



Original Research

A survey evaluating knowledge, perception, and use of skin lightening products among South African students

Farzana Rahiman PhD^{a,*}, Lester M. Davids PhD^b, Amy Thomas Hons^a^aDepartment of Medical Bioscience, University of the Western Cape, Cape Town South Africa^bC2L Scientific Consultancy, Rondebosch, Cape Town, South Africa

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ABSTRACT

Background: In sub-Saharan Africa, the use of skin-lightening products (SLPs) for cosmetic purposes has become common practice among women with dark skin tones. Despite the associated risks, the practice is still significantly increasing in Africa. The objective of this study was to determine the knowledge, perceptions and practice toward skin lightening among young adults.

Methods: A cross-sectional survey among health science students at a tertiary institution in the Western Cape of South Africa was conducted.

Results: A total of 401 participants were included in the sample. There was a low prevalence (12%) of skin-lightening practice among students, which could possibly be a result of students being aware of the associated side effects. Participants believed that family and friends are most likely to influence this behavior (48%) and perceived that individuals who practice skin lightening do so because this provides a more fashionable look (76%). Men and women were found to be equally likely to use SLPs, and those residing in urban settings are 10 times more likely to engage in the practice compared with rural dwellers.

Conclusion: This study contributes valuable information on the phenomenon of skin lightening among a diverse group of young adults. The results highlight the influential role social media platforms and family members play in motivating use of SLPs. Furthermore, the equal likelihood of use among both sexes suggests that the practice is growing among males.

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Introduction

The desire for fair skin has become a worldwide phenomenon, especially among dark skinned populations (Dlova et al., 2014). In sub-Saharan Africa, skin-lightening practices have been prominent for over 4 decades, with a prevalence of 40% to 72% among the population (Davids et al., 2016; de Souza, 2008). Skin-lightening agents are often advertised as beneficial, but the adverse effects have been shown to affect the skin barrier and physiology (Darj et al., 2015). Considering the serious health concerns associated with certain skin-lightening products (SLPs), many African countries, including South Africa (SA), have legislated policies to ban the sale of items containing mercury and hydroquinone (Dlova et al., 2014). However, due to the rapidly growing use and profitability of SLPs, they remain widely available and can be purchased from informal markets and through other illegal channels (Dlova et al., 2014; Maneli et al., 2016).

Recently in Africa, there has been a surge in the use of SLPs among young adults (Benn et al., 2016). It is therefore important to evaluate the extent to which these individuals are knowledgeable about product use and the associated side effects. Limited epidemiology studies have been conducted in SA, specifically in the Western Cape, on this issue. As such, this study aims to investigate the knowledge and perceptions behind the practice among a diverse cohort of young adults in the region.

Methods

A cross-sectional survey was conducted at a tertiary institute in the Western Cape during 2018. This study was approved by the Health Research Ethics Committee of the institution (BM18/3/21). A total of 401 students aged between 18 to 35 years and who were registered for undergraduate medical bioscience courses were recruited to ensure statistically significant results. Participants completed a structured, self-administered questionnaire adapted from Keakile (2016). This study tool was pretested to determine reliability and validity. Cronbach alpha's coefficients of 0.83 for the atti-

* Corresponding Author:

E-mail address: frahiman@uwc.ac.za (F. Rahiman).

Table 1
Association of demographic characteristics with usage of skin-lightening products

Description	Demographic	Count usage, %	p-value
Race	Black	13	.846
	Coloured	12	
	Indian	15	
	White	6.5	
	Asian	0	
Sex	Male	10	.515
	Female	12	
Geographic region	Rural	1	.002*
	Urban	14	
Degree	Medical bioscience	12	.886
	Sport science	9	
	Natural medicine	10	
	Community and health science	15	
	Other	11	

* Statistical significance at the .05 level

tude section and 0.87 for the attitude and knowledge sections were considered acceptable for our study population (Brown, 2002).

For analysis of the data, information was captured in Microsoft Excel and analyzed using IBM SPSS Statistics, version 24. A descriptive analysis was performed to describe categorical data, and frequency distribution tables were used to assess individual questionnaire items. Pearson χ^2 tests were performed to determine associations between categorical variables and the usage of skin lightening, and *t* tests were used to compare means between the groups. Logistic regression models were fitted to determine the odds ratios with 95% confidence intervals to determine predictors for the use of skin lightening.

Results and discussion

Sample characteristics

The final sample was composed of students with a mean age of 20 ± 2.4 years; 67% were female, and 49% were Black African (students were grouped into racial categories according to South African governmental policy). Most students resided in an urban setting (79%) and were registered for medical bioscience as a mainstream degree (44%). The results revealed that use of skin lightening was prevalent among 12% of students, of whom 15% were Indian women. There was little difference in SLP usage among Black African (13%) and Coloured women (12%; Table 1).

Knowledge and perception of skin-lightening products

Overall, 75% of participants reported that they were aware of the negative effects of skin lightening (Supplementary Table A). The low prevalence reported within this study cohort could possibly be a result of students being knowledgeable of the adverse effects of this practice. These results are similar to the results reported by Keakile (2016), who suggested that tertiary educated individuals are more likely to familiarize themselves with issues of social interest and are therefore more aware of the negative consequences associated with the practice.

Lewis et al. (2011) suggested that advertising in Africa has played a major role in the perception of fair skin as being more beautiful and desirable. However, this study revealed that participants were not greatly influenced by advertising (1%) and television shows (4%). Rather, participants believed that social media platforms, such as Instagram (23%), and having family members as users of SLPs (48%) were more important motivating factors (Supplementary Table B). Social media platforms have become an increasing source of influence and are used extensively by local and international celebrities to convey beauty ideologies and ideas on the feminine body. Young women who aspire to be like these

celebrities are therefore likely to be influenced by their attitudes and model their behavior (Motseki and Oyedemi, 2017).

Furthermore, respondents reported that SLP users are motivated by their desire to be more appealing to the opposite sex (70%), of a higher social class (68%), and to appear fashionable (76%; Supplementary Table B). This is similar to the findings by Dlova et al. (2014) and Hamed et al. (2010), who reported that women found a lighter skin tone to be an influential factor in securing better employment opportunities and attaining a higher socioeconomic status.

Association of demographic characteristics with use of skin-lightening products

The statistical analysis revealed that sociodemographic variables, such as race, gender, and degree, were not significantly associated with the use of SLPs ($p > .05$; Table 1). Previous studies have reported that women are more likely than men to practice skin lightening (Peltzer and Pengpid, 2017; Peltzer et al., 2016; Rusmadi et al., 2015). However, our results were surprising because both sexes were equally likely to use SLPs, which suggests that the practice is growing among males.

Conversely, a significant association was found between geographical location and the usage of SLPs ($p < .05$), with students residing in urban settings being 10 times more likely to engage in the practice compared with those living in rural areas (odds ratio: 10.05). This is similar to the findings by Lartey et al. (2017), who described the high prevalence of skin lightening among urban dwellers because of the need for socially active people to be accepted and appear beautiful.

Conclusion

To our knowledge, this is one of few studies to report on a multi-racial, diverse university cohort in Africa and contributes valuable preliminary information on the practice of skin lightening among educated young adults. The use of SLPs in SA is growing among both male and female young adults, and this population should be the target of education campaigns focusing on the associated risks. Although television and advertising are important ways to inform the public of the dangers of skin lightening, according to this study, social media platforms seem to be even more influential among young adults; thus, this media option should be further explored.

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Study approval

Study approval was granted by the Health Research Ethics Committee of the tertiary institution (BM18/3/21).

Conflicts of interest

None.

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Disclaimer

All findings of the study are those expressed by participants and are not those of the authors or the host institution. This paper has cited published references.

Supplementary materials

Supplementary material associated with this article can be found, in the online version, at doi:[10.1016/j.ijwd.2021.07.006](https://doi.org/10.1016/j.ijwd.2021.07.006).

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