



ENHANCING AWARENESS OF ILLEGAL COSMETIC HAZARDS THROUGH TARGETED EDUCATION IN A VOCATIONAL HEALTH SCHOOL

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ABSTRACT

Background: Cosmetics are one of the most commonly encountered pharmaceutical products used daily by people of all ages, from babies to adults. With the rapid expansion of the beauty industry and e-commerce markets, the circulation of unregistered and hazardous beauty products has risen significantly, posing a serious public health threat. **Objective:** This community service activity was conducted at SMK Kesehatan Insan Bhakti Husada Lamongan to assess and enhance students' knowledge regarding the dangers of illegal cosmetics. Vocational health students represent a crucial demographic, as they serve as future health advocates in their communities. **Method:** The method used in this activity is an interactive lecture method with evaluation through pre-test and post-test questionnaires. **Results:** The results show an average knowledge increase of 11.99%. The highest average increase was found in the question about types of heavy metals whose contamination levels are regulated by BPOM, with the average score rising from 22.72% in the pre-test to 90.90% in the post-test, demonstrating that targeted educational interventions can effectively eliminate critical knowledge gaps regarding regulatory safety standards. **Conclusion:** This community service activity successfully heightened students' awareness, proving that early educational outreach is a vital strategy for preventing the health risks associated with unauthorized cosmetic products.

Keywords: cosmetics; dangerous; education; illegal

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A. BACKGROUND

Social media has become a highly popular platform for promoting cosmetic products. In 2025, the promotion of cosmetic products through influential

figures such as influencers on various social media platforms is becoming increasingly widespread. On the other hand, there are numerous reports regarding the rise of counterfeit or fake cosmetics (Arba et al., 2023). Initially, in 2018, BPOM RI along with the Criminal Investigation Agency of the National Police successfully raided a house producing illegal and counterfeit cosmetics in West Jakarta. 21 types (39,389 pieces) of cosmetic products were confiscated, which were strongly suspected to contain mercury or hydroquinone (Maulana, 2018).

Cosmetics can be defined as preparations used on the external parts of the human body (Safitri et al., 2024). The external parts of the body include the epidermis, lips, hair, nails, external genital organs, teeth, and the mucous membranes of the oral cavity (Arifiyana et al., 2019). The functions of cosmetics include cleansing the external parts of the body, perfuming the body, altering appearance, and protecting or maintaining body condition (Safitri et al., 2024).

Recently, there has been widespread news regarding laboratory test results showing that some skincare products contain ingredients that do not match the claims made on their packaging. For example, a product advertised with the claim of "10x whitening effect" was found to contain hydroquinone (Isnaeni, 2023). Various media outlets have also reported on a news article titled "BPOM Semarang Found 9 Salons Producing Cosmetics Containing Harmful Substances". According to BPOM Semarang, the nine salons offered various types of cosmetics such as blush, lipstick, and eyeshadow (Isnaeni, 2023).

Therefore, this community service activity was conducted at SMK Kesehatan Insan Bhakti Husada Sukodadi, Lamongan to assess and enhance students' knowledge regarding the dangers of illegal cosmetics.

B. METHOD

This counselling activity was carried out at SMK Kesehatan Bhakti Husada Sukodadi, Lamongan for 12th-grade students. The activity was conducted using the lecture method. It consisted of four stages: administering a pre-test questionnaire before delivering the material, delivering the counselling material which included information on the dangers of illegal cosmetics accompanied by brochure distribution, a discussion session, and the final stage of administering a post-test questionnaire. The pre-test and post-test questions

were given using a questionnaire (Arifiyana & Devianti, 2022). The evaluation in this activity measured participants' knowledge before and after the delivery of the material.

C. RESULTS AND DISCUSSION

The results of the current community service activity were conducted on Saturday, January 25, 2025, from 08.00 to 10.00 WIB. This activity was attended by 22 students of Bhakti Husada Vocational High School in Sukodadi District, Lamongan Regency. The community service activity began with counselling on the definition of illegal cosmetics, their impacts, BPOM regulations regarding cosmetics, and proper methods for checking cosmetic products. The delivery of the material was reinforced with images of illegal and non-illegal cosmetics. Therefore, this activity is still at the initial stage, aiming to increase students' knowledge regarding the dangers of using illegal cosmetics.

The activity ran smoothly, with participants showing enthusiasm during the counselling session on "Education on the Dangers of Illegal Cosmetics." This enthusiasm was evident from the beginning to the end of the event, as all participants followed the session attentively. The activity started with administering the Pre-Test questionnaire, which showed that the average level of participants' knowledge was still low, particularly in question number 9. The low knowledge level was due to participants' inability to distinguish the characteristics of illegal and non-illegal cosmetics.



Figure 1. Presentation about Dangerous Illegal Cosmetics

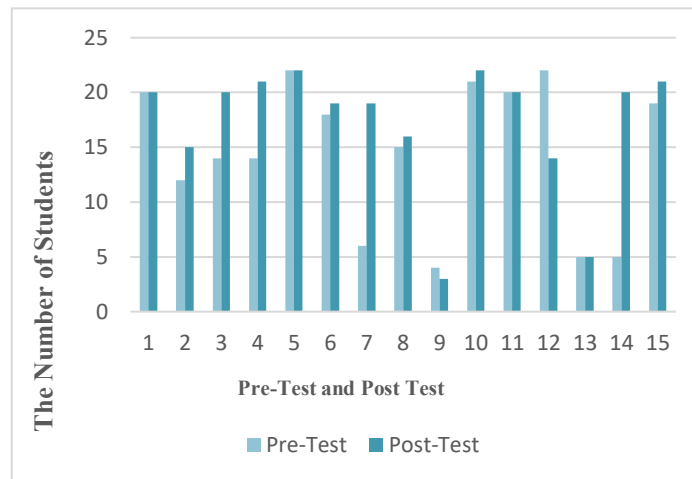


Figure 2. The Results of Participants' Pre-test and Post-test

From Figure 2, the results show a change in knowledge among the 22 respondents after the counselling session. The average post-test scores of students increased in each question, except for question number 9 and 13, which showed a decline in knowledge in the post-test results. This data proves that more than half of the questionnaire participants experienced an improvement in understanding how to choose safe cosmetics.

In question number 9, the average score obtained was 18.18%. This question covered the characteristics of illegal imported cosmetics. The characteristics of illegal cosmetic products include ordering through shipping services, as the products are not available for direct purchase at physical stores. These cosmetics are usually shipped by courier services. When purchasing large quantities of cosmetics, buyers are often asked numerous questions by the business owner (Dai, Kasim, & Martam, 2019). The products are typically sold online, without including BPOM registration numbers, ingredient lists, labels, or expiration dates (Ummah, 2019).

In question number 13, the average score obtained was 22.72%. This question covered the exposure to heavy metals in cosmetics. Heavy metals are one of the compound groups that are a major concern in cosmetic analysis, as certain heavy metals can have toxic effects on humans, even at very low concentrations (Rahmawati, Wicaksono, Nisa, Latifah, 2024). Examples of heavy metals include lead (Pb), mercury (Hg), arsenic (As), and cadmium (Cd). The presence of heavy metals in cosmetics can originate from raw materials,

production processes, or contamination during storage (Wulandari, Andini, & Puspitasari, 2018).

According to BPOM regulations, there are three aspects that must be considered in ensuring the quality of a cosmetic product: the product must be notified, must not exceed its expiration date, and must be properly stored (BPOM RI, 2022). Additionally, to protect the public from cosmetics that do not meet safety, efficacy, and quality requirements, BPOM has issued regulations on technical requirements for cosmetic ingredients. These regulations list permitted ingredients, restricted ingredients, and prohibited ingredients in BPOM Regulation Number 17 of 2022 concerning Technical Requirements for Cosmetic Ingredients (BPOM RI, 2022).

Some examples of prohibited ingredients in cosmetic products in Indonesia include mercury, hydroquinone, rhodamine, and retinoic acid (Indriaty, Nur, & Arsyad, 2018). Mercury, commonly found in lotions, is a toxic and carcinogenic heavy metal. Besides mercury, synthetic dyes such as Rhodamine B are often misused. This compound has harmful health effects, including liver dysfunction and carcinogenic properties. Meanwhile, hydroquinone can cause skin irritation and hyperpigmentation (Arba et al., 2023).

To avoid the use of illegal cosmetics, consumers can conduct checks on every cosmetic product before purchasing or using it. The inspection can be done by examining the product's packaging and label, paying attention to the distribution permit (Amr & Tbkhi, 2017). Cosmetic product packaging/labels must include the product name and its function, usage instructions, complete composition, the name of the company responsible for product distribution, net weight/volume, production number, expiration date/manufacturing date, and distribution permit number. Furthermore, the distribution permit number can be verified through the website (<https://cekbpom.pom.go.id>) to ensure its authenticity (Amr, & Tbkhi, 2017).

D. CONCLUSION AND SUGGESTION

The conclusion drawn from this community service activity is that before the delivery of the material, students of Bhakti Husada Vocational High School experienced an increase in knowledge about the types of heavy metals whose

contamination levels are regulated by BPOM, with the average score rising from 22.72% in the pre-test to 90.90% in the post-test.

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