

Skin lightening products to enhance beauty: A myth or reality

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ABSTRACT

Background: Skin lightening products (SLP) are widely used cosmetics among people that may result in lightening of skin complexion and may damage the skin. There seems to be a strong demand for lighter skin tone that is shared globally and promoted by the media. **Aims and Objectives:** To investigate the knowledge, attitude, and use of SLPs and its social and psychological correlation among people in a south Karnataka district. **Materials and Methods:** A cross sectional survey, 2000 individuals irrespective of age and sex from a district in south Karnataka responded to a questionnaire. **Results:** This study explored SLPs use among 2000 individuals irrespective of age and sex in Hassan, Karnataka using a questionnaire. A total of 33.8% of the sample reported currently using SLPs, with women being two times more likely using these products. Among current users, 12.8% reported past experiences of adverse side effects. “Friends” and “Family” were the most common influence for using fairness products, followed by “Advertisements”. **Discussion:** Cosmetics market is flooded with skin lightening products and rampant use of the same has become a major public health concern in all countries along with the reinforcement of racism and social disparities. Side effects for skin lightening products are less reported which is similar to other studies. This could be the reason why there is no regulation of the products or the ingredients in the products. **Conclusion:** A high prevalence of SLP use was found in a sample of population in south Karnataka, and several social and mental health-related risk factors were found that may help in guiding interventions.

Key words: Skin color; skin lightening products; side effects

INTRODUCTION

Skin lightening products (SLP) are widely used cosmetics among women and men that may result in lightening of the skin complexion and may cause damage to the skin [1]. Studies have documented the use of skin fairness products, sometimes referred to as “skin whitening products,” “skin bleaching products,” “depigmenting agents,” in Africa, Europe, North America, and Asia, with prevalence of use ranging from 27 to 77% among community samples. There seems to be a strong demand for a lighter skin tone that is shared globally and promoted in the media [2-4]. Factors associated with the use of SLP have been found to be sociodemographic characteristics, poor knowledge

about its harmful effects, positive perceptions about SLP, and poor mental health [4].

Regarding factors related to the SLP itself, being unaware of the harming effects of SLP [4-5] and positive perceptions about a lighter skin tone and SLP (provides high self-esteem, becomes more beautiful and healthier, marriage and employment opportunities, and other social enhancement) [6-8] have been found associated with SLP use. Despite this, empirical research into skin fairness product use is limited to prevalence and medical side effect investigations, especially among samples in Asia [9]. The widespread use of skin fairness products is increasingly recognized as a public health, environmental justice, and social

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justice issue due to the deleterious health side effects and the potential reinforcement of racial and social inequalities [10-11]. This is particularly the case for research conducted in India, one of the fastest growing markets with an annual spend of \$US 450 million on skin fairness products [12]. There are insufficient studies on the use and factors associated with SLP.

MATERIALS AND METHODS

A Cross-sectional questionnaire based study was conducted among Individuals who attended DVL OPD in a tertiary care centre, Hassan Institute of Medical Sciences, Hassan, Karnataka. 2000 individuals irrespective of age and sex were included in the study. After proper explanation and taking informed consent, patients were asked to fill the questionnaire

Ethics Statement

Study was conducted with Institutional ethics committee clearance

RESULTS

Among a total 2000 patients 58.3% were females and 41.7% were males (Fig. 1). Age of the patients ranged from 3-80yrs. 50.95% among the total population believed that skin lightening products can increase fairness. Among those who believed in the effectiveness of fairness creams, females were slightly more than males (51% v/s 50.8%) and this difference was not found to be statistically significant. Among them 40.9% were in low educational status (Below higher secondary). Among users of facial applications (54%) majority were females and of low educational status (29.6%) ($p < 0.001$). Among those with low education there was no significant difference between males and females on their belief regarding effectiveness of fairness cream.

Among those who do not apply anything on face, those with higher educational status was significantly more than lower educational status ($p < 0.001$).

Females were found to use more facial applications than males, but this difference was not statistically significant (55.1% v/s 52.5%, $p = 0.26$).

Major reason for use of facial applications was to increase fairness (13%) followed by someone's suggestion, hyperpigmentary conditions and dryness (Fig. 2).

Source of information regarding facial applications were mainly Advertisements (20%) followed by friends and family (Fig. 3). Among them mothers play a major role in promoting use of SLPs among children and teens by encouraging them to apply SLPs.

Main facial applications used was fairness creams (33.8%) followed by cosmetics and ayurvedic preparation (Fig. 4). Many patients marked the product that they are using as day cream, night cream, face cream etc. when crosschecked the products that they mentioned were found to be mainly marketed as SLPs. A lesser

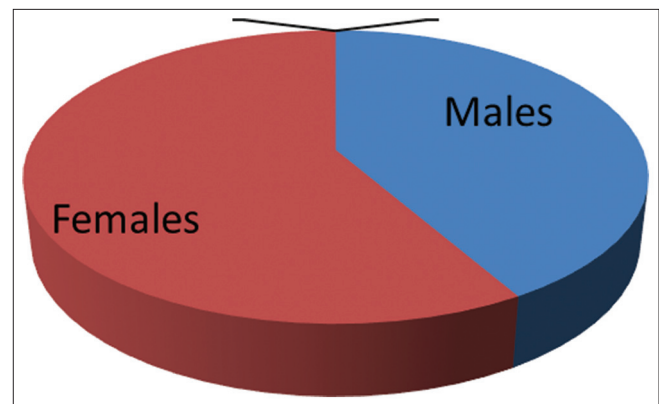


Figure 1: Proportion of males and females in study.

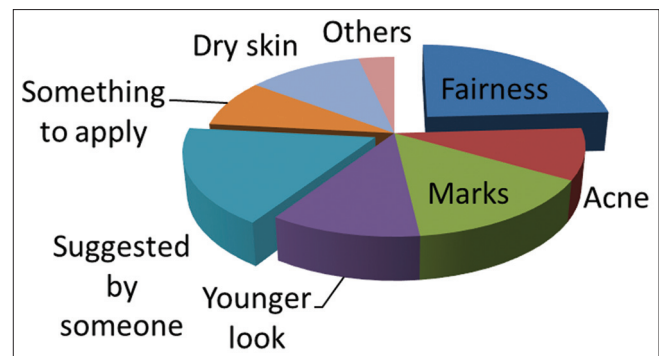


Figure 2: Proportion of reasons for use of facial application.

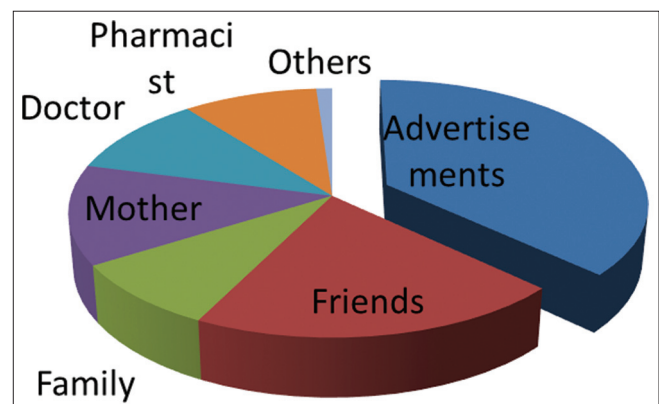


Figure 3: Different sources of information regarding facial application.

percentage use steroids and triple combinations for a longer time to increase fairness without knowing the long term sequelae. They even consider the adverse effects of long term topical steroids such as erythema as a normal change related to fairer skin.

Most users did not achieve the desired result (38.3%), but continued since it became a routine(22.6%) and to satisfy the need to apply something on face (16.7%) (Fig. 5). 12.8% of users of facial applications experienced adverse effects like acne, darkening of skin and worsening of skin texture (Fig. 6).

Daily application and frequent applications in a week was found to be more than weekly and monthly use among SLP users. This may contribute to the cumulative effect of the SLPs.

Most of the users of facial applications were ready to stop application of SLPs(26%), but 11% were not ready to stop application.

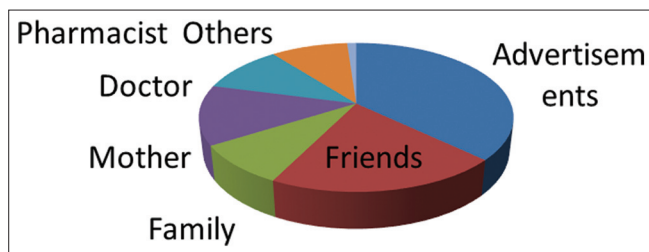


Figure 4: Different types of facial applications.

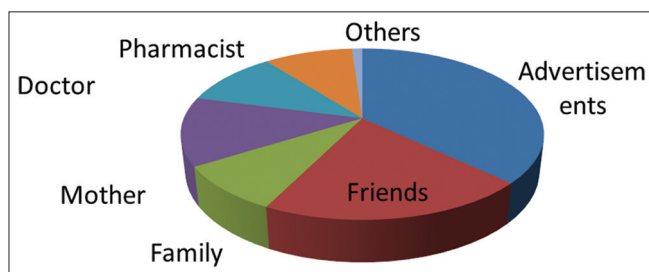


Figure 5: Reason for continuation of use of facial applications.

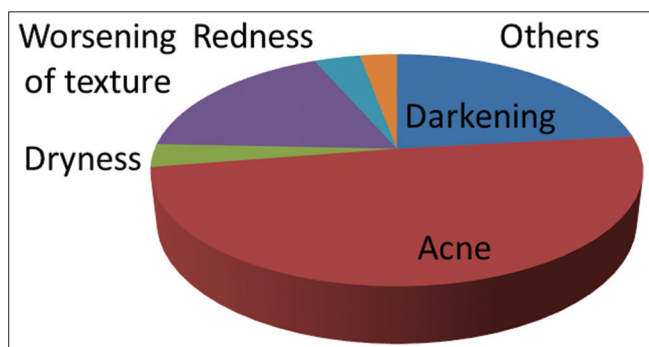


Figure 6: Adverse effects associated with SLPs.

Most of the users(35%) were applying SLPs for more than 3 years. 16.6% of participants gave a history of prior use of SLPs which was stopped following absence of desired outcome, acne and darkening of skin. Majority of SLP users use additional products or treatments to lighten skin colour (27.2%) like home remedies, chemical peels and facials

DISCUSSION

Karl Peltzer et al [1] in 2013 conducted a questionnaire based study among 19624 undergraduate university students in 27 universities among 26 countries across Asia, Africa and America. A high prevalence of skin lighteners use was found in the large sample of university students 24.5% (16.7% in male and 30.0% in female students). In our study it was 33.8% (46.3% females and 16.3% males). Social and health-related risk factors were identified in the study like what was observed in our study.

Nicoza Dlova et al [4] conducted a study among 579 women in two South African community in 2014 and found that Skin-lightening products are used by a third of African and Indian women in South Africa Cultural and historical perceptions equating a fairer skin with social advantage are pervasive and strongly reinforced by the media. There was a poor understanding of the risks associated with the use of these products. In our study high rate of SLP users who continue application of the same even in the presence of adverse effects indicate the lack of knowledge about risks associated with SLPs. Desire for a lighter skin tone is found to be overweighing the associated adverse effects.

Karl Peltzer et al [13] in 2015 conducted a questionnaire based study among 3259 undergraduate university students in southeast asian countries regarding the use of skin lightening agents and found high prevalence of SLP use 30.7% with 16.7% of male, and 30.0% of female students (v/s 16.3%,46.3%) with several social and mental health factors associated. Prevalence of SLP users in study ranged from 13.4% in Myanmar to 69.4% in Thailand. Female gender, low educational status and lack of awareness was associated with use of SLP, similar to our study.

Hemal Shroff et al [14] conducted a study in among 1992 adults in Mumbai, India, on the use of skin fairness products and found high prevalence of use of skin fairness creams 37.6% (v/s 33.6%) and it's adverse health consequences in 17% (v/s 12.6%)

He noticed that major factors influencing use of SLPs were media, friends and family which is similar to our study.

Saad F et al [15] conducted a cross sectional questionnaire based study in 2017 among 801 female students in Saudi Arabia and found high prevalence of use of SLPs 56.2% (v/s 46.3%) and users believe that fairer skin is associated with beauty and social advantage.

Irmina Maria Michalek et al [16] did an analysis on rapid alert system for dangerous non-food products to identify skin lightening products reported in Europe during 2015-2018. Hazardous skin lightening products that are not in line with European cosmetics legislation are available on the European market. Most of the products are imported. The main risk associated with these products is the content of hydroquinone, mercury, and clobetasol propionate.

Dominic Sagoe et al [17] conducted a metaanalysis on 68 studies in 2018 and found that practice of skin bleaching is a serious global public health problem. In our study the high rate of SLP users and associated adverse effects at an alarming rate, is substantiating this finding.

CONCLUSION

The use of SLPs is highly prevalent among females. SLP users believe that fairer skin is associated with beauty and social advantage. A need exists for targeted public health campaigns to raise public awareness about the uncontrolled use of skin lighteners. We hereby suggest an audit of available SLPs to uncover their harmful contents.

There is a dire need to change the mindset of the people that looking fair is beautiful. In our society, especially middle class give lot of emphasis to colour. Most of the cases it's the mother who sows the seeds of dark complexion. All the restrictions will be put on her like not to go out in sun, play outdoor games, apply skin lightners and meeting skin specialists to make them fair.

It's the moral responsibility of the dermatologists to stop prescribing skin lightening creams solely for fairness. Counsel the mother (as the girls are usually ok with their colour). Encourage her to look in to the other activities of her child than her skin colour. All

this is not easy and will take may be years to accept. The change has already begun.

Statement of Human and Animal Rights

All the procedures followed were in accordance with the ethical standards of the responsible committee on human experimentation (institutional and national) and with the 2008 revision of the Declaration of Helsinki of 1975.

Statement of Informed Consent

Informed consent for participation in this study was obtained from all patients.

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