



A Study on Market Research for Consumer Preference for Face Whitening Agent

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Abstract

The primary objective of this research paper is to explore consumer preferences in the realm of cosmetics. Quality is universally acknowledged as the most critical factor influencing consumers' choices when it comes to purchasing cosmetic products. These research findings hold significant potential for marketers seeking to develop effective strategies for marketing cosmetics. This study is dedicated to unravelling the multifaceted factors that contribute to shaping consumers' decisions when buying cosmetics. The research emphasizes the substantial influence wielded by factors such as product quality, brand reputation, pricing, advertising, and packaging on consumer preferences. In the vast landscape of retail stores, consumers encounter a myriad of options, particularly in the realm of skin-whitening products. The level of consumer awareness within the business community plays a pivotal role in determining the effectiveness of a free-market enterprise system.

Keywords: Marketing Strategy; Depigmentation; Skin Whitening; Bleaching

Introduction

The goal of skin whitening, also known as skin bleaching, is to lighten dark spots on the skin or achieve a generally paler skin tone. The way skin-lightening methods function is by lowering the skin's melanin synthesis or concentration. Natural skin pigment is called melanin. The kind and quantity of melanin mostly determines the colour of the skin, hair, and eyes. Melanin is produced by unique skin cells known as melanocytes. Although everyone has the same amount of melanocytes, different people produce different amounts of melanin based on their genetic makeup. Hydroquinone and its derivatives, ascorbic acid, topical steroids containing kojic acid, mercury, and clobetasol propionate—a member of the corticosteroid class—are a few examples of skin-whitening agents. They all obstruct the synthesis of melanin. The industry of skin-lightening products has been propelled by the desire for white skin. The dominance of skin-lightening products in the Asian skincare sector, accounting for 60% of sales, was indicative

of this phenomenon. Skin-lightening products can be easily found online, at neighbourhood convenience stores, and from large cosmetics corporations. These products are sold under several names, such as fading creams, fairness creams, skin-evening creams, skin lighteners, brighteners, whiteners, and toners. Skin-whitening products can cause cutaneous cancers among other systemic and dermatological side effects. Hospitalization may be necessary due to the serious consequences that might arise from skin whitening. Not to add the missed financial and medical resources associated with treating these issues [1-7]. Mequinol and hydroquinone are strong chemical SLAs that irritate. Hydroquinone's side effects restrict its use. To reduce adverse effects, SLA should only be applied to the afflicted areas and only at night. Although in vivo investigations have demonstrated the promise of newer chemical and plant extracts, double-blind clinical trials must be conducted to confirm their effectiveness. The least penetrative impact is exhibited by plant extracts arbutin, kojic acid, azelaic acid, and aloesin, which

are safer and have no cytotoxic effects but significant potential for skin whitening. Since retinoids and glycolic acid increase the plant extracts' penetration, an appropriate blend of chemicals and more recent plant extracts must be created and tested in a large-scale clinical study.

Basic formulation

The SLA interference that occurs most frequently is noted below.

Plant extracts and non-plant extracts are the two categories into which A) Competitive Tyrosinase inhibitors fall.

Extracts from non-plants

- Derivatives of hydroquinone: N-acetyl-4-S-cysteaminylphenol, hydroquinone (2–5%), mequinol (2%), and gentisic acid are the members of this category (methyl generate).
- Organothiol glutathione
- Gallates of epicatechin

Plant extracts

- First, 15%–20% azelaic acid: a substance called a dicarboxylic acid with nine carbons.
- Arbutin
- Arbutin alpha [9]
- Doxyarbutin
- Aloesin
- Kojic acid (2-4%) [10]
- Flavonoids, flavones, flavonols, hesperidins
- Kuraninone
- Saponin
- Oregon
- The Yohimbine.

Non-competitive tyrosinase inhibitors are also divided into non-plant extracts and plant extracts.

Extracts from non-plants

- Haginin A
- N-acetyl glucosamine

Plant extracts

- Glabirdin (10-40%): Derived from Licorice extracts.
- Hydroxystilbenes: This includes resveratrol, oxyresveratrol, and ginetol.
- Piceatannol
- Mulberry (mulberroside)
- Polyphenols (procyanidins).

Newer tyrosinase inhibitors, which require further in vivo and in vitro studies, are categorized into non-plant extracts and plant extracts.

Extracts from non-plants

- Hydroxyphenyl naphthol
- Calycosin
- Quinolines: chloroquine and quinine [11]

Plant extracts

Diarylpropane.

Serine protease inhibitors

Another category involves substances that reduce the transfer of melanosomes from melanocytes to keratinocytes or melanin transfer, often referred to as serine protease inhibitors.

Plant extracts

- Niacinamide (5%)
- Soy (soybean trypsin inhibitor) [12].

Some compounds reduce tyrosine oxidation.

Plant extracts

P-coumaric acid.

Certain compounds have properties such as copper chelation, antioxidant effects, and the inhibition of melanocyte proliferation.

Plant extracts

- Ascorbic acid (5-10%) (Magnesium L-ascorbic acid-2-phosphate)
- Ellagic acid

Some substances aid in the removal of keratinocytes (desquamation), shorten the cell cycle, facilitate rapid pigment loss, interfere with pigment transfer, and enhance the penetration of other skin-lightening agents.

Non-plant extracts

- **Alpha hydroxy acids:** This includes Glycolic acids (6-12%) [13].
- **Retinoids:** Such as Tretinoin (Retinoic acid) [14] (0.05 and 0.1%), and adapalene (0.1%) [15].

Plant extracts

- Liquirtin (Licorice extracts) [16]
- Among these, Hydroquinone, magnesium-L-ascorbyl-2-phosphate (MAP), mequinol, N-acetyl-4-S-cysteaminylphenol, and arbutin are the most commonly used skin-lightening agents.

Furthermore, several more RECENT COMBINATIONS have been investigated [17-21]

- The first two ingredients are arbutin and aloesin.
- The third ingredient is kojic acid, phytic acid, and butyl methoxy dibenzoyl methane for melasma.
- The fourth ingredient is hydroquinone and kojic acid.

Aim and Objective of the Survey

The objective of this research is to examine consumer preferences regarding cosmetic products and explore the impact of cultural, social, and psychological factors on consumer choices in the utilization of these products.

Research design/types of surveys

Sample size and population

The sample was drawn from individuals ranging in age from 15 years to 35 years and older, encompassing a diverse cross-section of participants.

Instrument

A questionnaire serves as the data collection tool, comprising 10 closed-ended questions. Various survey methods are employed to present diverse information and insights in a statistical format, including:

- Online Google Form surveys
- Mobile WhatsApp surveys
- Paper-based surveys

Questions for survey

Q1 Gender:

- a) Male
- b) Female

Q2 Age:

- a) 10-20
- b) 21-29
- c) 30-39
- d) 40-49
- e) More than 50

Q3 Please select the option that best describes your current relationship status:

- a) Married
- b) Unmarried (single/divorced/separated) but in a relationship
- c) Single/Widowed/Separated and not in a relationship

Q4 How frequently do you use external skin whitening products (e.g., creams, lotions, soaps)?

- a) Every day
- b) Several times a week
- c) Once a week
- d) Less than once a week
- e) Never

Q5 How often do you use internal skin whitening products (e.g., injections, oral tablets like glutathione)?

- a) Very often
- b) Often
- c) Once every few months
- d) Never
- e) Rarely

Q6 Are you familiar with the ingredients and their concentrations in the products you use?

- a) Yes
- b) No

Q7 Have you ever experienced any side effects from these products?

- a) Yes
- b) No

Q8 How long have you been using these products?

- a) Less than a month
- b) 1-6 months
- c) 6-12 months
- d) More than a year

Q9 How did you first learn about the source of these products?

- a) Doctor’s prescription
- b) Friends/family
- c) Ordered online
- d) Influencer
- e) Boutique/shop

Q10 What is the primary reason for using skin-whitening agents?

- a) To treat acne scars
- b) To address hyperpigmentation
- c) To lighten scars

	Female	15
Geography	Rural	3
	Urban	13
Degree	Medical bioscience	10
	Sport science	13
	Non-medicine	8
	Geriatric	1
	Miscellaneous	9

Table 3: Assess the ensuing claims.

	Strongly Disagree	Disagree	Agree	Strongly Agree
Advertisements effectively promote whiter skin more than darker skin				
Having white skin is considered more beautiful than having dark skin				
Advertisements target only younger people with skin-whitening commercials, billboards, etc				
People want white skin to look more Caucasian (i.e.: American, European, etc...)				
According to culture and customs, white skin has always been valued more than black skin.				
The desire for white skin is due to colonial mentality (i.e.: the colonization of the Spaniards in the Philippines)				
Only younger generations are obsessed with having white skin				
Men prefer/are more attracted to women who have white skin				
There is societal pressure for women to have white skin				
Employers are more likely to hire someone if they have lighter skin				
I have a fair complexion				
I wish I had whiter skin				

Result and Discussion

Table 1: Customer Preferences for Cosmetic Products.

Sr No	Parameters	No of the Subjects answered
1.	Quality	56
2.	Quantity	40
3.	Price	37
4.	Durability	10

Table 2: Relationship Between Demographic Characteristics and Skin-Lightening Product Usage.

Description	Characteristics	Count usage, %
Race	Black	20
	Colored	13
	Indian	15
	White	5
	Asian	0
Sex	Male	8

Interpretation

The majority of the participants demonstrated an overall average level of knowledge (48%), with a significant portion (25%) exhibiting poor knowledge. Regarding awareness of skin whitening products potentially causing complications, a substantial proportion (88%) of the participants were informed, while only (60.5%) possessed good knowledge about the nature of these complications. Media and social media played a pivotal role as the primary source of information regarding side effects (80%), followed by personal observations of such effects on others (40%).

Negative attitude

Negative attitudes towards skin whitening were prevalent, with (60%) of participants expressing a negative viewpoint. A minority believed that skin whitening could enhance marriage prospects (19%), while (17%) thought it could aid in job attainment. Only (30%) and (21%) believed that skin whitening could increase social acceptance and attractiveness, respectively.

Acne scars

The primary motivation for using skin-whitening products was the treatment of acne scars (72%), followed by a desire to lighten skin complexion (34%). Pharmacies emerged as the primary source for obtaining these products among respondents (60%), with doctor's prescriptions being the second most common (35%). Approximately half of the users applied the products for a duration of 1 to 6 months.

Concentration and name of ingredients

Knowledge about the concentration and names of ingredients varied, with (18%) experiencing side effects due to skin-whitening, and (28%) lacking awareness of the ingredients and their concentrations. Nevertheless, the majority of participants (72%) expressed satisfaction with the results achieved through skin whitening products. Creams and lotions were the most frequently used forms of products (90%), followed by soaps (40%). A minority (14%) of the participants felt societal pressure to use skin-whitening products, with media and social media being the primary sources of this pressure (68%), followed by family members (38%). Additionally, (68%) of participants reported a family history of skin-whitening.

Social sites

The participants' primary source of social pressure came from the media and social media. (68.9 percent), then relatives into second place. forty percent. The majority of subjects (68.8%) reported a familial history of skin whitening.

Knowledge was correlated with skin tone. Individuals with lighter skin tones are 1.5 times more likely than those with darker skin tones to have inadequate information.

Skin type

Participants with lighter skin were 1.5 times more likely to have inadequate knowledge than those with darker skin, suggesting a correlation between skin tone and knowledge.

Skin type was related to both knowledge and practice of skin-whitening; participants with combination skin were 2.5 times more likely to perform skin-whitening and 5 times more likely to have excellent knowledge than those with dry or normal skin. Compared to participants with normal or dry skin, those with oily skin were three times more likely to perform skin whitening.

Pressure from society

Individuals who felt under social pressure to lighten their skin were 2.7 times more likely to practise skin whitening and 3.6 times more likely to have a positive attitude than those who did not feel under pressure. These findings suggest a relationship between societal pressure and attitudes.

Family history

Those who reported a 4.5-fold higher likelihood of skin-whitening than non-family members showed an association between the practice and having a history of skin-whitening.

Prescription

Getting products from places other than pharmacies or doctor's prescriptions was associated with not knowing what ingredients are in the products; individuals who did not get products through these channels were 3.6 and 3.2 times more likely to be unaware of the ingredients in their skin-whitening products. In addition, people who purchased items from friends or relatives had an 11-fold increased risk of experiencing adverse effects in comparison to those who purchased them from other sources.

Goods from friends and family

Compared to participants who got their products from other sources, those who got theirs from friends and family were 11 times more likely to have side effects.

In conclusion, the study indicates that those with darker skin tones are more interested in and knowledgeable about skin whitening. Those with combination skin types are more likely to be very knowledgeable, perhaps because controlling both oily and dry regions can be challenging. It's interesting to note that positive opinions on skin whitening remained unaffected by knowledge of the adverse effects, demonstrating how strongly motivated this practice is. The primary sources of societal pressure were found to be the media and social media.

Conclusion

In conclusion, a comparative analysis of plant extracts highlights the effectiveness of arbutin, kojic acid, aloesin, and liquorice in descending order when it comes to their skin-lightening properties and safety. Newer skin-lightening agents (SLAs) offer improved safety, enhanced stability, reduced irritation, and innovative efficacy. They bring versatility, customization, and potential sustainability to meet evolving skincare needs.

It's noteworthy that females aged between 20 to 35 are prevalent users of skin-lightening products. Many of these individuals are well-informed and possess good knowledge regarding the safety of these products. They can even identify the ingredients prohibited in skin-lightening products. However, this awareness and knowledge, despite recognizing the risks associated with skin-lightening products, do not deter them from usage. Their motivation primarily stems from personal satisfaction with achieving a lighter skin tone.

While general awareness of skin-whitening products is deemed average, particular knowledge of skin-whitening chemicals is still comparatively lacking. Although most female students have an unfavourable opinion of skin whitening, it is nevertheless a popular practice among them. People who have a familial history of skin whitening or who feel pressure from society to lighten their skin are more likely to follow through on this practice. Social media and the media itself become powerful information and pressure sources, especially when it comes to the demand for lighter skin. The use

of social media and the media to promote acceptance of different skin tones and increase knowledge about the safe use of skin-whitening products are among the recommendations. Furthermore, for the sake of customer safety and transparency, it is suggested that Sudan's Standards and Metrology Authority and Ministry of Health enforce thorough product labelling that includes specific information on ingredients and their concentrations.

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Conflict of Interest

"The author(s) declare no conflict of interest".

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