

DESCRIPTION OF PHARMACY STUDENT BEHAVIOR OF BINA MANDIRI UNIVERSITY GORONTALO REGARDING THE CIRCULATION OF ILLEGAL COSMETIC PRODUCTS IN GORONTALO CITY

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ABSTRACT

This study aims to describe the behavior of pharmacy students of Bina Mandiri University Gorontalo towards the use of illegal cosmetics circulating in Gorontalo City. The method in this study is descriptive with a quantitative approach. The population is S1 Pharmacy students of Bina Mandiri University Gorontalo. The research instrument is in the form of a questionnaire distributed through Google form to the study population. The number of samples was 124 people who filled out the google form that was distributed completely. The data were then analyzed univariately with frequency and percentage distributions. The results showed that most pharmacy students of Bina Mandiri University Gorontalo had good knowledge, which was 93 people (75.00%). Meanwhile, students with sufficient knowledge levels were 24 people (19.35%) and less knowledge as many as 7 people (5.65%). In the attitude variable, the number of good categories was 61 people (49.19%). Meanwhile, students with sufficient attitudes were 26 people (20.97%) and less attitudes as many as 37 people (29.84%). In the Good Action category variable, there were 107 people (86.29%). Meanwhile, students with enough actions as many as 10 people (8.06%) and less actions as many as 7 people (5.65%)

Keywords : Knowledge, Attitude, Action, Illegal Cosmetics Circulation

INTRODUCTION

Cosmetics are preparations that are used outside the human body with a function to clean dirt and maintain a person's appearance for the better. Regulation of the Food and Drug Control Agency Number 23 of 2019 concerning Technical Requirements for Cosmetic Ingredients, the use of cosmetics is synonymous with the desire to beautify themselves. It is also considered as one of the benchmarks of acceptance of social life so that it continues to be a priority for one's

life. Therefore, the cosmetics used must be free from harmful ingredients [5].

According to the "World Health Organization", illegal lightening cosmetic products have been used all over the world, but their use is widespread in many countries. African Countries, Asian and Caribbean Countries. The skin lightening industry is one of the fastest growing beauty industries worldwide and is currently estimated at 1.2 billion people [1].

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Based on global cosmetics market data, it is estimated that there will be an increase in annual growth from 2016 to 2022 amounting to more than 429.8 billion. The use of cosmetics by women in the United States reaches more than 12 cosmetic products used every day and there are still several other types of products. Unsafe cosmetics are less than 20% [19]. Then data released by the Global *Nielsen* institution in 2016 in Indonesia, explained that the use of cosmetics in Indonesia reached 45% of foreign brands supported by quite a lot of Indonesian cosmetic enthusiasts, reaching 150 million people [20].

The skin lightening industry is one of the fastest growing beauty industries worldwide and is currently estimated at 1.2 billion people. In Indonesia, for example, the skin lightening industry (including mercury-free peoduk) represents 50% of the skincare market and is currently estimated to be worth 540-535 million. Illegal cosmetic products containing mercury are manufactured in many Countries and Regions, such as Bangladesh, China, Dominican Republic, Hong Kong, Jamaica, Lebanon, Malaysia, Mexico, Philippines, Korea and the United States of America [25].

The results of routine surveillance by the Food and Drug Control Agency (BPOM) throughout Indonesia from 2017-2019 found 30 cosmetics with harmful ingredients [24]. BPOM also explained that the cosmetic requirements that may be circulated are not to contain harmful substances such as chemicals. Harmful ingredients in cosmetics usually contain red dyes K3 and Rhodamine B as well as Hydroquinone and mercury [16].

The circulation of illegal cosmetics can have a negative impact on the national economy because it has the potential to reduce the competitiveness of cosmetic products in the country. Reflecting the government's efforts in eradicating illegal

products containing hazardous ingredients and providing a sense of justice for business actors in doing business, BPOM aims to prevent the circulation of illegal cosmetics, especially imported cosmetics that contain hazardous ingredients strictly. This control is carried out by BPOM individually and jointly across departments. All cosmetic products on the market must meet the standards of quality, safety and usability as well as the requirements set by laws and regulations.

According to the Indonesian Cosmetic Manufacturers Association (PPAKI), illegal cosmetic sales in Indonesia account for 20% of Indonesia's total cosmetic sales, estimated to grow by double digits every year. In 2018, the elimination of drugs and cosmetics under the supervision of BPOM in Bandung, West Java is estimated to reach Rp 8.1 billion. The high number of illegal cosmetic discoveries indirectly indicates high demand from the public [10].

In 2018, the Food and Drug Administration found 115 billion illegal cosmetics containing prohibited or dangerous ingredients. Find cosmetics are dominated by cosmetic products containing mercury, hydroquinone and retinoic acid. The POM RI also found 6 types that have been indicated to contain prohibited or dangerous ingredients, namely dyes such as K3 and lead heavy metals that can cause cancer, fetal abnormalities and skin irritation. In 2020, BPOM found more than 12 billion illegal cosmetics in the Jakarta area and 23 types of illegal cosmetics containing dangerous mercury ingredients in the Bekasi area [7].

The increasing use of cosmetics in Indonesia encourages manufacturers to produce cosmetics in various dosage forms and chemical content. The Food and Drug Administration mentions several cosmetic criteria that can be categorized as safe including the existence of uses and methods

of use, no harmful chemicals, labels, packing, distribution permits, and expiration dates [18].

Based on *statistical data* of cosmetic products that received distribution permit approval from the POM Agency, cosmetics received the most distribution permit approvals compared to food and beverages, traditional medicines and medicines, reaching a total of 183,522 distribution permits from 361,625 total distribution permits [7].

There are more than 1,100 ingredients used in cosmetic products according to the *Environmental Working Group* (EWG). The use of 10 ingredients in cosmetics has been banned by the *Food and Drug Administration* (FDA) and compactly opposed by dermatologists. These cosmetic ingredients can interfere with fertility, can even cause cancer or are carcinogenic including *Oxybenzone, Formaldehyde, Lead, Triclosan, Hydroquinone, Parabens, Mercury, Formalin, Phthalates*, and *Lead* [11].

Regulation of the Food and Drug Control Agency Number 23 of 2019 concerning Technical Requirements for Cosmetic Ingredients, the use of cosmetics is synonymous with the desire to beautify themselves. It is also considered as one of the benchmarks of acceptance of social life so that it continues to be a priority for one's life. Therefore, the cosmetics used must be free from harmful ingredients [6].

Women consumers, especially of productive age are the main targets of the cosmetics industry. College students are one of the populations in it and are the highest users of cosmetics [3,12]. A 2010 study of 3,814 British women conducted by *Opinium Research* in London showed that 73% of women did not understand the ingredients listed on the labels of the cosmetics they bought [10].

This dangerous behavior of illegal cosmetic use is in line with Bloom's theory, that behavior is the result of all sorts of human experiences and interactions with their environment. The form can be knowledge, attitudes, and actions. Human behavior tends to be holistic and basically consists of psychological, physiological, and social points of view [13].

Behavior is divided into three domains, domains or areas: *cognitive* (knowledge), *affective* (attitude) and *psychomotor* (action) [15]. Knowledge is the result of human knowledge of the combination or cooperation between the knowing subject and the known object. Everything that is known about a particular object [23]. Knowledge is the result of human sensing, or the result of knowing a person about objects through the senses possessed (eyes, nose, leagues, and so on). So knowledge is the various things that a person acquires through the post-senses. An individual is closely related to his or her own attitude as an individual characteristic. A general attitude is defined as an action performed by a person. Understanding attitude is defined as a reaction or response that arises from an individual person to an object which then raises individual behavior towards the object in a certain way [1].

Based on initial observations made by researchers using *google form* (online) on 37 pharmacy students at Bina Mandiri University Gorontalo regarding the circulation of illegal cosmetics, it was found that the level of knowledge of good students was 81.1% and sufficient 18.9%, good attitude was 43.2%, enough attitude was 13.5% and less attitude was 43.2%. Meanwhile, good student action was 89.2% and sufficient action was 10.8%.

The basis of attitude formation is knowledge, whereas attitude is not yet an action but a predisposition to closed behavior or reaction. Attitude has not automatically

manifested in an action. Therefore, I am interested in conducting research on "Behavioral Descriptions of Pharmacy Students regarding the circulation of illegal cosmetics circulating in the city of Gorontalo".

RESEARCH METHODS

The method in this study is descriptive with a quantitative approach. The population is S1 Pharmacy students of Bina Mandiri University Gorontalo. The research instrument is in the form of a questionnaire distributed through Google form to the study population. The number of samples was 124 people who filled out the google form that was distributed completely. The data were then analyzed univariately with frequency and percentage distributions.

RESEARCH RESULTS

Level of Knowledge of Pharmacy Students of Bina Mandiri University Gorontalo regarding the Circulation of Illegal Cosmetics Circulating in Gorontalo City

Table 1. Level of Knowledge of Pharmacy Students of Bina Mandiri University Gorontalo regarding the Circulation of Illegal Cosmetics Circulating in Gorontalo City

No	Knowledge	n	%
1.	Good	93	75,00
2.	Enough	24	19,35
3.	Less	7	5,65
	Sum	124	100,0

Source: Data Processed 2023

The table shows that most pharmacy students of Bina Mandiri University Gorontalo have good knowledge, which is 93 people (75.00%). Meanwhile, students with sufficient knowledge levels were 24 people (19.35%) and less knowledge as many as 7 people (5.65%).

Attitude of Pharmacy Students of Bina Mandiri University Gorontalo regarding the Circulation of Illegal Cosmetics Circulating in Gorontalo City

Table 2. Attitude of Pharmacy Students of Bina Mandiri University Gorontalo regarding the Circulation of Illegal Cosmetics Circulating in Gorontalo City

No	Attitude	N	%
1.	Good	61	49,19
2.	Enough	26	20,97
3.	Less	37	29,84
	Sum	124	100,0

Source: Data Processed 2023

The table and figure show that most pharmacy students of Bina Mandiri University Gorontalo are good, as many as 61 people (49.19%). Meanwhile, students with sufficient attitudes were 26 people (20.97%) and less attitudes as many as 37 people (29.84%).

Actions of Pharmacy Students of Bina Mandiri University Gorontalo related to the Circulation of Illegal Cosmetics Circulating in Gorontalo City

Table 3. Actions of Pharmacy Students of Bina Mandiri University Gorontalo related to the Circulation of Illegal Cosmetics Circulating in Gorontalo City

No	Action	n	%
1.	Good	107	86,29
2.	Enough	10	8,06
3.	Less	7	5,65
	Sum	124	100,0

Source: Data Processed 2023

The table and figure show that most of the pharmacy students of Bina Mandiri University Gorontalo acted well, as many as 107 people (86.29%). Meanwhile, students with enough actions as many as 10 people (8.06%) and less actions as many as 7 people (5.65%).

DISCUSSION

Level of Knowledge in Pharmacy Students of Bina Mandiri University Gorontalo regarding the Circulation of Illegal Cosmetics Circulating in Gorontalo City

The results showed that most pharmacy students of Bina Mandiri University Gorontalo had good knowledge, as many as 93 people (75.00%). Meanwhile, students with sufficient knowledge levels were 24 people (19.35%) and less knowledge as many as 7 people (5.65%).

In 93 students with good knowledge obtained from the average correct answers on 8-10 questions, namely the definition of illegal cosmetics as many as 80 people (86.0%), the risk of using illegal cosmetics as many as 90 people (96.8%), things that must be considered in the selection of cosmetics as many as 93 (100%), the use of mercury in cosmetics as many as 20 people (21.5%), SNI in cosmetics as many as 93 people (100%), What to do if you find illegal cosmetics on the market as many as 88 people (94.6%), due to the use of illegal cosmetics containing dangerous bleaching ingredients as many as 82 people (88.2%), BPOM in cosmetic regulations in Indonesia as many as 89 people (95.7%), how to distinguish illegal cosmetics from legal cosmetics as many as 93 people (100%) and the reasons for using illegal cosmetics must be avoided as many as 86 (92.5%).

In 24 respondents who are knowledgeable enough, obtained from the calculation of scores that on average answer correctly on 6-7 questions, namely the definition of illegal cosmetics as many as 5 people (20.8%), the risk of using illegal cosmetics as many as 12 people (50.0%), things that must be considered in the selection of cosmetics as much as 24 (100%), the use of mercury in cosmetics as many as 1 person (4.2%), SNI in cosmetics as many as 23 people (95.8%), What to do if

you find illegal cosmetics on the market as many as 23 people (95.8%), due to the use of illegal cosmetics containing dangerous bleaching ingredients as many as 14 people (58.3%), BPOM in cosmetic regulations in Indonesia as many as 19 people (79.2%), how to distinguish illegal cosmetics from legal cosmetics as many as 18 people (75.0%) and the reasons for using illegal cosmetics should be avoided as many as 23 (95.8%).

In 7 students with less knowledge, on average only answered correctly on less than 6 questions, namely the definition of illegal cosmetics as many as 1 person (14.3%), the risk of using illegal cosmetics as many as 2 people (28.6%), things that must be considered in the selection of cosmetics as many as 4 (57.1%), the use of mercury in cosmetics no one is able to answer correctly (0.0%), SNI in cosmetics as many as 6 people (85.7%), Things to do if you find illegal cosmetics on the market as many as 2 people (28.6%), due to the use of illegal cosmetics containing dangerous bleaching ingredients as many as 3 people (42.9%), BPOM in cosmetic regulations in Indonesia as many as 2 people (28.6%), how to distinguish illegal cosmetics from legal cosmetics as many as 2 people (28.6%) and the reasons for using illegal cosmetics should be avoided as many as 5 (71.4%).

The results of this study are in line with previous research, which found that the level of knowledge of female student respondents FPSB UII on cosmetic safety and halal with good categories was 51.42% and bad knowledge level was 48.57% [17].

Researchers argue that pharmacy students of Bina Mandiri University Gorontalo have good knowledge about the circulation of illegal cosmetics, showing that the majority of students at the university have an adequate understanding of this problem. Illegal cosmetic circulation refers to the sale, distribution, or production of

cosmetics that violate the regulations and requirements set by cosmetic supervision authorities in a country. Illegal cosmetics can include products that contain harmful ingredients, unauthorized ingredients, or adulterated products. Illegal cosmetics can be a serious problem as they can compromise the health and safety of users.

As a pharmacy student, it is expected to have a good understanding of cosmetic regulations, including knowledge of the circulation of illegal cosmetics. Pharmacy students typically study various aspects of pharmaceutical science, including pharmacology, formulation, quality management, and drug and cosmetic regulation. They are also taught about the principles of testing the safety and effectiveness of cosmetic products as well as procedures to ensure compliance with applicable regulations.

A good level of knowledge about the circulation of illegal cosmetics among pharmacy students is important, as they are aspiring professionals in the pharmaceutical industry and can play a role in combating the circulation of illegal cosmetics. With a good understanding of regulations and associated risks, they can assist in educating the public, preventing the sale and use of illegal cosmetics, as well as contributing to regulatory enforcement and consumer protection.

Knowledge is the result of knowing and occurs after people sense a certain object. Through sensing, a person can give an assessment of the effects of using cosmetics. However, assessment is not necessarily a positive point when the knowledge possessed is wrong and limited. The impact will make someone do negative actions which in this case is wearing mercury cosmetics. The level of knowledge can be increased through self-awareness to conduct the correct search for information. So that behavior based on

knowledge will be more permanent than behavior without knowledge [21].

The higher the knowledge gained by a person, it can affect a person's behavior. There are 6 (six) stages of a person's level of knowledge, namely know, understand, application, analysis, synthesis, and evaluation [15]. In this study, the knowledge of the respondents is already in the stage of knowing and applying in themselves related to the circulation of illegal cosmetics circulating in Gorontalo City.

One of the knowledge of respondents who are students about the circulation of illegal cosmetics can be influenced by the source of information obtained. New information about something will provide a new cognitive foundation so that knowledge will be formed about it [4] Knowledge is one of the factors that influence the formation of a person's attitude. Someone who has good knowledge will have good behavior as well. Good knowledge will affect respondents' behavior in carrying out activities, one of which is the purchase of cosmetics. High knowledge about information, product content, labels in packaging, safety, BPOM numbers will increase consumer awareness in buying products characterized by positive changes in attitude and behavior [22].

Attitude of Pharmacy Students of Bina Mandiri University Gorontalo regarding the Circulation of Illegal Cosmetics Circulating in Gorontalo City

The results showed that most pharmacy students of Bina Mandiri University Gorontalo were good, as many as 61 people (49.19%). Meanwhile, students with sufficient attitudes were 26 people (20.97%) and less attitudes as many as 37 people (29.84%). The attitude is said to be good if the response of students who do not support the circulation of illegal cosmetics that pay attention to the safety of the product.

The results of this study are in line with previous research, which found that the level of attitude of FPSB UII student respondents towards cosmetic safety and halal with good categories was 51.42% and the level of bad knowledge was 48.57%. Consumer attitudes towards the selection of cosmetics are the first step for decision making in purchasing cosmetics. Attitude is a significant factor to influence consumers to use safe and halal products [17]

Researchers argue, attitudes are formed from a person's level of knowledge of an object. The better the knowledge, the better the attitude and vice versa. Respondents' lack of understanding regarding illegal cosmetics caused them to have negative attitudes. Attitudes in this order do not include actions or activities, only the predisposition of an action or behavior. Student knowledge can form good or lacking attitudes. Selecting information received by finding correct information that can be obtained from books, the internet, or beauty clinics can prevent students from wearing illegal cosmetics. Changes in attitude that go in a positive direction will lead to the selection of healthy and safe cosmetics. Cosmetics will have a good impact when used according to the condition of facial skin.

The attitude of pharmacy students towards the circulation of illegal cosmetics is considered important for the safety and security of the community. As aspiring professionals in the pharmaceutical industry, pharmacy students are expected to understand the risks and repercussions that illegal cosmetics may cause. They can play a role in combating the circulation of illegal cosmetics by educating the public, promoting the safe and legal use of cosmetics, and involving themselves in the enforcement of applicable regulations.

Attitude is a reaction or response of someone who is still closed to a stimulus or object. Attitudes manifestly show the

connotation of the appropriateness of reactions to certain stimuli. In everyday life, attitudes are emotional reactions to social stimuli [15]. Looking beautiful and handsome is someone's dream so it does not rule out the possibility of many individuals who do anything to get it. Many people think that beautiful and handsome is someone who has a good body, straight hair and white skin.

The concept of beauty with white skin through cosmetics without paying attention to the side effects of its use makes someone have a more consumptive attitude. The selection of cosmetic products in early adulthood is usually done through supermarkets and the internet. Before buying beauty products, the attitude of early adults tends to only pay attention to the benefits, how to use, expiration time, suitability of the type of product purchased, and its use. This attitude occurs because of a strong dream from someone to look perfect like having white and smooth skin. The impact of this attitude will motivate someone to behave choosing and using cosmetics without paying attention to the composition of ingredients with mercury content which of course the product is illegal [9].

Attitudes can be influenced by knowledge, it can be interpreted that less attitudes are the impact of low knowledge. Less understanding related to cosmetics will make a person tend to have a negative attitude or an attitude in favor of the use of illegal cosmetics that provide instant results without knowing their safety [2].

As a consumer, everyone has an attitude towards a number of products, including with cosmetics. When a person is asked about his reference, if he likes or dislikes an object, then the answer shows his attitude towards that object. Good and bad consumer attitudes towards a product will affect the behavior of buyers. If consumers think positively, then the tendency of action is to buy cosmetics that are legal. Conversely,

with a negative consumer attitude, they will tend to buy and use cosmetic products without paying attention to the legality of the product. In this case, not all consumers have the same attitude. As people begin to buy cosmetics and herbal medicines consistently, consumers who are less conscientious in buying and lack knowledge about cosmetic ingredients and herbal medicines can become targets of such abuse [12].

Actions of Pharmacy Students of Bina Mandiri University Gorontalo related to the Circulation of Illegal Cosmetics Circulating in Gorontalo City

The results showed that most pharmacy students of Bina Mandiri University Gorontalo acted well, as many as 107 people (86.29%). Meanwhile, students with enough actions as many as 10 people (8.06%) and less actions as many as 7 people (5.65%).

Researchers are of the view that action is a reflection and realization of knowledge and attitudes into a real action. Therefore, attitude actually predisposes to an action, in other words attitude is a shaper of a person's readiness to react to an object. This can be seen from the data tabulation which found that out of 107 respondents who acted well, there were 86 people who were well informed and 59 people who were good. So it can be stated that a person's actions are influenced by his level of knowledge and attitude. Good knowledge will be responded well and will eventually form a good concrete action in the appeasement of illegal cosmetics.

Knowledge has an important role to play in action. The knowledge that a person has will greatly affect one's behavior and encourage someone to take an action. So that good community action is due to public knowledge that tends to be good about the circulation of illegal cosmetics. Actions and efforts need to strengthen respondents' attitudes towards the problems faced, attitudes that are not yet optimistic

manifested in an action to realize attitudes into real actions require supporting factors / a possible condition.

Researchers argue that illegal cosmetics can endanger the health and safety of consumers because they contain harmful ingredients or ingredients that are not permitted, so it is expected that students and individuals at large will act well in the face of illegal cosmetic circulation.

Knowledge is a very important domain for the formation of one's responses and perceptions. One of the elements needed in order to do something is knowledge and if we want something to be done continuously then positive knowledge of what must be done is needed, in other words behavior or action based on knowledge will be more lasting than practice or action that is not based on knowledge and the level of knowledge of a person affects individual practice, The higher a person's knowledge, the higher the awareness to do something in accordance with his knowledge, which will then be implemented in concrete actions.

In line with previous research, which found that the majority of respondents made a usage decision that was in the negative category. Negative use decisions are decisions that lead to the use of face whitening skincare containing mercury. Knowledge level and attitude have a relationship with respondents' decision to use mercury-containing skincare [2].

Knowledge and attitudes are very important things to shape an action. Knowledge is the result of knowing, after sensing a certain object, the individual has the drive to understand, with his experience to acquire knowledge. A person's attitude towards an object indicates that knowledge of the object [1].

H.L Bloom stated four main factors that affect the degree of public health, one of which is behavioral factors in the community. Behavior is divided into three

domains or stages according to Benjamin Bloom, namely cognitive (knowledge), affective (attitude), and psychomotor (practice) which are interrelated with each other Knowledge has an influence on health behavior in society as explained by Rogers in his research states that behavior based on knowledge will last longer than those that are not based on knowledge. But in its implementation, the process of forming a behavior is not always in accordance with these stages. The number of factors that can influence a behavior so that behavior change results in the possibility of someone having good practices despite having low knowledge and bad attitudes [15].

CONCLUSION

The results of the research that have been conducted have concluded that most pharmacy students of Bina Mandiri University Gorontalo have good knowledge (75.00%), good attitudes (49.19%) and good attitudes (86.29%) about the circulation of illegal cosmetics.

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