

Frequency of Use of Skin-Lightening Products, Levels of Self-Esteem and Colorism Attitudes in University Students of Karachi: A Cross Sectional Study

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Abstract

The objective of our study was to determine the frequency of use of skin lightening/whitening products, level of self-esteem among university students, and any association between them. A cross-sectional study was conducted at Jinnah Medical and Dental College and the University of Karachi over a period of 12 months on a convenient sample of 499 students of both genders. Self-esteem was measured using Rosenberg Self Esteem Scale, and the use of skin whitening products and attitude towards skin color was determined using a structured questionnaire. Data were analyzed using SPSS 21.0. Out of n = 499 participants, 30.9% (n = 155) responded that they had used skin lightening products during their life. Of those who said yes, 15.1% (n = 76) responded that they are currently using such products. 63.8% (n = 321) classified their complexion as medium, 29.8% (n = 150) classified it as fair and 5.2% (n = 26) classified themselves as having dark complexion. 73% (n = 367) of people were completely satisfied with their complexion, while 20.1% (n = 101) wished for a lighter shade. Self-esteem scores were calculated, and it was found that 89.9% (n = 452) participants had scores above 15, and only 9.3% (n = 47) participants had low self-esteem, having scores below 15. Only 1% (n = 5) having dark complexion, 5.4% (n = 27) having medium complexion and 2.8% (n = 14) fair suffered from low self-esteem score. The frequency of use of skin lightening products was found to be low in university students from the sample population. The majority had good self-esteem and were satisfied with their complexion. There was no relationship between complexion and self-esteem in the study sample.

Keywords: self-esteem, complexion, skin whitening, lightening products, colorism, fairness

1. Introduction

Skin color is a physical trait dependent on several variables, including race, geographical location, genetics, diet, etc. Skin color is primarily determined by melanin, a pigment present in the epidermis. Over centuries, there has been a preference for a lighter complexion, especially for women. Implications of such classist colorism are observed all over Pakistan, leading to an increased usage of harmful chemicals in skin whitening creams and cosmetics to achieve a lighter tone (Gio, 2010). The desire to look fairer has convinced thousands of individuals to invest a remarkable amount of money in fairness products, as seen in a dramatic increase over the last few decades (Hoskins, 2014).

Pharmaceutical and advertisement industries depict fair complexion as a driver to excelling in professional and personal life, such as job and marital prospects. This has led individuals to splurge on such products without adequate knowledge about their results and effects (Global Industry Analysts Inc., 2017). Most manufacturers of such products are aware that people with darker or tanned skin are willing to try out every possible skin lightening treatment regardless of the expense, effectiveness, or hazards associated with them, thus causing the industry to flourish further (Hoskins, 2014). However, a study conducted by Jayakrishnan (2021) discusses the change in the marketing techniques of certain popular brands and companies in India. The age-old debate, which has now turned into a global movement against skin color bias and racism, has made big brands step back and reanalyze their marketing ways, which are majorly designed according to consumer demand. Consumer behavior and demand are

driven by social and cultural factors, among which skin-lightening products played a major role in South Asian markets. The recent conversation around skin lightening creams and criticism for promoting negative stereotypes for dark skin tones have led to change in how these brands and consumers view such products. A major brand like Fair and Lovely has renamed its skincare brand Glow and Lovely after social pressure and global debate about racial inequality. This is a breakthrough and led to other brands having the conversation about changing their marketing strategies as well.

Whitening products work by lowering the concentration of melanin in the skin. Skin whitening creams usually contain skin bleaching chemicals such as steroids, mercury salts, glutathione, and hydroquinone. Although banned in most European countries due to their harmful effects, they are still being used in Asian countries due to their high demand. While these products may give instant results, they damage the skin in the long run, causing wrinkles, rashes, diarrhea, headaches, itchiness, chills, and acne breakouts. Excessively reducing the concentration of melanin may also increase the risk of skin cancers as melanin acts to prevent sun damage to skin DNA.

Self-esteem is an understanding of one's self-worth, abilities, and potential. It includes accepting oneself with all personality and physical traits. Skin color plays an important role in developing self-esteem and may make some people vulnerable or insecure due to standards set by society.

It has been observed that young adults, such as university students, use these products to fit in with societal demands. Most published literature is conducted on African American populations that show no difference in self-esteem between dark and light-colored participants (Wade, 1996). Studies measuring self-esteem in university students and skin tone have been done separately and show a variable level of self-esteem among university students; however, there is limited evidence of a relation between them in the age group of university students, and none could be found from Pakistan (Fairness creams have nothing fair for skin, 2012).

2. Method

2.1 Participants and Sampling Procedure

A cross-sectional study was conducted at Jinnah Medical and Dental College and the University of Karachi for a period of 12 months. The sample size was set at 499, and a convenience sampling technique was used to interview students fulfilling the inclusion criteria and agreed to participate. The Research and Review Committee JMDC approved the study.

2.2 Inclusion Criteria

Students of both genders, aged 18 years and above, were included irrespective of their department within both universities. Participants in a good state of health and without any skin disease, not undergoing any surgical/cosmetic skin procedures or treatments, were considered eligible for the study. Implied consent was stated on the questionnaire.

2.3 Statistics Analysis

A 20-point structured questionnaire was constructed and pre-piloted to record background data and assess perceptions, experiences, and attitudes towards colorism. Rosenberg Self Esteem Scale (RSES) 10 item scale was used to measure self-esteem (Rosenberg, 1989). Data entered and analyzed using SPSS 21.0. Descriptive frequencies were obtained. The total RSES score was calculated using the Rosenberg scoring chart. RSES score was used to create normal, below, and above normal categories. Cross tabulation and chi-square tests were done to determine the relationship between self-esteem and usage of skin lightening/whitening products.

3. Results

A sample of 499 subjects was interviewed, of which, 53.7% (n = 270) were females and 45.5% (n = 229) were males, with a mean age of 21 years. Most of the students belonged to medicine, 54.9% (n = 276) and 21.1% (n = 106) students belonged to the field of business. The majority of the participants were unmarried, 79.1% (n = 398). Most of the candidates had a family income between PKR 1-3 lac per month, 31.6% (n = 159), while 22.7% (n = 114) candidates had more than three lacs per month.

Most of the participants, i.e. 63.8% (n = 321) identified themselves as having medium complexion, 29.8% (n = 150) identified as fair, and 5.2% (n = 26) participants identified as having dark complexion.

Figure 1 shows the frequency of usage of skin lightening products. Results showed that most participants have never used any skin lightening products, and only 15% are currently using them.

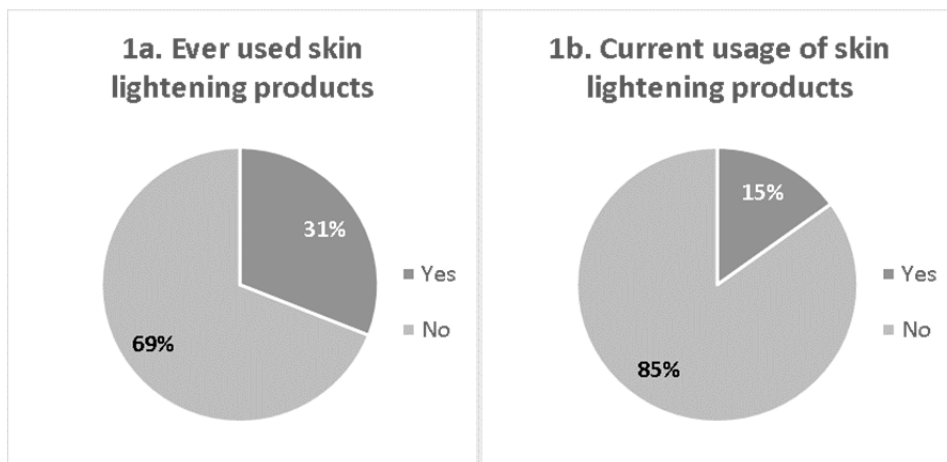


Figure 1. Frequency of use of skin lightening products

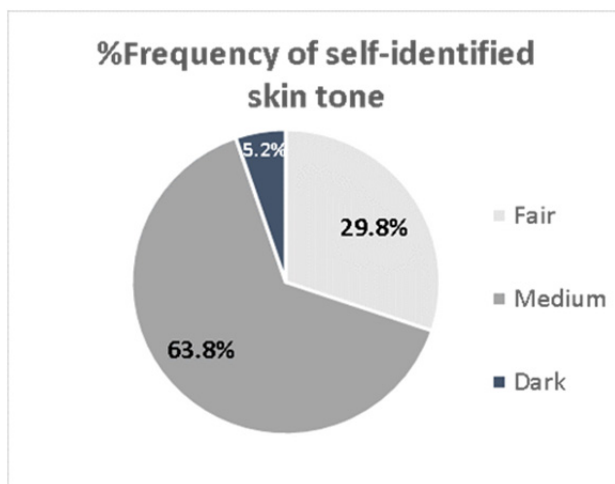


Figure 2. % frequency of self-identified skin tone

Self-esteem scores were calculated using Rosenberg Scale, and it was found that the mean self-esteem score was 20.99. 89.9% (n = 452) participants had scores above 15, which shows that they did not have low self-esteem; on the other hand, 9.3% (n = 47) participants had low self-esteem, having scores below 15, as illustrated in Figure 3. Of these only 1% (n=5) of dark-toned, 5.4% (n = 27) of medium-toned and 2.8% (n = 14) of fair toned had low scores.

Mean Score	• 20.99 ± 5.0
<15 Below Normal	• 9.3% (n=47)
15-25 Normal	• 69.4% (n=349)
26-30 Above Normal	• 20.5% (n=103)

Figure 3. Level of self-esteem and mean score

The level of self-esteem was cross-tabulated with self-classified current skin tone and with the use of skin whitening products. No association was found using chi-square tests between self-esteem and skin tone.

Additionally, data on attitudes and experiences regarding colorism was gathered. Descriptive frequencies for fully agreed responses are given in Table 1.

Table 1. Descriptive frequencies for colorism

Personal Perceptions	Agree	
	n	%
In your opinion		
People have negative attitude towards dark complexion	405	80.5
Media has important role in promoting colorism	434	86.3
Fairness product ads are major contributor to promoting colorism	215	42.7
Men and women perceive colorism differently	356	70.8
Complexion is important factor in marriage	394	78.3
For Men	86	17.1
For Women	202	40.2
Both	115	22.9
Personal Experience		
Have felt differently treated due to complexion	159	31.6
Negatively different	68	13.5
Positively different	89	17.7
Have received comments on complexion from peers/friends	294	58.4
Bothered by comments on complexion	170	34.1
Personal Attitude		
Prefer lighter skin tone for self	101	20.1
Prefer lighter skin tone for prospective spouse	84	16.7
Feel less confident due to own complexion	120	24.0
Feel unsatisfied with own complexion	132	26.4

The majority of students agreed that society has a negative attitude towards dark complexions, and media plays a major role in developing this construct. They also agree that there is a difference in perception of colorism between men and women; however, a fair complexion is a highly desired quality for a woman. The majority admitted receiving comments on their complexion, but such comments impacted a few.

Based on the data collected, we concluded that out of 499 participants who took the survey, about 73.0% (n = 367) subjects were completely satisfied with their current complexion; however, 20% (n = 101) people would have preferred a lighter skin tone for themselves.

Only 16.7% of participants admitted light skin to be a desirable trait in a prospective partner.

In contrast, several people rejected the role of their skin color in establishing their self-esteem. 75.3% (n = 379) of participants claimed that their skin tone has no bearing on their self-image or self-confidence. 51.7% (n = 260) of the participants explicitly revealed being completely satisfied with themselves.

4. Discussion

This study was conducted to determine the prevalence of the use of whitening products, levels of self-esteem, and the association between them, if any, among university students of Karachi. According to the results, only 15% of the participants were found to currently use skin whitening products. The majority identified as having a medium complexion and had normal to high self-esteem scores. No relationship could be found between the two variables.

Skin lightening practices have escalated worldwide in an attempt to enhance skin tone. A study conducted in the

Northern Region of Saudi Arabia by Alrayyes, Alrayyes, & Farooq Dar (2020) highlights the increasing use of skin lightening products. Various reasons and beliefs were found behind these practices. The most prevalent being that the users believed that lighter skin tone played a role in self-esteem, perception of beauty, marriage, and social and financial opportunities. With women held to higher beauty standards than men, increasing skin-lightening practices and media sources contribute most to the normalization of colorism and social hierarchies, perceptions, and stigma.

A recent detailed study by Khan et al. (2021) in Pakistan found that over 50% of women use some type of skin-lightening product. However, the study did not determine the correlation between social strata, education, and age group, and it did not include men. Our study is the first to determine the frequency of use among university students in Karachi, including both sexes, middle-income groups, and educated past high school; factors that may contribute to less usage.

Studies show that the highest self-esteem was found amongst the participants in their early 20s, similar to the mean age of our study sample. A longitudinal study by Adams, Kurtz-Costes, Hoffman, Volpe, and Rowley (2020) found that low self-esteem in darker-toned adolescents outgrow it by their twenties and attain normal self-esteem.

According to an Afrocentric study conducted by Charles (2003), skin bleaching was not the result of low self-esteem. There were various reasons for skin bleaching because of various Black identities and because each person constructs his or her personality in a multicultural society. Another study by Marekia-Cleaveland (2019) commented on the effect of colorism on people in a society and the pressure to attain specific traits to adhere to beauty standards. A lighter complexion is celebrated widely due to the euro centricity of light skin, forcing people to try and look a certain way. However, it concluded that diversity must be celebrated, and it should not be restricted socially and culturally by constructed definition of beauty. Another research among the African population showed that only a few participants, significantly women, were using these products. However, they were mostly unaware of the after-effects and had low literacy (Chohan et al., 2014).

A study was conducted among women of South Asia aged 18-40. The purpose was to determine the interconnection between skin tone and self-esteem and if belonging to a generally less desired race and color plays any role. It was highlighted that regardless of women facing difficulties in foreign countries because they belong to a specific race or color, the women of South Asia did not negatively impact their skin color on their self-esteem (Bhayani-Larsen, 2020).

A study in Mumbai by Shroff, Diedrichs, & Craddock (2018) revealed that more than half of the population used skin fairness products at least once in their lifetime. In our study also, 31% admitted ever using such products. Since the mean age of our sample is 21 years, it can be assumed that such products were used during the formative teenage years. The main reason cited by this study was to look fairer and more attractive, just like what was being promoted in advertisements or in the media. Another study conducted by Lau and Idang (2022) in Malaysia among university students highlights the usage of beauty filters and selfie editing apps and their relationship with the individual's mental wellness. As the internet and social media usage have increased, more people started trying to take picture-perfect selfies, which has increased the usage of beauty filters and editing apps to hide or change their natural skin color, texture, or their real body shape. This study showed that the usage of these selfie editing apps was linked to lower self-esteem levels and greater social appearance anxiety. According to the research conducted by students of another university in Karachi, fairness product advertisements, societal pressure, and media were the main reasons for disliking dark skin tone and partiality toward lighter skin (Ismail, Loya, & Hussain, 2015). This opinion is similar to our participants, most of whom agreed that media has a major role in promoting usage through successful, attractive role models. A study performed on racism, colorism, and elitism in Bollywood points out the impact that the film industry has on the masses and the fact that these attitudes reinforce prejudices against dark-skinned people. The blatant partiality towards lighter skin and Eurocentric features is incongruent with the attitudes of several notable Bollywood voices raised in solidarity with the Black Lives Matter movement to battle racism in America. Bollywood needs to be less dismissive toward casting actors of all skin colors. It also needs to address the lack of positive representation of different regional and ethnic groups in India. Moreover, following the progressive views held by Bollywood celebrities and filmmakers, it is high time they realize that continually stereotyping darker-skinned actors as poverty-stricken, maleficent, or at a physical disadvantage is blatant hypocrisy and has lasting effects on the already prevalent colorism in its public (Peters, 2021).

As stated in a study conducted in Jamaica by Charles (2011), skin bleaching is in demand because they associate fair skin with high status, reputation, and sexual attractiveness. On the other hand, according to our research, complexion was not considered a contributing factor in receiving attention from the opposite gender by more than half of the respondents. That may be because both the studies targeted different groups of people from different

socioeconomic backgrounds and classes.

Another study was performed in Zanzibar, Tanzania, by Tekie (2020) to assess the effect that colorism has on women's identity and ethnic construction. Women were questioned about the impact that colorism has on their personal lives and its effect on their self-perception. It was established that colorism exists in society alongside the preconceived notion of relating lighter or medium skin to positivity while attaching stigmas to dark skin. That being said, women who were inhabitants of Zanzibar were less severely impacted by colorism than those raised in Tanzania's mainlands. It was also concluded that inclusion in the Zanzibar community was determined more directly by factors like religious, geographical, and historical similarities than skin color.

According to Indian research, more women believe that colorism has an important role in marriage (Verma, 2010). A study conducted by Sharda (2020) claims that colorism has been a constant dilemma for people in India. They think that skin tone biases has majorly disseminated by media, culture, and families. People living in India are fascinated by lighter skin tones. They think people with darker skin have low self-esteem and cannot be successful. They concluded that women in the young age group had the lowest self-esteem and had the most pressure to conform to lighter skin beauty ideals compared to the older generation. Also, they mentioned that skin tone has also been affecting people in the context of marriage. A similar study performed in India by Kukreja (2021) has revealed how colorism is treated as a marriage capital in certain areas of the country. The study acknowledges a form of gender-based oppression that takes roots in archaic, sexist ideals. The financial and social marginalization of certain communities in India makes it extremely difficult for darker-skinned women from these backgrounds in to get married. These women have entered cross-cultural marriages as a last resort, and their struggles do not end here. Their dark skin is routinely used as leverage against these brides. They are subjugated due to the implication that they have been saved from being perpetually unmarried due to their less-than-desired physicality.

Contrary to their findings, about half of our respondents stated that they do not have any preference regarding skin complexion when choosing their life partner. This shows that the women's excessive obsession is only the result of societal conditioning and that skin complexion is not as significant a factor in marriages as perceived by them. This, too, was because both the researchers had different social settings.

A study conducted by Jawad, Bhuiya, Faroque, and Gani (2022) discusses the role of a Bangladeshi superhero battling the social problems of colorism within the subcontinent. This study shows how South Asian countries still suffer from a colonial hangover by calling light-skinned people beautiful and prejudice against dark-skinned people, especially women. Young girls are told that having fair skin will determine the quality of their life; this distorts their sense of self and ingrains racism and colorism at a psychological level. This study focuses on introducing Ms. Shabash, a female superhero who fights against monsters and zombies at night, and society's expectations of ideal female beauty in daily life is a breath of fresh air for the young generation. For years young generation has been attracted to comics and graphic novels, and addressing an important issue through such medium has set a great example. It will inspire young minds in the future.

After all of the above discussion, it was concluded that most participants seemed to be completely satisfied with their complexion. They also had high to normal self-esteem. It cannot be determined whether self-esteem contributed to this satisfaction or vice versa.

4.1 Limitations

Our study's limitations are that the sample included educated, middle-class individuals, predominantly female gender. Majority of the students participating belonged to the same age group ranging from 18-25 years, South Asian race, similar mental and physical abilities, similar family income, and language skills. The representation of the dark-toned and male sex was small.

5. Conclusion

We conclude that most participating university students were satisfied with their natural skin tone. The majority had high self-esteem, and there is no relation between complexion and self-esteem in the participating university students despite cultural norms and promotion of colorism in our society.

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Competing Interests Statement

The authors declare that there are no competing or potential conflicts of interest.

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