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THE EFFECTIVENESS OF YOGHURT CONSUMPTION ON THE EVENT OF PATHOLOGICAL FLUOR ALBUS SYMPTOMS IN NURSING STUDENTS OF MAGELANG POLTEKKES KEMENKES SEMARANG

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Abstract

Background: *Women of childbearing age have many problems in the vaginal area. The problems that most women experience is fluor albus. When the fluor albus experienced is pathological fluor albus, it will cause several symptoms such as yellowish white, itching, and smelly. Fluor albus can be pathological and even complicated because it occurs too long and is left untreated. If complications occur, it can often lead to problems in the female reproductive organs, including cervical cancer, infertility, and even death. Effort that can be made to reduce the symptoms of pathological fluor albus, one of which is by non pharmacological methods such as consuming yoghurt.* ***Purposes:*** *This study aims to determine the effectiveness of yoghurt consumption on the incidence of pathological fluor albus symptoms in nursing students in Magelang Poltekkes Kemenkes Semarang.* ***Methods:*** *This study uses a Pre Experimental research design approach which is a study used to determine the causal relationship in manipulating independent variables.* ***Results:*** *It was found that 14 respondents (87,5%) experienced a decrease in symptoms of pathological fluor albus and 2 respondents (12,5%) did not experience a decrease in symptoms of pathological fluor albus. Statistical test results p value = 0,000 where p value < α (0,05) then Ha is accepted.* ***Conclusion:*** *There is a positive effect of yoghurt consumption on the incidence of pathological fluor albus symptoms in nursing students in Magelang Poltekkes Kemenkes Semarang.*

Keywords : *Fluor Albus, Pathological, Yoghurt*

PRELIMINARY

Reproductive health is a condition in which physical, mental and social well-being is complete, not only free from disease or disability but in all matters relating to the reproductive system and its functions and processes (Ahmad, 2020). According to the World Health Organization (WHO), poor reproductive health problems in women have reached 33% of the total burden ofdisease worldwide that affects women. This figure is greater than reproductive problems in men of the same age inwomen which only reached 12.3%.

Women have many problems in the vaginal area. Problems that can appear in the vaginal area include *fluor albus*, syphilis, herpes, psoriasis, and ulcers. Of the several problems in the vaginal area, one and the most experienced by women is *fluor albus* (leucorrhoea). *Fluor albus* is a symptom associated with women's reproductive health problems and is often experienced by most women. After menstrual disorders, *fluor albus* is the most common problem experienced by most women(Jonathan, 2021).

All age groups of women are at risk for *fluor albus*. Women of childbearing age often experience PID (Pelvic Inflammatory Disease) therefore, women of childbearing age have a higher risk of experiencing *fluor albus* than adolescents. In addition, cervical cancer in women is one of the initial symptoms, namely excessive and abnormal *fluor albus* so that it can be fatal or death (Firmanila, 2016). At leastthree-quarters of women in the world have experienced *fluor albus* (Novianta, 2018). The National Center for Biotechnology Information (2013) estimates that 75% of women in the world at least once in their lifetime haveexperienced *fluor albus* and those who have experienced *fluor albus* twice or more are estimated to be 45%. Whereas in Indonesia, which is a tropical country and due to humid weather, the development of fungal infections will be easier and faster, so it is estimated that as many as 90% of women in Indonesia have the potential to experience *fluor albus* and this will increase every year.

Fluor albus can be pathological and even complicated because it occurs too long and is left untreated. When the bacteria in the vagina enter the uterine cavity then the fallopian tubes to the ovaries and finally into the pelvic cavity then complications have occurred. If complications occur, it can often lead to problems in the female reproductive organs, including cervical cancer, infertility, and even

death (Sari, 2012). Due to inflammation and infection in the vaginal area, some signs and symptoms such as itching and odor will appear when experiencing *fluor albus*.

Yogurt is a processed product that is safe for consumption by all people, even for people with lactose intolerance. Yogurt is made through a milk fermentation process assisted by the activity of live bacteria, namely *Lactobacillus bulgaricus*, *Streptococcusthermophillus*, and *Lactobacillus casei* (Budirahayu, 2020). The live bacteria found in yogurt function as probiotics that are beneficial for the human body. The good bacteria found in yogurt are believed to be useful in maintaining the pH of the vagina in an acidic condition so that it can reduce the risk of infection. In addition, when the vaginal area is infected, the good bacteria in yogurt can suppress the proliferation of bacteria, fungi, viruses, or germs that cause these infections (Budirahayu, 2020).

Based on the results of the description, it can be concluded that *fluor albus* must be treated if it is abnormal by showing some symptoms. Yogurt consumption can be considered as a non-pharmacological therapy in overcoming the symptoms of pathological *fluor albus*.

METHOD

This study uses a pre-experimental research design with a one-group pre- post test design approach. The research was carried out in the Magelang Nursing Campus, Poltekkes, the Ministry of Health, Semarang, starting from the preparation of the proposal to the preparation of the final report from January to June 2022. The population in this study were all undergraduate students of Applied Nursing Magelang Poltekkes Kemenkes Semarang as many as 123 female students and the number of samples was 16 female students who were experiencing symptoms of pathological *fluor albus*. Theindependent variable in this study was yogurt consumption, while the dependent variable in this study was thesymptom of pathological *fluor albus*. Data processing includes editing, coding, processing, and cleaning withdata analysis using the Paired T Teststatistical test.

RESULTS

1. Age

Table 4.1
Frequency Distribution of Respondents Age

Age	Frequency	Percentage
< 19 years	5	31 %
19 – 20 years	9	56 %
> 20 years	2	13 %
Total	**16**	**100%**

Based on table 4.1 shows that most of the respondents aged 19-20 years as many as 9 people (56%) of the 16 respondents studied.

2. Categories of Pathological *Fluor Albus* Symptoms Pre-Treatment of Yoghurt Consumption

Table 4.2
Frequency Distribution of PathologicalFluor Albus Symptoms Category Pre Treatment of Yogurt Consumption

Category	Frequency	Percentage
Light	15	94 %

Based on table 4.2, it shows that most of the pathological *fluor albus* symptoms experienced by respondents before the yogurt consumption treatment were included in the mild category with a score between 8-13 as many as 15 people (94%) of the 16 respondents studied while for the moderate category with a score of 14 as many as 1 person (6%) of the 16 respondents studied.

3. Categories of Pathological *Fluor Albus* Symptoms Post Yogurt Consumption Treatment

Table 4.3
Frequency Distribution of PathologicalFluor Albus Symptoms Category Post Yogurt Consumption Treatment

Kategori	Frekuensi	Persentase
Light	8	50%
Fluor Albus Physiological	8	50%
Total	**16**	**100%**

Based on table 4.3, it shows that most of the symptoms of pathological *fluor albus* experienced by respondents after the yogurt consumption treatment decreased from where previously there was a moderate category to only mild category respondents with a score of 8- 11 as many as 8 people (50%) of 16 respondents who researched.

4. Long Experienced Symptoms ofPathological Fluor Albus

Table 4.4 Frequency Distribution of Long Experienced Symptoms of PathologicalFluor Albus

Long	Frequency	Percentage
≤ 1 week	14	87,5%
2 – 3 week	2	12,5%
Total	**16**	**100%**

Based on table 4.4, it shows that mostof the symptoms of pathological *fluor albus* experienced by respondents for 1 week were 14 people (87.5%) of the 16 respondents studied.

5. Comparison of Pathological *Fluor Albus* Symptoms Before and After Consumption of Yoghurt

Table 4.5
Comparison of Pathological Fluor Albus Symptoms Before and After Consumptionof Yogurt

Consumption of Yogurt	Mean	Median	Mode	SD	Min –Max
Pre-Test	10.44	10.00	10	1.896	8 –14
Post-Test	8.06	7.50	7	1.340	7 –11

Based on table 4.5 shows that the average score of pathological *fluor albus* symptoms before the yogurt consumption treatment is 10.44 with a median value of 10.00, a mode value of 10, a standard deviation of 1.896, and a minimum score of 8 while a maximum score of 14. The results of the average score indicate that most of the respondents experienced mild symptoms of pathological *fluor albus*. After the yogurt consumption treatment was carried out, the average score of *fluor albus* symptoms was 8.06 with a median value of 7.50, a mode value of 7, a standard deviation of 1.340, and a minimum score of 7

while a maximum score of 11. The results of the minimum score showed that after the yogurt consumption treatment there were respondents who experienced a decreasein symptoms of pathological *fluor albus*to symptoms of physiological *fluoralbus*.

6. Analysis of the Effectiveness of Yoghurt Consumption on the Occurrence of Pathological *Fluor Albus* Symptoms in Nursing Students in Magelang Poltekkes, Ministry of Health, Semarang

Table 4.6

Results of Paired T-Test Statistical Test ofthe Effectiveness of Yogurt Consumption on the Occurrence of Pathological Fluor Albus Symptoms in Nursing Students in Magelang Poltekkes, Ministry of Health, Semarang

Inspection	Criteria	Frequency	Percentage
Symptoms of Pathological Fluor Albus Post Treatment of Yogurt Consumption	Decrease	14	87,5%
	Permanent	2	12,5%
Total		**16**	**100%**
Uji Paired T-Test	0,000		

Based on table 4.6 shows that the results after the treatment of yogurt consumption, most of the respondents experienced a decrease in symptoms of pathological *fluor albus*, namely asmany as 14 respondents (87.5%).

It was found that the p value = 0.000 at 5%, thus the p value , it can be concluded that there is an effect of yogurt consumption on the incidence of pathological *fluor albus* symptoms in Nursing students of Magelang Poltekkes Kemenkes Semarang.

DISCUSSION

The Occurrence of Pathological Fluor Albus Symptoms Before Yogurt Was Given to Nursing Students in Magelang Poltekkes, Ministry of Health, Semarang

Based on the data obtained from the results of the study using a questionnaire sheet, it was found that the respondents who were experiencing *fluor albus* were 16 respondents (100%) with an average age of 18-21 years. Symptoms experienced by most of the respondents included a moderate amount of *fluor albus* and sticky fluid on underwear, yellowish white in color, musty smell, thick and attached to underwear, occasional itching and pain in the vaginal area. The severity of the symptoms of pathological *fluor albus* experienced by a person can be influenced by several factors, including frequent scratching of the female organs, imbalance of hormonal conditions, excessive use of feminine hygiene soap, severe mental stress that is being experienced, when menstruation does not change pads immediately, fatigue due to excessive physical activity, wrong direction in washing the female organs, lack of attention to the cleanliness of the female organs, unhealthy lifestyle by consuming foods that contain excess sugar or carbohydrates, and humid conditions due to weather conditions that can affect the development of fungal infections easier and faster (Octaviyati, 2012). According to the Gynecologist and Clinical Associate Professor at NYU Langone's Women's Health Center (2016), vaginal temperature also shifts, such as from hot to humid in cold weather. When the vaginal temperature changes, it is possible that the vaginal pH will change to alkaline. So when the vaginal pH becomes alkaline, the development of infection that occurs will be easier.

Based on the theoretical explanation and the evidence of the data above, the researcher argues that women of childbearing age who experience symptoms of pathological *fluor albus* are one of the factors of personal hygiene and awareness of the lifestyle they are living. In addition, respondents who have good knowledge regarding problems that can arise, then these respondents will try to prevent problems that will arise. Respondents must understand the problems that will arise if not handled properly, one of which is the problem of pathological *fluor albus* symptoms in female respondents of childbearing age which often occurs.

The Occurrence of Pathological *Fluor Albus* Symptoms After Yogurt was Given to Nursing Students in Magelang Poltekkes, Ministry of Health, Semarang

The results of data analysis and interpretation conducted on 16 respondents regarding the incidence of pathological *fluor albus* symptoms after consuming ±150 ml of yogurt consumption for 7 days, the results showed that as many as 14 (87.5%) respondents experienced a decrease in symptoms of pathological *fluor albus* experienced, where initially there was an odor, appeared itchy, yellowish color became slightly reduced after being given treatment with yogurt consumption, while as many as 2 (12.5%) respondents did not experience a decrease (fixed). This shows that most of the respondents after being given treatment with yogurt consumption experienced a decrease in symptoms of pathological *fluor albus*.

According to Jannah (2014) yogurt contains good bacteria *Lactobacillus bulgaricus* and *Streptococcus thermophilus* in it. The good bacteria in yogurt produce lactic acid to maintain an acidic environment in the vagina. In addition, these good bacteria also produce hydrogen peroxide which serves to inhibit the growth of yeast that causes vaginal infections. So, by consuming yogurt, it is possible to reduce the symptoms of pathological *fluor albus* which is generally caused by an infection in the vaginal area.

According to Setyoningsih Budirahayu (2020) the live bacteria found in yogurt function as probiotics that are beneficial for the human body. The good bacteria found in yogurt are believed to be useful in maintaining the pH of the vagina in an acidic condition so that it can reduce the risk of infection. In addition, when the vaginal area is infected, the good bacteria in yogurt can suppress the proliferation of bacteria, fungi, viruses, or germs that cause the infection.

The theory above is in accordance with the reality in the field that the incidence of pathological *fluor albus* symptoms in female respondents of childbearing age can be overcome by consuming yogurt regularly. Symptoms of pathological *fluor albus* experienced by respondents if left unchecked will be at risk of causing problems in the female reproductive organs. In addition, the symptoms of pathological *fluor albus* experienced can also become more severe and are at risk for cervical cancer. If the symptoms of pathological *fluor albus* experienced by the respondent are left untreated, it will cause discomfort and will affect the length of the healing process. Based on the results of data regarding the symptoms of

pathological *fluor albus* that have been obtained using a questionnaire sheet before being given the treatment of yogurt consumption, there is a theoretical compatibility with the conditions in the field, that the symptoms of pathological *fluor albus* in Nursing students of Magelang Poltekkes, Ministry of Health, Semarang before being given the yogurt consumption treatment are caused by several factors. These factors include not paying attention to a good diet, the habit of using pantyliners and tights, thewrong direction when cleaning the female organs.

This is evidenced by the majority of respondents, namely 14 respondents experienced a decrease in symptoms of pathological *fluor albus* after being given treatment with yogurt consumption. The application of good hygiene behavior can be done by cleaning the outside of the vagina after urinating or defecating using clean water, frequently changing sanitary napkins when menstruating, not using soap or sweeping shower gel on the genitals, using absorbent underwear, sweating, changing underwear at least 2 times a day, and consulting a doctor if you experience abnormal symptoms from the reproductive tract such as vaginal discharge with a greenish yellow color and a burning sensation onthe lips of the vagina (Irianto, 2015).

Several things that can affect the incidence of pathological *fluor albus* symptoms in respondents outside the study are where respondents do not perform management interventions to reduce *fluor albus* symptoms on a regular basis. Respondents who experience problems with pathological *fluor albus* symptoms and do not perform management interventions to reduce the symptoms they experienceon a regular basis will be at risk of increasing the incidence of pathological *fluor albus* and at risk of complications into cervical cancer.

Based on this description, the researcher argues that consuming yogurthas an effect on the symptoms of pathological *fluor albus*, especially in terms of treating or reducing the symptoms of pathological *fluor albus* experienced. This is because in yogurt there are good bacteria that have thebenefit of inhibiting the development of fungi that cause infection in the vaginal area and can maintain the vaginal area in an acidic condition.

Analysis of the Effectiveness ofYogurt Consumption on the Occurrence of Pathological *Fluor Albus* Symptoms in Nursing Students in Magelang Poltekkes Kemenkes Semarang

After the respondents were given treatment with yogurt consumption for ± 7 days, the results showed that almost all respondents, namely 14

female students (87.5%) experienced a decrease in symptoms of pathological *fluor albus* and respondents who did not experience a decrease in symptoms of pathological *fluor albus* were 2 female students (12.5 %). These data indicate that there is a significant decrease in the symptoms of pathological *fluor albus*experienced by the respondents.

The results of statistical tests using the Mean T-Dependent Two Different Test (paired t-test) showed that the pvalue = 0.000 with = 0.05. Thus, the p value < , it can be concluded that there is an effect of yogurt consumption on the incidence of pathological *fluor albus* symptoms in Nursing students of Magelang Poltekkes, Ministry of Health, Semarang.

Based on the results of the data above, it can be shown that the consumption of yogurt functions in reducing the symptoms of pathological *fluor albus*.

According to Bahari (2012) the emergence of pathological *fluor albus* symptoms can be caused by several factors, one of which is due to a Candida albicans fungal infection. Candida albicans is classified as a dimorphic fungus, where the fungus is easy to breed in damp and wet places. Usually, the infection occurs because the water used to wash the female organs has been contaminated withfungi. In addition, it can also be caused by a lack of hygiene care for the female organs so that the Candida albicans fungus can grow more quickly. Anotherfactor that can cause pathological *fluor albus* is because it is caused by a lack of hygiene care for the female organs which can make the Candida albicans fungus to develop. In connection with this, it is possible that bad things may happen to women of childbearing age.

According to Yohana (2012) *fluor albus* caused by parasites will usually be accompanied by itching in the vaginal area so that it will cause discomfort to sufferers. Another factor that can cause symptoms of pathological *fluor albus* is the use oftight and damp underwear. Meanwhile, external factors that can causepathological *fluor albus* symptoms are the level of knowledge, environment, and personal hygiene.

The results obtained indicate that the consumption of yogurt has an effect on the incidence of pathological *fluor albus* symptoms in women of childbearing age. Some of the changes experienced include the amount of fluid being less and not sticky on the underwear, the color of the liquid is clear white, there is no odor, the consistency of *fluor albus* becomeswatery like cream, there is no itching and pain in the vaginal area. It states that the consumption of yogurt can reduce the symptoms of pathological *fluor albus*.

CONCLUSION

Based on the results of this study, it can be concluded that there is an effect of yogurt consumption on the incidence of pathological *fluor albus* symptoms in Nursing students of Magelang Poltekkes, Ministry of Health, Semarang. Consumption of yogurt can be used as a way of non-pharmacological management in overcoming and reducing the symptoms of pathological *fluor albus*.

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