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DIETARY FACTORS FOR PREMATURE SKIN AGING IN ADULT STUDENTS OF THE FACULTY OF MEDICINE, YARSI UNIVERSITY, CLASS OF 2021 REVIEWED FROM MEDICINE AND ISLAM

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ABSTRACT

Keywords: Dietary Habit; Premature Skin Aging; Faculty of Medicine.

Premature Skin Aging is a change in the skin that occurs due to the aging process. The occurrence of aging on the skin is based on the physiological aging process of the organs, which can ultimately cause skin aging. The main factor causing premature skin aging is a lifestyle, one of which comes from nutrition. This research uses a quantitative research method and a cross-sectional analytical observation method. The population used in this research were individuals studying at the Faculty of Medicine, YARSI University, class of 2021, with the age group 20-25 years. The sampling technique used in this research is a purpose sampling technique. Twenty students were taken as samples from the existing population. The type of data used in this research is primary data. The data analysis technique used in this research is the Chi-Square Test. This research found that the average sample of students at the Faculty of Medicine, Yarsi University class of 2021, had a suitable and sufficient diet. Ten students (50%) had an adequate diet, and the other 10 (50%) had a good diet. Hypothesis testing using the Chi-Square test produces Asymp values. Sig. (2-sided) of 0.037, this value is smaller than 0.05 (0.037 < 0.05), so H1 is accepted. The conclusion is that diet influences the process of premature skin aging.

Pendahuluan

Premature Skin Aging is a change in the skin that occurs due to the aging process. Skin aging is based on the physiological aging process in the organs, which can eventually cause skin aging (Irianti & Pramono, 2022). Two categories of factors cause skin aging: intrinsic factors, such as chronological, genetic, and hormonal factors, and extrinsic factors, such as lifestyle, one of which is diet (Wong & Chew, 2021). Ditemukan angka kejadian terjadinya premature skin aging di Indonesia sebanyak 57% ditemukan tanda-tanda penuaan seperti kulit kusam pada wanita berusia 25 tahun (Cahyani, Sastramihardja, & Irasanti, 2022).

The main causative factor for premature aging of the skin is lifestyle. A bad lifestyle, such as smoking, alcohol consumption, drug use, diet, consumption of the wrong diet, such as fast food, and stress, can increase the process of premature aging of the skin. Bad habits of consuming alcohol can cause a decrease in digestive function involving vitamins A, E, B3, and C (Irianti & Pramono, 2022). Generally, we know that smoking contains nicotine, which can form wrinkles on the face (Sutanto et al., 2023).

The mechanism of skin aging is one of the extrinsic factors caused by UV exposure, while in intrinsic factors, skin aging occurs in the basal cells. When basal cells undergo the aging process, it can cause the epidermis and dermis layers to become thin. This process is called cellular aging, which results in a decrease in the ability of cell

proliferation, including keratinocytes, fibroblasts, and melanocytes (Irianti & Pramono, 2022).

Eating is essential for humans to keep their bodies so that the body can carry out all physiological processes. It is mentioned in the word of Allah (swt) in surah 'Abasa verse 24,

فَلْيَنْظُرِ الْإِنْسَانُ إِلَىٰ طَعَامِهِ

It means: "Let man watch his food, then." QS. 'Abasa: 24 (Rahayu Mahasiswa Pasca Sarjana UIN Alauddin Makassar & Ilmu Hadis, 2019).

Healthy food can be seen from the diet and complete foods, which are high in vitamins, vegetables, and fruits and get adequate nutrition. This will positively impact human immunity and skin freshness (Dolatkhah, Jabbaripour, Somi, & Roshani, 2020).

Based on the explanation above, it is necessary to research the influence of diet on premature aging in adults 20-25 years. Therefore, researchers want to determine whether dietary factors influence premature aging in adults aged 20-25 who are students of the Faculty of Medicine, University of Yarsi 2021 (Wijayanti, Rumi, & Sultan, 2021).

Research Methods

This study used quantitative research methods and cross-sectional analytical observation methods. This term is used in research observations by analyzing variable data collected from interviews and questionnaires to produce quantitative conclusions. The population used in this study is individuals studying at the Faculty of Medicine, YARSI University, class of 2021, with an age group of 20-25 years. The sample will be determined from the population using the purpose sampling technique. According to Dana P. Turner, purpose sampling is used when researchers already have individual targets with criteria matching the research (Turner, 2020).

The type of data used in this study is primary data. Data collection in this study by conducting individual interviews using the Google form method. Researchers will interview based on data on the form that has been created and ask respondents to sign/agree as a form of informed consent (Mujahidin, 2021). The instrument used in this study was an interview using a Google form questionnaire addressed to respondents. The material used is data from interviews with female students at the Faculty of Medicine, Yarsi University, class of 2021, adults aged 20-25. The data analysis technique used in this study was carried out in 3 stages: data reduction, data presentation, and conclusion drawing with the help of the SPSS program.

Results and Discussion

The object of this study is students who are studying at the Faculty of Medicine, YARSI University, class of 2021, with the age group of 20-25 years. Determination of the number of samples using the *purpose sampling method,* where researchers already have target respondents who meet the research criteria. Respondent profiles are presented in the following table:

Dietary Factors for Premature Skin Aging in Adult Students of The Faculty of Medicine, Yarsi University, Class of 2021 Reviewed From Medicine and Islam

Table 1
Profile Respondent

Variable	Frequency (F)	Percentage (%)
Gender		
Woman	38	100
Age		
20 years	7	18
21 years old	21	55
22 years old	9	24
23 years old	1	3
Total	**38**	**100**

Based on Table 1, it can be explained that the respondents in this study were 100% female or as many as 38 students. The age range ranges from 20-23 years old. For 20-year-olds, there are 7 or 18% of respondents; for 21-year-olds, there are 21 or 55% of respondents; for 22-year-olds, there are 9 or 24%; for 23-year-olds, there are 1 or 3% of the total 20 respondents.

Frequency Distribution Percentage of Diet Data

Table 2
Frequency Distribution Percentage of Diet Data

Category	Frequency (F)	Percentage (%)
Less	0	0
Enough	19	50
Good	19	50
Excess	0	0
Total	**38**	**100**

Indicators of the researchers' dietary variables are based on the results of the FFQ (Food Frequency Questionnaire) questionnaire developed from research conducted at Harvard University (Mujahidin, 2021). The indicator is divided into four categories. In the less category, the value range is 128-235, the sufficient type is 236-343, the excellent variety is 344-452, and the excess class is > 452. Based on the table above, it can be stated that there are no students who have less and extra diets, students who have sufficient diets totaling 19 students or as many as 50%, while students who have a good diet are also 19 students or as many as 50% of students from a total of 38 students at the Faculty of Medicine, Yarsi University, class of 2021.

Frequency Distribution of Premature Skin Aging Data Percentage

Premature skin aging is a degenerative process in the skin that undergoes changes in skin structure and elasticity characterized by wrinkles and pigmentation. In this study, researchers conducted trials on 38 respondents using a tool in the form of Janus' Skin Analyzer, which aims to determine the skin condition of the respondents. The Janus tool researchers use is the A-one type, with the A1P series 170252 released in 2017. Researchers observed three categories, namely wrinkles, sebum, and pores.

Table 3
Percentage of data between U-Zone and T-Zone

Category	Sebum U-Zone		Sebum T-Zone	
	Tailcoat	(%)	Tailcoat	(%)
Normal	5	13	16	53
Little	31	82	20	42
Much	2	5	2	5
Total	38	100	38	100

Table 3 shows the frequency of students' U-zone sebum and T-zone sebum at the Faculty of Medicine, Yarsi University, class of 2021. Sebum U-zone and T-zone have three categories: regular, *petite,* and *much*. Normal category means the condition of skin oil on the face is equal. The *little* category implies the lack of fat on facial skin, which can cause dry, scaly, or even itchy skin conditions. While in the very category*,* it means excess oil production on the skin. *In* the U-zone sebum, the frequency of students who have the normal category is five students or as much as 13%; for the *little* category, the frequency is 31 students or as many as 82% of students, while for the much category, the frequency is two students or as much as 5%. For the T-zone sebum, the frequency of students for the standard category is 16 students or as much as 42%; for the *little* category, it is 20 students or as much as 53%, while for the much category, the frequency is two students or as much as 5%.

Persentase Data Pori-Pori

(Kim et al., 2023) μm and about 5-10 μm at each diameter). Here is the data spread:

Table 4
Persentase Data Pori-Pori

Kategori	Frekuensi (F)	Percentage (%)
Normal	4	11
Large	19	50
Large	13	34
Very Large	2	5
Total	**38**	**100**

Table 4 describes the frequency of pore data divided into four categories. The standard category is defined as the condition of not too large or small pores. In the category of large, it means that the condition of the pores on the face is slightly oversized. In the large category, the condition of the skin pores on the front is significant. While in the vast category, it means the pores on the face are enormous. The standard category's frequency is four students or as much as 11%. The category is large; the frequency is as many as 19 students or 50%. In the large category, the frequency is 13 students or as much as 34%. The vast category's frequency is two students or as much as 5%.

Percentage Data *Wrinkle*

Wrinkles are folds on the visible facial skin. Wrinkles are categorized into fine wrinkles with less than 1 mm depth and rough wrinkles with more than 1 mm (Manríquez et al., 2008). Here is the data spread:

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Table 5
Percentage Data *Wrinkle*

Category	Frequency (F)	Percentage (%)
None	23	61
Thin	15	39
Total	**38**	**100**

Wrinkles are wrinkles found in the human face area. In observing this condition, researchers use the help of Janus tools, and the type of fetal tool used is type A-one with the A1P series 170252 issued in 2017. Table 4.5 shows the number of wrinkles, consisting of 2 categories: none and thin. The none category means no wrinkled facial skin condition, while the light type means the facial skin condition has many wrinkles. For the none category, the frequency is 23 students or as much as 61%. As for the thin type, the frequency is 15 students or as much as 39%.

The main causative factor for premature aging of the skin is lifestyle. A bad lifestyle, such as smoking, alcohol consumption, drug use, diet, consumption of the wrong diet, such as fast food, and stress, can increase the process of premature aging of the skin. Bad habits of consuming alcohol can cause a decrease in digestive function involving vitamins A, E, B3, and C. Generally, we know that smoking contains nicotine, which can form wrinkles on the face (Annas, Pratama, Rifandi, Sanusi, & Side, 2020).

Normality Test

The normality test in this study used the *Shapiro-Wilk test* because the sample amounted to less than 50 respondents. The test was used to determine whether the data the researchers collected from students of the Faculty of Medicine, Yarsi University, class of 2021, on premature skin aging and eating patterns were normally distributed. This standard or no distribution can be seen from the value of Asymp. Sig. (2-tailed). The basis for decision-making in this test is if the value of Asymp. Sig. (2-tailed) is more significant than 0.05 (Asymp. Sig. (2-tailed) > 0.05), then the data is usually distributed, and if the value of Asymp. Sig. (2-tailed) is smaller than 0.05 (Asymp. Sig. (2-tailed) < 0.05); hence the data is not normally distributed.

Table 6
Normality Test

Tests of Normality

	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistic	df	Say.	Statistic	df	Say.
Pola_Eat	.150	38	.031	.946	38	.068
Premature_Skin_Aging	.146	38	.041	.962	38	.221

Table 6 shows the value of Asymp. Sig. (2-tailed) The dietary and premature skin aging variables, 0.068 and 0.221, respectively, are more significant than 0.05 (0.068 and 0.221 > 0.05). So, the data in this study is usually distributed so that it can be continued in the next test.

Uji Hypoplant

Test the hypothesis in this study using the Chi-Square test. This test is used to determine whether there is an influence between diet and premature skin aging. The basis for decision-making in this study is to look at the value of Asymp. Sig. (2-sided). If the value is Asymp. Sig. (2-sided) is smaller than 0.05 (Asymp. Sig. (2-sided) < 0.05), then H1 is accepted, and H0 is rejected. If the value is Asymp. Sig. (2-sided) is more significant than 0.05 (Asymp. Sig. (2-sided) > 0.05), then H0 is accepted, and H1 is rejected.

Table 7
Uji *Chi-Square*

Chi-Square Tests			
	Value	**df**	**Asymp. Sig. (2-sided)**
Pearson Chi-Square	22.996[a]	4	.000
Likelihood Ratio	21.769	4	.000
Linear-by-Linear Association	14.591	1	.000
N of Valid Cases	38		

Based on Table 7, the value of Asymp can be seen. Sig. (2-sided) is 0.000, this value is less than 0.05 (0.000 < 0.05), so H1 is **accepted.** In this study, the hypothesis used is H0: there is no influence between diet and the process of premature skin aging, and H1: there is an influence between diet and the process of premature skin aging. So, this hypothesis concludes that there is an influence between diet and the process of premature skin aging (Turner, 2020).

A study entitled The influence of risk factors for premature aging in the skin in adolescent women aged 18-21 also revealed that skin aging that occurs in adolescence-adulthood, especially in women, is influenced. A survey entitled The Effectiveness of Water Consumption in the Prevention of Premature Aging in Women also argues that several factors trigger premature aging of the skin, one of which is the consumption of unhealthy foods and drinks (Tanjung, Nurkhalilah, Hafizah, & Hevanda, 2022). Similar to the study entitled Smoking and Premature Aging in the Form of Wrinkles Around the Face, they explained that one of the extrinsic factors that cause premature aging with marked wrinkles is a factor of diet. So, adolescents aged 20-25 must maintain a healthy diet to reduce the occurrence of premature aging.

As Islam has taught that a good diet will give birth to good health for the body. In a verse of the Qur'an it is written about diet that is in surah Al-A'raf verse 31,

يَا بَنِي آدَمَ خُذُوا زِينَتَكُمْ عِنْدَ كُلِّ مَسْجِدٍ وَكُلُوا وَاشْرَبُوا وَلَا تُسْرِفُوا ۚ إِنَّهُ لَا يُحِبُّ الْمُسْرِفِينَ

It means: "O posterity of Adam, put on your beautiful garments at every mosque and eat and drink, but do not overdo it. Verily, he does not like those who are excessive." QS. Al-A'raf:31. (Kusumawardani et al., 2020).

Negative impacts will occur, such as the body experiencing high calories, fat, and cholesterol, which can trigger obesity. Too often, consuming junk food and *fast food* can cause various other health problems such as diabetes, hypertension, coronary heart

disease, cancer, and many more. As explained in the word of Allah (swt) in surah 'Abasa verse 24,

<div dir="rtl">فَلْيَنْظُرِ الْإِنْسَانُ إِلَىٰ طَعَامِهِ</div>

It means: "Let man watch his food, then." QS. 'Abasa: 24. (Kusumawardani et al., 2020).

Just as human skin must be cared for because skin care is an integral part of personal hygiene and well-being, in addition to the need for ritual cleaning at the time of daily prayers through ablution and ritual bathing, there are a large number of other hygiene-related rules governing the lives of Muslims. In general, the Qur'an encourages Muslims to uphold standards of physical hygiene and ritual cleanliness whenever possible. Proper and complementary skincare and associated holes are essential in contemporary medicine because unclean skin favors the development of pathogenic and infectious organisms (AlGhamdi, AlHomoudi, & Khurram, 2014).
As Allah Almighty says in surah Al-Hijr verse 28,

<div dir="rtl">وَاِذْ قَالَ رَبُّكَ لِلْمَلٰۤىِٕكَةِ اِنِّيْ خَالِقٌۢ بَشَرًا مِّنْ صَلْصَالٍ مِّنْ حَمَاٍ مَّسْنُوْنٍ</div>

It means: "and (Remember) when your Lord said to the angel, "Behold, I will create a man out of dry clay from formed black mud." QS. Al-Hijr:28.

The Quran uses various terms to refer to humans with different meanings, including *Al-Basyar* or basyarah, which means 'skin.' The man is named Al-Basyar because his skin is visible and distinct from that of other animals.

Foreign words or terms are used in italics (*italics*). It is best to avoid using unfamiliar terms for Indonesian articles. New paragraphs start 1.15 cm from the left border, while between sections are not spaced between.

Tables and Figures are placed in groups of text after they are referenced. Each image must be titled image (*Figure Caption*) at the bottom of the image and numbered in a sequence of numbers followed by the image title. Each table must be given a table title (*Table Caption*) and numbered in a series of numbers at the top of the table, followed by a table title. The images must be guaranteed to print clearly (font size, resolution, and line size must be sure to print clearly). Figures, tables, and diagrams/schematics should be placed in columns between groups of text, or if they are too large, they should be placed in the middle of the page. The table should not contain vertical lines, while horizontal lines are allowed, only the essentials.

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Conclusion

Based on the research findings and discussions regarding the influence of diet on premature skin aging, coupled with its review through Islamic religious perspectives, the study concludes that 50% of the students had a sufficient diet while the remaining 50% had a good diet among the 38 students surveyed. Furthermore, 29% of the students exhibited poor skin conditions, 58% displayed good skin conditions, and 13% showed excellent skin conditions. The analysis utilizing chi-square test yielded a significant result (Asymp. Sig. 2-sided = 0.000, p < 0.05), indicating a discernible influence between diet and premature skin aging. From an Islamic standpoint, maintaining a healthy diet, as encouraged in the Quran, impacts bodily health and skin condition, emphasizing the responsibility to care for one's skin and overall health. However, acknowledging the study's limitations, further research is needed, potentially incorporating additional variables such as exercise habits and sleep quality to enrich understanding of the diet's impact on premature skin aging.

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