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Access to Sunscreen, Protective Clothing, and Dermatologic Care Among Albino Populations in Nigeria: A Cross-sectional Study

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

Background: Albinism is a genetically inherited condition characterised by reduced or absent melanin, predisposing individuals to ultraviolet (UV)-related skin damage, including sunburns, photoaging, and skin cancers. In sub-Saharan Africa, particularly Nigeria, persons with albinism (PWA) face significant challenges in accessing preventive measures such as sunscreen, protective clothing, and dermatologic care, despite living in regions with high UV radiation exposure.

Objective: This study aimed to assess the accessibility and utilisation of sunscreen, protective clothing, and dermatologic care among albino populations in Nigeria.

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Methods: A cross-sectional study was conducted among 412 individuals with albinism recruited from community organisations, dermatology clinics, and advocacy groups across five geopolitical zones of Nigeria. Data were collected using structured interviewer-administered questionnaires assessing sociodemographic characteristics, awareness of sun protection, frequency of sunscreen use, availability of protective clothing, and access to dermatologic consultations. Statistical analysis involved descriptive summaries and chi-square tests to examine associations between sociodemographic factors and access to protective resources.

Results: Of the participants, 72% reported awareness of sunscreen benefits, yet only 29% reported consistent use, largely due to high costs and limited availability. Protective clothing (wide-brimmed hats, long-sleeved garments) was accessible to 48%, but only 35% used them regularly. Dermatologic care access was markedly low, with 22% having ever consulted a dermatologist. Financial barriers, lack of government support, and inadequate health education were cited as major limitations. Notably, individuals residing in urban centres had significantly better access to sunscreen and dermatologic care compared to those in rural communities ($p < 0.05$).

Conclusion: Access to sun-protective resources among Nigerian albino populations remains limited, increasing their vulnerability to UV-induced complications. Targeted interventions, including subsidised sunscreen programs, public health education, and expansion of dermatologic services, are urgently needed to reduce health disparities and improve the quality of life for PWA.

Keywords: Albinism; sunscreen; protective clothing; dermatologic care; Nigeria.

1. INTRODUCTION

Albinism is a rare genetic condition characterised by the partial or complete absence of melanin pigment in the skin, hair, and eyes. The absence or reduction of melanin in the skin in albinism is associated with increased sensitivity to UV radiation and predisposition to skin cancers (Sefako Akakpo et al., 2024). The most common form in Nigeria and sub-Saharan Africa is oculocutaneous albinism (OCA), which significantly increases vulnerability to ultraviolet (UV) radiation–related skin damage, ocular disorders, and cutaneous malignancies (Okoro, 1975). In tropical regions such as Nigeria, where solar UV exposure is intense year-round, individuals with albinism face heightened health risks, especially in the absence of adequate protective measures. Beyond medical implications, albinism carries profound psychosocial consequences, often shaped by stigma, discrimination, and poor health access (Ayanlowo et al., 2023). Consequently, access to preventive strategies—including sunscreen, protective clothing, and dermatologic care—represents a critical determinant of health outcomes among this population (Marçon et al., 2025).

The anomaly exhibits a wide spectrum of forms from partial to complete absence of melanin. Organisms with a complete absence are known as 'albino' and those with a partial absence are known as 'albinoid' (Chifamba & Chifamba, 2024). Despite recognition of albinism as a public health concern, evidence consistently highlights inadequate photoprotection and disproportionate disease burden among persons with albinism (PWA) in Nigeria. Decades ago, Okoro (1975) described albinism not only as a dermatological condition but also as a social issue, citing pervasive neglect and limited interventions. Nearly fifty years later, contemporary studies continue to echo these challenges. For example, Ayanlowo et al. (2023) found that individuals with OCA in Lagos experienced reduced quality of life due to chronic photodamage, recurrent dermatoses, and psychosocial distress. Similarly, Sani et al. (2023) reported a high prevalence of cutaneous dermatoses in Kaduna, including actinic keratoses, photodermatoses, and early malignant changes, often exacerbated by delayed presentation and limited access to dermatologic care.

Skin cancer represents one of the most severe outcomes of inadequate photoprotection in PWA. Enechukwu et al. (2020) observed shifting histopathologic patterns of cutaneous malignancies among individuals with albinism in Anambra State, suggesting that increasing life expectancy among PWA may paradoxically expose them to greater cumulative UV damage and malignancy risks. Alarmingly, the Albinism Association of Nigeria (2024) reported that an estimated two albinos die from skin cancer in the country every month, reflecting both high disease incidence and poor survival outcomes. These findings emphasise the urgent need for preventive measures to mitigate UV-induced harm.

Among available protective strategies, sunscreen use is one of the most effective interventions. However, sunscreen use among albino populations in Nigeria remains alarmingly low. A study conducted in Enugu revealed that despite awareness of sunscreen benefits, only a small fraction of respondents reported consistent use, primarily due to high costs, poor availability, and misconceptions (International Journal of Medicine and Health Development, 2021). Similar barriers were documented in Benin City, where Madubuko and Onunu (2023) found that economic constraints and cultural attitudes significantly limited adherence to photoprotective strategies, even among those who understood the risks. Comparable findings were recently reinforced by Ighorodje et al. (2024), who showed that while awareness of photoprotection was relatively high in Uyo, implementation lagged, with irregular sunscreen use and inconsistent adoption of protective clothing. Collectively, these studies underscore a gap between knowledge and practice, largely mediated by structural barriers such as affordability, distribution, and health policy neglect.

Protective clothing, including wide-brimmed hats, long-sleeved garments, and sunglasses, represents another cornerstone of photoprotection. Yet similar to sunscreen, utilization rates remain suboptimal. In Benin City, the *Journal of Medicine in the Tropics* (2018) documented that many PWA relied on improvised or inadequate clothing that offered limited UV protection, often due to financial hardship or lack of awareness. A study in Plateau State further demonstrated that protective clothing use was sporadic, with many PWA citing discomfort in Nigeria's hot climate and societal stigma as reasons for non-adherence (Journal of the Egyptian Women's Dermatologic Society, 2024). These challenges highlight the complexity of photoprotection behaviours, which are influenced not only by resource availability but also by sociocultural dynamics and individual perceptions of identity.

Dermatologic care access forms the third pillar of prevention and early intervention. However, systemic barriers frequently restrict PWA from receiving adequate care. In southwestern Nigeria, Ajani et al. (2022) reported that many patients with OCA presented late with advanced cutaneous lesions, reducing therapeutic success rates. This delay often stemmed from financial difficulties, inadequate dermatology workforce distribution, and limited outreach programs. Similarly, Enneng et al. (2022) described how rural PWA in Nigeria face compounded barriers, including geographical isolation, poverty, and lack of transportation, which collectively hinder timely dermatologic consultation. Even in urban centres, specialist dermatologic services are insufficiently available relative to demand, leaving many PWA reliant on general practitioners or unqualified providers who may lack expertise in managing albinism-related complications.

The cumulative consequences of these deficits are evident in the high prevalence of dermatologic morbidity and mortality among Nigerian albino populations. The Nigerian Journal of Dermatology (2022) highlighted that inadequate photoprotection practices directly correlated with elevated risks of cutaneous malignancies when compared to the normally pigmented population in Anambra State. Furthermore, Hadiza and Yahya (2023) observed that common dermatoses such as actinic keratoses, fungal infections, and xerosis often went undertreated, predisposing PWA to chronic skin damage and poor quality of life. These findings align with broader observations across Nigeria, where consistent patterns of neglect, underfunding, and health system limitations continue to compromise outcomes.

The psychosocial dimensions of albinism further compound these medical challenges. Discrimination, marginalisation, and cultural misconceptions surrounding albinism often limit social participation, economic opportunities, and access to healthcare resources (Ayanlowo et al., 2023). Such stigma may discourage PWA from seeking dermatologic consultations or adhering to photoprotective practices, thereby perpetuating cycles of vulnerability. Moreover, societal exclusion reduces employment opportunities, making it even harder for PWA to afford protective resources such as sunscreen and specialised care.

Despite the growing body of research on albinism in Nigeria, significant gaps remain. While earlier studies described the clinical profiles and dermatologic complications associated with albinism (Okoro, 1975; Ajani et al., 2022; Sani & Yahya, 2023), relatively fewer have systematically explored the intersection of sunscreen access, protective clothing, and dermatologic care in a single comprehensive framework. Emerging data, such as those from

Madubuko and Onunu (2023) and Ighorodje et al. (2024), highlight behavioural aspects of photoprotection but remain limited in geographic scope. Meanwhile, structural factors such as government policy, subsidy programs, and systemic healthcare barriers are underexplored, leaving important questions about sustainability and equity unanswered.

Addressing these challenges requires coordinated public health interventions and policies tailored to the unique needs of PWA. Subsidised sunscreen distribution, expansion of dermatology outreach services, and culturally sensitive education campaigns are potential strategies to improve outcomes. However, effective interventions must be grounded in robust evidence that accounts for regional variability, socioeconomic dynamics, and the lived experiences of individuals with albinism. Thus, research focusing on access to sunscreen, protective clothing, and dermatologic care across Nigeria provides not only critical clinical insights but also actionable guidance for policymakers, advocacy groups, and healthcare providers.

This study builds on existing literature by systematically examining access to sunscreen, protective clothing, and dermatologic care among albino populations in Nigeria, with the aim of highlighting disparities, identifying barriers, and informing practical strategies for intervention. By situating the health of PWA within a broader context of socioeconomic inequities and systemic neglect, the study underscores the urgent need for multisectoral engagement to reduce preventable morbidity and mortality. Ultimately, improving access to sun-protective measures and specialised care will not only safeguard dermatologic health but also enhance quality of life, reduce stigma, and promote health equity for one of Nigeria’s most vulnerable populations.

2. METHODOLOGY

2.1 Study Design and Setting

This was a cross-sectional study conducted between January-September, 2025, among individuals with albinism residing in Nigeria. The study covered five geopolitical zones (North-Central, North-West, South-East, South-South, and South-West) to ensure wide representation of the albino population.

2.2 Study Population and Sampling

The study population included persons with albinism (PWA) of all ages who were members of albino support groups, patients attending dermatology clinics, and individuals recruited through community outreach programs. Inclusion criteria were a clinical diagnosis of albinism and willingness to participate. Individuals with cognitive impairment that precluded reliable responses were excluded. A total of 412 participants were recruited using a stratified purposive sampling technique.

2.3 Data Collection

Data were collected using a structured, interviewer-administered questionnaire designed after a literature review and expert input. The tool captured information on sociodemographic characteristics (age, sex, educational status, occupation, and residence), awareness of sun protection, availability and frequency of sunscreen use, access to protective clothing (hats, long-sleeved garments), and history of dermatologic consultation. The questionnaire was pre-tested among 20 PWA outside the study area to ensure clarity and validity.

2.4 Outcome Measures

The primary outcomes were:

1. Self-reported access and utilisation of sunscreen.
2. Availability and use of protective clothing.
3. Access to dermatologic care (frequency of dermatology consultations).

2.5 Data Analysis

Data were entered into Microsoft Excel and analysed using SPSS version [insert version]. Descriptive statistics were presented as frequencies, percentages, means, and standard deviations. Chi-square tests were used to examine associations between sociodemographic variables (age, gender, residence, education, and occupation) and access to protective measures. A p-value of <0.05 was considered statistically significant.

3. RESULTS

The findings of this study revealed substantial disparities in access to sunscreen, protective clothing, and dermatologic care among persons with albinism (PWA) in Nigeria, underscoring the intersection of medical, socioeconomic, and systemic challenges faced by this vulnerable population. Among the 412 participants surveyed across five geopolitical zones, awareness of sunscreen benefits was relatively high, with 72% acknowledging that regular use prevents sunburn, reduces photodamage, and lowers the risk of skin cancer. However, only 29% reported consistent use of sunscreen, a figure that aligns closely with previous reports from Enugu and Benin City, where less than one-third of albinos regularly applied sunscreen due to affordability and availability constraints (International Journal of Medicine and Health Development, 2021; Madubuko & Onunu, 2023). The median cost of sunscreen was described as prohibitive, with participants citing that a single tube often costs between ₦4,000 and ₦8,000, far exceeding the financial capacity of many families, especially in rural communities where income levels are lower.

The scarcity of affordable sunscreens was compounded by poor distribution networks, with many rural and semi-urban areas reporting a complete absence of such products in local pharmacies. This corroborates earlier findings from Plateau State, where albino populations depended largely on donations or non-governmental interventions for access to sunscreen (Journal of the Egyptian Women's Dermatologic Society, 2024). Participants noted that when sunscreens were available, they were often of suboptimal SPF levels or had expired, further limiting protective efficacy. In addition to cost and availability, cultural misconceptions also emerged as barriers, as some respondents expressed scepticism regarding the necessity of sunscreen, reflecting gaps in health education.

In terms of protective clothing, 48% of respondents indicated access to wide-brimmed hats, long-sleeved garments, and UV-protective fabrics, yet only 35% reported consistent usage. This disparity between access and regular use may be explained by sociocultural factors. Some participants associated sun-protective clothing with stigmatisation, as wearing long sleeves and broad hats in hot climates drew unwanted attention and further amplified feelings of social exclusion. Comparable findings were noted in Uyo, where, although protective clothing was more affordable and widely available than sunscreen, compliance was undermined by social stigma and discomfort in the humid tropical climate (Ighorodje et al., 2024).

Access to dermatologic care was strikingly limited. Only 22% of participants had ever consulted a dermatologist, a figure that mirrors historical reports highlighting systemic inequities in dermatologic service provision (Okoro, 1975; Enneng et al., 2022). Urban participants had significantly higher access to dermatologists compared to rural participants ($p < 0.05$), reflecting the concentration of dermatologic services in metropolitan centres such as Lagos, Abuja, and Port Harcourt. Respondents in rural areas often relied on general practitioners or traditional healers for skin-related complaints, leading to delays in diagnosis and treatment of precancerous lesions. Several respondents recounted journeys of over 100 km to the nearest dermatologist, which discouraged routine visits and contributed to late-stage presentations of skin malignancies. These challenges echo reports from Lagos and Kaduna, which highlighted the burden of late-diagnosed dermatoses and skin cancers in PWA (Ayanlowo et al., 2023; Sani et al., 2023).

Skin cancer and precancerous lesions were major clinical outcomes associated with poor access to sun-protective measures. In this study, 14% of participants reported a prior diagnosis of actinic keratosis or squamous cell carcinoma, with incidence significantly higher among those with inconsistent sunscreen use. This pattern aligns with histopathologic studies in Anambra State that documented a paradigm shift in the predominance of squamous cell carcinoma and basal cell carcinoma among albinos, reflecting cumulative sun exposure (Enechukwu et al., 2020; Nigerian Journal of Dermatology, 2022). Participants with greater access to sunscreen and dermatologic care had markedly lower prevalence of malignant and premalignant lesions, suggesting a protective association.

The psychological impact of limited access to sun-protection resources was also evident. Respondents described feelings of vulnerability, fear of developing skin cancer, and reduced quality of life due to sun avoidance strategies that restricted mobility and participation in outdoor activities. These findings are consistent with the psychosocial dimensions reported in Lagos, where persons with albinism reported poor quality of life indices due to recurrent sunburn, skin lesions, and stigmatisation

(Ayanlowo et al., 2023). In addition, lack of access to preventive resources perpetuated cycles of poverty, as many respondents noted decreased employability, particularly in outdoor labour-intensive sectors such as farming, security services, and construction, which further limited their ability to afford sunscreen or dermatologic care.

Governmental and institutional support for PWA was perceived as inadequate. Over 80% of participants believed that sunscreen should be subsidised or provided free of charge, a demand consistent with advocacy from the Albinism Association of Nigeria, which has repeatedly highlighted the alarming statistic that two albinos die of skin cancer monthly in the country (Albinism Association of Nigeria, 2024). While some state governments have initiated outreach programs and non-governmental organisations occasionally donate sunscreens, such interventions were described as irregular, unsustainable, and insufficient to meet the widespread need.

Interestingly, education emerged as a significant determinant of sun-protection practices. Participants with higher educational attainment were more likely to be consistent with sunscreen use and dermatologic consultations, aligning with earlier reports that knowledge strongly predicts adoption of photoprotective behaviours (Journal of Medicine in the Tropics, 2018; Ajani et al., 2022). Conversely, lack of education and persisting myths regarding albinism perpetuated poor compliance and vulnerability to sun-induced skin damage.

The cumulative findings of this study resonate with over four decades of evidence indicating that PWAs in Nigeria remain disproportionately disadvantaged in accessing dermatologic protection (Okoro, 1975). Despite greater awareness and ongoing advocacy, systemic barriers, including poverty, inadequate policy frameworks, and geographic inequities in healthcare distribution, continue to undermine protective practices. Recent studies across Nigeria confirm that the prevalence of cutaneous malignancies remains disproportionately high in PWA compared to the general population, and that improvements in access to sunscreen, protective clothing, and dermatologic care could substantially reduce this burden (Madubuko & Onunu, 2023; Ighorodje et al., 2024; Hadiza & Yahya, 2023).

In summary, this study highlights the persistent challenges facing Nigerian albino populations in achieving equitable access to sunscreen, protective clothing, and dermatologic care. The findings confirm that awareness does not necessarily translate to practice, largely due to affordability, accessibility, and sociocultural barriers. Urban-rural disparities in dermatologic care access, compounded by financial constraints and limited governmental support, place PWA at heightened risk of photodamage and cutaneous malignancy. These results, supported by both contemporary and historical evidence, underscore the urgent need for comprehensive interventions, including subsidised sunscreen programs, strengthened health education campaigns, and expansion of dermatologic services to underserved regions. Without such measures, the morbidity and mortality burden associated with albinism-related skin conditions in Nigeria is unlikely to decline.

4. DISCUSSION

This study highlights critical gaps in access to sunscreen, protective clothing, and dermatologic care among albino populations in Nigeria. Despite growing awareness of the heightened susceptibility of persons with albinism (PWA) to ultraviolet (UV) radiation and its consequences, the findings reveal persistent disparities in preventive and clinical resources that reflect long-standing structural, socioeconomic, and cultural barriers. These results contribute to an expanding body of literature emphasising the urgent need for targeted interventions to improve skin health outcomes and quality of life for PWA in Nigeria.

Our findings that only a minority of participants reported consistent sunscreen use align with earlier studies documenting low sunscreen utilisation among Nigerian albinos. In Enugu, for instance, a study found that although awareness of sunscreen existed among the majority of participants, only about one-third reported regular use, primarily due to high costs and poor accessibility (International Journal of Medicine & Health Development, 2021). Similarly, Madubuko and Onunu (2023) reported that in Benin City, cost and unavailability were the leading barriers to sunscreen adoption, despite widespread recognition of its protective benefits. These patterns mirror our results and reinforce the observation that sunscreen, though medically essential, remains economically inaccessible for most PWA in Nigeria. The situation is compounded by the fact that imported sunscreens, which are the main source in Nigerian markets, are priced well beyond the purchasing power of most families, especially in rural communities (Ighorodje et al., 2024).

In terms of protective clothing, less than half of the participants reported regular use of wide-brimmed hats, long sleeves, and other photoprotective garments. This finding is consistent with data from Uyo, where Ighorodje et al. (2024) observed that although some PWA understood the importance of covering exposed skin, adherence was poor due to climate discomfort, fashion stigma, and limited resources to acquire protective clothing. The issue of stigma has been emphasised in earlier sociocultural studies, such as Okoro's (1975) seminal work, which noted that PWA often experienced social ridicule when adopting atypical clothing styles, further discouraging consistent use. These social factors continue to play a critical role nearly five decades later, suggesting that interventions must not only focus on affordability but also on shifting cultural perceptions around protective dressing.

Dermatologic care utilisation in our study was markedly low, with less than a quarter of participants having ever consulted a dermatologist. This resonates with findings from Ayanlowo et al. (2023), who showed that despite the high prevalence of dermatologic conditions among albinos in Lagos, very few had regular dermatology follow-up. The barriers are multifactorial, ranging from geographical inaccessibility to dermatology services, particularly in rural areas (Enneng et al., 2022), to financial costs and lack of awareness of specialised care. Sani et al. (2023) and Hadiza and Yahya (2023) both underscored the clinical consequences of these gaps, showing high prevalence rates of solar keratoses, squamous cell carcinoma, and other UV-related dermatoses among PWA in Kaduna. Without regular dermatologic surveillance, precancerous lesions often progress unchecked, contributing to alarmingly high mortality rates from skin cancer in this population. Indeed, the Albinism Association of Nigeria (2024) reported that two albinos die of skin cancer every month in Nigeria, a statistic that underscores the dire consequences of inadequate access to preventive and clinical dermatologic services.

The geographic disparities observed in our study, where urban-dwelling albinos had significantly better access to sunscreen and dermatologic care compared to their rural counterparts, mirror previous research. Ajani et al. (2022) observed that patients with albinism in Southwestern Nigeria presented with more advanced skin lesions when residing in rural or semi-urban settings, underscoring the urban–rural divide in both preventive practices and access to care. This gap is concerning, given that rural communities often experience higher levels of poverty and limited access to healthcare infrastructure. Ayanlowo et al. (2023) also highlighted that the lack of integration of albinism-focused dermatologic care into primary health services perpetuates these inequalities. Addressing rural-urban disparities will therefore require deliberate decentralisation of dermatologic services, as well as community-based outreach programs that bring education and care closer to affected individuals.

An important dimension of our findings is the psychosocial burden associated with poor access to protective resources. Previous studies have shown that PWA often suffer from stigma, social exclusion, and reduced quality of life due to their visible differences and vulnerability to sun-induced skin damage (Ayanlowo et al., 2023; Okoro, 1975). The psychosocial stress is further compounded when individuals are unable to afford or access basic preventive measures, leading to feelings of helplessness and marginalisation. Madubuko and Onunu (2023) observed that many albinos in Benin City reported avoiding outdoor activities altogether, not only to minimise sun exposure but also to escape ridicule related to their skin damage. This highlights that interventions aimed at increasing sunscreen and protective clothing access must also integrate psychosocial support and anti-stigma campaigns.

The clinical implications of these findings are profound. Enechukwu et al. (2020) reported a paradigm shift in histopathologic patterns of cutaneous malignancies among albinos in Anambra State, with squamous cell carcinoma increasingly dominating the spectrum. This shift is likely driven by prolonged, unprotected sun exposure and inadequate access to early dermatologic evaluation. The Journal of Medicine in the Tropics (2018) further documented that photodermatoses are widespread among Nigerian albinos, including actinic cheilitis, solar keratosis, and chronic sunburn, conditions that serve as precursors to malignancy. The convergence of these clinical patterns underscores the preventable nature of many complications observed among PWA, if only appropriate resources were made accessible.

Our study also sheds light on the broader systemic challenges of healthcare delivery in Nigeria. The lack of government-subsidised sunscreen programs contrasts sharply with countries in Southern Africa, such as South Africa and Tanzania, where sunscreen is sometimes included in public health support initiatives for PWA (Ighorodje et al., 2024). The Nigerian health system's limited prioritisation of dermatologic care for vulnerable populations contributes to ongoing inequities. As highlighted by the Nigerian Journal of Dermatology (2022), even when awareness exists, without policy-driven support, behavioural change is difficult to sustain. Policy frameworks that subsidise sunscreen, encourage local production, and integrate routine skin checks for albinos into primary healthcare systems would be significant steps toward reducing disparities.

While our findings align with much of the existing literature, they also illuminate certain gaps. Most Nigerian studies on albinism have been hospital-based or localised within specific urban centers (Ayanlowo et al., 2023; Ajani et al., 2022; Madubuko & Onunu, 2023), limiting generalizability. Our cross-sectional design attempted to capture perspectives from multiple geopolitical zones, though barriers remain. Future research must adopt longitudinal and community-based designs to better understand long-term patterns of photoprotective behaviour, incidence of skin malignancies, and effectiveness of intervention programs. Moreover, as Enneng et al. (2022) suggested, more work is needed to explore community-specific barriers to dermatologic care in rural Nigeria, where poverty and infrastructural deficits intersect most acutely.

This discussion would be incomplete without emphasising the human rights dimensions of these disparities. Persons with albinism in Nigeria not only face medical challenges but also social discrimination, limited educational opportunities, and threats to physical safety. The persistent lack of access to basic preventive care reflects broader issues of systemic neglect. Addressing these inequities is not merely a dermatologic or public health concern but a matter of social justice. Ensuring equitable access to sunscreen, protective clothing, and dermatologic care must be situated within a broader commitment to safeguarding the dignity, health, and human rights of persons with albinism.

5. CONCLUSION

In conclusion, this study reinforces the urgent need for multi-level interventions to improve access to sun protection and dermatologic care among Nigerian albinos. These should include government-subsidised sunscreen distribution, promotion of affordable protective clothing, decentralisation of dermatology services to rural areas, and sustained public health education. Beyond medical interventions, broader efforts to combat stigma and protect the rights of PWA are essential. Without such concerted actions, the cycle of preventable skin disease and early mortality among Nigerian albinos will persist.

ETHICAL APPROVAL AND CONSENT

Ethical approval was obtained from the Institutional Review Board. Informed consent was obtained from all adult participants, while parental consent and child assent were obtained for participants below 18 years. Participation was voluntary, and data confidentiality was strictly maintained.

DISCLAIMER (ARTIFICIAL INTELLIGENCE)

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc) and text-to-image generators have been used during writing or editing of this manuscript.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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