

The Practice of Cosmetic Skin Lightening Among African Immigrants in Western Australia

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Abstract

Cosmetic skin lightening involves the intentional use of skin lightening agents solely for aesthetic purposes. This study investigated the practice of cosmetic skin lightening among African immigrants in Western Australia (WA). The result showed that there is need for further research to determine prevalence of cosmetic skin lightening practice among African immigrants in Australia and the spectrum of health effects associated with the practice. Public health information is required for both health care professionals and consumers and cosmetic skin lightening products available needs to be tested for toxicity.

Keywords: Depigmenting agent • Skin bleaching • Skin brightening • Skin whitening • Motivating factors

Introduction

Skin lightening is the process of obtaining a reduction in the physiological pigmentation of the skin, through the use of natural or chemical agents which inhibit melanin biosynthesis or degrade existing melanin stores. Skin lightening may be undertaken for a variety of purposes. While therapeutic skin lightening may be employed as a modality for management of various hyper-pigmentary disorders such as melasma, solar lentigo and vitiligo [1,2], cosmetic skin lightening practice is solely for aesthetic purposes and it is usually uncontrolled [3]. Other terms used to describe the practice of cosmetic skin lightening include skin bleaching, skin whitening, skin brightening and skin toning. Common skin lightening formulations utilised in the practice of cosmetic skin lightening include soaps, topical creams, ointments, gels, pills and injections [1,2]. These formulations usually contain biologically significant concentrations of class 1 and 2 corticosteroids; hydroquinone and its derivatives, at concentrations ranging from 2% to 10%; and mercuric compounds.

As cosmetic skin lightening is not undertaken under dermatological supervision, it often results in significant adverse side effects for those who engage in the practice [1,4]. Potential cutaneous and systemic side effects that may result from uncontrolled use of skin lightening cosmetic products include rebound hyperpigmentation, exogenous ochronosis, steroid-induced acne, telangiectasia, skin atrophy, striae, cataracts, glaucoma, hypertension, adrenal suppression, diabetes, nephrotic syndrome, peripheral neuropathy, skin cancer, and foetal toxicity and birth defects in infants of mothers who use skin lightening cosmetic products during pregnancy [2,5,6].

The practice of cosmetic skin lightening has become widespread and highly prevalent around the world. Cosmetic skin lightening practice has been reported in Asian and Middle Eastern countries [7,8] however Africans are among some of the most widely represented practitioners of cosmetic skin lightening worldwide [4,9]. A considerable proportion of African immigrants extend the practice of cosmetic skin lightening beyond the shores of the African continent. In a study of the skin lightening practices of African

and Afro-Caribbean women in New York, USA. Benn et al. found that 50% of study participants had been using skin lightening products for at least 13 years [10]. Similarly, Adawe and Oberg reported a high prevalence of cosmetic skin lightening among Somali women in Minnesota, USA [11]. In Paris, Petit et al. identified 46 cases of African immigrants presenting with dermatological manifestations of uncontrolled skin lightener use [12]. Mistry, Shapero, Kundu and Shapero, also, reported two cases of Afro-Canadian women presenting at a dermatological clinic in Canada, with cutaneous complications of cosmetic skin lightening [13].

In Australia, recent publications have documented increasing prevalence of adverse side effects associated with protracted use of topical corticosteroids by individuals of African descent. Goldstein et al. described the case of 24-year-old Sudanese woman who presented to a general practitioner with Cushingoid symptoms secondary to extended use of steroid-containing creams [14]. Lee et al., also documented the case of a 26-year-old Sudanese woman who presented at an endocrinology clinic with hypoadrenalism secondary to topical corticosteroid use [15]. Likewise, Morton et al. reported the case of a 24-year-old Congolese refugee, who was referred to the emergency department with hyperglycaemia and Cushing-like features resulting from use of a topical corticosteroid cream purchased at a local African shop [16].

Against this background, this study investigated the practice of cosmetic skin lightening by African immigrants in Western Australia. The study explored availability of cosmetic skin lightening products in Western Australia, active ingredients information in the skin lightening products, commonly available skin lightening formulations, motivating factors for usage of cosmetic skin lightening products as well as awareness of health implications that may arise from the use of cosmetic skin lightening.

Research Methodology

The study was conducted in the Perth metropolitan region of Western Australia. An exploratory, parallel, mixed methods approach was employed.

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The mixed methods approach involved the use of both qualitative and quantitative research methods to provide an effect means of incorporating depth and breadth into the research study. The study involved field observation visits to local African shops and focus group interviews.

For the field observation visits, a convenience sampling technique was employed. A sample of 7 local African shops were selected based on accessibility and proximity to the researcher. The purpose of field observation was to obtain an inventory of skin lightening cosmetic products available to African immigrants in Western Australia that suggested skin lightening, skin brightening or skin whitening, details of known depigmenting agents on the ingredients list as well as the countries where the products were manufactured.

On the other hand, study participants who participated in focus group discussions were recruited via snowball sampling. Two African immigrants known to the researcher were recruited and requested to identify other potential study subjects. The subsequently recruited participants were then asked to recruit other members for the study. A total of 12 participants took part in the study. All 12 study participants recruited were female African immigrants living in Western Australia, 18 years and older, who were current users of skin lightening cosmetic products. To ensure consistency, encourage communication and explore key issues into details, 2 focus groups comprised of 6 participants each were conducted. The focus groups addressed the following questions:

- What are the most common skin lightening formulations used by African immigrants in Western Australia?
- What factors motivate the use of skin bleaching products by African immigrants in Western Australia?
- Are African immigrants in Western Australia aware of the adverse health effects of cosmetic skin lightening?

Socio-demographic background of focus group participants was also collected. Both focus group sessions were 60 minutes long, conducted in English and moderated by the researcher. The discussions were audiotaped for transcription purposes, while an independent observer also collected extensive notes.

Data Analysis

All quantitative data, including the shop inventory and background details of focus group participants, was organized and examined in Microsoft Excel using descriptive statistics. Following this, the transcripts from focus group discussions were assessed using a thematic analysis approach, which searches for common themes, patterns and influential quotes across the data. Firstly, the discussions were read manually by the researcher to foster a general, collective understanding of the data, identify the preliminary, broader themes within the dataset and ensure saturation was reached [17]. As such, the data collected within focus group discussions was organized into thematic categories which described participants' perceptions, attitudes and behaviours as it relates to cosmetic skin lightening practice. Interpretations were made based on consistencies between the identified themes and the theoretical literature. Only consistently identified themes were considered; however, outlier data was delineated but not discarded.

Results

Focus group participants were female African immigrants, living in the Perth metropolitan region of Western Australia, who engaged in the practice of cosmetic skin lightening. As illustrated in Table 1, the large majority (83%) of participants were in their 20s or 30s. While more than half (58%) of the interviewees were single women. Most participants (75%) had an educational

qualification of Australian Qualification Framework (AQF) Level 4 and 60% of the interviewees earned between \$45,000 and \$55,000 per annum.

Table 1. Background information on focus group participants.

| Variables | Sub-categories | Frequency (n=12) | Percentage (%) |
|---------------------|-------------------------|------------------|----------------|
| Age | 18 – 30 | 10 | 83 |
| | 31 – 40 | 2 | 17 |
| Relationship Status | Single | 7 | 58 |
| | De-facto | 3 | 25 |
| | Married | 2 | 17 |
| AQL Level | Education Below Level 3 | 1 | 8 |
| | Level 4 | 9 | 75 |
| | Level 5 | 2 | 17 |
| Annual Income | Below \$35,000 | 2 | 17 |
| | \$35,001 | – | – |
| | \$45,000 | 2 | 17 |
| | \$45,001 – \$55,000 | 8 | 66 |

Availability of cosmetic skin lightening products in Western Australia

Cosmetic products that suggested skin lightening, brightening or whitening were sought at the 7 African shops visited. Notably, skin lightening cosmetics, comprising creams and lotions, were available for purchase at all of the shops. The cost of these products ranged from \$10 to \$15 per 500ml unit. As shown in Table 2, 70% of the 10 most common brands of skin lightening creams and lotions found across the Perth metropolitan region were manufactured in West Africa.

Table 2. Most common skin lightening creams and lotions.

| Brand | Depigmenting Agent on the Package | Country of Manufacture |
|-----------------|-----------------------------------|------------------------|
| Bio Claire | Natural Extracts | Côte d'Ivoire |
| Caro White | Natural Extracts | Côte d'Ivoire |
| Perfect White | None | Côte d'Ivoire |
| Fair & White | None | France |
| L'abidjanaise | Natural Extracts | Italy |
| Clear Essence | 2% Hydroquinone | USA |
| Carotone | Natural Extracts | Côte d'Ivoire |
| Nature secre'te | Natural Extracts | Côte d'Ivoire |
| MARICHA | None | Togo |

| | | |
|-------------|------|---------------|
| Diva Maxima | None | Côte d'Ivoire |
|-------------|------|---------------|

Furthermore, focus group participants stated that they procured skin lightening products by purchasing at stores owned by immigrants and on the Internet or having close relations bring them to Australia following visits to their home countries.

Active ingredients information in the skin lightening products

Of the skin lightening cosmetics identified during the field visits, about one-half were cited to contain natural extracts such as argan oil, carrot oil and vitamins. Two products' packaging had information indicating that they did not contain hydroquinone (Bio Claire and Perfect White). Only one product, i.e., Clear Essence, listed a commonly known depigmenting agent on the package. The Clear Essence packaging label stated that the product contained 2% hydroquinone. There was, however, no indication of potential side effects on the packaging of any of the products.

Commonly available skin lightening formulations

While more than half (58%) of the participants reported that they had been using skin lightening cosmetics for a duration of 5 to 10 years, 42% had used the products for less than 5 years. Ninety percent of the participants reported to frequently use creams/lotions. All participants indicated that they currently used more than one product in form of creams/lotions, soaps, serums and pills as a way of maximizing the results. Ninety two percent of the participants reported that they applied the products all over their body while 8% applied them only to the facial area.

Motivating factors for usage of cosmetic skin lightening products

Based on the responses from participants, the primary motive for the use of skin lightening cosmetics was to attain pre-conceived notions of beauty. There was a commonly held belief that beauty equated to lighter skin. For instance, one participant noted that:

"Since I started becoming lighter, I look much more beautiful. Other people notice it too. I get compliments a lot because of my lighter skin tone now. It feels great".

The desire to get married was reported as a strong motivator behind the practice of cosmetic skin lightening. Participants consistently agreed that having light skin raised their chances of attracting a suitable partner. As one participant stated:

"I want to get married soon, men from my home country like women who are light skinned and they treat light skinned women better".

Other reasons cited were to achieve an even skin tone and get rid of pimples and black spots.

Awareness of health implications

All participants indicated that they did not read the ingredient list on the packages of skin lightening products because most ingredient lists contained complicated names. Thus, they preferred judging the product by the advertising image on the packaging. As one of the participants remarked:

"I had a look at the ingredients and I could not understand the names so I normally look at the picture on the package. If there is a before and after picture on the package, that's even better because it gives me an idea of how white I can get. That's all I need".

As regards perceived risks associated with use of skin lightening cosmetic products, over 50% of participants indicated that they were aware of potential adverse health effects. Although a few participants disclosed that they had

experienced some side effect, there was a general consensus that the side effects were usually trivial. One of the participants said:

"I ended up having dark knuckles after the first three months of using the lightening lotion. It may be a side effect but it is nothing serious. I just bought a specific cream that targeted the knuckles and the knees. Now I don't have the discolouration. I think the side effects are a bit exaggerated".

Another participant agreed, stating:

"I have been getting multiple stretch marks which my sister says comes from using the creams. I think she is just scaring me because a lot of people have stretch marks and they don't use the creams that I use".

Discussion

Consistent with anecdotal reports, the results obtained in the study show that skin lightening cosmetic products are widely available in the Perth metropolitan region of Western Australia at the local African shops. Other avenues for procuring skin lightening cosmetics were via online stores and having close relations bring them to Australia following visits to their home countries. According to Australia Bureau of Statistics, the median annual income in Western Australia is \$51,450 [18]. Over 50% of the participants earned approximately the medium annual income and they stated that the skin lightening products were easily affordable at the price range of \$10 - \$15 per 500ml unit.

Of the 10 commonly available brands of skin lightening creams and lotions identified during the field visits, only one product brand indicated on its packaging that it contained 2% hydroquinone. Majority cited natural extracts such as argan oil, carrot oil and vitamins as active ingredients. Prior research indicates that the information provided on packaging labels and ingredient lists of these products are often misleading, as they either underestimate the concentrations of depigmenting agents contained in the product or were an outright misstatement of the product's constituents [9]. As a matter of fact, research elsewhere (Uganda National Bureau of Standards, 2018) [19] show that three of the 10 brands of skin lightening cosmetics which were identified in the Perth metropolitan area i.e., L'abidjanaise, Fair & White and Carotone, contained high levels of hydroquinone and mercury and were not officially approved in Uganda. Ironically, there was no indication of these compounds on the packaging label of the products. This is in spite of the strict regulations governing the manufacture, distribution and sales of cosmetic products in Australia.

Creams and lotions tended to be favoured over other product formulations. This most likely accounts for the preponderance of these skin lightening product formulations at the shops visited. Notably, focus group participants disclosed that they often used a combination of skin lightening products to hasten and maximise the process of depigmentation. This supports previous findings, whereby users tend to apply multiple products concurrently or sequentially over several years [3,9,20-24].

Interestingly, the shared belief that beauty equated to lighter skin appeared to be the central theme motivating the skin lightening practices of respondents in this study. Consistent with findings amongst indigenous African women, participants' beauty ideals tended to revolve around the light complexion and cosmetic skin lightening was regarded as the sole means by which individuals without naturally light skin could achieve this aesthetic ideal. Whereas current evidence indicates that skin lightening cosmetics containing toxic depigmenting agents often exacerbate existing skin conditions [20], participants consistently believed that these products were effective in curing skin imperfections and yielding beautiful skin. In the same vein, insight gleaned from the responses of study participants speak to pre-conceived notions linking skin tone with desirability and attractiveness. Thus, considering that a good proportion of focus group participants were young unmarried women aged 18 to 30 years, it is hardly surprising that the desire to find a suitable marriage partner was identified as a strong motivator behind indulgence in skin lightening cosmetic products.

Study participants reported only superficial health complications such as striae, dark knuckles and knees. However, rather than being the consequence of a lack of significant side effects, this apparently contradictory result may have originated from the inability of respondents to identify the connection between use of skin lightening cosmetics and subsequent health problems. For instance, considering that skin lightening cosmetic brands do not state the potential side effects of their products on the packaging, it would be near impossible for most consumers to reconcile a diagnosis of diabetes or hypertension with extensive and uncontrolled use of steroid-containing creams. Alternatively, acknowledging that there is often a tendency to dissimulation and denial by skin lightening product users because cosmetic skin lightening is considered a reprehensible practice in some cultures. It is plausible that this finding derives from an under-reporting of adverse side effects [6,24].

Conclusion

The results of the present study confirm the initial assumption that African immigrants in Western Australia engage in the practice of cosmetic skin lightening. Moreover, several brands of skin lightening creams and lotions are readily available and easily obtained in the Perth metropolitan region of Western Australia. More research is, however, necessary to extend the current understanding and further elaborate on the preliminary findings obtained in this study. Further studies should aim to confirm and validate the concepts and constructs that emerged in this study, using a larger and more geographically diverse sample and quantitative, longitudinal and comparative research methods. There is a need for complementary studies that incorporate findings from both male and female participants. Research is also required to determine the prevalence of cosmetic skin lightening among African immigrants in Australia, exact composition of skin lightening cosmetic products sold in Australia as well as the full spectrum of adverse health effects experienced by African-Australian skin lightening practitioners. Additionally, given that a high prevalence of cosmetic skin lightening has also been reported in Asian and Middle Eastern countries, research might be undertaken to explore the skin lightening practices of immigrants from these regions residing in Australia to better inform health education and interventions.

The study findings, also, indicate that the dominant theme motivating African Australians' indulgence in skin lightening cosmetics relates to internalised interpretations of the light skin as emblematic of beauty. The anticipated gains are personal gratification and acquisition of a marriage partner. However, the majority of those who use skin lightening cosmetic products do not have adequate information about their potential health impacts, and therefore assert that the health risks are likely exaggerated. Thus, as part of a comprehensive strategy for tackling the phenomenon of cosmetic skin lightening, it is imperative to implement consumer education campaigns to address misconceptions and raise awareness on the potential adverse health consequences of extended use of toxic skin lightening products. As health care professionals serving African immigrant communities may be unaware of this practice and the complications of cosmetic skin lightening can mimic other health conditions, it is pertinent to prioritize health informational campaigns in both public and healthcare settings. Furthermore, it is essential that health information and messages address the underlying beliefs regarding lighter skin tone, increasing knowledge and acceptance of the natural diversity of skin colour.

Cosmetic skin lightening products available in African shops should be tested for toxicity since several brands of potentially toxic skin lightening creams and lotions were identified in the study and protective measures taken

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