



Research Article

## Awareness of Health Hazards of Skin-Whitening Cream Use among Female Undergraduate Instagram Users in Anambra State

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### About Article

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### ABSTRACT

This study examined the awareness of health hazards of skin-whitening cream use among female undergraduate Instagram users in Anambra State, Nigeria. The objectives of the study were to assess the level of awareness of health hazards associated with the use of skin-whitening creams, determine the extent to which exposure to Instagram influences their usage, identify the specific health risks perceived by the respondents, examine the relationship between awareness and usage, and identify the major Instagram-related factors influencing attitudes toward such creams. The Social Comparison Theory and Risk Perception Theory provided the theoretical framework, explaining how social influence and perceived risk shape behavioural patterns. The study adopted the survey research design using a table of sample size determination developed by Krejcie and Morgan to select a sample size of 382 respondents. Also, the study used purposive sampling technique and simple random sampling to select three universities in Anambra State: Nnamdi Azikiwe University, Awka; Chukwuemeka Odumegwu Ojukwu University, Igbariam; and Paul University, Awka. Data were collected through a structured likert scale questionnaire and analysed using mean scores, percentages, and Pearson correlation analysis. Findings revealed that the majority of respondents demonstrated a moderate to high level of awareness of the health hazards associated with skin-whitening creams. Despite this awareness, a significant number still reported using such products, indicating that awareness alone does not necessarily influence behaviour. Results also showed that exposure to Instagram content significantly influences the use of skin-whitening creams. Respondents identified skin irritation, hyperpigmentation, premature aging, and risk of cancer as major health hazards linked to these products. A significant relationship was found between awareness of health hazards and the use of skin-whitening creams, as well as between exposure to Instagram content and product usage. The study concluded that although awareness of health hazards exists, Instagram exposure and social comparison pressures play a dominant role in shaping the use of skin-whitening products among female undergraduates. It recommends the intensification of health communication campaigns, the promotion of media literacy education, and the regulation of harmful beauty product advertisements on social media platforms to promote safer health practices and positive body image among young women.



## 1.0 INTRODUCTION

The widespread use of skin-whitening creams, especially among young women, has become a growing concern across the globe. Skin whitening, which is often pursued for aesthetic reasons or societal pressures related to beauty ideals, has been linked to various health risks. These creams often contain hazardous chemicals such as mercury, hydroquinone, and corticosteroids that can have severe consequences on users' skin and overall health (Adetunji & Olawale, 2022). Among female undergraduates in Nigeria, particularly those active on social media platforms like Instagram, the popularity of skin-whitening products has surged, raising concerns about their awareness of the associated health hazards. In Anambra State, where cultural and societal norms emphasize fair skin as a marker of beauty, many young women are increasingly turning to these products without fully understanding their potential health risks (Okafor & Uche, 2023).

The rise of social media platforms, particularly Instagram, has significantly influenced the beauty standards and behaviors of young women. Instagram is a visually driven platform where appearance plays a central role in gaining social acceptance and popularity. As a result, many female undergraduates in Anambra State are exposed to influencers, celebrities, and advertisements that promote the use of skin-whitening products as a means to achieve societal ideals of beauty (Eze & Ibekwe, 2023). This exposure creates a perception that lighter skin is synonymous with attractiveness, social status, and success, which can lead to the adoption of skin-whitening practices without considering the associated health hazards.

The use of skin-whitening creams has become a normalised practice in many African societies, including Anambra State, where societal pressures often promote lighter skin tones as more desirable. This practice is deeply rooted in colonial history, where lighter skin was often associated with higher social status and privilege (Nwankwo & Chikodi, 2022). As a result, many young women, particularly undergraduates, feel compelled to conform to these beauty standards in order to gain social acceptance or attract potential partners. Instagram, as a platform where appearance is highly emphasized, plays a significant role in perpetuating these beauty ideals, with many users exposed to content that glorifies fair skin as a marker of beauty and success (Ezenwa & Nwachukwu, 2023).

The increasing reliance on Instagram among female undergraduates in Anambra State has further exacerbated the issue of skin-whitening cream usage. Studies have shown that the more time young women spend on social media platforms, the more likely they are to internalize unrealistic beauty standards and engage in appearance-enhancing behaviors such as the use of skin-whitening products (Ijeoma & Okoye, 2023; Ezeaka et.al, 2025). This is particularly concerning as many Instagram influencers and beauty brands, both local and international, promote these products without adequate information about the health hazards associated with their use. As a result, female undergraduates may be unknowingly exposing themselves to dangerous chemicals that can have long-term health consequences.

In Anambra State, female undergraduates represent a vulnerable group when it comes to the use of skin-whitening creams. These young women are often at a stage in life where appearance and social image are highly prioritized, and they may be more susceptible to societal pressures to conform to certain beauty standards (Onyeji & Ibe, 2022). The influence of Instagram further complicates this issue, as the platform is inundated with images and advertisements that promote fair skin as desirable. Unfortunately, many of these advertisements fail to provide adequate warnings about the potential health risks associated with the use of skin-whitening products, leaving users uninformed about the dangers they may be exposing themselves to.

The role of Instagram in promoting the use of skin-whitening products cannot be overlooked. As a platform that thrives on visual content, Instagram has become a powerful tool for beauty brands and influencers to market their products to a wide audience. Many female undergraduates in Anambra State follow these influencers and are exposed to content that promotes skin whitening as a means of enhancing one's appearance (Nwachukwu & Okeke, 2023). This exposure can lead to the normalization of harmful beauty practices, as young women strive to emulate the beauty ideals they see on their screens.

In recent years, there has been a growing concern about the safety of skin-whitening products, with health organizations and regulatory bodies calling for stricter controls on the ingredients used in these products. In 2023, the Nigerian National Agency for Food and Drug Administration and Control

(NAFDAC) issued a warning about the dangers of using skin-whitening creams containing mercury and hydroquinone, citing the health risks associated with these chemicals (Obi & Adibe, 2023). However, despite these warnings, many of these products remain widely available, particularly through online platforms like Instagram, where regulation is often lacking. Female undergraduates, who are frequent users of social media, may not be aware of these warnings and continue to use these products without understanding the potential health consequences.

This study therefore examines the awareness of health hazards associated with the use of skin-whitening creams among female undergraduate Instagram users in Anambra State. It further investigates the relationship between awareness, exposure to Instagram content, and the usage of skin-whitening creams among the respondents.

## 1.2 Statement of the Problem

The increasing popularity of skin whitening creams among female users, particularly within the context of social media platforms like Instagram, has raised significant public health concerns. In Anambra State, a growing number of female undergraduates are exposed to and engage with content promoting these products, often without adequate understanding of their potential health hazards. Despite the reported benefits, such as improved appearance and increased self-esteem, the long-term effects of using these creams can include skin damage, hormonal imbalances, and other serious health issues. The literature has highlighted a gap in awareness regarding the adverse

effects of skin bleaching agents, yet little is known about the specific perceptions and knowledge levels of female undergraduates in Anambra State. Furthermore, the role of social media influencers in shaping these perceptions complicates the issue, as they often promote whitening products without disclosing associated risks. This lack of awareness and critical understanding poses a significant threat not only to the health of these young women but also to public health at large. Given the potential consequences of uninformed usage, it is imperative to investigate the extent of awareness regarding the health hazards of whitening creams among female undergraduate Instagram users in Anambra State. This study aims to fill the knowledge gap and inform health communication strategies that could effectively address the misuse of such products. This study aims to fill the knowledge gap and inform health communication strategies that could effectively address the misuse of such products. The motivation for this study stems from the increasing visibility of skin-whitening practices among female undergraduates and the growing concern that many users may be engaging in these practices without adequate knowledge of their health implications, particularly within the highly influential Instagram environment.

## 2.0 OBJECTIVES OF THE STUDY

The main objective of the study is the awareness of health hazards of skin-whitening cream use among female undergraduate Instagram users in Anambra State. However, specific objectives are as follows:

1. To assess the level of awareness of the health hazards associated with the use

of skin-whitening creams among the respondents

2. To determine the extent to which exposure to Instagram influences the use of skin-whitening creams among female undergraduates in Anambra State.
3. What is the relationship between the level of awareness of health hazards and the usage of skin-whitening creams among female undergraduate Instagram users in Anambra State?
4. To identify the specific health risks perceived by the respondents about skin-whitening cream usage.
5. To identify the major factors on Instagram that influence the respondents' attitudes toward skin-whitening creams.

## 3.0 THEORETICAL FRAMEWORK

The researcher adopted two theories for this study which include Social Comparison Theory and Risk Perception Theory. While Social Comparison Theory provided a nuanced understanding of how perceptions of beauty and peer influence shape awareness of the health hazards associated with skin whitening creams among female undergraduates on Instagram, Risk Perception Theory provided a deeper understanding of how female undergraduates perceive the health hazards associated with skin whitening creams and the factors influencing their awareness and behaviours.

### 3.1 Social Comparison Theory

Social Comparison Theory (SCT), first introduced by Leon Festinger in 1954, posits that individuals evaluate their own abilities and opinions by comparing themselves to others. This process plays a crucial role in

shaping self-concept, self-esteem, and overall well-being. As society becomes increasingly interconnected through social media, the implications of social comparison have grown more significant, warranting a deeper examination of this phenomenon. Social Comparison Theory emerged during a time when psychologists sought to understand how individuals gauge their self-worth. Festinger proposed that people have an innate drive to evaluate themselves, especially when objective measures are absent. He asserted that individuals often compare themselves to similar others to acquire self-evaluation information. This comparison process serves not only as a means of self-assessment but also plays a role in shaping social norms and values. Festinger's initial work laid the groundwork for further research into social comparison processes. His hypothesis suggested that social comparisons occur in two directions: upward and downward. Upward comparisons involve evaluating oneself against those perceived to be superior, while downward comparisons entail assessing oneself against those seen as inferior. Understanding these dynamics has become essential for exploring self-perception, motivation, and behaviour. Social comparison is particularly pronounced in the realm of body image. Research has shown that exposure to idealized body images on social media can lead to body dissatisfaction, particularly among young women. For instance, Tiggemann and Slater (2014) found that adolescents who frequently compared their bodies to those depicted on social media experienced greater body dissatisfaction and engaged in unhealthy behaviors, such as extreme dieting and excessive exercising. The relationship between social comparison and mental health is multifaceted.

Social Comparison Theory provides a valuable framework for understanding how individuals evaluate themselves relative to others. As social media continues to influence interpersonal dynamics, the implications of social comparison are more pronounced than ever. Recognizing the complexities of social comparison its mechanisms, emotional impacts, and cultural influences can empower individuals to navigate these processes more effectively. By fostering social media literacy, promoting authenticity, and encouraging positive coping strategies, we can mitigate the adverse effects of social comparison and enhance overall well-being in an increasingly interconnected world.

Social media influencers play a pivotal role in shaping beauty standards and consumer behaviors. Many influencers endorse skin whitening products, often showcasing their own experiences with these creams. This practice can normalize the use of such products, leading followers to perceive them as safe and effective. Studies have shown that when influencers engage in upward comparisons, followers may feel compelled to emulate their appearance, further perpetuating the cycle of comparison and the pursuit of lighter skin (Baker & Hodkinson, 2019).

Social Comparison Theory offers a valuable lens through which to examine the awareness of health hazards associated with skin whitening creams among female undergraduate Instagram users. The interplay between social comparison, beauty standards, and health awareness is complex, influenced by societal norms, media representations, and individual experiences. By promoting media literacy, fostering positive role models, and

encouraging community support, we can empower young women to navigate the pressures of social comparison more effectively. Ultimately, fostering a culture that values diverse beauty standards and prioritizes health awareness is essential for combating the harmful effects of skin-whitening practices.

### 3.1.1 Risk Perception Theory

Risk Perception Theory emerged from psychological and sociological inquiries in the 1960s and 1970s, aiming to understand why people assess certain risks differently, even when presented with similar data. Early researchers, such as Slovic, Fischhoff, and Lichtenstein, focused on cognitive biases that influence risk perception, exploring why individuals often overestimate rare but catastrophic events (Slovic, 2016). This initial work established a foundation, highlighting that perceptions of risk are shaped not only by statistical probabilities but also by psychological, cultural, and social factors. Risk Perception Theory (RPT) is a comprehensive framework that addresses how individuals perceive and respond to potential hazards and threats in their environment. It has evolved significantly, especially as societies become more aware of environmental, technological, and health risks. In recent years, the theory has expanded to include a diverse range of applications in areas such as public health, environmental policy, disaster management, and health communication. RPT integrates various models to explain the process through which individuals evaluate risks. Two dominant approaches within the theory are the psychometric paradigm and cultural theory. The psychometric paradigm, developed by Slovic and colleagues, explores how people

categorize risks based on factors like dread, controllability, and familiarity (Renn, 2021). In contrast, cultural theory, proposed by Douglas and Wildavsky, argues that individuals' risk perceptions are influenced by societal values and cultural biases, categorizing people into risk "worldviews" that align with their sociocultural backgrounds.

Risk Perception Theory (RPT) provides a critical framework for examining how individuals perceive and respond to the health risks associated with various behaviours and products. Applying this theory to the study of awareness of health hazards related to skin whitening creams among female undergraduates offers insights into the psychological, social, and cultural factors that influence perceptions of risk and, consequently, behavioural choices. Risk Perception Theory examines how individuals interpret and respond to potential hazards. It addresses not only how people assess risks based on factual information but also how subjective factors such as emotions, personal beliefs, and cultural influences shape risk interpretation (Slovic, 2016).

Applying RPT to health behaviours, such as using skin-whitening creams, is crucial. The theory provides a lens through which we can examine why certain individuals underestimate or ignore potential health hazards, even when presented with factual information. Health risks like skin damage, mercury exposure, and other adverse effects linked to whitening creams are well-documented, yet users' perception of these risks often determines their usage behaviour (Larson et al., 2021).

Effective health communication strategies must consider the audience's risk perception to promote awareness of health hazards. Female undergraduates may perceive the risks of whitening creams differently based on personal or cultural factors. Health communication targeting these students should therefore address both cognitive and emotional elements, emphasizing health risks without undermining their beauty-related aspirations (Breakwell, 2021). Trust plays a critical role in risk perception. If female undergraduates do not trust the sources conveying the health hazards of whitening creams, they are less likely to consider these warnings seriously (Larson et al., 2021). Trusted messengers such as healthcare professionals, professors, or trusted media channels are crucial in communicating the risks associated with these products effectively.

Cognitive dissonance, a psychological concept closely tied to risk perception, occurs when individuals experience discomfort from holding contradictory beliefs. Female undergraduates may experience dissonance if they recognise the health risks of skin whitening creams but continue using them due to social pressures. This dissonance can either lead to behaviour change or rationalisation to downplay the risk (Festinger, 1957). Common biases like optimism bias can affect risk perception. Female undergraduates may believe that health hazards associated with skin whitening creams will not affect them personally, leading to continued use despite the risks. This optimism bias is prevalent in health-risk behaviors and requires tailored risk communication to counteract (Sandman, 2019). Studies suggest that women and men

perceive health risks differently. Gendered risk perception may influence how female undergraduates evaluate the hazards of whitening creams. Since these products are primarily marketed to women, understanding gender differences in risk perception can inform more effective communication strategies (Schmidt et al., 2021).

Studies relying on self-reported awareness can be limited, as individuals may underreport risk knowledge or overestimate their understanding. Addressing these limitations by integrating observational and experimental research methods can offer a more accurate view of female undergraduates' risk awareness levels (Schmidt et al., 2021). Education on health hazards is a crucial factor in risk perception. Integrating modules on skincare safety and product ingredients into undergraduate health courses can empower students to make informed choices regarding whitening creams (Breakwell, 2021). Policy measures, such as regulating advertising or placing warnings on whitening products, can influence public perception and usage rates.

Risk Perception Theory offers a valuable framework for understanding and addressing the health hazards associated with skin whitening creams among female undergraduates. By examining the complex interplay of cognitive, cultural, and social factors, this approach highlights the need for targeted, empathetic, and culturally sensitive risk communication strategies. Awareness campaigns grounded in RPT principles leveraging emotional appeals, trusted messengers, and visual cues—can effectively increase risk awareness and foster healthier choices. This approach underscores the importance of risk perception as both a

theoretical foundation and practical tool in public health, contributing to a safer and more informed student population.

#### 4.0 METHODOLOGY

For this study, the survey research method was adopted to investigate awareness of the health hazards with the use of skin whitening creams as promoted on Instagram among female undergraduates in Anambra State. Survey design was chosen because of its effectiveness in studying the attitudes and opinion of a people with a large population making it relevant and advantageous to the study. By using this method also, the researcher sampled the opinions of subset of female undergraduate students in Nnamdi Azikiwe University, Awka, Chukwuemeka Odumegwu Ojukwu University, Igbariam and Paul University, Awka all in Anambra State.

The study area comprises of three universities in Anambra State which include Nnamdi Azikiwe University, Awka; Chukwuemeka Odumegwu Ojukwu University, Igbariam; and Paul University Awka. Nnamdi Azikiwe University is one of the federal universities in the southeastern Nigeria located in Awka, the capital of Anambra State. It has three campuses, Awka, Agulu and Nnewi offering numerous courses that are spread across faculties and departments. Nnamdi Azikiwe University is one of the populous universities in Nigeria and has many undergraduate students drawn from different parts of the country that are exposed to information on the usage of skin-whitening creams on Instagram. The study focused on only the students in Awka campus of the university. On the other hand, Chukwuemeka Odumegwu Ojukwu University, formerly Anambra State University is a Nigerian State tertiary institution located in Igbariam, a suburb in

Anambra State. It has three campuses namely: Igbariam, Uli and Awka. It is made up of departments, distributed into faculties. The study, however, concentrated on the Igbariam campus of the University. Also, Paul University, Awka (PUA) is located in Awka, Anambra State in Nigeria. It is a private Christian university, founded in 2009 by Bishops of the five ecclesiastical provinces of the Anglican Church East of the Niger, to provide undergraduate training in Natural and Applied Sciences, Social Sciences and Management.

The population of the study was made up of all the female undergraduate students of Nnamdi Azikiwe University (NAU) Awka; Chukwuemeka Odumegwu Ojukwu University (COOU), Igbariam, and Paul University, Awka. According to the Students' Affairs departments of the three universities, their combined female students' population as at July 2024 is 32,703. The breakdown of this population shows that NAU has 20,981 students, COOU has 11,320 students and Paul University has 402 students.

The total population for the study is 32,703.

A sample of 380 female undergraduate students who are exposed to contents promoting skin whitening creams on Instagram was selected for the study. This sample was arrived at using a table of sample size determination developed by Krejcie and Morgan (1970) (See Appendix II). The table establishes sample sizes against their corresponding population.

The multistage sampling techniques was adopted for this study applying of random and purposive sampling.

**Stage One:** The researcher used purposive sampling technique to select Nnamdi Azikiwe University, Awka and Chukwuemeka Odumegwu Ojukwu University, Igbariam Campus. This is because the two universities are the only federal and state universities in Anambra state which is the study area.

**Stage Two:** The researcher adopted simple random sampling without replacement method to select one private university in Anambra State. In this stage, the researcher wrote down the names of all the private universities in Anambra state in pieces of paper and put them in a bag. Using random sampling without replacement, the researcher selected one private university. At the end, Paul University, Awka was selected.

**Stage Three:** In each of the selected universities, two faculties were selected for study using simple random without replacement method. This procedure yielded faculties of Social Sciences and Arts for NAU, Social Sciences and Management for COOU, and Management and Social Sciences for Paul University.

**Stage Four:** The researcher also used simple random sampling without replacement method to select two departments each from the selected faculties for study. This procedure produced Mass communication and Sociology, Theatre Arts and English Language from the faculties of Social Sciences and Arts of NAU; Political Science, Criminology, Accountancy and Banking and Finance from COOU; and Philosophy, Sociology, Marketing and Accountancy from Paul University.

The researcher adopted Proportionate Allocation Formula to assign copies of questionnaire that were distributed to the respondents accordingly. This is shown below:

Nnamdi Azikiwe University	$\frac{20,981 \times 380}{32,703}$	= 244
COOU	$\frac{11,320 \times 380}{32,703}$	= 131
Paul University Awka	$\frac{402 \times 380}{32,703}$	= 5
<b>Total</b>		<b>380</b>

This study employed the questionnaire as an instrument for data collection. The questionnaire is a set of questions presented to respondents to obtain answers on issues being investigated (Kotler, 2000). The questionnaire was used due to its capacity to facilitate the collection of large amounts of data in a relatively short period; particularly in the collection and analysis of quantitative data. The instrument was carefully designed to provide answers to the research questions raised for the study. The questionnaire contained more multi-choice close-ended questions with a few open-ended questions. The instrument was made up of two sections, A and B. Section A was designed to elicit information on the demographic variables of respondents while section B was designed to obtain respondents' perspectives on the objectives of the study. The questionnaire contains eighteen items.

Validity refers to the authentic nature of the measuring instrument in being capable of eliciting the necessary information applicable to the study (Owuamalam, 2012). To determine validity of any instrument, the pre-testing approach is very necessary. After producing questionnaire as the measuring instrument for this study, the researcher gave out 20 copies in a survey to a group of selected students in Tansian University, Umunya. The exercise was repeated the second time after an interval of three weeks using the same number

of measuring tool to the same number of respondents. This is referred to as the post-testing approach. The results of the first and second (pre and post-testing) were similar, this imply that the measuring instrument is valid.

The pilot study approach was used for determining if the tool for data collection were able to post a similar result, when used for the same research over time. When a valid measuring instrument is used, it makes for reliability and capable of producing the required result from the study. Owuamalam (2012, p. 129) holds that reliability assures the researcher of the competence of the measuring instrument. The results that were obtained from the responses were evaluated on a split unit correlation method. The correlation coefficient formula (Wimmer & Dominick, 2011) was applied using the formula as cited in (Owuamalam, 2012):

$$r = \frac{2ro}{1+roe}$$

Where r = reliability  
 o = odd number questions  
 e = even number questions

**4.1 Method of Data Presentation and Analysis**

Data collected through the questionnaire were presented in tables while frequency and simple percentages were used in the analysis. The data were analysed using Likert 5-point scale, taking 3 as the decision point. Data were analysed to exclusively answer research questions for the study. Data generated from the study were summarised and presented to answer as well as to test the research questions and hypotheses of the study. The mean statistic was used in analysing the

$$\bar{X} = \frac{\sum FX}{N}$$

$\bar{X}$  = Mean

$\sum$  = Summation

F = Frequency

X = Nominal value of options

N = Number of Respondents

research questions. The study used the formular below to calculate the mean:

Nominal values for five-point scaling items include:

- Strongly Agreed (SA) = 5
- Agreed (A) = 4
- Undecided (UD) = 3
- Disagreed (D) = 2
- Strongly Disagreed (SD) = 1

The study used Pearson Product Moment Correlation statistical tool to test the hypothesis of the study.

**Calculation of Cut-off Point**

To realize the cut-off point for the mean, the study added the normal values and calculated the mean score:

$$\bar{X} = \frac{5 + 4 + 3 + 2 + 1}{5} = \frac{15}{5} = 3.00$$

**5.0 DATA PRESENTATION AND ANALYSIS**

Three hundred and eighty copies of the questionnaire were administered to the respondents while three hundred and seventy-five copies were found usable for the study.

**Table 1: Return rate of Questionnaire**

Item	Frequency	Percentage
Returned and found usable	375	99.00
Not usable	5	1.31
<b>Total</b>	<b>380</b>	<b>100</b>

Table one shows that the return rate of questionnaire is 99.00% (n = 375) while the mortality rate is five. This shows that the return rate is higher than the mortality rate. The mortality rate does not have any significant effect on the study because it is minute when compared to the return rate of

99.00%. Thus, the copies were considered good enough to represent the population. The presentation and analysis of data obtained from the questionnaire were therefore based on the three hundred and seventy- five (375) copies that were returned and found usable.

**Table 2:Age Distribution**

Age Range	Frequency	Percentage (%)
16 - 20 years	102	27.2
21 - 25 years	210	55.0
26 - 30 years	63	17.0
<b>Total</b>	<b>375</b>	<b>100</b>

The age distribution of respondents indicates a concentration within the young adult population, particularly those in their early to mid-twenties. This suggests that the study largely captures the perspectives of individuals who are highly active on social media platforms and are more likely to engage with beauty-related content. The dominance of this age group is significant, as it represents a stage where issues of identity, appearance, and social comparison are particularly salient.

Consequently, this demographic is more susceptible to adopting beauty trends, including the use of skin-whitening creams, especially when influenced by content encountered on Instagram. Overall, the age structure of the respondents enhances the relevance of the study, as it focuses on a segment of the population that is both digitally engaged and more likely to be influenced by appearance-driven social media narratives.

**Table 3: Academic Level**

Academic Level	Frequency	Percentage (%)
100 Level	72	19.2
200 Level	83	22.1
300 Level	120	32.0
400 Level	100	27.0
<b>Total</b>	<b>375</b>	<b>100</b>

The distribution of respondents across different academic levels indicates that the study captures perspectives from students at varying stages of their undergraduate experience. The concentration of respondents within the mid to advanced levels of study suggests that a significant proportion of participants have spent considerable time within the university environment and are likely to have developed stable social media habits. This is important for the study, as students in higher levels are more likely to have prolonged exposure to Instagram content and may exhibit more established attitudes and behaviours regarding beauty practices, including the use of skin-whitening creams. Their academic exposure may also contribute to a relatively higher level of awareness of

health-related issues, although such awareness does not necessarily translate into behavioural change. Furthermore, the use of purposive sampling ensured that only respondents who actively use Instagram and fit the study criteria were included. This strengthens the relevance of the data, as it focuses specifically on individuals who are most exposed to social media influences related to skin-whitening practices.

**5.1 Answers to Research Questions**

**5.1.1 Research Question One**

What is the level of awareness of the health hazards associated with the use of skin-whitening creams among female undergraduate Instagram Users in the study area?

**Table 4: Level of awareness regarding health hazards associated with skin-whitening creams**

Items on Awareness of Health Hazards	SA	A	UD	D	SD
<b>TOTAL Mean</b>					
1. Continuous use of skin-whitening creams can cause skin damage.	190 (950)	94 (376)	45 (135)	20 (40)	26 (26) (1547) 4.07
2. Skin-whitening creams may contain harmful chemicals like mercury and hydroquinone.	194 (970)	105 (420)	20 (60)	30 (60)	26 (26) (1536) 4.10
3. Excessive use of whitening creams can lead to hormonal imbalance.	180 (900)	83 (332)	51 (153)	37 (74)	24 (24) (1483) 3.95

4. Use of whitening creams can result to Long-term allergic reactions.	174 (870)	83 (332)	47 (141)	35 (70)	36 (36)	375 (1449)	3.86
5. Most skin-whitening creams are medically safe when used frequently.	34 (170)	29 (116)	53 (159)	156 (312)	103 (103)	375 (860)	2.29
6. Long-term use of whitening creams can lead to skin cancer.	188 (940)	92 (368)	45 (135)	24 (48)	26 (26)	375 (1517)	4.04
<b>Grand Mean</b>	<b>3.0 and above</b>			<b>High Awareness</b>			

The analysis of responses from **375 female undergraduate Instagram users** in Anambra State reveals a **high level of awareness** of the health hazards associated with the use of skin-whitening creams. The **grand mean score of above 3.00**, which is above the decision benchmark of 3.0, indicates that the majority of respondents are knowledgeable about the potential dangers of such creams, including skin damage, allergic reactions, and hormonal imbalance. The low mean score (2.29) for the statement that “most skin-whitening creams are medically safe when used frequently” suggests

that respondents largely **disagree** with this notion, reflecting accurate understanding of the associated risks. Overall, the findings demonstrate that awareness of the negative health effects of skin-whitening creams among female undergraduate Instagram users in Anambra State is **generally high**.

**5.1.2 Research Question Two**

*To what extent has exposure to Instagram influenced the use of skin-whitening creams among female undergraduates in Anambra State?*

**Table 5: Influence of Instagram Exposure on the Use of Skin-Whitening Creams (N = 375)**

Items	SA	A	UD	D	S		
TOTAL MEAN							
1. I began using skin-whitening creams because I saw it advertised on Instagram	159 (795)	74 (296)	61 (183)	47 (94)	34 (34)	375 (1402)	3.73
2. Instagram posts make skin-whitening products appear desirable	170 (850)	74 (296)	59 (177)	45 (90)	27 (27)	375 (1440)	3.84
3. I often feel motivated to try whitening creams after seeing posts and testimonial on Instagram	144 (720)	72 (288)	61 (183)	51 (102)	47 (47)	375 (1340)	3.50
4. I follow Instagram pages that promote Skin-whitening products	120 (600)	64 (256)	70 (210)	63 (126)	58 (58)	375 (1250)	3.33
5. Instagram ads make skin-whitening creams Look safe and effective	110 (550)	60 (240)	90 (270)	70 (140)	45 (45)	375 (1245)	3.32
<b>Grand Mean</b>	<b>3.0 and above</b>			<b>Accepted</b>			

The data presented in Table 6 reveal that all the items recorded mean scores **above the decision benchmark of 3.0**, suggesting that exposure to Instagram has a **notable influence** on the use of skin-whitening creams among female undergraduates in Anambra State. The item with the highest mean score, *“Instagram posts and testimonials make skin-whitening products appear desirable”* (M = 3.50), indicates that the **visual and persuasive appeal** of Instagram content strongly shapes students' perceptions of such products. Similarly, respondents agreed that they **began using skin-whitening creams through advertisement from Instagram** (M = 3.73) and that **Instagram ads make skin-whitening creams look safe and effective** (M = 3.44). These findings point to the significant **motivational and behavioural effects** of social media exposure. Furthermore, the result that respondents often

feel **motivated to try whitening creams after seeing Instagram posts** (M = 3.50) and sometimes **purchase them because they are promoted on the platform** (M = 3.33) underscores the role of Instagram as a **marketing and influence driven space** that affects users' consumption behaviour. Overall, the findings show that **Instagram serves as a major driver of interest and experimentation with skin-whitening creams**, reinforcing the link between social media exposure and cosmetic behaviour among female undergraduates in Anambra State.

### 5.1.3 Research Question Three

*Is there any relationship between awareness of health hazards and the usage of skin-whitening creams among female undergraduate Instagram users in Anambra State?*

**Table 6: Relationship Between Awareness of Health Hazards and Usage of Skin-Whitening Creams (N = 375)**

Items		SA	A	UD	D	SD	
TOTAL	MEAN						
1.Despite knowing the health risks, I still consider using skin-whitening creams	105 (525)	65 (260)	85 (255)	70 (140)	50 (50)	375 1230	3.28
2.Awareness of the dangers does not stop People from using skin-whitening creams	120 (600)	60 (240)	80 (240)	70 (140)	45 (45)	375 1265	3.37
3.Even with awareness, I still find skin-whitening creams appealing	160 (800)	72 (288)	61 (183)	50 (100)	32 (32)	375 (1403)	3.74
4.My awareness of the dangers makes me Avoid using skin-whitening creams	140 (700)	70 (280)	63 (189)	55 (110)	47 (47)	375 1326	3.54
5.Awareness alone cannot stop people From using skin-whitening creams	168 (840)	72 (288)	59 (177)	47 (94)	29 (29)	375 (1428)	3.80
<b>Grand Mean</b>		<b>3.0 and above</b>			<b>Accepted</b>		

All the items recorded mean scores **above the decision mean of 3.0**, indicating a generally high awareness of the health hazards associated with skin-whitening creams among female undergraduate Instagram users in Anambra State. However, the findings also reveal **a paradoxical behavioural pattern** many respondents acknowledge the risks yet continue to use or consider using the products. Specifically, the highest mean score (M = 3.80) shows that the awareness of health hazards alone cannot stop people from using

skin-whitening creams. Overall, the results suggest that while awareness exists, **behavioural change remains limited**, highlighting the need for **targeted health communication campaigns** addressing both awareness and attitude transformation.

**5.1.4 Research Question Four**

What specific health risks do female undergraduates perceive in relation to the use of whitening creams?

**Table 7: Perceived Health Risks of Skin-whitening Creams**

Perceived Health Risks of MEAN	SA	A	UD	ND	SD	TOTAL	
<b>Skin-Whitening Creams</b>							
1.Prolonged use of whitening cream can cause skin cancer.	194 (970)	100 (400)	30 (90)	31 (62)	20 (20)	375 (1542)	4.11
2.Use of skin -whitening creams can lead to skin irritation or rashes.	220 (1100)	60 (240)	35 (105)	32 (64)	28 (28)	375 (1537)	4.10
3.Whitening creams can lead to Uneven skin tone or hyperpigmentation .	198 (990)	88 (352)	53 (159)	20 (40)	16 (16)	375 (1557)	4.15
4.Whitening creams may cause skin Peeling or sensitivity to sunlight .	170 (850)	72 (288)	57 (171)	46 (92)	30 (30)	375 (1431)	3.81
5.Whitening creams can cause hormonal Changes or other internal effects .	165 (825)	70 (280)	60 (180)	50 (100)	30 (30)	375 (1415)	3.77
<b>Grand Mean Identified</b>	<b>3.00 and above</b>					<b>Perceived Health Risk</b>	

The data reveal that female undergraduate Instagram users in Anambra State **perceive multiple health risks** associated with the use of skin-whitening creams. The **grand mean score** is well above the decision mean of 3.0, indicates a **high level of perceived health risks** among the respondents. Among the identified risks, **skin irritation or rashes** ( $\bar{X} = 4.10$ ) and **skin cancer** ( $\bar{X} = 4.11$ ) were the most strongly acknowledged, followed by **hyperpigmentation** ( $\bar{X} = 4.15$ ) and **premature skin aging** ( $\bar{X} = 3.81$ ). This suggests that respondents are well informed

about the visible and long-term health effects of skin-whitening creams. Overall, the findings imply that female undergraduates in Anambra State are **conscious of the health dangers** linked to the use of skin-whitening creams, particularly those affecting the skin's integrity and overall health.

**5.1.5 Research Question Five**

*What major factors on Instagram influence respondents' attitudes towards the use of skin-whitening creams?*

**Table 8 : Instagram factors influencing attitudes toward the use of skin whitening creams (N = 375)**

Items	SA	A	UD	D	SD	TOTAL	MEAN
1. Attractive Instagram visuals make Whitening creams appealing	180 (900)	85 (340)	53 (159)	37 (74)	20 (20)	375 (1473)	3.92
2. Repeated exposure to skin-whitening content Makes it seem normal	166 (830)	71 (284)	58 (174)	50 (100)	30 (30)	375 (1418)	3.78
3. Positive comments and likes on skin-whitening Posts influence my perception	140 (700)	60 (240)	63 (189)	59 (118)	53 (53)	375 (1300)	3.47
4. I am influenced by the popularity of pages Promoting skin-whitening products.	150 (750)	71 (284)	60 (180)	52 (104)	42 (42)	375 (1360)	3.63
5. Instagram product reviews encourage me to consider trying skin -whitening creams	145 (725)	65 (260)	63 (189)	55 (110)	47 (47)	375 (1331)	3.55
<b>Grand Mean</b>	<b>3.0 and above</b>			<b>Accepted</b>			

The findings in Table 8 reveal that all the items recorded mean scores above the decision mean of 3.0, indicating that multiple factors on Instagram significantly influence respondents' attitudes toward the use of skin-whitening creams.

The most influential factor was **attractive photos and videos of fair-skinned individuals** ( $M = 3.92$ ), showing that **visual appeal and social comparison** strongly shape perceptions of beauty and desirability. This was closely followed by repeated exposure to skin-whitening content ( $M = 3.78$ ) and **popularity of pages promoting skin-whitening creams** ( $M = 3.63$ ), which demonstrate the persuasive impact of both **commercial promotions** and **social interaction** on Instagram.

Additionally, **product review** ( $M = 3.55$ ) and **engagement features such as likes and comments** ( $M = 3.47$ ) contribute to sustaining positive attitudes toward these products. Overall, the findings suggest that Instagram functions as a **powerful social and visual environment** that reinforces skin-whitening ideals and subtly promotes usage through repeated exposure and peer validation.

### 5.1.6 Discussion of Findings

The findings of this study on *the awareness of health hazards associated with the use of skin-whitening creams among female undergraduate Instagram users in Anambra State* reveal several critical insights into the influence of social media exposure, particularly Instagram, on health-related behaviours and perceptions among young women. The first research question sought to

determine the level of awareness of the health hazards associated with the use of skin-whitening creams among female undergraduate Instagram users in Anambra State. The findings indicated a high level of awareness among the respondents, as the mean scores on awareness-related items were above the decision benchmark of 3.0 on a 5-point Likert scale. This implies that a majority of the respondents were knowledgeable about the negative health consequences of using such creams, including skin irritation, hyperpigmentation, and, in severe cases, skin cancer.

This high level of awareness aligns with earlier studies that have reported growing consciousness about the dangers of chemical-based cosmetic products among educated youth (Nwagbara & Okoro, 2023; Adeyemi, 2022). The accessibility of online health information and widespread health campaigns may have contributed to this awareness. However, the study also reveals that awareness does not necessarily translate into behavioural restraint, as shown in subsequent analyses. In this case, Instagram content often frames fair skin as a symbol of beauty and social advantage, which may override the respondents' health knowledge and reinforce usage despite awareness of risks.

Many participants were aware of the potential health hazards, such as skin damage, risk of cancer, and hormonal imbalances, which is consistent with research by Olumide (2022), who found that awareness of skin whitening dangers is growing in Nigeria due to health campaigns and social media. However, despite awareness, some participants may still use these products, potentially influenced by

societal beauty standards that idealize lighter skin. Studies, such as that by Ansong and Mumuni (2023), highlight that awareness alone may not deter usage, as social and cultural pressures often encourage women to pursue lighter skin. This finding aligns with similar studies in West Africa, where awareness campaigns have yet to fully shift attitudes or behaviour due to the powerful appeal of beauty ideals (Adebayo & Olatunji, 2021). However, despite this high level of awareness, the study also found that awareness alone did not necessarily reduce usage. This paradox can be explained by the **Risk Perception Theory**, which posits that individuals' behavioural decisions are shaped not merely by awareness of risk, but by how they *perceive* and *weigh* that risk in relation to perceived benefits. In this case, respondents may perceive the aesthetic and social benefits of lighter skin such as attractiveness, confidence, and social validation as outweighing the potential health risks. This highlights the psychological gap between knowledge and behaviour.

The second research question sought to determine the **extent to which exposure to Instagram influences the use of skin-whitening creams among female undergraduates**. Findings indicated that respondents were highly exposed to beauty-related content on Instagram, including advertisements, celebrity endorsements, skincare tutorials, and peer-generated content promoting lighter skin tones. The mean scores for these items were above the decision benchmark, indicating that Instagram exposure strongly influences the respondents' use of skin-whitening creams.

This finding aligns with **Social Comparison Theory**, which suggests that individuals evaluate their self-image and worth by comparing themselves to others, particularly those they admire or follow on social media. Female undergraduates on Instagram are constantly exposed to curated images of influencers, celebrities, and peers whose appearance aligns with prevailing beauty standards. Such exposure fosters upward social comparison, where individuals aspire to match or exceed the physical attributes of these idealized figures. In this context, lighter skin becomes a desirable attribute that signals modernity, class, and attractiveness.

The findings corroborate the studies of Akpan and Okpara (2022) and Chukwu and Eze (2023), who found that Instagram's visual content fosters appearance-based comparison, resulting in behaviors such as skin-lightening product use. The implication is that while awareness exists, the persuasive and repetitive exposure to idealized beauty frames on Instagram exerts a stronger influence on behavioral decisions.

Research question three examined whether there is any significant relationship between exposure to Instagram content and usage of skin-whitening creams. The results showed a **moderate but significant positive correlation**. This finding confirms that Instagram exposure significantly contributes to users' adoption of skin-whitening products. The visual and interactive nature of Instagram amplifies its persuasive power: repetitive exposure to images of lighter-skinned individuals as embodiments of beauty and success subtly normalizes such ideals.

The findings from research question four revealed that respondents perceived several specific health risks associated with the use of skin-whitening creams, including **skin irritation, hyperpigmentation, premature aging, acne, and skin cancer**. This awareness indicates a general understanding of the potential dangers of unregulated cosmetic use. However, the continued usage despite this knowledge aligns with the **Risk Perception Theory**, emphasizing that risk awareness does not automatically translate to risk avoidance. Individuals' perceptions of severity and vulnerability are subjective and often influenced by media messages, peer approval, and cultural expectations. Thus, even when respondents recognize the possibility of adverse health outcomes, their perceived invulnerability combined with the influence of social comparison on Instagram diminishes the deterrent effect of such awareness.

Findings from the fifth research question identified **advertisements, celebrity endorsements, peer influence, and before-and-after transformation posts** as major Instagram factors influencing attitudes toward skin-whitening creams. These features shape behavioural tendencies by presenting lighter skin as aspirational and socially rewarding. This supports **Social Comparison Theory**, as individuals model their behaviour after figures they admire or view as successful. It also demonstrates how media environments function as cultural agents that transmit and reinforce aesthetic values.

Moreover, from a **Risk Perception standpoint**, these promotional contents may reduce the perceived threat associated with product use. When trusted or admired

personalities endorse such products without visible consequences, users perceive the risks as minimal or controllable, thereby increasing the likelihood of adoption.

The combined findings suggest that while female undergraduates in Anambra State are well aware of the health risks associated with skin-whitening creams, their behaviors are heavily influenced by social comparison dynamics and subjective perceptions of risk. **Social Comparison Theory** explains the motivational drive to align one's appearance with idealized media figures, while **Risk Perception Theory** elucidates the cognitive justifications that allow individuals to continue using potentially harmful products despite awareness of their dangers.

The convergence of both theories in this study demonstrates that health behaviour cannot be adequately explained by awareness alone. Behavioural change interventions must account for the powerful social and psychological influences of digital media platforms like Instagram. Health communicators, therefore, need to design messages that not only inform but also reshape comparative standards and recalibrate perceptions of risk. Campaigns that emphasize the authenticity and healthfulness of natural skin tones while countering unrealistic social comparisons may be more effective in promoting positive health behaviour.

## 6.0 CONCLUSION

This study examined the awareness of health hazards associated with the use of skin-whitening creams among female undergraduate Instagram users in Anambra State. The findings show that although

respondents demonstrate a considerable level of awareness of the associated health risks, this awareness does not significantly deter usage. Exposure to Instagram content was found to significantly influence the use of skin-whitening creams, as many respondents are driven by social comparison and the need to conform to prevailing beauty standards. The continued use of these products despite known risks indicates that social media influence outweighs health considerations. Addressing this issue requires more than awareness creation; it calls for targeted health communication strategies that challenge harmful beauty ideals, promote self-acceptance, and encourage safer behavioural choices among young women.

## 7.0 RECOMMENDATIONS

Based on the findings and conclusions of this study on the awareness of health hazards of skin-whitening cream use among female undergraduate Instagram users in Anambra State, the following recommendations are made to promote informed health choices, discourage harmful beauty practices, and enhance awareness through effective communication and policy interventions:

1. **Strengthen Health Communication Campaigns on the Dangers of Skin-Whitening Creams:** Government health agencies, NGOs, and university health services should design continuous and evidence-based campaigns highlighting the dangers of skin-whitening creams. These campaigns should utilize relatable messages and visuals that appeal to young women, correcting misconceptions about fair skin and emphasizing the importance of natural beauty.

2. **Integrate Media and Digital Literacy into University Curricula:** Higher institutions should incorporate media literacy education into general studies or health education courses. This will equip students with the skills to critically analyze online beauty content, question unrealistic beauty ideals, and make informed decisions about products promoted on social media platforms like Instagram.
3. **Engage Social Media Platforms in Regulating Harmful Beauty Content:** Social media platforms such as Instagram should be encouraged to monitor and regulate promotional content related to skin-whitening products. Policies should be developed to restrict advertisements that promote harmful or unapproved cosmetic products, especially those containing toxic substances like hydroquinone and mercury.
4. **Promote Positive Body Image and Self-Acceptance Among Young Women:** Health educators, counsellors, and women's advocacy groups should champion campaigns that promote body positivity and cultural appreciation of natural African skin tones. Public communication strategies should emphasize confidence, self-worth, and the beauty of diversity rather than narrow, Eurocentric beauty standards.

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