

Association between Skin Color, Body Image, and Self-Esteem among Undergraduate Students: A Cross-Sectional Study

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Abstract- *Living with lighter skin is the dream of most dark-skin youth. Younger people with dark skin probably experience dissatisfaction with the skin color which results in a less positive body-image and low self-esteem. This research aims to examine the relationship between skin color, body-image and self-esteem. The study design was a descriptive correlation with cross-sectional approach. A stratified random sampling technique was used and 211 respondents were included. The Independent variable was skin color; the dependent variables were body image and self-esteem. The variables were measured by Luschan skin color scales, Multidimensional Body-Self Relation Questionnaires (MBSRQ) and Rosenberg's self-esteem scale (RSES). Data were analyzed using the Spearman Correlation statistic test. There was a correlation between skin color and body image ($p = .000$) and skin color and self-esteem ($p = .015$). Undergraduate students with dark skin who positively received their conditions presented positive body image and high self-esteem. Further research on the effects of peer, family, and society on the skin color associated with body image and self-esteem needs to be explored.*

Keywords: *body-image, cosmetic, undergraduate student, self-esteem, skin color*

I. INTRODUCTION

Lighter skin color is everyone's dream on different continents [1, 2]. Dissatisfaction with the color, the more dominant women experiencing dissatisfaction with skin color than men [3]. Dissatisfaction with skin color is characterized by the proliferation of cosmetic products that aim to brighten the skin color [4]. As a result of the discontent and continuous need for the ideal color there is an increase in excessive cosmetic consumption or the use of unlicensed cosmetic ingredients. If this is not immediately addressed it will have a direct impact on health, in addition to feelings of shame and not being confident in one's skin color that has resulted in a person experiencing a self-concept disorder [5]. Poor self-concept can also result in decreased academic performance [6].

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Skin color is identical with ethnic and tribal cultures [6]. Indonesia has various tribes. The top three tribes in Indonesia are based on consecutive numbers. The first is the Java Tribe, the largest with a population of 95.2 million people or about 40.2% of the population of Indonesia. The second-largest is the Sundanese with 36.7 or 15.5% and the third is the Batak Tribe with 8.5 million or 3.6% [7]. The majority of skin tones of the Javanese, Sundanese, and Batak Tribes are brown, while in the less populated tribes such as the predominantly dark-skinned Papuan Tribe and Chinese or Chinese majority tribes [8]. However, lighter skin is currently the ideal benchmark for Indonesians and shifts the idealism of Indonesian skin color from brown [6]. This is reinforced because there is a presumption that white color is identical with urbanism and dark skin to rural areas. The majority of women want white skin due to career demands, social pressure, attracting the opposite sex, and body image [9, 10].

The body image, in theory, has a sense of how one sees oneself as ideal according to his or her desires and the way the individual acts at a certain moment [11]. In addition to body image, their self-esteem will also decline. The assumption that white color is the ideal benchmark has a direct impact on psychological and mental health [12]. Dissatisfaction with their skin color can interfere with everyday psychosocial life [13]. In addition, white color idealism makes the mushrooming of cosmetic products [14]. It also affects most people's consumptive behavior. Consumptive behavior toward cosmetic goods is influenced by self-concept. If one has a low self-concept then consumptive behavior toward cosmetic goods will increase [13].

Early adulthood is the age at which consumer behavior towards cosmetic goods increases [14]. This behavior is influenced by culture, social class, reference group, situation, family, personality, self-concept, motivation, learning experience, gender and lifestyle that occur in students' environments [6, 15]. As a result of these behaviors, an individual will experience the concept of low self-esteem. The development of self-esteem is in line with self-concept [16, 17] that can be the best solution in reducing the impact of skin color idealism.

Examining skin color, body-image and self-esteem among early adults are crucial prior to any intervention to support those with low-esteem caused by skin-color. In conclusion, skin color should not be a barrier for an undergraduate student to gain their self-esteem and early adulthood as a whole.

II. METHODS

The research design is descriptive with a cross-sectional approach. The population was undergraduate nursing students at Universitas Airlangga Surabaya Indonesia, cohorts 2015, 2016, 2017 and 2018. The inclusion criteria for the participants were undergraduate nursing students as proven by the student ID cards issued by Universitas Airlangga, students who agreed to participate in this study. A stratified random sampling technique was used to collect respondents from three different cohort enrollments and 211 students agreed to participate. Explanation of study objectives, information related to any possible risks before giving written formal consent to participate in the study were also delivered. Prior to collecting data, this research proposal was reviewed for ethical consideration and approved by Universitas Airlangga IRB with ethical certificate No: 536-KEPK.

The Independent variable in this study is skin color while the dependent variables are body image and self-esteem. The instruments used to measured were Luschan skin color scales [18-20], Multidimensional Body-Self Relationnaire Questionnaire (MBSRQ) and Rosenberg's self-esteem scale (RSES) [21, 22]. All the data were analyzed with descriptive and inferential statistics; IBM SPSS statistics software (SPSS Inc., Chicago, IL; version 20.0).

III. RESULT

Table 1. Respondents' Characteristic

| Characteristics | n (%) |
|----------------------------|------------|
| Sex | |
| Male | 17 (8.1) |
| Female | 194 (91.9) |
| Age | |
| 16 years old | 1 (0.5) |
| 17 years old | 5 (2.4) |
| 18 years old | 58 (27.5) |
| 19 years old | 61 (28.9) |
| 20 years old | 65 (30.8) |
| 21 years old | 18 (8.5) |
| 22 years old | 3 (1.4) |
| Tribe | |
| Javanese | 198 (93.8) |
| Madurese | 5 (2.4) |
| Balinese | 3 (1.4) |
| Bugis | 1 (0.5) |
| Sasak | 1 (0.5) |
| Kaili/kulawi | 1 (0.5) |
| Minangkabau | 1 (0.5) |
| Dayak | 1 (0.5) |
| Reason for using cosmetics | |
| Skin protection | 191 (90.5) |
| Decorative | 20 (9.5) |

Based on Table 1, the result of the attribution of respondents by sex shows most of the respondents are women with, 194 people (91,9%). The majority of respondents' age is 20, 65 people (30.8%). The majority of respondents came from the cohort of 2017, as many as 75 people (35.5%). The majority were Javanese with a prevalence of 198 people (93.3%). Most respondents carry and use cosmetics treatment, 191 people (90.5%).

Table 2 Analysis of Color Students' Skin and Body Image

| Variable | Body Image | | Total |
|--|------------|-----------|-----------|
| | Positive | Negative | |
| Skin Color | n (%) | n (%) | n (%) |
| Dark II | 0 (0) | 1 (0,5) | 1 (0.5) |
| Dark I | 54 (25.6) | 27 (12.8) | 81 (38.4) |
| Brown II | 75 (35.5) | 21 (10) | 96 (45.5) |
| Brown I | 31 (14.7) | 2 (0.9) | 33 (15.6) |
| Total | 160 (76) | 51 (24) | 211 (100) |
| Significance (p): 0.000 | | | |
| Spearman's Rho Correlation Coefficient (r): -.337 | | | |

Based on the table, it was found that the majority of respondents had skin tan II with a positive body image, 75 people (35.5%), but there were respondents with brown skin II and I who had a negative body image, 23 people (10.9%). The crosstabulation data showed that there were respondents who had dark skin II and I but had a positive body image, with 54 people (25.6%).

The skin color of respondent to body image based on non-parametric test, spearman's rho correlation with significance level $\alpha \leq .05$. The result of the analysis shows p-value: .000 which means there is a correlation between respondent's skin color to body image for students at Faculty of Nursing Universitas Airlangga Surabaya, while the correlation coefficient value (r) = -.337 that is, enough correlation level and negative correlation coefficient indicating the relationship between the two variables is not unidirectional, so H1.1 is accepted, meaning there was a relationship between skin color and body image for the students at the Faculty of Nursing Airlangga University.

Table 3 Analysis of Students' Color Skin and Self-esteem.

| Variable | Body Image | | Total |
|---|------------|----------|-----------|
| | Positive | Negative | |
| Skin Color | n (%) | n (%) | n (%) |
| Dark II | 1 (0,5) | 0 (0) | 1 (0.5) |
| Dark I | 80 (37.9) | 1 (0,5) | 81 (38.4) |
| Brown II | 96 (45.5) | 0 (0) | 96 (45.5) |
| Brown I | 33 (15.6) | 0 (0) | 33 (15.6) |
| Total | 210 (99.5) | 1 (0.5) | 211 (100) |
| Significance (p): 0.000 | | | |
| Spearman's Rho Correlation Coefficient (r): -.337 | | | |

Table 3 describes the crosstabulation of skin color with self-esteem. All respondents who have brown skin II and I have high self-esteem, as many as 129 people (61.1%). However, there are respondents who have dark skin color I with low self-esteem, with 1 person (0.5%).

The skin color of respondent to self-esteem based on non-parametric test, spearman's rho correlation with significance level $\alpha \leq 0,05$. The result of the analysis shows that p-value: 0,015 which means there is a correlation between respondent skin color and student body image at the Faculty of Nursing Universitas Airlangga Surabaya, while correlation coefficient value (r) = -0,166 which means the correlation level is very weak and the negative correlation coefficient indicates the relationship between the two variables is not unidirectional, so H1.2 accepted. This means there is a relationship between skin color and students' self-esteem at the Faculty of Nursing Airlangga University.

IV. DISCUSSION

Skin color and body image

The results showed that the majority of students at the Faculty of Nursing Airlangga University have brown skin color and a small part have dark skin. The distribution of the respondents showed respondents who have mature skin color mostly have a positive body image and only a few have a negative body image. This is in line with the research conducted by [10], which explains that what can improve or affect the body image is the color of the skin. Thus, skin color affects the image of one's body. Skin color is important for most students entering adolescence and early adulthood. Individuals entering early adolescence or early adult phase are more careful about their appearance to support socialization and attract

the attention of the opposite sex [23, 24]. Skin color becomes one of the supporting appearances, because if an individual has a dark skin color or one they do not want this certainly reduces the need for self-actualism [13, 14].

The distribution of the data in this study also showed some respondents who have dark skin but have a positive body image. This is because although they have dark skin they still think positively about their bodies. Individuals do not reproach or look down on the dark skin they have. They think beyond having dark skin color as the function and benefits are still optimal. Besides they never compare themselves with others. This is in accordance with research conducted by Supple et al. The results show individuals who have a positive body image have a relationship with good self-acceptance [25, 26]. According to another study, a positive body image has several characteristics, high confidence in facing various things, the activities are well organized, have a pleasant personality, and easy to accept the circumstances and adapt [27]. While a negative body image also has some characteristic traits that appear to be dissatisfied with their physical appearance, a high level of concern, and busy modifying body parts for their desired body image [11].

The majority of Airlangga University Faculty of Nursing students have a positive body image. Some dark-skinned students have a negative body image resulting from a lack of effort by individuals to improve their appearance. Appearance is also closely related to skin color [15, 28]. Dark skin color is the reason some students feel less attractive. Appearance is not the main thing when undergoing education, but if an individual does not accept their appearance or improve their appearance continuously it affects their acceptance in the social environment [23]. It does not happen directly, an individual who does not pay attention to his appearance then the longer it can make other people reluctant to communicate or build relationships with the person [29]. As a result, the individual may experience being isolated from society.

Body image is defined as an individual's way of evaluating their own appearance [30]. Additionally, Surabaya weather is tropical sunny throughout the year. Sunlight makes the skin darker. This natural condition is placed as an anxiety reason for the majority of students. This resulted of anxiety of the discoloration and the skin becomes darker. Hence, students cope by applying a protective skin or cream and skin whitening that can counteract the sunlight. In addition, the majority of students use jackets and gloves when driving to avoid the effects of direct sunlight. If the color of their skin becomes dark then it can affect their daily life. The findings show that the majority of students bring skincare cosmetics (sunblock) into the campus. They use sunblock to protect the skin from sunburn or reduce the risk of sunlight. It makes them more anxious about their appearance (skin discoloration) than their intention to study, so it will have an impact on the primary value or focus in every campus lesson.

Orientation to everyday appearance includes part of body image. Various efforts are made to get a bright and special skin color that makes most students use a variety of cosmetics on campus or outside the campus. Based on observations made by researchers many students use cosmetics, especially women. Cosmetics are used ranging from skincare (sunblock, night cream, and day cream) and others such as lipstick, powder. Every day most respondents bring 2 to 3 cosmetics, but there are a small number of students who bring 5 to 7 cosmetics. This is in line with the research conducted by Chen et al., whereas applying cosmetics in order to appear feeling confident in front of society other than cosmetics for care for skin care reason [9]. It also appears that many female students at the Faculty of Nursing Airlangga University use powder and lipstick. Appearance is a good thing if not too excessive. Attention to excessive appearance makes students tend not to believe when not wearing cosmetics.

The skin color and ideal body shape is something that the majority of students desire. The ideal skin color and body shape exposed by the mass media gives high expectations to the majority of current students. According to research

conducted by Tran et al. (2016), skin color is also a relevant factor in short and long term psychological disorders especially in women [31] et al., 2017). This may then create a gap between expectations and reality and result in some students feeling dissatisfied with their current body shape and skin color.

Entrepreneurship or trading activities are also seen in a small number of students at Airlangga University. Activities are often done is a book bazaar and they also sell drinks on the street by utilizing the back of their car. Their sales activities run smoothly without being affected by skin color. This is certainly not in accordance with research conducted by Devaraj and Patel. This study reported individuals with dark skin experience difficulties in entrepreneurship [32].

The regulations at the Faculty of Airlangga, especially on dress code, are very strict. As a result, some students who commit violations will be given appropriate sanctions. In a previous study conducted by Hannon, DeFina and Bruch, sanctions, punishments and pressures that occur in schools against dark-skinned students are found to be more severe [33]. In addition, research conducted by King and Johnson reported individuals with dark skin to have a high crime rate [34], 2016). In contrast, those findings are not in accordance with the situation in the study setting. In the environment of the Faculty of Nursing University of Airlangga sanctions are given per the error regardless of skin color. There is no evidence at the Faculty of Nursing University of Airlangga that students who have dark skin do bad things more often.

Skin color and self-esteem

The results showed that most students at the Faculty of Nursing Airlangga University have brown skin color and a small part have dark skin. The distribution of the respondents showed all those who have brown skin have high self-esteem. While the respondents who have dark skin-color also have mostly high self-esteem and only one respondent has low self-esteem. This finding contrasts with the research conducted by Ferguson and Cramer (2007), which states that urban community self-esteem is lower than rural [35].

Several factors that cause nursing students to have high self-esteem despite having dark skin color or brown are internal and external factors [20, 36]. Internal factors include sex, intelligence, and physical condition. The sex factors according to Baudson et al. are closely related to women. Women always feel that their self-esteem is lower than men's and feel inadequate and or have low self-esteem [13]. In this study, the findings show sex does not affect the nursing faculty students; the majority of women almost entirely have high self-esteem. While the factor of intelligence explained that academic achievement affects one's self-esteem. A person with high self-esteem will achieve better academic results than those with low self-esteem [37]. The last factor is physical condition. An individual who is physically attractive and tends to have high self-esteem [38].

In addition to internal factors, external factors can also affect one's self-esteem. The role of the family as being fair, giving an active opportunity, educating, punishing can give a child high or low self-esteem [39, 40]. As a result, the process of self-appreciation, acceptance and treatment of others becomes the thing that directly affects one's self-esteem. According to Donlevy et al., education helps individuals to gain self-esteem expressed by self-satisfaction and trust within a person [41]. This study is relevant to the study setting. The majority of students of the Faculty of Nursing Airlangga University who have high self-esteem feel self-capable, such as capable of self-respecting, have a positive attitude towards various things and can overcome all the deficiencies and feeling satisfied with themselves.

The participants of this study are students of the Faculty of Nursing consisting of 3 cohorts and derived from various tribes; almost all have high self-esteem and of course, have different levels of knowledge and various things.

According to research conducted by Kuehn et al., an individual who has a high position in the process of self-decline is very slow[42]. However, this is not in line with the situation at the Faculty of Nursing, as, although it consists of various tribes, positions, levels of force and others, students have high self-esteem.

The results showed that the majority of respondents have high self-esteem, but there is still one respondent who has low self-esteem. The distribution of the data shows that respondents who have high self-esteem obtained the majority of the most on self-acceptance indicators which means the level of ability and desire to live with all the abilities and characteristics of nursing students is very high. Self-evaluation means that almost all students can evaluate themselves, and self-achievement which means a process of a person reaching the direction and purpose of life, so it can be said the majority of nursing faculty students have a definite direction of life goals.

V. CONCLUSION

Based on the results of this study, generally, those female participants with dark-skin have high self-esteem. The next research should develop more on female and external factors related to the impact of support and socialization in the respondent's family.

CONFLICT OF INTEREST

No conflict of interest has been declared.

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