

# Retailers' Knowledge and Attitudes Regarding the Consequences of Using Depigmenting Products In 2022

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## ABSTRACT

**Introduction:** Depigmenting products are often marketed without proper consideration of the risks they pose to users. This study aimed to evaluate retailers' knowledge and attitudes regarding the potential consequences of using depigmenting products. **Patients and Methods:** This was a descriptive cross-sectional study. Any person selling depigmenting products in public markets who had given informed consent was included in the study. **Results:** Seventy-five out of 125 shopkeepers agreed to take part in the study. The majority of participants were female (84%) and the sex ratio was 0.19. The mean age were  $32.2 \pm 8$  years with the dominant age range being between 20-30 years. Most shopkeepers had secondary education (32%) and no cosmetology training (89%). Lightening products were defined as 'a product that makes the skin clear' by 64% of participants. Hydroquinone was the most commonly used product, counting for 40% of the cases. Retailers reported that depigmenting products were associated with complications in 84% of cases. The most common complications were stretch marks (40%), cosmetic acne (24%), and exogenous ochronosis (12%). In response to these complications, 25% of retailers recommended consulting a health professional. Some retailers wanted to ban the entry of products containing hydroquinone, as they were considered dangerous (21%). **Conclusion:** The phenomenon of depigmentation is still very present in our society. Although aware of the dangers of the products they sell, retailers do not envisage an end to this activity. Raising awareness among these players could help limit the extent of this phenomenon.

**Keywords:** Bleaching agents, Commerce, Health Knowledge, Attitudes, Practice

## INTRODUCTION

Voluntary skin depigmentation is the use of powerful lightening products, which are typically reserved for medical use and often prohibited [1]. This harmful practice, with its disastrous complications, constitutes a significant public health problem [2]. It is prevalent on virtually every continent, albeit in varying proportions. It is common in sub-Saharan Africa, the Indian Ocean, the Middle East, Asia, and South America [3]. The prevalence of depigmentation in the Abidjan population was estimated at 53% in 2008 [4], while in North America and Europe, it appears to be more marginal [5]. Prolonged and abusive use of depigmenting products can lead to serious and often irreversible complications [6,7]. Additionally, the distribution of lightening products in Africa is often unregulated, leading to misappropriation or counterfeiting in the distribution chain. These products are often marketed by individuals lacking knowledge of their composition and the potential risks to users [7]. The study aimed to evaluate the knowledge and attitudes of retailers regarding the risks associated with depigmenting products. The study sought to raise awareness among retailers about the consequences of using such products.

## PATIENTS AND METHODS

**Type and scope of study:** This was a descriptive cross-sectional study conducted in the four public markets of the Cocody commune in the city of Abidjan.

**Study Period:** May to July 2022, a period of three months.

**Study population:** The study population consisted of people who sold depigmenting products in the markets of the Cocody commune.

**Inclusion criteria:** The study included individuals who sold depigmenting products in the markets of the Cocody commune and have given informed consent.

**Non-inclusion criteria:** Individuals who sold or offered cosmetic products and were absent during the study period were not included.

**Data Collection:** The data were collected using a standardized survey form that considered the following parameters:

- Socio-demographic data
- Retailers' knowledge of depigmenting products in the Cocody commune,
- Depigmenting product retailers' knowledge of the harmful effects of products on their customers,
- Attitudes of depigmenting product retailers with regard to their customers' needs.

**Data processing:** The data was entered and processed using Epi Info 7 and Excel 2016 software. Qualitative variables were presented as proportions, while quantitative variables were presented as means with their standard deviation and range.

Four levels of knowledge have been established to assess retailers' understanding:

- less than 25% correct answers = Poor
- less than 50% correct answers = Insufficient
- less than 70% correct answers = Fair
- over 70% correct answers = Good

**Ethical considerations:** The study was submitted for approval to the administrative authorities of the Cocody commune, who acted as an institutional ethics committee. To preserve the anonymity of the merchants, photos of their face, names, and contacts were not published.

## RESULTS

### Socio-professional characteristics of shopkeepers

During a three-month period, we interviewed 125 shopkeepers, of which 75 agreed to participate in the study. The majority of participants were between the ages of 20 and 30. The sex ratio was 0.19. Table 1 summarizes the main socio-professional characteristics of the shopkeepers.

**Table 1:** Main socio-professional characteristics of traders met at Cocody markets, n= 75.

Characteristics		Effectives	Percentage
Age groups	[20-30[ years	35	47
	[30-40[ years	24	32
Gender	Female	63	84
	Male	12	16
Educational level	High school	24	32
	Unenrolled	22	29
	Primary school	20	27

### Shopkeepers' Knowledge of Depigmenting Products

Of the shopkeepers surveyed, 11% (08) had received training in cosmetology. Merchants' responses concerning the definition

of depigmenting products are illustrated in Table 2. Retailers had less than 70% correct answers, indicating an average level of knowledge about depigmenting products.

**Table 2:** Distribution of retailers according to their knowledge of the definition of depigmenting products, n= 75.

Definition of depigmenting product	Effectives	Percentage
Product to clear the skin	48	64
Product to beautify the skin	25	33
Skin moisturizing product	02	03
<b>Total</b>	<b>75</b>	<b>100</b>

According to our survey, 55% of retailers reported using depigmenting products to enhance an individual's beauty, while 32% used them to achieve an even skin tone.

The origin of depigmenting products is well-known among retailers. The top five import destinations are China (24%), Thailand (18%), Togo (18%), Nigeria (12%), and the USA (10%).

Retailers report that 40% of depigmenting products contain hydroquinone, while 28% contain mercury derivatives. Corticoids and fruit acids are present in 12% of the cases. Sixty-four percent of retailers viewed the sale of lightening products as a means of meeting their financial needs. Merchants reported that milk and soap were the best-selling products, with sales rates of 96% and 100%, respectively. Regarding the decree prohibiting the sale of depigmenting products, only 39% of retailers were aware of it, and their knowledge of the decree was insufficient.

In this study, it was found that 49% of retailers have been selling depigmenting products for at least 5 years. The products were reported to be mainly sold to individuals aged between 15 and 25. Additionally, 95% of merchants reported that men purchased depigmenting products for personal use, while 50% of merchants reported that parents purchased depigmenting products for their children aged 0 to 15.

### Knowledge of Complications Associated with Voluntary Skin Depigmentation

Traders reported that 84% of cases using depigmenting products were associated with complications, including stretch marks (40%) (Figure 1), cosmetic acne (24%), and exogenous ochronosis (12%).



**Figure 1:** stretch marks on the inner thighs of a 35-year-old woman.

### **Retailers' Opinions on the Use of Depigmenting Products**

Eighty-nine percent (89%) of retailers agreed with the use of depigmenting products. They justified their position by stating that these products help achieve perfect beauty (72%) and are good practice (8%). Those who disagreed with the use of these products cited health concerns (11%).

### **Attitudes of Retailers towards Customer Needs**

According to the retailers, 95% of customers selected their own products before seeking assistance. All merchants provided instructions on the use of depigmenting products. Merchants reported that their customers were satisfied after 14 days of using depigmenting products (45%). Additionally, 67% of customers expressed satisfaction with the effects of the products they used. When encountering skin complications, 25% of retailers recommended consulting a health professional.

Additionally, 21% of retailers believed that depigmenting products containing hydroquinone should be prohibited due to their potential harm to an individual's health.

## **DISCUSSION**

Our study surveyed retailers directly involved in the distribution of depigmenting products to assess their knowledge and attitudes towards the consequences of using these products. However, we encountered difficulties due to the reluctance

and mistrust shown by most of the retailers we interviewed. Many retailers refused to participate in the study due to the fear of being denounced for engaging in an illegal commercial activity. However, we conducted the first study of its kind, and the following section discusses the results.

The gender disparity observed in our population is consistent with several studies conducted in sub-Saharan Africa, which reported that women accounted for 25 to 96% of depigmenting product users [2, 8, 9, 10]. Moreover, women tend to use more cosmetics than men and play a significant role in the marketing and popularization of depigmenting products. In their 2008 study in Togo, Pitché et al. found that 61.73% of female traders used depigmenting products, while 38.92% did not [11]. In a 2008 study conducted in Nigeria, Olumide et al. found that 27.6% of men practiced depigmentation. Additionally, some shopkeepers promoted depigmenting products to their customers [12]. Our findings regarding the age of traders were similar to those of Glèlè-Ahanhanzo et al., who reported an age range of the study participants was between 15-24 (41.33%) with a median age of 26 [20;34] years [13].

In our study, only 11% of shopkeepers had received training in cosmetology. The primary goal of selling products was to ensure financial stability, which may explain the low participation rate in such training.

Traders demonstrated an average level of knowledge

regarding the definition of depigmenting products, which is consistent with the findings of Kourouma et al. (Côte d'Ivoire) who reported 77.5% correct responses [4]. The high level of knowledge about depigmenting products is attributed to their common use for beauty and skin tone enhancement, as reported in 87% of the cases. This aligns with the findings of Kourouma et al., who reported a similar aim in 50% of the cases in their study [4].

Migan's study in France found 30% hydroquinone and 40% corticoids were present, while our study found 40% hydroquinone and 12% corticoids [2]. Pitché et al. in Togo also found the use of mercury derivatives (30.9%), hydroquinone derivatives (24%), and dermocorticoids (18.5%) [11]. These depigmenting products were found to be commonly used in different countries where voluntary skin depigmentation was practiced, although their frequencies varied.

The practice of parents buying depigmenting products for their children is concerning, as it is becoming more prevalent among young people. Mahé noted that the debate surrounding parents practicing depigmentation on their children has been covered in the general press [14].

The skin complications mentioned by the merchants are commonly associated with depigmentation practices. The study revealed that dermocorticoids and hydroquinone were the most commonly used products. Kourouma et al. (Côte d'Ivoire, 2016) reported that stretch marks and exogenous ochronosis were found in equal proportions of 20% [4]. Similarly, Glèlè-Ahanhanzo et al. (Benin, 2019) found cosmetic acne in 32.29% and stretch marks in 13.44% [13].

The reason why health professionals are not involved in treating skin complications caused by depigmentation is due to the fact that certain retailers are able to address them. These retailers then suggest using more depigmenting products to conceal pre-existing lesions.

Some retailers recognized that the products used were harmful to the users' health, specifically corticoids and hydroquinone. However, they perceived hydroquinone as more hazardous than corticoids, leading to a desire to ban it. In a 2019 study conducted in Saudi Arabia, Alratty et al. found that women who practiced depigmentation identified dermocorticoids (63%), hydroquinone (17.5%), and fruit acids (12.2%) as the most dangerous products [15].

## CONCLUSION

The phenomenon of depigmentation is still very present in our society. Although aware of the dangers of the products they sell, retailers do not envisage an end to this activity. Raising awareness among these players could help limit the extent of this phenomenon.

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## CONFLICT OF INTEREST

The authors declare no conflict of interest.

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