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ORIGINAL ARTICLE

The Correlation of Pregnant Women's Knowledge Regarding Cosmetics and the Use of Face Cream

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ABSTRACT

Background: The knowledge of pregnant women about cosmetics' dangers is still shallow; this is because pregnant women mostly have never consulted a dermatologist regarding the cosmetic products they use.
Aim: This study aimed to determine the relationship between pregnant women's knowledge about cosmetics and the use of facial cream.
Method: This research applied an analytical survey with a cross-sectional approach. The study samples were 40 pregnant women taken from a population of 44 pregnant women who used facial cream with Slovin formula and a purposive sampling technique that met the inclusion criteria. The instrument used questionnaires.
Results: Data analyzed by the Chi-Square test showed bivariate results ($\rho = 0.001$) <0.05 indicating that there were relationships between 2 variables.
Conclusion: In conclusion, there was a relationship between maternal knowledge about cosmetics and the use of facial cream in the Bre Village of Palibelo Primary Health Center in 2017.
Keywords: Knowledge, Pregnant women, Cosmetics

INTRODUCTION

The third point of the SDGs indicator is to support a healthy life and improve the population's wellbeing at all ages. The indicator aims to end preventable deaths with child deaths of at least 20 deaths per 1,000 births, reduce maternal mortality to at least 40 deaths per 100,000 live births, and reduce mortality due to diseases of the population less than 70 years old at least 30 percent of the figure in 2015 [1]. Indonesian Food and Medicine Security Board routinely monitor cosmetics' circulation, including the use of hazardous ingredients in cosmetics, to protect the public from using products that do not meet security, benefit, and quality requirements. Potentially hazardous ingredients in these cosmetics are rhodamine, hydroquinone, timbale (Pb), steroids, cadmium, and mercury bleach. The effects that can be caused by the use of cosmetics that contain hazardous ingredients are starting from the appearance of black spots, acne, causing cancer, and fetal defects [2]. Skin problems commonly experienced by pregnant women during pregnancy including the onset of acne and the occurrence of melisma (darkening of facial skin color) caused by hormonal changes. Because of concerns about the potential exposure of hazardous substances in cosmetics, many pregnant women do not know about the safety of using cosmetics during pregnancy [3]. Epidemiological research explains that the detrimental effects of hazardous cosmetic ingredients on pregnant women include miscarriages, premature birth, low birth weight, congenital disabilities, childhood morbidity, obesity, cognitive impairment, development of an impaired immune system, asthma, early puberty, adult disease, and mortality (cardiovascular and cancer effects). Also, decreased fertility in women and impaired testicular development and reproductive function in men in fetuses can happen to those whose mothers have been exposed to hazardous chemicals [4]. Some safe ingredients to use during pregnancy include benzoyl peroxide, salicylic acid, and glycolic acid in anti-acne products; thioglycolic acid, sodium, and potassium hydroxide hair care products; oxybenzone, octocrylene, and octisalate in sunscreen products.

These materials have low absorption if used on the skin so that they do not harm the fetus. Knowledge is the result of knowing and occurs after a person senses an object, both through the senses of sight, hearing, smell, taste, and touch. The knowledge of pregnant women about the dangers of cosmetics is still shallow. This happens because pregnant women have never consulted a dermatologist regarding the cosmetic products they use. When pregnant, it is fair and generous for mothers to stay beautiful and charming. However, choosing cosmetics during pregnancy must be careful, considering the ingredients in the dangerous cosmetics or not for pregnancy [5]. Based on the results of a preliminary study conducted by researchers in Bre village on Tuesday, May 30, 2017, of 18 pregnant women, the authors conducted an interview and gave questionnaires to 10 pregnant women. The interview results obtained from 10 respondents showed that three respondents had knowledge about facial cream during pregnancy, and seven respondents did not know the use of cosmetics during pregnancy.

METHODS

The research design used in this study was an analytical survey with a cross-sectional approach. The study population was all pregnant women in Bre Village at Palibelo Primary Health Center 44 people at the work area. The number of samples in the study was 40pregnant women who were calculated using the Slovin formula. The sampling technique in this study used the purposive sampling technique by fulfilling the inclusion and exclusion criteria. The inclusion criteria of this study were pregnant women who used cosmetics and were willing to become respondents.

In contrast, the exclusion criteria were mothers who were not willing to become research respondents. The study was conducted in Bre Village at Palibelo Primary Health Center at a three-month work area (May - July

2017). Data collection instruments applied closed questionnaires with correct and wrong answers. The independent variable was the knowledge of pregnant women about cosmetics, and the dependent variable was the use of facial cream. Data processing techniques were done by editing, coding, entry, cleaning, and scoring carefully. Data were then analyzed using Statistical Product and Service Solutions (SPSS) version. 16 for Windows. Data analysis was performed univariate for frequency distribution, and bivariate analysis used Chi-square.

Ethics: The step was to provide an informed consent sheet before researching the respondent and then fill in the respondent's questionnaire.

RESULTS

Univariate Analysis: Table. 1 Univariate analysis shows that most pregnant women had enough knowledge about cosmetics as many as 23 (57.5%), and a small percentage of pregnant women had good knowledge as much as 7 (17.5%). Table 2. Frequency distribution of the use of facial cream in Bre Village at Palibelo Primary Health Center's work area in 2017.

Table 1. Distribution frequency of knowledge on pregnant women about cosmetics in Bre Village at the work area of Palibelo Primary Health Center in 2017

Knowledge of pregnant women about cosmetics	f	%
good	7	17.5
moderate	23	57.5
less	10	25
Total	40	100

Table. 2 Univariate analysis shows that most pregnant women used face cream as many as 36 (90%) and 4 (10%) who did not use facial cream.

Table 2. Univariate analysis shows that most pregnant women used the face cream

Use of face cream	f	%
Yes	36	90
No	4	10
Total	40	100

Table 3. Correlation between maternal knowledge about cosmetics and the use of facial cream in Bre Village at the work area of Palibelo Primary Health Center in 2017

Knowledge of pregnant women about cosmetics	use of face cream				total		*p-value*
	Yes		No				
	f	%	f	%	f	%	
Good	7	19.4	0	0	7	17.5	0,001
Enough	23	64	0	0	23	57.5	
Less	6	16.6	4	100	10	25	
Total	36	100	4	100	40	100	

Bivariate Analysis: Table 3 bivariate analysis shows that the use of official cream was more dominant in pregnant women who had enough knowledge as much as 23 (64%) while pregnant women who had less knowledge 6 (16.6%) used facial cream. Chi-square test results showed that p-value 0.001 <0.05, indicating that there was a relationship between maternal knowledge about cosmetics and the use of facial cream in Bre Village.

DISCUSSION

Knowledge is the result of knowing and occurs after people do sensing of a particular object. Sensing occurs through the five senses of vision, hearing, smell, taste, and touch so that most human knowledge is obtained through the eyes and ears, so knowledge is the result of our sensing [6]. Some say that the use of chemicals such as topical steroids is safe to use during pregnancy. However, some say that this substance has dangerous effects, including cataract cases, hypoadrenalism in children, and intrauterine growth retardation [7]. The results of data analysis showed that most pregnant women had enough knowledge about cosmetics as many as 23 (57.5%), and those who used face cream were 36 (90%) and those who did not use face cream 4 (10%). The level of education influences one's knowledge. The better the level of education, the better the level of knowledge. Besides, education becomes the factor that influences an increase in one's knowledge by participating in training or counseling. One's knowledge can also increase by enriching knowledge through reading mass media and electric media (internet). Besides, expectations about cosmetics, especially facial creams, can be achieved through public awareness of the impact of cosmetic use during pregnancy. Based on the analysis of the Chi-Square test using SPSS 16, the results showed that there was a significant relationship of p-value = 0.001, which was compared with the p-value of 0.05 so that the p-value counts <0.05. Then H1 was accepted, and H0 was rejected, meaning that there was a significant relationship between pregnant women's knowledge about cosmetics and the use of facial cream in Bre Village in 2017. The knowledge possessed by mothers influences the use of facial cream during pregnancy. Pregnant women who have good and sufficient knowledge about cosmetics chose not to use face cream during pregnancy.

In contrast, pregnant women who had less knowledge as many as four respondents used cosmetics during pregnancy so that it is in line with the theory stated by Lee (2013) that the high knowledge about cosmetics allows the person to apply the knowledge in terms of choosing cosmetic during pregnancy [8]. Pregnant women are particularly vulnerable to the potential risks of the endocrine disruptors contained in cosmetics. First, cosmetics use is far more common among women than men. Second, pregnancy is a vulnerable time for developing the embryos and fetus because of their immature metabolism. Finally, exposure to endocrine disruptors can be changed during this period by changes in life habits such as a different diet and cosmetics [9]. Good interaction with the environment makes a mother get information about the dangers of cosmetic use during pregnancy to affect cosmetic use [10] positively.

CONCLUSION

Based on the research results that have been carried out, it can be concluded that; based on knowledge, most pregnant women had enough knowledge about cosmetics as (57.5%); a small percentage had good knowledge about

cosmetics as much as (17.5%). Based on facial creams in pregnant women, the more dominant were pregnant women who had sufficient knowledge about cosmetics, as many as 23 respondents (64%). In contrast, pregnant women who had good knowledge did not use facial cream while pregnant. There was a significant relationship between pregnant women's knowledge about cosmetics and the use of facial cream in Bre Village, Palibelo Primary Health Center (p-value = 0.001). This study had limitations in research methodology. Further researchers are expected to develop confounding variables and explore deeper related to other factors in pregnant women's facial creams.

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REFERENCES

[1] A. R. Nunes, K. Lee, and T. O'Riordan, "The importance of an integrating framework for achieving the Sustainable Development Goals: the example of health and well-being," *BMJ Glob. Heal.*, vol. 1, no. 3, p. e000068, Nov. 2016, doi: 10.1136/bmjgh-2016-000068.

[2] L. Sautebin, "Understanding the Adverse Effects of Cosmetics," *Drug Saf.*, vol. 31, no. 5, pp. 433–436, 2008, doi: 10.2165/00002018-200831050-00010.

[3] H. Li *et al.*, "Maternal cosmetics use during pregnancy and risks of adverse outcomes: a prospective cohort study," *Sci. Rep.*, vol. 9, no. 1, p. 8030, Dec. 2019, doi: 10.1038/s41598-019-44546-z.

[4] A. Mahé, J. L. Perret, F. Ly, F. Fall, J. P. Rault, and A. Dumont, "The cosmetic use of skin-lightening products during pregnancy in Dakar, Senegal: a common and potentially hazardous practice," *Trans. R. Soc. Trop. Med. Hyg.*, vol. 101, no. 2, pp. 183–187, Feb. 2007, doi: 10.1016/j.trstmh.2006.06.007.

[5] C. Marie, S. Cabut, F. Vendittelli, and M.-P. Sauvant-Rochat, "Changes in Cosmetics Use during Pregnancy and Risk Perception by Women," *Int. J. Environ. Res. Public Health*, vol. 13, no. 4, p. 383, Mar. 2016, doi: 10.3390/ijerph13040383.

[6] M. Whitehead, "Physical Literacy: Philosophical Considerations in Relation to Developing a Sense of Self, Universality and Propositional Knowledge," *Sport. Ethics Philos.*, vol. 1, no. 3, pp. 281–298, Dec. 2007, doi: 10.1080/17511320701676916.

[7] A. Coondoo, M. Phiske, S. Verma, and K. Lahiri, "Side-effects of topical steroids: A long overdue revisit," *Indian Dermatol. Online J.*, vol. 5, no. 4, p. 416, 2014, doi: 10.4103/2229-5178.142483.

[8] K. C. Lee, K. Korgavkar, R. G. Dufresne, and W. H. Higgins, "Safety of Cosmetic Dermatologic Procedures During Pregnancy," *Dermatologic Surg.*, vol. 39, no. 11, pp. 1573–1586, Nov. 2013, doi: 10.1111/dsu.12322.

[9] P. Nicolopoulou-Stamati, L. Hens, and A. J. Sasco, "Cosmetics as endocrine disruptors: are they a health risk?," *Rev. Endocr. Metab. Disord.*, vol. 16, no. 4, pp. 373–383, Dec. 2015, doi: 10.1007/s11154-016-9329-4.

[10] R. Nussbaum and A. V. Benedetto, "Cosmetic aspects of pregnancy," *Clin. Dermatol.*, vol. 24, no. 2, pp. 133–141, Mar. 2006, doi: 10.1016/j.clindermatol.2005.10.007.