

CORRELATION BETWEEN MELASMA AND QUALITY OF LIFE IN WOMEN IN SEBANI VILLAGE, TARIK DISTRICT, AND SIDOARJO DISTRICT

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ABSTRACT

Introduction: Melasma has another name chloasma, derived from the Greek word "melas" which means black. Melasma is usually found on the cheeks, forehead, nose, chin, and the area above the lip. The majority of melasma will appear in women who have dark skin with certain histories such as pregnancy, never using sunscreen resulting in exposure to ultraviolet (UV) rays, and use of hormonal contraception.

Objective: Knowing the relationship between melasma and the quality of life of mothers in Sebani Village, Tarik District, Sidoarjo Regency.

Method: The design of this research is analytic observational using a cross-sectional method. The number of samples in the study was 67 people. Data analysis used the t-test and Spearman's correlation.

Results: The results of the study found that most of the respondents aged 46-50 were 43 people (64.2%). The average MASI of people exposed to the sun >6 hours, namely 27.41, was higher than people exposed to the sun <6 hours, namely 18.09. The average MASI of people who do not use sunscreen, which is 27.41, is higher than those who do not use sunscreen, which is 18.09. The average MASI for people who use birth control pills is 28.47, higher than for people who don't use birth control pills, which is 25.02. The relationship between melasma and quality analyzed using the Spearman correlation test and found $r = 0.823$ and $p = 0.000$.

Conclusion: There is a very strong relationship between melasma and quality of life.

Keywords: Melasma, Quality of Life, MASI, DLQI

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INTRODUCTION

Melasma has another name chloasma, derived from the Greek word "melas" which means black. Melasma is usually found on the cheeks, forehead, nose, chin, and the area above the lip. The majority of melasma will appear in women who have dark skin with certain histories such as pregnancy, never using sunscreen resulting in exposure to ultraviolet (UV) rays and, the use of hormonal contraception. Melasma can have an impact on a person's appearance and can even put psychological pressure on sufferers caused by reduced self-confidence, so it can be said that melasma can hurt a person's quality of life.^{1,2}

Quality of life is how a person has a way to overcome problems in his life by reacting to them in good or bad ways. Quality of life is a person's capacity to carry out daily activities in the context of culture, environment, life goals, interests, social, attention, pleasure, hope, health, and psychology.¹

Research that was conducted by Sair (2016) showed that there is a relationship between melasma and the level of quality of life for women shows that a sample of melasma sufferers has the highest quality of life, namely a low quality of life of 36% because they are ignorant of skin protection. 3 Sebani Village is a village located in the area of Tarik District,

Sidoarjo Regency. The reason why Sebani village was chosen as the research location was due to the habit of women in Sebani village who are still ignorant of skin protection. Mothers in Sebani village often do not use protective equipment or sunscreen when doing activities outside the home, especially since the distance between their houses and shops such as supermarkets, pharmacies, and others is far. This is one of the main causes of melasma which can affect quality of life.

METHOD

The research that aims to analyze the relationship between melasma and the quality of life of mothers in Sebani Village, Tarik District, Sidoarjo Regency uses an analytic observational research design with a cross-sectional approach. 7 Where In this study the subjects were mothers in Sebani Village, Tarik District, Sidoarjo Regency.

The population in this study was 80 women in Sebani Village, Tarik District, Sidoarjo Regency. Respondents in this study were aged 25-50 years. The sample used in this study were women in Sebani Village, Tarik District, Sidoarjo Regency, and met the inclusion and exclusion criteria. The sampling technique used in this study was purposive sampling, namely a sampling method where

respondents who met the inclusion and exclusion criteria would be used as the sample size until the required sample size was met. This research was conducted for 1 month in September 2022. Researchers interviewed respondents and included them in a questionnaire and then took pictures of melasma on the faces of women in Sebani Village, Tarik District, Sidoarjo Regency. The number of samples determined was 67 people using the Slovin formula. Prospective respondents will read the Information for Consent and if they are

willing to take part in the research, they will manually sign the Informed Consent document. The samples obtained were 75 people consisting of 67 people who met the inclusion criteria and 8 people who met the exclusion criteria. Of the 8 samples, 5 samples answered that they were more than 50 years old, and had received melasma therapy for more than 3 months while the other 3 samples had acne. Data from the 8 samples could not be used in research so the number of samples analyzed was 67 samples.

RESULT

Based on the research conducted, the following data are obtained:

Table 5.1 Distribution of respondents by age (in years)

No	Age (years)	Frequent	Presents (%)
1.	25-30	1	1,5%
2.	31-35	2	3,0%
3.	36-40	12	17,9%
4.	41-45	9	13,4%
5.	46-50	43	64,2%

Table 5.1 shows that most of the respondents are aged 46-50 years.

Table 5.2 Comparison of the average MASI of people exposed to the sun <6 hours and >6 hours.

Comparison of average sun exposure	N	Average \pm SD
<6 hours	11	18,09 \pm .831
>6 hours	56	27,41 \pm 5.96

According to Table 5.2, the

average comparison of MASI in people exposed to the sun >6 hours was higher, namely 27.41 in 56 people compared to people exposed to the sun <6 hours, namely 18.09 in 11 people.

Table 5.3 the average MASI of people who use and do not use sunscreen

Comparison of the average use of sunscreen	N	Average \pm SD
Yes	11	18,09 \pm .831
No	56	27,41 \pm 5.96

According to Table 5.3, The average comparison of MASI in people who use sunscreen is lower, namely 18.09 in 11 people compared to people who do not use sunscreen, which is 27.41 in 56 people.

Table 5. 4 The average MASI of people who use and those who do not use birth control pills

Comparison of average use of birth control pills	N	Average ± SD
Yes	21	28,47 ± 4.74
No	46	25,02 ± 7.21

According to Table 5.4, the average comparison of MASI in people who use birth control pills is higher, namely 28.47 in 21 people compared to people who do not use birth control pills, namely 25.02 in 46 people.

Table 5.5 Cross tabulation of correlation between MASI and DLQI

MASI	DLQI influence				
	No	Little	Moderate	Big	Huge
Mild	0	0	0	0	0
Moderate	0	0	12	40	0
Severe	0	0	0	0	15

According to table 5.5 people with moderate MASI and moderate, large, and very large DLQI influence 12, 40, and 15 people respectively.

Table 5.6 Spearman Rank Correlation Test Results

Melasma Correlation Test (MASI) with Quality of Life (DLQI)	
Significant (p)	0,000
Correlation coefficient (r)	0,823

The relationship between melasma and quality of life in this study was analyzed using the Spearman correlation test. From the Rank Spearman correlation test, a significance value (p) of 0.000 is obtained, which means it is correlated. A correlation coefficient (r) of

0.823 is also obtained, which means that the relationship is very strong. The higher the MASI score, the greater the influence on quality of life.

DISCUSSION

Based on the results of the study, respondents who had melasma ranged in age from 46 to 50 years. This is in line with previous research conducted by Martino K that the highest incidence of melasma was in the age group of 46-55 years.¹³

In this study, there was a significant difference in the average MASI based on the duration of sun exposure, that is, people exposed to the sun for >6 hours got a higher MASI score of 27.41 compared to people exposed to the sun <6 hours got a MASI score of 18, 09. In these two groups, the average MASI score was still classified as moderate-grade melasma, but the average MASI in people exposed >6 hours were found to be higher than in people exposed

<6 hours. In addition, it was also found that people who were exposed <6 hours were still at risk of developing melasma. This is because exposure to sunlight is a very influential factor in the occurrence of melasma. Free radicals from sun exposure will damage body tissues (skin) and lipids. Excessive

melanin production will be produced by melanocytes which are stimulated by free radicals resulting in melasma. Exposure to the sun <6 hours and >6 hours, the degree of melasma of women in Sebani Village is moderate, even though the quality of life has been calculated using the Dermatology Quality of Life Index (DLQI) it should have an effect but only 15 people have a very severe effect because the melasma is also severe, which Others have no significant effect after calculating the melasma score because the women in Sebani Village all have melasma. This research is in line with previous research conducted by Puspitasari in which 72% of respondents who were exposed to the sun for >6 hours had poor melasma.⁶

In this study, it was also possible to find differences in the average MASI based on the use of sunscreen. In people who do not use sunscreen, the average MASI is higher, namely 27.41, compared to people who use sunscreen, which is 18.09. In these two groups, the average MASI is still classified as moderate. This shows that the use of sunscreen is necessary for daily use to reduce the risk of melasma severity. The mechanism of action of sunscreen is by reflecting the energy from the UV rays that reach the skin. So, it is mandatory to use sunscreen for everyone who has outdoor activities. Using sunscreen still carries the risk of

developing melasma but can reduce the risk of melasma severity. Sunscreen can be used 15-30 minutes before leaving the house or being exposed to UV light, repeating the use of sunscreen for about 2- 4 hours during sun exposure. Improper use of sunscreen can lead to the severity of melasma. Using or not using sunscreen, the degree of melasma among women in Sebani Village is moderate, even though the quality of life has been calculated using the Dermatology Quality of Life Index (DLQI) it should have an effect but only 15 people have a very severe effect because melasma is also severe, the others are not to effect after calculating the melasma score because the women in Sebani Village all have melasma. This is in line with previous research conducted by Lakhdar that the use of sunscreen is related to the severity of melasma.¹⁶

This study also found differences in the average MASI based on the use of birth control pills. In people who use birth control pills, the average MASI is higher, namely 28.41, compared to those who do not use birth control pills, which is 25.02. In these two groups, the average MASI is still classified as moderate. These results indicate that the use of birth control pills can affect the occurrence of melasma because the hormones estrogen and progesterone contained in these contraceptives will cause accumulation in

the body. The hormones estrogen and progesterone are interrelated in influencing cell pigmentation, where they act directly on melanocytes as one of their receptors so that they can cause worsening of melasma. Using or not using birth control pills, the degree of melasma of women in Sebani Village is classified as moderate, even though the quality of life has been calculated using the Dermatology Quality of Life Index (DLQI) it should have had an effect but only 15 people had a very severe effect because the melasma was also severe, the others were not too effect after calculating the melasma score because the women in Sebani Village all have melasma. This is in line with research conducted by Ariani D in the Journal of Issues in Midwifery, the emergence of melasma can occur in people who do not use birth control pills and with a history of birth control pill users.¹⁷

CONCLUSION

There is a very strong relationship between melasma and quality of life.

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