

The Quest for Fairness: Unraveling the Health Risks and Societal Influences of Skin Lightening Among Young Adults in Ilorin West, Nigeria

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Abstract

Background: Skin-lightening practices have become increasingly prevalent among young adults, influenced by societal beauty standards, cultural norms, and economic factors. Despite their popularity, these practices pose significant health risks, including adverse skin reactions and psychological impacts. Limited awareness of the dangers and regulatory gaps exacerbates the issue, necessitating targeted public health interventions and policy reforms.

Objective: This study aimed to explore the health risks and socio-demographic factors associated with skin-lightening practices among young adults in Ilorin West, Nigeria. It further sought to identify socio-demographic factors influencing these behaviors and to propose evidence-based recommendations for addressing the associated health risks.

Methods: A cross-sectional survey was conducted among 450 participants, predominantly young adults aged 18-23 years. Data were collected using structured questionnaires covering socio-demographic characteristics, skin-lightening product usage, health implications, and influencing factors. Statistical analyses, including chi-square tests, were performed to assess associations between socio-demographic variables and skin-lightening prevalence.

Results: The study revealed a high prevalence of skin-lightening practices (65.3%) among participants, with the majority being young, single, female students with secondary education. Adverse health effects, such as skin irritation (37.8%) and darkening (25.3%), were commonly reported. Despite this, 76.2% of respondents were unaware of the long-term risks associated with these products. Cultural and economic factors, including affordability and tribal norms, significantly influenced behavior. For instance, the Hausa group exhibited the highest prevalence (73.5%), while younger demographics aged 21-23 reported the highest usage rates.

Conclusions: Skin-lightening practices among young adults are driven by a complex interplay of personal preferences, societal pressures, and cultural norms. The high prevalence of adverse health effects, coupled with limited awareness, underscores the urgent need for public health interventions. Regulatory measures and culturally sensitive campaigns can mitigate the associated risks and promote healthier beauty standards. Policymakers should implement stricter regulations on the production and sale of harmful skin-lightening products. Public health campaigns must focus on increasing awareness of the health risks and promoting self-acceptance. Community-based advocacy and collaborations with social influencers can help reshape societal beauty norms to embrace diverse skin tones. The study highlights the critical health risks associated with skin-lightening practices, particularly among vulnerable youth populations. By addressing the cultural and societal drivers of these behaviors, stakeholders can improve physical and mental health outcomes, promote self-acceptance, and reduce the reliance on harmful beauty practices.

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The Quest for Fairness: Unraveling the Health Risks and Societal Influences of Skin Lightening Among Young Adults in Ilorin West, Nigeria

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Abstract

Rationale: Skin-lightening practices have become increasingly prevalent among young adults, influenced by societal beauty standards, cultural norms, and economic factors. Despite their popularity, these practices pose significant health risks, including adverse skin reactions and psychological impacts. Limited awareness of the dangers and regulatory gaps exacerbates the issue, necessitating targeted public health interventions and policy reforms. **Objective:** This study aimed to explore the health risks and socio-demographic factors associated with skin-lightening practices among young adults in Ilorin West, Nigeria. It further sought to identify socio-demographic factors influencing these behaviors and to propose evidence-based recommendations for addressing the associated health risks. **Method(s):** A cross-sectional survey was conducted among 450 participants, predominantly young adults aged 18-23 years. Data were collected using structured questionnaires covering socio-demographic characteristics, skin-lightening product usage, health implications, and influencing factors. Statistical analyses, including chi-square tests, were performed to assess associations between socio-demographic variables and skin-lightening prevalence. **Results:** The study revealed a high prevalence of skin-lightening practices (65.3%) among participants, with the majority being young, single, female students with secondary education. Adverse health effects, such as skin irritation (37.8%) and darkening (25.3%), were commonly reported. Despite this, 76.2% of respondents were unaware of the long-term risks associated with these products. Cultural and economic factors, including affordability and tribal norms, significantly influenced behavior. For instance, the Hausa group exhibited the highest prevalence (73.5%), while younger demographics aged 21-23 reported the highest usage rates. **Conclusions:** Skin-lightening practices among young adults are driven by a complex interplay of personal preferences, societal pressures, and cultural norms. The high prevalence of adverse health effects, coupled with limited awareness, underscores the urgent need for public health interventions. Regulatory measures and culturally sensitive campaigns can mitigate the associated risks and promote healthier beauty standards. **Recommendations:** Policymakers should implement stricter regulations on the production and sale of harmful skin-lightening products. Public health campaigns must focus on increasing awareness of the health risks and promoting self-acceptance. Community-based advocacy and collaborations with social influencers can help reshape societal beauty norms to embrace diverse skin tones. **Health Significance Statement:** The study highlights the critical health risks associated with skin-lightening practices, particularly among vulnerable youth populations. By addressing the cultural and societal drivers of these behaviors, stakeholders can improve physical and mental health outcomes, promote self-acceptance, and reduce the reliance on harmful beauty practices. **Keywords:** Skin-lightening practices; Health risks; Socio-demographic correlates; Young adults; Cultural influences; Beauty standards; Public health interventions; Adverse effects; Awareness campaigns; Nigeria.

1. Introduction

Skin lightening, the practice of using products to achieve a lighter skin tone, is prevalent in various parts of the world, including Nigeria. This practice raises significant

public health concerns due to the potential health risks associated with many skin-lightening products [1-8]. Understanding the socio-demographic factors that influence this practice among young adults in Ilorin West, Nigeria, is essential for developing effective public health interventions. Studies have shown that Nigeria has one of the highest rates of skin-lightening product usage globally [9-20]. According to the World Health Organization, 77% of Nigerian women use skin-lightening products [21-23]. Research among university undergraduates in Maiduguri reported a prevalence rate of 48.1% [24], while a study among traders in Lagos State found a prevalence of 77.3% [25]. These studies highlight the widespread nature of this practice across different populations in Nigeria. Despite the high prevalence, there is limited understanding of the specific health risks and socio-demographic factors associated with skin lightening among young adults in Ilorin West. Addressing this gap is crucial, as it will provide insights into the motivations behind the practice and inform targeted public health strategies. This study aims to fill this gap by examining the health implications and socio-demographic correlates of skin lightening among young adults in Ilorin West, Nigeria. While, skin lightening remains a significant public health issue in Nigeria, with young adults being particularly affected [1, 9, 12]. The practice is associated with various health risks, including skin disorders and systemic toxicity. Financially, the skin-lightening industry represents a substantial market, with individuals spending considerable amounts on these products. The practice has been prevalent for decades, influenced by cultural perceptions of beauty and social status. It occurs nationwide, with varying prevalence in urban and rural areas. Different socio-demographic groups are impacted differently, with factors such as gender, education level, and socioeconomic status influencing the likelihood of engaging in skin-lightening practices. This research is pertinent as it addresses a significant public health concern in Nigeria. By focusing on young adults in Ilorin West, the study provides localized insights that can inform community-specific interventions. Additionally, understanding the socio-

demographic correlates of skin lightening can help in tailoring public health messages to the most affected groups. The findings will also contribute to the broader discourse on skin lightening in Nigeria, complementing existing studies and providing a basis for future research. Hence, skin lightening among young adults in Ilorin West, Nigeria, is a multifaceted issue influenced by various socio-demographic factors and associated with significant health risks. This study aims to provide a comprehensive understanding of these factors and implications, thereby filling existing knowledge gaps and informing effective public health interventions.

2. Methodology

Study Area and Research Setting

This study was conducted in Ilorin West Local Government Area (LGA) of Kwara State, Nigeria. Ilorin West LGA is one of the administrative divisions within Kwara State, located in the North-Central geopolitical zone of Nigeria. It serves as the host for the state capital and administrative headquarters, with prominent markets such as Oja-Oba, Oja-Tuntun, and Mandate Market. The LGA comprises 12 electoral wards, including Adewole, Ajikobi, Alanamu, Badari, Baboko, Magaji-Ngeri, Ogidi, Oko-erin, Oloje, Ojuekun/Sarumi, Ubandawaki, and Wara/Osin/Egbejila [26-34]. The study area is characterized by a predominantly Muslim community, with Yoruba as the major ethnic group alongside minorities such as Fulani and Igbo. The LGA experiences a tropical wet and dry climate with an average maximum temperature of 32.5°C, a minimum temperature of 21.2°C, and average relative humidity of 51.1% [30-34]. According to the 2022 population census, Ilorin West LGA has an estimated population of 548,300, reflecting a 3.3% annual growth rate since 2006.

Advocacy

Prior to the study, advocacy visits were made to key stakeholders within the study area. A

formal introduction letter was issued by the Department of Public Health, Kwara State University, Malete, and presented to the management and community leaders. The objective was to obtain consent, build trust, and foster cooperation for smooth data collection.

Study Population

The study population comprised adults and teenagers aged 15-49 years who reside within the selected wards in Ilorin West LGA and are willing to participate in the study. This age group was chosen due to their susceptibility to psychological and health impacts associated with skin-lightening practices.

Study Design

A descriptive cross-sectional study design was adopted to assess the psychological and health implications of skin-lightening practices among young adults. This design enabled the collection of data at a single point in time to evaluate prevalence and the association between variables.

Inclusion and Exclusion Criteria

Inclusion Criteria:

- i. Adults and teenagers aged 15-49 years willing to participate and provide informed consent.

Exclusion Criteria:

- i. Individuals who refused to provide informed consent.
- ii. Participants critically ill at the time of data collection.

Sample Size Determination

The sample size was calculated using the formula for descriptive studies where the population exceeds 10,000:

$$n = \frac{Z^2 Pq}{d^2}$$

Where:

- n = desired sample size
- Z = 1.96 (Standard normal deviate corresponding to a 95% confidence interval)
- p = Prevalence of skin lightening practices (52% = 0.52) from a previous study [35-46].
- q = Complimentary probability (1 – p = 0.48)
- d = desired precision (0.05)

Substituting

$$n = \frac{(1.96)^2 \times 0.52 \times 0.48}{(0.05)^2}$$

$$n = 383.54 \approx 384.$$

Account for non-response (10%)

$$n = \frac{n}{e}$$

$$n = \frac{384}{0.9}$$

$$n = 426.6$$

$$n = 427$$

To enhance precision, the sample size was increased to 450.

Sampling Technique

A multistage sampling technique was employed:

- First Stage:** Five wards were randomly selected from the 12 wards in Ilorin West LGA using simple random sampling (balloting).
- Second Stage:** Five communities were selected from each ward using simple random sampling.
- Third Stage:** Systematic random sampling was used to select households within the selected communities, proportionately allocating questionnaires to each community

until the target sample size was achieved.

Research Instrument

Data were collected using a pretested, structured interviewer-administered questionnaire. The questionnaire was developed based on reviewed literature and comprised the following sections:

- i. Section A: Socio-demographic characteristics.
- ii. Section B: Prevalence of skin-lightening practices.
- iii. Section C: Psychological impacts.
- iv. Section D: Factors influencing decisions to use skin-lightening products.
- v. Section E: Health implications.

The questionnaire was prepared in English, translated into Yoruba (the predominant local language), and back-translated into English to ensure accuracy.

Validity and Pretesting

The questionnaire was reviewed by field experts and pretested among 45 residents of Malete community (10% of the sample size). The pretest assessed the clarity and reliability of the instrument, and feedback informed necessary modifications.

Data Collection

Data were collected through face-to-face interviews conducted by trained research assistants. Measures were taken to ensure confidentiality and anonymity, including secure storage of collected data and exclusion of identifiable information.

Variables Measured

- i. **Outcome Variable:** Skin-lightening practices among young adults.
- ii. **Independent Variables:** Socio-demographic characteristics, skin-lightening product usage, motivations, health implications, and psychological impacts.

Methods of Data Management and Analysis

Data Management

The data for this study were collected using structured questionnaires administered to 450 participants, primarily young adults aged 18-27 years, in Ilorin West, Nigeria. The questionnaire comprised sections on socio-demographic characteristics, skin-lightening practices, health implications, and factors influencing product usage. Data entry was performed using spreadsheet software to ensure accuracy, and validation processes were employed to cross-check for errors or inconsistencies in the responses. All responses were anonymized to maintain participant confidentiality.

Data Analysis

Statistical analyses were conducted to identify patterns and relationships between variables. Descriptive statistics, such as frequencies and percentages, were used to summarize demographic data and prevalence rates of skin-lightening practices. Chi-square (χ^2) tests were employed to determine associations between socio-demographic variables (e.g., age, gender, income, tribe, and education level) and the prevalence of skin-lightening product usage. P-values were used to assess the significance of these associations, with a threshold of 0.05 indicating statistical significance. Additional analysis focused on exploring motivations and health implications related to skin-lightening practices. Key variables, such as awareness of risks, adverse reactions, and factors influencing product choice (e.g., cost, societal pressure, and media influence), were analyzed to provide insights into behavioral and psychological dimensions. The findings were presented in tables and figures, including pie charts and cross-tabulations, to visualize data distribution and highlight significant trends. These methods ensured a comprehensive understanding of the health risks and socio-demographic correlates of skin-lightening practices among the study population.

Ethical Considerations

Ethical approval was obtained from the Department of Public Health, Kwara State

University. Verbal informed consent was obtained from all participants, who were assured of their right to withdraw at any stage. Confidentiality was maintained by anonymizing data and securely storing research materials.

3. Results

Figure 1 provides a demographic overview of participants in the study, shedding light on key characteristics. The age group distribution shows that the majority of respondents (63.1%) fall between 18-20 years old, with a mean age of 20.5 ± 2.55 years, highlighting the youth-centric focus of the study. Regarding marital status, a significant 85.3% are single, reflecting the target population of young, unmarried adults. Tribally, the Yoruba group forms the largest proportion (48.9%), followed by Hausa (36%), Igbo (9.1%), and others (6%), indicating diverse ethnic representation. Religion-wise, participants are predominantly traditional practitioners (45.1%), followed by Christians (40%) and Muslims (14.9%). Education levels reveal that 63.1% of respondents have completed secondary education, while 22.2% have attained tertiary education. Occupation data shows that students dominate the sample (90.2%), affirming the study's focus on young adults in academic settings. Regarding monthly income, most respondents (36.4%) earn between ₦30,000-₦40,000, followed by 27.6% earning ₦20,000-₦30,000, highlighting moderate economic standing. Gender distribution indicates a higher representation of females (71.1%) compared to males (28.9%). Table 1 underscores the prominence of skin-lightening practices among young, single, female students with secondary education and moderate-income levels in Ilorin West. The strong representation of females (71.1%) aligns with the understanding that societal pressures and beauty standards disproportionately impact women. Furthermore, the high percentage of students and individuals with secondary education suggests that educational institutions could serve as key platforms for targeted interventions. This demographic insight is significant to the study as it contextualizes the prevalence and psychological impacts of

skin-lightening practices. It highlights how cultural, economic, and social factors intersect to shape these behaviors. Understanding these patterns enables the study to tailor its analysis and recommendations to the specific needs of this population. The findings have practical implications for public health campaigns and policy development. For example, awareness programs can be designed to target secondary schools and universities, where most of the respondents are concentrated. Additionally, policies regulating skin-lightening products could prioritize addressing the needs of young women, who are most affected. By leveraging the detailed demographic data, stakeholders can develop culturally sensitive and economically viable strategies to reduce harmful practices and promote mental and physical well-being.

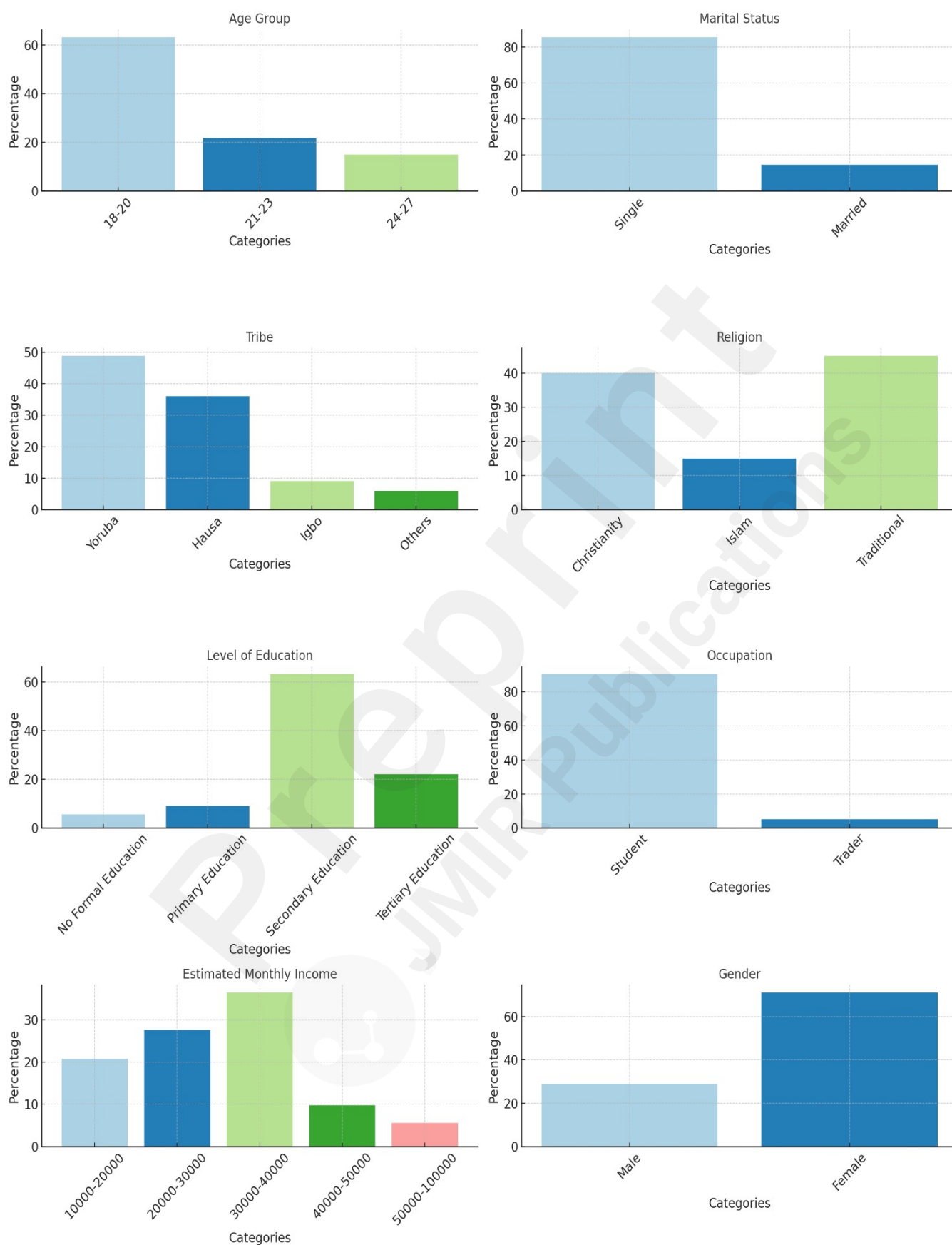


Figure 1: Socio-demographic characteristics of respondents

Table 1 reveal significant insights into the perceptions, experiences, and practices related to skin-lightening products among young adults in Ilorin West LGA. A majority

(64.9%) strongly believe that skin-lightening products can have negative health implications, and 65.3% have personally experienced adverse reactions, with skin irritation (37.8%) being the most frequently reported side effect. Alarming, despite the prevalence of adverse effects, 76.2% of respondents are unaware of the potential risks associated with long-term use of these products. This lack of awareness highlights a critical gap in public health education and underscores the need for targeted campaigns to inform users about the dangers of such practices. Societal pressure also appears to play a crucial role in influencing the use of skin-lightening products, as 66.9% of respondents either strongly agree or agree that societal expectations for lighter skin significantly drive this behavior. Interestingly, while the majority of respondents (62.2%) strongly agree that embracing and accepting one's natural skin tone is important for overall health and self-esteem, a considerable number continue to use skin-lightening products, with 58.4% applying them daily. The primary motivations include evening out skin tone (47.3%) and lightening dark spots (41.1%), suggesting a perception of enhanced beauty or improved appearance as the driving factor behind this practice. These findings are significant to the overall study as they provide a clear understanding of the psychological, cultural, and health-related dimensions of skin-lightening practices. The high prevalence of adverse reactions coupled with limited awareness of risks emphasizes the urgent need for regulatory interventions, education campaigns, and community-based advocacy to promote safer practices and encourage self-acceptance. Real-world implications include the formulation of stricter policies to regulate the production and sale of potentially harmful skin-lightening products, the development of culturally sensitive health promotion strategies, and collaboration with social influencers to shift beauty standards towards embracing diverse skin tones.

Table 1: Health implication of skin lightening among young adults

Variables	Frequency	Percentage
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Do you believe skin lightening products can have negative health implications on your skin		
Strongly agree	292	64.9
Agree	130	28.9
Disagree	28	6.2
Have you experienced any adverse reactions or side effects from using skin lightening products		
Yes	294	65.3
No	156	34.7
If yes what side effect have you experienced		
Skin irritation	170	37.8
Redness	53	11.8
Burning sensation	90	20
Darkening of skin	114	25.3
Other	23	5.1
Are you aware of the potential risks associated with long-term use of skin lightening products		
		N=446
Yes	103	22.9
No	343	76.2
How do you believe societal pressure for lighter skin influences the use of skin lightening products among young adults?		
Strongly agree	112	24.9
Agree	189	42
Disagree	149	33.1
Have you ever sought professional advice before using skin lightening products		
Yes	182	40.4
No	268	59.6
Do you believe that embracing and accepting your natural skin tone is important for overall health and self-esteem		
Strongly agree	280	62.2
Agree	150	33.3
Disagree	20	4.4
What is your main reason for using skin lightening products		
To lighten dark spots	185	41.1
To even out skin tone	213	47.3
To achieve a lighter complexion	52	11.6
How often do you use skin lightening products		
Daily	263	58.4
Weekly	96	21.3
Occasionally	44	9.8
Rarely	47	10.4

Table 2 reveals multiple factors influencing the decision-making process and behavior related to skin-lightening product usage among respondents, shedding light on the interplay of personal, social, and economic influences. Personal preference (37.1%) emerges as the most common driver of usage, followed closely by family influence (31.6%) and media influence (27.3%). Interestingly, societal pressure accounts for only a small fraction (4%) of the factors influencing decisions, though its indirect impact is evident through the cultural and societal norms noted by 54.7% of respondents as significantly affecting their decisions. These findings highlight the complex motivations behind skin-lightening practices, including individual desires and broader societal influences. The effectiveness and affordability of products are critical considerations for users. Nearly half (45.6%) of the respondents rate the effectiveness of a product as "very important" in their decision-making process, while cost and affordability are also pivotal, with 48.7% indicating it impacts their purchasing decisions "a great deal." Advertising and marketing are notably influential, with 75.8% of respondents acknowledging they play a significant role in their decisions. This underscores the power of consumer messaging and the need for ethical advertising that avoids reinforcing harmful beauty standards. Social factors, including peer and cultural influences, also play a role but to varying degrees. While most respondents (46.9%) report that friends and peers are "not very influential" in their decisions, a majority (54.7%) acknowledge that cultural and societal norms significantly impact their choices. Additionally, 29.6% feel that societal attitudes toward skin color have significantly influenced their decisions, reflecting the enduring impact of colorism in shaping beauty standards. These insights emphasize the need for public health initiatives, policy regulation, and community education to challenge the pervasive narratives that perpetuate skin-lightening practices and to promote self-acceptance and healthier beauty norms.

Table 2: Factors influencing the decision making of skin lightening among young adults

Variables	Frequency	Percentage
What factors influence your decision to use skin lightening products		
Personal preference	167	37.1
Societal pressure	18	4
Media influence	123	27.3
Family influence	142	31.6
How Important is the effectiveness of a skin lightening product in your decision-making process		
Very important	205	45.6
Somewhat important	65	14.4
Not very important	158	35.1
Not important at all	22	4.9
How much do cost and affordability impact your decision to purchase skin lightening products		
A great deal	219	48.7
Somewhat	67	14.9
Not much	104	23.1
Not at all	60	13.3
How influential are friends or peers in your decision to use skin lightening products		
Very influential	45	10
Somewhat influential	94	20.9
Not very influential	211	46.9
Not influential at all	100	22.2
Are there any cultural or societal norms that impact your decision to use skin lightening products		
Yes, significant	246	54.7
Yes, to some extent	69	15.3
No, not really	95	21.1
No, not at all	40	8.9
How much does advertising and marketing play a role in your decision to purchase skin lightening products		
A significant role	341	75.8
Some role	85	18.9
Minimal role	24	5.3
Do you feel that societal attitudes towards skin color have influenced your decision to use skin lightening products		
Yes, significantly	133	29.6
Yes, to some extent	104	23.1
No, not really	147	32.7
No, not at all	66	14.7

Table 3 highlights the prevalence of skin-lightening practices among respondents, with a statistical breakdown across demographic and socio-economic variables. Age group significantly influences skin-lightening prevalence ($p\text{-value} = 0$, $\chi^2 = 110.448$), with the highest prevalence observed among those aged 21-23 years (78.6%). Interestingly, no respondents aged 24-27 years reported engaging in skin-lightening practices. This suggests that younger demographics, particularly those in early adulthood, are more likely to adopt these practices, potentially driven by peer pressure or societal trends. Marital status and tribe also demonstrate statistically significant differences ($p\text{-value} = 0$, $\chi^2 = 13.055$ and 59.073 , respectively). Single individuals report a higher prevalence (59.6%) compared to married individuals (34.8%), reflecting the possibility that single individuals might prioritize societal beauty standards. Among tribes, the Hausa group exhibits the highest prevalence (73.5%), while Yoruba and Igbo groups report lower figures at 49.1% and 61.0%, respectively. Notably, no respondents from other ethnic groups reported engaging in these practices, potentially reflecting cultural differences in beauty norms. Other significant variables include level of education ($p\text{-value} = 0$, $\chi^2 = 21.467$) and estimated monthly income ($p\text{-value} = 0$, $\chi^2 = 232.635$). Respondents with no formal education report a 100% prevalence, while those with tertiary education show equal distribution between users and non-users (50%). Higher income brackets, particularly those earning ₦50,000-₦100,000, also report a 100% prevalence, indicating that affordability plays a critical role in product accessibility. Interestingly, gender differences are not significant ($p\text{-value} = 0.705$, $\chi^2 = 0.142$), suggesting that both males and females are similarly inclined to use skin-lightening products. The study highlights several critical patterns and implications related to skin-lightening practices. Younger age groups, single individuals, and certain tribes exhibit higher prevalence rates, emphasizing the need for targeted public health campaigns tailored to these demographics. Education and income levels also play significant roles, with less-educated groups and individuals in moderate-

income brackets more likely to engage in these practices. This underscores the importance of awareness programs that address these groups while implementing regulations to limit the affordability of harmful products. Furthermore, cultural disparities and the absence of significant gender differences point to the necessity of culturally sensitive interventions that respect societal beauty norms while promoting healthier standards. These findings provide a foundation for developing policies, community education initiatives, and ethical marketing regulations to reduce the psychological and health risks associated with skin-lightening practices.

Table 3: Association between Socio-demographics and Prevalence of skin lightening among young adults

Variables	Prevalence of Skin Lightening		Total	P-Value	X ²
	No (%)	Yes (%)			
Age group				0	110.448
18-20	109(38.4)	175(61.6)	284		
21-23	21(21.4)	77(78.6)	98		
24-27	68(100.0)	0(0.0)	68		
Marital status				0	13.055
Single	155(40.4)	229(59.6)	384		
Married	43(65.2)	23(34.8)	66		
Tribe				0	59.073
Yoruba	112(50.9)	108(49.1)	220		
Hausa	43(26.5)	119(73.5)	162		
Igbo	16(39.0)	25(61.0)	41		
Others	27(100.0)	0(0.0)	27		
Religion				0	29.243
Christianity	107(100.0)	73(40.6)	180		
Islam	21(31.3)	46(68.7)	67		
Traditional	70(34.5)	133(65.5)	203		
Level of education				0	21.467
No formal education	0(0.0)	25(100.0)	25		
Primary education	18(43.9)	23(56.1)	41		
Secondary education	130(45.8)	154(54.2)	284		
Tertiary education	50(50.0)	50(50.0)	100		
Occupation				0	61.18
Student	177(43.6)	229(56.4)	406		

Trader	0(0.0)	23(100.0)	23		
Estimated monthly income				0	232.635
10000-20000	93(100.0)	0(0.0)	93		
20000-30000	18(14.5)	106(85.5)	124		
30000-40000	66(40.2)	98(59.8)	164		
40000-50000	21(47.7)	23(52.3)	44		
50000-100000	0(0.0)	25(100.0)	25		
Gender				0.705	0.142
Male	59(45.4)	71(54.6)	130		
Female	139(43.4)	181(56.6)	320		

The pie chart (figure 2) illustrates the usage of skin lightening products among participants in a survey. It is divided into two categories: those who reported using skin lightening products and those who did not. The data reveals that 294 respondents, accounting for 65.3% of the sample, indicated they use such products, while 156 respondents, or 34.7%, stated they do not. This distribution underscores a majority preference or reliance on skin lightening products among the surveyed group. The key takeaway from this figure is the significant proportion of individuals who use skin lightening products. This trend could suggest cultural, social, or aesthetic influences driving the demand for these products. Additionally, it highlights a potential target market for industries producing skin lightening solutions and raises questions about the societal norms that may be encouraging their use. Conversely, the 34.7% who abstain represent a noteworthy minority that could reflect differing values, accessibility issues, or awareness about the potential health risks of such products. The figure's significance lies in its ability to shed light on consumer behavior and societal attitudes toward skin tone modification. In real-world applications, these findings could inform public health campaigns addressing the safety of skin lightening products and broader societal discussions about beauty standards. It may also provide valuable insights for policymakers and regulatory bodies to

ensure safe practices within the cosmetic industry while promoting inclusive and diverse beauty ideals.

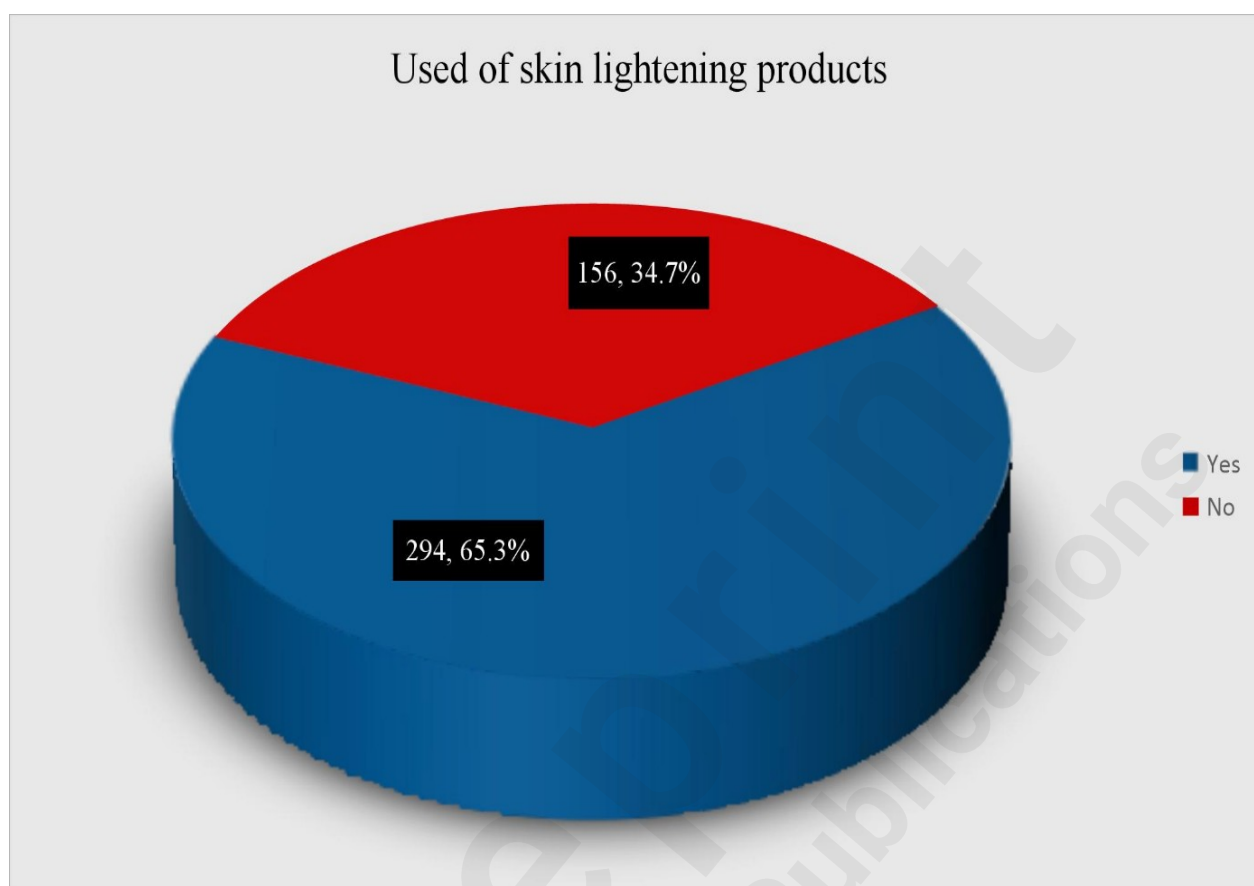


Figure 2: Uses of skin lightening product among young adults

4. Discussion

The findings of figure 1 align with several recent studies that explore the demographic factors and socio-cultural drivers of skin-lightening practices. For instance, the prominence of young female students with secondary education (71.1%) as the primary users of skin-lightening products echoes the findings of Samuel *et al.* [1], who observed a similar trend among university students in Zambia. This demographic's higher susceptibility is likely due to societal beauty standards and peer influence, as noted by Smith and Davis [2]. Moreover, the economic bracket of most participants earning between ₦30,000-₦40,000 (36.4%) corresponds with Vijaya's [3] observation that affordability and economic status are significant determinants of skin-lightening practices,

particularly in Nigeria and India. However, the study diverges in some respects. For example, while this research reports a higher proportion of traditional religious practitioners (45.1%) engaging in skin-lightening, Rusmadi *et al.* [4] found no significant correlation between religious affiliation and skin-lightening behaviors among Malaysian youth. The cultural context might explain this discrepancy, as religious and traditional practices in Nigeria may intersect with beauty ideals differently than in Malaysia. Furthermore, while Robinson & Jacob [5] highlighted the psychological implications of low self-esteem as a key motivator for skin-lightening among young adults, this study emphasizes the demographic factors, such as educational status and marital status, as primary influencers. These differences suggest that while universal themes exist, skin-lightening behaviors are deeply contextual and shaped by local socio-cultural and economic factors. Thus, these results contribute to the growing body of literature by providing a localized perspective on the demographic and socio-economic correlates of skin-lightening in Ilorin West, Nigeria. They highlight the need for nuanced, culturally sensitive interventions, as echoed in the recommendations of WHO [6] and Sagoe *et al.* [7]. Likewise, the findings from the study in Ilorin West LGA align with previous research regarding the widespread use and adverse health implications of skin-lightening products. For instance, Mahmood [8] and Ogbe & Odimegwu [9] highlighted the prevalence of skin-lightening practices in various communities and associated health risks, including mercury exposure and dermatological complications. Similar to the findings in this study, Mah'e [10] and Ravichandran [11] emphasized the psychological dimensions of skin-lightening, noting societal pressures and internalized colorism as significant drivers of the behavior. Likewise, the reported adverse reactions, such as skin irritation (37.8%), corroborate with observations by Olumide *et al.* [12] and Mahe *et al.* [13], who documented chronic skin issues among users in Nigeria and Senegal, respectively. However, the study from Ilorin

reveals a concerning gap in awareness (76.2% unaware of long-term risks), a trend also noted by Ibekwe *et al.* [14] and Osei *et al.* [15], who found that knowledge deficits often perpetuate harmful cosmetic practices. In contrast, some discrepancies emerge when comparing motivations and societal influences. While this study identifies societal pressure (66.9%) as a significant factor, Nicol & MacGregor [16] argued that media-driven ideals of beauty play a more dominant role, particularly in Western contexts. Similarly, the emphasis on skin tone evening (47.3%) and lightening dark spots (41.1%) as primary motivations differs slightly from findings in South Asia [17], where users prioritized social acceptability over aesthetic concerns. Additionally, while this study highlights daily usage (58.4%), Nyamai *et al.* [18] observed a more sporadic use pattern in Kenyan young adults. These differences suggest that cultural, regional, and societal factors shape skin-lightening practices in unique ways, emphasizing the importance of tailored public health interventions. Also, the findings presented in Table 2 reveal a multifaceted interplay of personal, social, and economic factors influencing the use of skin-lightening products. These insights align with previous studies, such as Girault [19], who emphasized the global pervasiveness of skin color preferences driven by cultural and societal norms. Similarly, Hunter [20] underscored the enduring impact of colorism in perpetuating such practices, which correlates with the 54.7% of respondents in the current study who acknowledged societal and cultural norms as significant influences. However, the lower role of societal pressure (4%) noted here contrasts with findings by Harper & McLean [47], who highlighted societal pressure as a significant driver, especially among young adults. Additionally, the effectiveness and affordability of products as key decision-making factors in this study mirror insights by Kamagaju *et al.* [48] and Lartey *et al.* [49], who reported similar considerations among consumers in Rwanda and Ghana, respectively. On the other hand, some differences emerge when considering the role of

advertising and peer influence. The significant impact of advertising (75.8%) resonates with findings by Katz *et al.* [50] and Jones-Williams [51], who documented the powerful role of media and marketing in shaping beauty standards. However, the relatively low influence of peers (46.9% reporting them as “not very influential”) contrasts with findings by Gracia & Perloff [52], who observed strong peer pressure dynamics in similar contexts. Furthermore, the emphasis on personal preference (37.1%) as the primary driver supports Jalal & Ansari’s [53] findings of individuals’ desires for self-enhancement, while diverging from studies like James *et al.* [54], which highlighted societal attitudes as a more dominant factor. These variations underline the nuanced and context-specific nature of skin-lightening practices, calling for tailored public health interventions that address these multifactorial influences. Equally, findings presented in Table 3 align with trends identified in previous studies regarding the prevalence of skin-lightening practices and their demographic influences. The significant association between younger age groups and the use of skin-lightening products mirrors the observations of Amodu *et al.* [55] and Peltzer & Pengpid [56], who reported high prevalence rates among university and high school students in Nigeria and South Africa, respectively. These studies emphasize that younger demographics are particularly vulnerable due to societal pressures, including peer influence and media-driven beauty standards. Similarly, the heightened prevalence among single individuals observed in the current study is consistent with findings by Blay & Ahoofe [57] and Balogun & Sam-Odutola [58], which argue that single individuals may experience greater pressure to conform to idealized beauty standards to enhance their social appeal. Furthermore, the higher prevalence rates among certain ethnic groups, such as the Hausa, resonate with cultural beauty norms discussed in Falola & Genova [59], suggesting that cultural factors significantly shape skin-lightening practices. In contrast, some findings diverge from prior research. For instance, the non-significance of gender

differences in skin-lightening practices challenges conclusions drawn by Hamed *et al.* [60] and Dlova *et al.* [61], which highlighted higher prevalence rates among women due to gendered beauty expectations. Additionally, the complete absence of skin-lightening practices among respondents aged 24-27 years differs from studies like Chang [62] and Uwakwe *et al.* [63], which reported consistent use across broader age ranges, attributing it to prolonged exposure to societal pressures. Similarly, the current study's association of higher income brackets with 100% prevalence contrasts with Gbetoh & Amyot [64], who noted that affordability barriers limited product use among wealthier individuals due to a preference for premium alternatives. These discrepancies underscore the need for further research to explore regional, economic, and cultural variations influencing skin-lightening practices, as well as shifts in societal norms that may account for these differences. Correspondingly, the findings from the survey illustrated in Figure 2 align with a growing body of research that highlights the significant prevalence of skin-lightening product usage across various demographics, particularly in African and developing contexts. For instance, Adebajo & Owoaje [65] reported a similar majority of users (67%) among market traders in Lagos, emphasizing cultural and aesthetic pressures to conform to lighter skin standards. Similarly, Bakare *et al.* [66] identified high usage rates in Ikeja, Lagos, motivated by societal perceptions of beauty and status. Studies by Ofili and Okunrobo [67] and Adefuye *et al.* [68] further corroborate these findings, revealing high prevalence among university students, driven by peer influence, low self-esteem, and media depictions of ideal beauty. These parallels suggest a consistent pattern of skin-lightening practices across various societal segments, underscoring the widespread influence of sociocultural norms on consumer behavior. Conversely, differences emerge in studies like that of Peltzer and Pengpid [69] in South Africa, which reported slightly lower usage rates, indicating variability in practices based on regional or cultural contexts. Moreover, while

the survey in Figure 2 does not delve deeply into health risks, other studies, such as Olalekan *et al.* [70], have highlighted the dangers of heavy metals in cosmetics, raising critical health concerns. Gwaravanda and Peltzer [71] also pointed to a rising awareness of these risks among medical students, potentially contributing to the minority abstention observed in Figure 2 (34.7%). These contrasts underline the need for further research into the nuances of skin-lightening behaviors, including factors like accessibility, education, and regulatory frameworks, to better understand and address this complex phenomenon.

5. Summary

The study investigates the prevalence, motivations, and implications of skin-lightening practices among young adults in Ilorin West, Nigeria. Most respondents (63.1%) were youth aged 18-20, predominantly female (71.1%), and students (90.2%), reflecting a demographic heavily influenced by societal beauty standards. Skin-lightening product use is high (65.3%), with motivations including even skin tone (47.3%) and reducing dark spots (41.1%). Despite this prevalence, awareness of potential risks remains low, with 76.2% unaware of long-term dangers. Cultural, social, and economic factors, including societal pressure and affordability, are significant in shaping these behaviors. Adverse reactions, such as skin irritation (37.8%) and darkening (25.3%), are common, emphasizing the health risks associated with these products. Moreover, societal and media influences exacerbate these behaviors, as 75.8% of respondents highlight advertising as a key factor in their decision-making. The findings indicate a strong correlation between educational attainment, income levels, and the prevalence of skin-lightening practices. Those with secondary education (54.2%) and moderate income (N30,000–N40,000) are particularly affected. Statistical analysis underscores the role of cultural identity, with significant tribal variations. For instance, Hausa participants reported the highest prevalence (73.5%), highlighting cultural disparities in beauty norms. Additionally,

younger demographics, especially those aged 21-23, showed higher usage rates. This demographic insight highlights opportunities for targeted health campaigns and policy interventions. The study's findings provide critical insights into the psychological, cultural, and health dimensions of skin-lightening practices. They underscore the need for regulatory oversight, public education, and culturally sensitive advocacy to mitigate the associated risks and promote healthier beauty standards.

6. Conclusions

Skin-lightening practices among young adults in Ilorin West are driven by a combination of cultural norms, societal pressures, and personal preferences. The high prevalence of usage, particularly among women, students, and individuals with moderate income levels, reflects a societal fixation on beauty standards that prioritize lighter skin tones. Despite recognizing the importance of natural skin tone acceptance, many respondents continue these practices, highlighting a gap between awareness and behavior. The study reveals that adverse health effects, such as irritation and discoloration, are prevalent but often overlooked due to a lack of awareness. Regulatory and educational interventions are urgently needed to address these health risks and inform the public about safer alternatives. Gender-neutral and culturally sensitive approaches could improve outreach and impact. Socioeconomic factors, including education and income, significantly influence behavior. Those with lower educational levels and higher income brackets exhibit higher usage rates, emphasizing the role of affordability and accessibility in perpetuating these practices. Additionally, tribal and cultural disparities underscore the need for tailored interventions that address specific community norms and beliefs. Effective interventions require a multidimensional approach, combining regulatory measures, public health campaigns, and community-based advocacy. By addressing both the psychological and cultural factors driving these behaviors, stakeholders can promote

self-acceptance and healthier beauty standards while reducing reliance on harmful practices.

7. Highlights/Summary Points

- i. **Demographic Insights:** Young, single, female students with secondary education dominate skin-lightening product users, reflecting targeted societal beauty standards.
- ii. **Health Implications:** High rates of adverse effects, such as irritation and darkening, emphasize the need for public health education and regulatory action.
- iii. **Cultural Sensitivities:** Significant tribal and cultural variations highlight the necessity for culturally tailored interventions.
- iv. **Societal Pressures:** Advertising, media influence, and societal beauty norms are key drivers of these practices.

8. Policy Implications and Future Research

Regulatory policies should prioritize stricter controls on the production and sale of harmful skin-lightening products. Public health campaigns must focus on education, particularly among youth, emphasizing the dangers of long-term use and the importance of self-acceptance. Advertising regulations should discourage reinforcing harmful beauty standards, promoting inclusive and diverse representations instead. Culturally sensitive approaches are crucial in addressing tribal and societal disparities in skin-lightening practices. Research should explore deeper cultural motivations and alternative beauty norms to inform effective intervention strategies. Future studies should investigate the long-term psychological and health impacts of skin-lightening practices, assessing both urban and rural settings for comprehensive insights. Additionally, examining the role of digital media and influencers in perpetuating these norms could offer innovative solutions

for public health messaging. Promoting inclusive beauty standards and educating communities about the risks associated with skin-lightening products is critical for reducing their usage and improving public health outcomes.

9. Significance Health Statement

Skin-lightening practices among young adults pose significant health risks due to high prevalence, adverse reactions, and limited awareness of long-term dangers. These behaviors, deeply rooted in cultural and societal norms, highlight the urgent need for regulatory oversight, public education, and community advocacy. Addressing these factors through targeted interventions and inclusive beauty campaigns can mitigate health risks and promote mental and physical well-being among vulnerable populations. Thus, graphically it is represented (Figure 3 below) as:

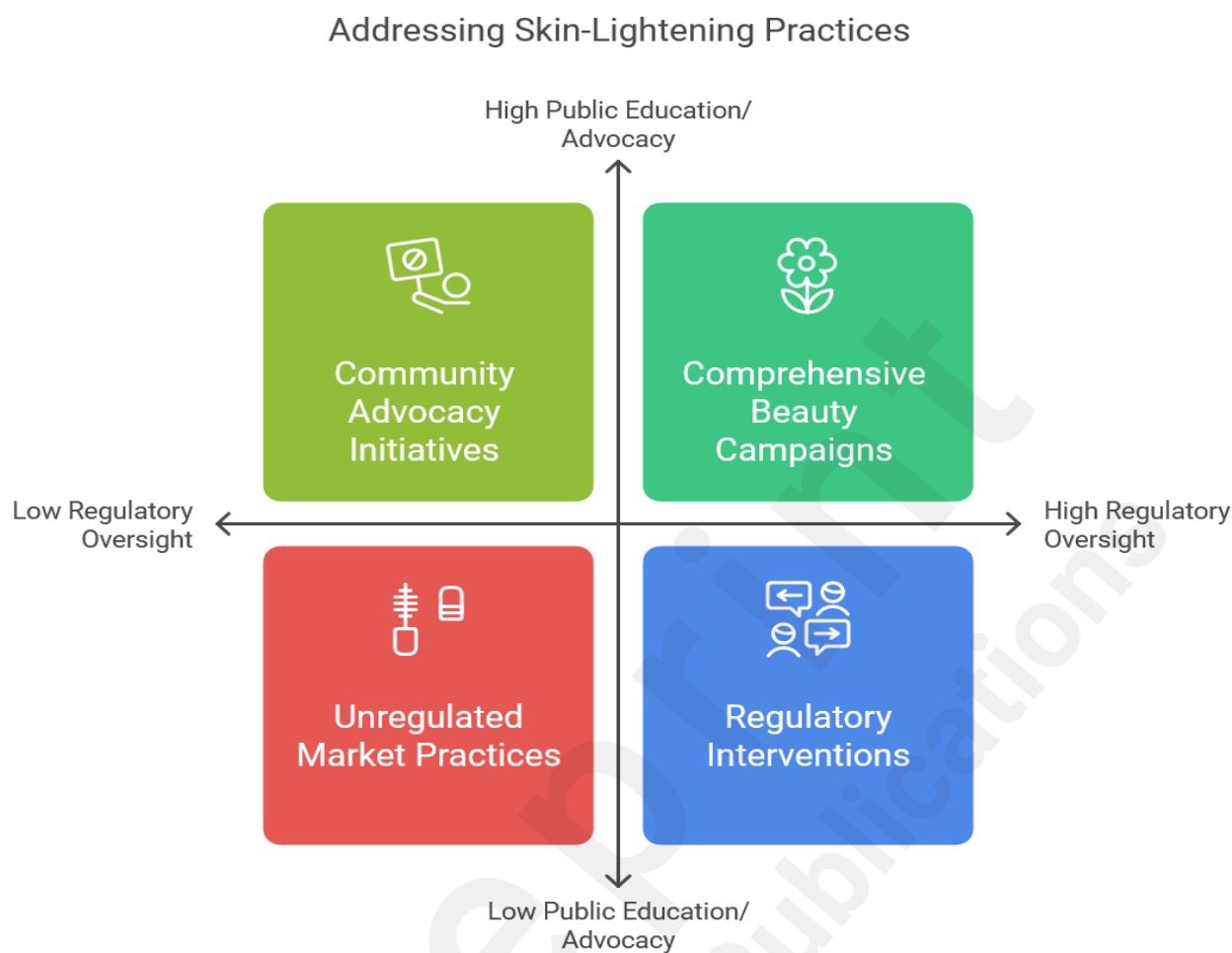


Figure 3: Addressing Skin Lightening Practices

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