for the study. The instrument used for the study is titled "Prevalence of Skin Bleaching Questionnaire (PSBQ)" the instrument consists of two sections (A & B). Section A consists of demographic data of the respondents such as gender and religion. Section B contains twenty items on prevalence of skin bleaching usage. Section B of the instrument was patterned to have options of Yes (2 points) and No (1 point). The instrument was

validated by experts in the field of medicine and counseling. Thereafter, the researcher incorporated their suggestions into the final draft. The test re-test method was used. The two sets of scores derived were correlated using Pearson Product Moment Correlation. A coefficient of 0.79 was derived indicating that the instrument was reliable for the study.

Results

Demographic Characteristics of Respondents

Table 1: Distribution of Respondents by Gender

Gender	Frequency	Percentage
Male	162	42.7
Female	217	57.3
Total	379	100.0

Table 1 shows that 379 respondents participated in the study out of which, 162 (42.7%) of the respondents were males, while 217 (57.3%) of the respondents were females. This implies that more females participated in the study than their male counterparts.

Table 2: Distribution of Respondents by Religion

Religion	Frequency	Percentage
African Traditional Religion	19	5.0
Christianity	207	54.6
Islam	153	40.4
Total	379	100.0

Table 2 shows that 19 (5%) of the respondents practice African Traditional Religion, 207 (54.6%) of the respondents practice Christianity religion, while 153 (40.4%) of the respondents practice Islamic religion. This implies that there are more respondents who were of the Christianity religion that participated in the study.

Research Question 1:

How prevalent is skin bleaching agents usage among youths in tertiary institutions in Kwara State?

Table 3: Percentage Distribution on the Prevalence of Skin Bleaching Agents Usage among Youths in Tertiary Institutions in Kwara State

S/N	As far as I know, the following bleaching agents are commonly used by youths in Kwara State:	Yes	No	Mean	Rank Order
19	Gluta white or snail white body lotion	348 (91.8%)	31 (8.2%)	1.91	1 st
11	Facial cleansers	342 (90.2%)	37 (9.8%)	1.90	2 nd
4	Lightening soaps like Acura Soap; Fair Lady soap; Movate Soap	336 (88.7%)	43 (11.3%)	1.88	3 rd
3	Facial creams like Funbact-A; Tribotan and other triple action cream	328 (86.5%)	51 (13.5%)	1.86	4 th
18	Caro white cream	322 (85%)	57 (15%)	1.84	5 th
5	Kojic acid	317 (83.6%)	62 (16.4%)	1.83	6 th
13	Fair and white	316 (83.4%)	63 (16.6%)	1.83	6 th
6	Anti-oxidants (Vitamin C Serum)	296 (78.1%)	83 (21.9%)	1.78	8 th
1	Injections for toning	291 (76.8%)	88 (23.2%)	1.76	9 th
15	Bio-carrot lightening body lotion	290 (76.5%)	89 (23.5%)	1.76	9 th
8	Hydroquinone	267 (70.4%)	112 (29.6%)	1.70	11 th
2	Pills for toning	254 (67%)	125 (33%)	1.67	12 th
9	Clear Essence	252 (66.5%)	127 (33.5%)	1.66	13 th
10	Shirley	233 (61.5%)	146 (38.5%)	1.61	13 th
16	Maxi light lightening lotion	225 (59.4%)	154 (40.6%)	1.59	15 th
17	Bio-claire body cream	219 (57.8%)	160 (42.2%)	1.57	16 th
14	Peau Clear Cream	208 (54.9%)	171 (45.1%)	1.54	17 th
20	Diva maxitone fade milk	207 (54.6%)	172 (45.4%)	1.54	17 th
7	Mercury	202 (53.3%)	177 (46.7%)	1.53	19 th
12	Corticosteroids	177 (46.7%)	202 (53.3%)	1.46	20 th
Grand Mean Score		1.71			

Table 3 indicates that Items 19, 11 and 4 with mean scores of 1.91, 1.90 and 1.88, rank 1st, 2nd and 3rd. these Items state that: “As far as I know, the bleaching agents commonly used by youths in Kwara State are: Gluta white or snail white body lotion; facial cleansers and Lightening soaps like Acura Soap; Fair Lady soap; Movate Soap respectively. Ranked 20th is Item 12 with a mean score of 1.46 and it states that “As far as I know, the bleaching agents commonly used by youths in Kwara State is

Corticosteroids”. Since nineteen out of the twenty items have mean scores that are above 1.50, with a grand mean score of 1.71 which is greater than the mid mean score of 1.50, then it can be said that the prevalence level of the use of skin bleaching agents by youths in Kwara State is high. The finding corroborated the study of Kpanake, Sastre and Mullet (2010) who noted that skin lightening has been widely reported for both Asia and Africa, with a quarter of women in Japan and two-thirds of Indian women using bleaching products. It was noted that the prevalence rate varied from country to country. The finding is also in tandem with Durosaro, Ajiboye and Oniye (2012) who stated that in Mali, twenty five percent of women are involved in skin beaching while in Ghana fifty percent of people enjoy using whitening creams. Senegal, Togo and Nigeria ranked high (70%) among countries using bleaching substances.

Hypotheses Testing

Two null hypotheses were formulated for the study. Chi-square was used to analyze the data at 0.05 level of significance. In view of this, the results of the hypotheses tested are presented as follows:

Hypothesis 1: *There is no significant difference in the prevalence of skin bleaching agents usage among youths in tertiary institutions in Kwara State based on gender*

Table 4: Chi-square Showing the Prevalence of Skin Bleaching Agents Usage among Youths in Tertiary Institutions in Kwara State, Nigeria Based on Gender

Gender		Prevalence of the use of skin bleaching				Cal. χ^2	p-value	Decision
		Yes	No	df				
Male	Observed	121	41	162	1	0.69	0.41	Accepted
	Expected	124.4	37.6					
Female	Observed	170	47	217				
	Expected	166.6	50.4					
Total				379				

Table 4 shows that the calculated χ^2 value of 0.69 and a p-value of 0.41 at an alpha level of 0.05. Since the calculated p-value of 0.41 was greater than the alpha level of 0.05, this implies that there is no significant difference in the prevalence of the use of skin bleaching agents as perceived by youths in tertiary institutions in Kwara State on the basis of gender. This implies that irrespective of the gender of the respondents, they do not differ concerning the prevalence of the use of skin bleaching agents as perceived by youths in tertiary institutions in Kwara State. This finding corroborated Mahe (2014) who in a study stated that Nigeria records the highest percentage of women using skin bleaching products with an estimate of 77% worldwide. The result also corroborated Jennifer, Stephanie, Abhishri and Shalami (2012) who reported the incidence of skin bleaching among high school students in Ghana and Benin. The researchers found out that 60% of female secondary school students that participated in the study engaged in

skin-lightening practices. This thus implies that irrespective of the gender, skin bleaching agents is being actively utilized by youths.

Hypothesis 2: *There is no significant difference in the prevalence of the use of skin bleaching agents as perceived by youths in Kwara State based on religion*

Table 5: Chi-square Showing the Prevalence of the Use of Skin Bleaching Agents as Perceived by Youths in Tertiary Institutions in Kwara State based on Religion

Religion	Prevalence of the use of skin bleaching				df	Cal. χ^2	p-value	Decision
		Yes	No					
ATR	Observed	6	13	19	2	32.29	0.001	Rejected
	Expected	14.6	4.4					
Christianity	Observed	176	31	207				
	Expected	158.9	48.1					
Islam	Observed	109	44	153				
	Expected	117.5	35.5					
Total				379				

Table 5 shows that the calculated χ^2 value of 32.29 and a p-value of 0.001 at an alpha level of 0.05. Since the calculated p-value of 0.001 was less than the alpha level of 0.05, this implies that there is a significant difference in the prevalence of the use of skin bleaching agents as perceived by youths in tertiary institutions in Kwara State on the basis of religion. This implies that religion of the respondents influences the rate at which the youths make use of skin bleaching agents in Kwara State. This finding corroborated AlGhamdi (2010) who noted in a cross-sectional study of knowledge, attitudes and practices towards the use of topical bleaching agents amongst 509 Saudi Arabian women that the degree of skin bleaching practice has increased in the country, with an estimation of 38.9% reporting to be actively bleaching their skin irrespective of their religion. Atadokpédé, Adégbidi, Koudoukpo, Térclessou, Aholoukpé, Degboé, Yedomon (2015) revealed that 36.6% of high school students in Malaysia, Nigeria and Zimbabwe engaged in depigmentation. Rusmadi, Ismail, Praveena, (2015) reported that 63.6% of university students in Malaysian and Nigeria universities are using skin-lightening items.

Implications for Counselling Practice

The findings of this study indicated that the prevalence of skin bleaching agents' usage is very high among youths in Kwara State. This implies that skin bleaching agents are very rampant in commodity stores in Kwara State and the youths are really patronizing these products. It is also very pertinent to note that counsellors should endeavour to infuse the concepts of skin bleaching, the prevalence as well its consequences on the health and wellness of youths into the counselling programmes and outreach organized in tertiary institutions so as to enlighten these youths on the possible resultant effects that could arise from the usage of these bleaching agents. Professional counsellors should be recruited into counselling centers of all tiers of education

particularly in the tertiary institutions where youths abound in order to be able to counsel these youths on the inherent dangers of using skin bleaching or toning agents.

Recommendations

Based on the outcome of this research, it is recommended that youths irrespective of their gender should be regularly sensitized and made to be aware that the prevalence of skin bleaching agents as a result of its usage is still very high and continuous use of these chemical agents can be very dangerous to the skin and health of the user. Religious leaders should make it a point of duty to not only serve as models to their followers but also use the scriptures to guide and deter its members from doing or using anything that will defile their natural complexion or beauty. The media could be used by these religious organizations to air sensitization programmes to the youths on God's view about defilement of the flesh. Such programmes could include adverts that mentions some harmful effects that could result from making use of skin whitening agents. Professional counsellors could assist the school management in sensitizing the youths in the tertiary institutions through the school curricular on what skin bleaching entails, the prevalence, resultant effect of engaging in them and many more. Professional counsellors should also sound it as a note of warning also to the students on the need to be satisfied with their present appearance.

References

- Adebajo S.B., (2002). An epidemiological survey of the use of cosmetic skin lightening cosmetics among traders in Lagos, Nigeria. *West Afr J Med.* 21:51-5.
- Adegboye, A. A. (2020) <https://scholarworks.waldenu.edu/dissertations>
- Alghamdi, K.M. (2010). The use of topical bleaching agents among women: a cross-sectional study of knowledge, attitude and practices. *Journal of the European Academy of Dermatology and Venereology*, 24 (10),1214–1219.
- Al-Saleh I.A., (2016). Mercury contenting skin lightening creams and potential hazards to the Health of Saudi Women. *J Toxicol Environ Health*, 5 (1):123–130.
- Amodu M.O, Bolori M.T, Ahmad I.M, Kale A, Kuchichi A., (2018). Knowledge, Attitude and practice of skin whitening among female university students in Northeastern Nigeria OALib.05 (4): 1-14.
- Antoine, P. (2019). Skin lightening and its motives: A historical overview. <https://doi.org/10.1016/j.annder.2019.04.017>
- Atadokpédé, F., Adégbidi, H., Koudoukpo, C., Téleclessou, J., Aholoukpé, C., Degboé, B., Yedomon, H. (2015). Epidemiological and clinical aspects of skin bleaching in a secondary school in Bohicon, Benin. *Journal of Cosmetics, Dermatological Sciences, and Applications*, 1 (5): 1-6.
- Azibo, D. A. (2011). Commentary: On skin bleaching and lightening as psychological misorientation mental disorder. *The Journal of Pan African Studies*, 4(4). Retrieved from <http://www.jpanafrican.org/docs/vol4no4/AZIBO%20final.pdf>
- Durosaro, A., Ajiboye, S., and Oniye, A. (2012). Perception of Skin lightening among female secondary school students in Ibadan metropolis, Nigeria. *Journal of Education and Practice*; 3(7); 40-46.

- Eyo, O. A. (2019). Understanding the rationale behind skin lightening in Nigeria – challenges and repercussion. Laurea University of Applied Sciences. <https://www.researchgate.net/publication/337056776>
- Faronbi, J.O., Oyediran, O.O., Adebiyi, M.A, Adereti, S.C., Faronbi, G.O., Famakinwa, T.T. (2018) Perceived Risk and Consequences of Bleaching Practices Among University Students In Southwest Nigeria. *International Journal of Basic, Applied, and Innovative Research IJB AIR*; 7(1): 2 – 11.
- Ferreira, A. O., Freire, E. S., Polonini, H. C., Candido da Silva PJL, Brandaio, M.A.F., Raposo, N.R.B. (2018). Anti-ageing effects of monomethylsilanetriol and maltodextrin-stabilized orthosilicic acid on nails, skin and hair. *Cosmet J.*, 5 (4):12–15.
- Harriet A.W., (2006). The cleansing light of science. In *Medical Apartheid, The Dark History of Medical Experimentation on Black Americans from Colonial Times to the Present*. Harlem moon, Broadway books, New-York pp. 237-241.
- Jacobs, M., Levine, S., Abney, K. & Davids, L. (2016) *Fifthly shades of African lightness, a bio-psychological review of the global phenomenon of skin lightening practices*. *Journal of Public Health in African*, 7 (2) 552 12-31.
- Kpanake, L., Sastre, M. T. M., & Mullet, E. (2010). Skin bleaching among Togolese: A preliminary inventory of motives. *Journal of Black Psychology*, 36 (3), 350-368.
- Lewis, K. M., Harris, S., Camp, C., Kalala, W., Jones, W., Ellick, K. L. & Younge, S. (2013). The Historical and Cultural Influences of Skin Bleaching in Tanzania. In *The Melanin Millennium* Springer Netherlands, 19-38.
- Lewis, K.M., Gaska, K., Robkin, N., Martin, A., Andrews, E. & Williams, J. (2012). The need for interventions to prevent skin bleaching: A look at Tanzania. *Journal of Black Studies*, 43 (7). <https://doi.org/10.1177/0021934712446701>
- Mahe, A. (2014). The practice of skin bleaching for cosmetics purpose in immigrants communities. *J. Travel Med.*, 21 (4): 282 – 7. doi: 10.1111/jtm.12106. Epub 2014 Mar 11. PMID: 24612323
- Olumide, Y. M., Akinkugbe, A. O., Altraide, D., Mohammed, T., Ahamefule, N. & Ayanlowo, S., et al. (2008). Complications of chronic use of skin lightening cosmetics. *International Journal of Dermatology*, 47(4), 344–353.
- Osei, M., Ali, M., Owusu, A. & Baiden, F. (2018). Skin lightening practice among female high school students in Ghana. *Public Health*. 2018 Feb; 155:81-87. doi:10.1016/j.puhe.2017.11.06.Epu 2018 Jan 9. PMID: 29328977.
- Owolabi, J. O. & Fabiyi, O. S. (2020). Effects of skin lightening cream agents- hydroquinone and kojic acid on the skin of adult female experimental rats. *Clinical Cosmetic and Investigation Dermatology*. 2020:13:283-289. Doi: 10.2147/CCID.S233185
- Poligone, B., Hayden, M. S., Chen, L., Pentland, A. P, Jimi, E. & Ghosh, S. (2013). A role for NF-κB activity in skin hyperplasia and the development o keratoacanthomata in mice. *PLoS One*, 8(8):e71887. doi:10.1371/journal.pone.0071887
- Punch (September 6, 2022). *Daily podcast: Skin bleaching in Nigeria, a silent obsession*. Retrieved from <https://punchng.com/daily-podcast-skin-bleaching-in-nigeria-a-silent-obsession/>

- Ravichandran N, (2013). *Skin whitening creams can cause long-term damage, doctors warn*. Retrieved <http://www.dailymail.co.uk/>.
- Rusmadi, S. Z., Ismail, S. N. S., & Praveena, S. M. (2015). Preliminary study on the skin lightening practice and health symptoms among female students in Malaysia. *Journal of Environmental and Public Health*; 1-7.
- Shroff, H., Diedrichs, P. C. & Craddock, N. (2018). Skin colour, cultural capital and beauty products: An investigation of the use of skin fairness products in Mumbai India. *Front public Health* 5 :365. Doi :10.3389.fpubh.201700365
- Street, J. C., Gaska, K., Lewis, K. M. & Wilson, M. L. (2014). Skin lightening: A neglected form of injury and threat to global skin. *African Safety Promotion: A Journal of Injury and Violence Prevention*; 12(1): 52-71.