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The Relationship between Stress Levels and Fast Food Consumption Behavior and the Incidence of Dysmenorrhea in Adolescent Girls at SMAN 8 Tana Toraja

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Abstract: Background: Cases of Dysmenorrhea (Menstrual pain) during menstruation, especially in young women, are currently common cases. Several theories state that one of

the causes of menstrual disorders is stress levels and consumption behavior. So this study aims to determine the relationship between stress levels and fast food consumption behavior with the incidence of dysmenorrhea in young women at SMAN 8 Tana Toraja. Methods: This study uses a quantitative research method with a cross-sectional study. The population in this study were 400 female students of SMAN 8 Tana Toraja with a sample size of 80 female students selected using the *stratified random sampling method* . Data collection using questionnaires and analyzed with the *Chi-Square test* . Results: The results of this study indicate that 27.5% of respondents experienced mild stress, 7.2% experienced moderate stress and 66.3 normal, as many as 46.3% of respondents with normal stress levels experienced moderate dysmenorrhea. There are also 88.8% of respondents who consume fast food and only 11.2% of respondents who do not consume fast food. 63.8% of respondents who consume fast food experience moderate dysmenorrhea. The results of the biavariate analysis of Stress Level with Dysmenorrhea Incidence (*p-value* = 0.435) and Fast Food Consumption Behavior with Dysmenorrhea Incidence (*p-value* = 0.23). Conclusion: in this study there is no relationship between stress levels and fast food consumption behavior with dysmenorrhea in female students of SMAN 8 Tana Toraja.

Keywords: Stress, Fast Food, Dysmenorrhea, Adolescent Girls

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1. Introduction

Stress is a natural physiological and psychological response to pressure or burdens that are present in everyday life [1] (Nurrafi et al. 2023). In the context of women's reproductive health, stress has great potential to affect important aspects. Especially in cases of primary dysmenorrhea, stress can have a significant impact. Stress can trigger the release of stress hormones, such as cortisol, which in turn can affect a woman's menstrual cycle. Changes in this hormone cycle can affect the intensity and severity of pain experienced during menstruation [2] (Vermarina, 2022). In addition, stress also has the potential to disrupt the balance of sex hormones such as estrogen and progesterone, which play an important role in regulating the menstrual cycle. An

imbalance of these hormones can worsen the symptoms of dysmenorrhea [3] (Mivanda et al, 2023). Therefore, understanding the impact of stress on women's reproductive health, especially in the context of dysmenorrhea, is very important, and efforts to manage stress can play a role in minimizing its negative impact on women's quality of life.

Dysmenorrhea is a problem that occurs when women experience menstruation. Dysmenorrhea is menstrual pain characterized by short pain before the onset or during menstruation which is a major gynecological problem, which is often complained of by women. The causative factors of dysmenorrhea are disturbed psychological and physical conditions such as stress, shock, narrowing of blood vessels, and declining body conditions. Education, psychological factors such as stress, and low health such as anemia can worsen dysmenorrhea [4] (Rejeki et al, 2019).

Dysmenorrhea can also be caused by fast food consumption by adolescent girls. Various types of fast food have a high taste and have been widely sold at affordable prices so that someone wants to keep buying it and eventually becomes a bad habit and lifestyle. Fast food is a food that is high in fat and sodium and low in micronutrients. Fast food can affect dysmenorrhea because it contains trans fatty acids which trigger the production of prostaglandin hormones so that it will affect the uterus to contract and cause menstrual pain [3] (Mivanda, 2023).

The Indonesian government has regulated policies regarding adolescent health issues, especially those related to reproductive health, as stated in Law Number 36 Article 71 of 2009, that reproductive health is organized through promotive, preventive, curative, and rehabilitative activities. Known as PKPR (Services), Adolescent Health Program). PKPR is available at health centers, hospitals, and adolescent meeting places. Meanwhile, a government program has also been developed by BKKBN to socialize adolescent reproductive health through PIK-R (Adolescent Information and Advice Center). This PIK-R is adjusted to certain regions or development institutions such as school PIK-R, mosque PIK-R and others. The main activity of PIK-R is to provide health services in the field of adolescent reproductive health, STDs, HIV/AIDS, and the dangers of drugs.

According to data from *the World Health Organization* (WHO) in 2018, the incidence of dysmenorrhea in the world is very large. On average, more than 50% of women in each country experience dysmenorrhea (Februanti et al. 2020). The prevalence of dysmenorrhea in Asia is 84.2% with specifications of 68.7% occurring in Northeast Asia, 74.8% in Middle East Asia, 54.0% in Northwest Asia and 72.6% in Southeast Asia (Tsamara et al., 2020). Dysmenorrhea is widely suffered by adolescent girls, many adolescent girls feel they have limitations in carrying out learning activities at school, resulting in these adolescent girls having difficulty concentrating while studying, being unmotivated, and having difficulty understanding the material given by the teacher properly. Severe dysmenorrhea can cause ectopic tissue growth or endometriosis, leading to increased mortality rates, including infertility [3] (Mivanda, 2023).

In Indonesia itself, the incidence of dysmenorrhea is 64.25%, where 54.89% is primary dysmenorrhea and 9.36% is secondary dysmenorrhea. Based on the health profile of South Sulawesi province in 2018, the incidence of dysmenorrhea is quite high, namely mild pain of 57.7%, moderate pain of 38.5%, and severe pain of 3.8%. This

shows that many young women experience dysmenorrhea 5 (South Sulawesi Provincial Health Office, 2019). Meanwhile, for Tana Toraja Regency, the exact prevalence figure for dysmenorrhea was not obtained.

Based on initial data obtained from SMAN 8 Tana Toraja, it was found that the number of female students was 400. The results of interviews with students explained that there had never been any counseling related to menstrual disorders, specifically dysmenorrhea, by health workers at school, this made students less aware of the factors causing dysmenorrhea, resulting in a lack of prevention carried out by students.

Based on these data, the researcher feels the need to conduct research on the relationship between stress levels and fast food consumption behavior on the incidence of dysmenorrhea in adolescent girls at SMAN 8 Tana Toraja.

The purpose of this study was to determine the level of stress in female adolescents at SMAN 8 Tana Toraja, to determine the behavior of consuming fast food in female adolescents at SMAN 8 Tana Toraja, to determine the incidence of dysmenorrhea in SMAN 8 Tana Toraja, to determine the relationship between stress levels and the incidence of dysmenorrhea in female adolescents at SMAN 8 Tana Toraja, to determine the relationship between fast food consumption behavior and the incidence of dysmenorrhea in female adolescents at SMAN 8 Tana Toraja.

2. Preliminaries or Related Work or Literature Review

2.1. Overview of *Stress in Adolescent Girls*

According to the World Health Organization (WHO), stress is one of the most serious problems affecting human mental and physical health today . people who are stressed are generally nervous, angry, tired , worried, annoyed , afraid and even lancholic . Stress is described as a situation that endangers the well - being of a person and prohibits or forces people to move forward . The age of 20 years is the final stage of development of a juvenile plant , marked by the disconnection of the ideal and real conditions . They must adapt themselves to various existing problems as well as face problems that arise in to then day [6] (Lubis et al . 2021). The RI category categorizes the age of 19-20 years as the age of late adolescence , which is an especially sensitive period for stress and depression [7] (Elvariani et al . , 2021) . Stretch requires an appropriate period of time .Physical disorders , bad behavior , and even mental illness can occur if stress is not managed well . Stress is are caused by stresssors. Stressors can come both from outside and from within people ..

2.2. Overview of Fast Food Consumption Behavior

Consuming fast food is one of the part dysmenorrhea with the content fatty acids inbalanced and not sufficient omega-6 and omega-3 fatty acids . And there's too much sodium . Omega 6 fatty acid is the start of the prostaglandic cascade which is the hormone related to the dysmenorrhea . In addition to this , fast food is also contain trans fats make which is a free radicals [8] (Mohiuddin, 2019) .

One of the impacts of this basic irradiation is damage to seil membranes . Cell membranes have many components , one of which is phospholipids. The function of phospholipids is to help the uterus contract and expel the lining of the uterus during the long period of menstruation . Therefore , in this chapter , women who suffer from

dysmenorrhea find a build up of prostaglandin too large an amount , so that pain can occur in the dysmenorrhea.

The impact of consuming fast food (Mohiuddin, 2019), namely it can cause obesity, diabetes mellitus, increase the risk of stroke at an early age, increase the risk of heart disease, and psychological changes that are activated by mental pressure or stress [8] .

Factors that influence fast food consumption include the ease of access to fast food , which can influence the taste or frequency of cakes in eating fast food for people , teenagers who have large pocket money and large amounts of pocket money . Regarding the food that is high in it , it is appropriate to eat it but whether it is healthy or not . Teenagers who have large pocket money can miss breakfast outside by using the pocket money they have received .Teenagers with great knowledge about nutritional science can have an influence on the habit of consuming fast - food food without paying attention to the nutritional content contained in it , just for the reason of its delicious taste , as well as its content .The characteristics of food at home (soda drinks , the taste , and the deliciousness of consuming vegetables and milk) can influence people in terms of the frequency of cakes in consuming fast food [9] (Saleh, 2019) .

2.3. Overview of Dysmenorrhea

Dysmenorrhea (*dysmenorrheal*) be the taste of Greek. The word *dys* means difficult , painful , abnormal ; *meino* which means month ; and *orrhea* which means flow . Dysmenorrhea is also called menstrual cramps or menstrual pain . In English , Dysmenorrhea is referred to as " painful period ' or painful menstruation . Pain menstruation is occur mainly in the ruts of the lower in , but can cause pain to lower back , lower back , hips , upper thighs , and even thorax . Pain can also be accompanied by severe stomach cramps . This process is basically a normal part of the menstrual process and usually starts to be felt when the bleeding starts and continues for 32-48 hours in most women [10] (Si Naga & Heni , 2023) .

According to Rita & Sari (2019) , the risk factor that causes in the private dysmenorrhea is age , Menarche is an index of the physical maturity of a woman 's reproductive organs . , This age-related dysmenorrhea is associated with several health complications including gynecological diseases, with excess body weight, and having excess fat which can trigger the emergence of hormones that can interfere with the body's production during menstruation can also cause pain , nulliparous (women who have never given birth) [11] . The occurrence of dysmenorrhea is caused by nicotine, which contains has a vasoconstriction effect and this does not result in a reduction in the flow of blood to the endometrium, stress will occur increased in prostaglandin. It is caused by a decrease in the levels of estrogen and progesteron, that there will be contractions of the uterine muscles , urinary blood flow , uterine bleeding , no pain or dysmenorrhea [12](Purvati i , 2020)

Sufficient exercise habit is needed to reduce the secretion of prostaglandins hormones , this is caused because the oxygen cannot be distributed to the blood vessels of the production organs which at that time occurs vasoconstriction .This does not cause women to complain about the issue [12] (Purwati *et al* . , 2020) , and the behavior of consuming fast food can disrupt the progesterone metabolism of the progress of the system in phase luteal the contents of the menstrual cycle , as a result there is an increase

in the level of prostaglandin which causes a feeling of pain at the time of the dysmenorrhea . The intensity of pain is according to the multi - dimensional dimensions of pain in Purwanti *et al* . , (2020) classification of the degree of pain in mild , moderate and severe [12] .

2.4. An Overview of Teenagers

The teenage period is a transition period from childhood to adulthood from the age of 10-24 years . According to the World Health Organization (WHO) , the age group for young people is between 10-19 years , while the United Nations (UN) party says young people are 15-24 years old . Teenage girls will experience menstruation at the age of 12 to 16 years (Rosyida , 2020) .

According to Rosyida (2020) , growth is a change that is characterized by an increase in physical size and can be measured . Meanwhile , balance is the change in quality and quantity . In adolescents , the immune system occurs , changes that are influenced by hormones , stroge , and iron progei , which will experience menstruation , with physical changes , i.e. an increase in body height , skin becomes thinner .It 's fine , hair grows around the vaginal organs and the underarms , the voice becomes softer and higher , the breasts start to grow bigger , the hips get bigger , the thighs become rounder , and they experience menstruation [13] .

The most difficult task of youth development is related to social conformity . Teenagers who have to adjust to being with opposites are the kind of relationships that have never existed before , so they do n't fit in with adults outside of the family environment and school . Teenagers spend a lot of time together with their friends , so the influence of older friends on their attitude , conversation , thoughts , reception , and behavior is greater than on the influence on the family [13] (Rosyida, 2020).

3. **Proposed Method**

In this type of research , the design used is quantitative research design, with the aim of using survey methods to obtain data from a specific natural place, but the researcher carries out treatment in collecting data, by distributing questionnaires, tests and interviews. The aim of this is to find out whether there is a relationship between the level of stress and behavior and the occurrence of nore i in teenage girls at SMAN 8 Tana Toraja.

3.1 Place and Time of Research

This research was carried out at SMAN 8 Tana Toraja which was carried out in 12-24 August 2024 .

3.2. Population, Sampling Techniques, and Research Samples

The population used in this study was all female adolescents at SMAN 8 Tana Toraja , totaling 400 female students , of which 133 were in grade XI , 134 were in grade XI , 133 were in grade XI .

The sampling technique used Stratified Random Sampling. So that the total number of samples in this research is 80 respondents .

3.3. Data Collection Methods

The data were obtained using a self-balanced questionnaire administered by the researchers and conduct interviews with the respondents. However , we first present a level - of - level weld inspection of the section that is included in the respondents . The questionnaires used were a questionnaire about demographic data, a questionnaire about stress levels, a questionnaire about behavior, and a questionnaire about the incidence of dysmenorrhea.

3.4. Data Processing and Analysis

Data processing techniques are carried out by *editing, coding, data entry, tabulating,* and *cleaning data.* The data analysis techniques used are univariate analysis to describe using the frequency of stress levels , fast food consumption behavior and dysmenorrhea incidents and bivariate analysis to determine the relationship between stress levels and fast food consumption behavior with dysmenorrhea incidents in female adolescents at SMAN 8 Tana Toraja . The statistical test used is the *Chi-square test* with a level of significance (*p-value*) <0.05 using the SPSS program .

4. Results and Discussion

Results

1) Univariate Analysis

Once a unique analysis of the variations in the results of this type of activity is carried out, then a description of the role is as follows :

a. Respondent Frequency Distribution

Table 1
Frequency Distribution Based on Respondent Characteristics
At SMAN 8 Tana Toraja

Democracy Data	n	%
Age		
15	20	25.0
16	33	41.3
17	18	22.5
18	9	11.3
Class		
X	26	33.5
XI	27	33.8
XII	27	33.8
Total	80	100.0

Source : primary data , 2024

Based on table 1 , it shows that from 80 respondents , it was found that the characteristics of the age of the respondents were the most numerous at the age of 16 years , with 33 respondents (41.3 %) and the lowest at the age of 18 years , with 9 respondents (11.3 %) . The characteristics of the most numerous class of respondents were class XI and XI I , with 27 respondents (33.8 %) .

a. The stress level

Table 2
Frequency Distribution of Respondents Based on Stress Level
At SMAN 8 Tana Toraja

Stress level	n	%
Normal stress	53	66.3
Mild stress	22	27.5
Moderate stress	5	6.3
Total	80	100.0

Source : Primary Data , 2024

Based on table 2 , it shows that out of 80 returns there are 53 returns (66.3 %) who experience normal stress , 22 returns (27.5 %) experience mild stress and 5 returns (6.3 %) experience moderate stress

b. Consumption behavior of fast food

Table 3

Frequency Distribution of Respondents Based on Fast Food Consumption Behavior at SMAN 8 Tana Toraja

Fast food consumption behavior	n	%
Positive	71	88.8
Negative	9	11.3
Total	80	100.0

Source : Primary data , 2024

Based on table 3 , it shows that of the 80 respondents , there are 71 respondents (88.8 %) who positive experience the behavior of consuming fast - foods , and 9 respondents (11.3 %) experience negative of fast - foods the consumption.

b. Occurrence of dysmenorrhea

Table 4

Frequency Distribution of Respondents Based on the Incidence of Dysmenorrhea at SMAN 8 Tana Toraja

Dysmenorrhea Occurrence	N	%
Mild dysmenorrhea	8	10.0
Moderate dysmenorrhea	55	68.8
Severe dysmenorrhea	17	21.3
Total	80	100.0

Source : Primary data , 2024

Based on table 4 , it shows that of the 80 respondents there were 8 respondents (10.0%) experiencing mild dysmenorrhea, 55 respondents (68.8%) having moderate dysmenorrhea, and 17 respindents (21.3%) having severe dysmenorrhea.

2. Bivairate Analysis

a. The relationship between the level of stress and occurrence dysmenorrhea

To see the relationship between the level of stress on the occurrence of social and social events in teenage girls at SMAN 8 Tana Toraja , a test was carried out *Chi-square* test.

Table 5

Relationship between Stress Levels and the Incidence of Dysmenorrhea in Adolescents Daughter at SMAN 8 Tana Toraja.

Stress level	Occurrence of Dysmenorrhea						*p-value* = 0.435	
	Light		Currently		Heavy		Total	
	n	%	n	%	n	%	n	%
normal stress	6	7.5	37	46.3	10	12.5	53	66.3
mild stress	1	1.25	14	17.5	7	8.8	22	27.5
severe stress	1	1,25	4	5.0	0	0.0	5	6.3

Total	8	10.0	55	68.8	17	21.3	80	100.0

Source : Primary data , 2024

Based on Table 5 , it shows that the returns experiencing normal stress amounted to 53 returns (66.3 %) , of which there were 6 returns (7.5 %) experiencing the same , 37 returns (46.3 %) experiencing dysmenorrhea seriously , 10 respondents (12.5 %) experienced heavy dysmenorrhea . Respondents who experienced mild stress is 22 respondents (27.5) , of which there were 1 respondent (1.25 %) experienced light dysmenorrhea, 14 respondents (17,5%) experienced currently dysmenorrhea, and 7 respondents (8.8%) experienced heavy dysmenorrhea . The number of young people who experience social stress is 5 people (6.3 %) , 1 country (1.3) who experience normal conditions , 4 people (5.0 %) experience normal conditions .

Results of statistical tests with chi - square were obtained with a value of p= 0.435. Because the value is p>α (0.05), then the alternative hypothesis is rejected. It is interpreted that there is no relationship between the level of stress and the incidence of dysmenorrhea in teenage girls at SMAN 8 Tana Toraja.

a. The relationship between consumption behavior of fast food

To see the relationship between consumption behavior of fast food and the behavior of dysmenorrhea in teenage girls at SMAN 8 Tana Toraja , a test was carried out *Chi -square* test.

Table 6

The Relationship between Fast Food Consumption Behavior and the Occurrence of Dysmenorrhea in Adolescent Girls at SMAN 8 Tana Toraja.

Fast food consumption behavior	Dysmenorrhea occurrence Light n	%	Currently n	%	Heavy n	%	*p-value = 0.23* Total n	%
Positive	8	10.0	51	63.8	12	15.0	71	88.8
Negative	0	0.0	4	5.0	5	6.3	9	11.3
Total	8	10.0%	55	68.8%	17	21.3%	80	100.0%

Source : Primary data , 2024

Based on table 6 , it shows that the consumption behavior of fast - food fast- food food positions is 71 re - sponde i n (88.8 %), of which there are 8 re i sponde i n (10.0 %) experiencing light dysmenorrhea , 51 respondents (63.8 %) experienced currently dysmenorrhea , and 12 respondents (15.0 %) experienced heavy dysmenorrhea . Youth were found to be in negative total of 9 respondents (11.3%), of which 4 respondents (5.0%) experienced currently dysmenorrhea , and 5 respondents (6.3%) experienced heavy dysmenorrhea.

The results of the statistical test using chii-squarei were obtained with a value of p= 0,23. Because the value is p>α (0.05), then the alternative hypothesis is rejected. It is believed that there is no relationship between the behavior of consuming fast food and the occurrence of dysmenorrhea in teenage girls at SMAN 8 Tana Toraja.

Discussion

1. Stress Levels

   Based on research carried out at SMAN 8 Tana Toraja , it shows that the majority of respondents experienced normal stress as much as 71.3 % , light stress as much as 27.5 % , and moderate stress as much as 1.3 % . This caused nervous system overreacting to situations, difficulty relaxing, feeling a lot of energy because of anxiety (fatigue), impatience and easily irritated.

   According to the researcher's assumption, stress experienced by students is a state or condition in the form of physical, mental or emotional disturbances caused by environmental demands, so that they are increasingly overwhelmed by various pressures and demands at school. Academic stress on the individual will arise when expectations for achievement of the academic achievement of the individual are high , tasks are inconsistent with the student 's capacity , there are problems with friends and feel bored .

   The results of the research carried out by Palupi II (2020) , show that most of the individuals are experiencing stress from this event . Stress in students caused by a lack of appropriateness of perception between environmental demands and abilities . Academic stress occurs to the individual as a result of the onal resistance felt by the individual in coping with the demands of the academic and has an impact on their physical and mental health [14] .

   Wardah et al . , (2020) also explained that the majority of individuals experienced stress in schools . The individual views the demands of the academic academy which are presented as challenges that can spur the individual to balance himself , then the individual will experience the stress of the academic academy at a low level or can be adjusted but the individual will experience the position of stress. Because basically , this positional stre is needed so that the person can be challenged in doing something [15] .

   Stress is a non - specific human response to stimuli or pressures (stressor stimuli) . Stress is an adaptive response , has a very individual and dual nature, so that a stressor for one person is not necessarily the same response as for another person . Stress is external demands that increase a person's response , for example , objects in the environment or a situation that is objectively dangerous . Stretch is also usually interpreted as a problem , tension , an unpleasant disorder that comes from outside the person (Wardah et al . , 2020) [15] .

2. Consumption behavior of fast food

   Based on the research carried out at SMAN 8 Tana Toraja , it shows that the majority of the positive resources are 71 sources (88.8 %) , and those that are necessitated are 9 sources (11.3 %) .

   According to the researcher's assumption, female students with positive (good) fast food consumption behavior are mostly students at SMAN 8 Tana Toraja who bring lunch from home. This may also be influenced by their pocket money, as the more pocket money they receive, the greater their attraction to buying fast food.

   This research is in line with the research that has been carried out by h Sholihah MD (2019) at the Faculty of Public Health of the university of Airlangga, regarding the consumption of fast food. The research did not find a significant relationship between fast food and diet, this is caused by several factors , namely , exercise habits , and fitness [16] .

In the selection stage of food selection , it is important to pay attention because young people have reached the initial stage . This change has occurred in a wide way among young people 's relationships and the high level of value of people 's lives and interactions with middle - aged people . Therefore , their habits can easily be influenced by their friends . Teenagers can choose whatever food they like .In addition , teenagers spend a lot of time with their middle - aged friends , and eating becomes one of the core ways in socialization .These are the activities that many people do outside the home , which make people a lot of money as they age .If you spend a lot of time outside the home , you will choose the same food as your friend 's taste .The social content that comes from middle - aged people or close friends can have a positive or negative influence [17] (Dianda , 2019) .

3. Occurance of Dysmenorrhea

Based on the research that has been carried out at SMAN 8 Tana Toraja , it shows that 8 (10.0%) respondents experienced mild dysmenorrhea, 55 (68.8%) experienced severe dysmenorrhea, and 17 (21.3%) experienced severe dysmenorrhea. This can be influenced by hormonal factors . The decrease in ovarian hormone levels also stimulates the excretion of prostaglandic uterine secretions which cause vasoconstriction of the urethral vessels and also cause contractions of the urethra . If prostaglandin levels are higher, it will trigger dysmenorrhea.

According to the assumptions of this type of researcher, the dysmenorrhea that occurred in re i female teenagers at SMAN 8 Tana Toraja due to the lack of knowledge of menstruation is related to the dysmenorrhea prevention, lack of exercise , menstruation cycle the abnormal , and a history of health problems in the family .

This research aligns with research conducted by Wardah et al. , (2020) , also shows that a large part of the women experience dysmenorrhea . The conditions experienced by women make them unable to function normally and sometimes require treatment by pharmacological methods . The occurrence of these antecedents can cause a decline in women 's quality of life , an example of which is a female student who experiences a decline in her motivation to learn because of the pain she suffers from feel [15] .

Pain during menstruation (dysmenorrhea) is a common thing that every woman has ever felt . In menstruation , this usually occurs before and at the time of menstruation , which generally takes the form of pain or cramps in the lower part of the body which continues and sometimes spreads to the lower back along the thighs . This feeling of pain can also be accompanied by headaches , nausea, and diarrhea 15 (Wardah et al . , 2020) .

Dysmenorrhea generally occurs in teenagers due to lack of knowledge of regarding to prevention of dysmenorrhea. Dysmenorehea generally occurs in adolescents due to the lack of levels of the hormone progesteron in the blood most often causing the occurrence of pain . Prostaglandins a lot so that the contractility muscle of the uterine muscle is increased and occurs dysmenorrhea. Prostaglandins pain causes the uterine muscle to contract as a reaction to the inflammatory action of decay in the uterine lining.

4. The relationship between the level of stress and the occurrence of Dismenorhea in adolescent girls

Results of statistical tests with chi - square difference value p= 0.435. Since the value of p>a (0.05), the alternative hypothesis (Ha) is rejected and Hypothesis (H0) is accepted. Interpretation that there is no relationship between the level of stresss with the occurrence

of dysmenorrhea in girls at SMAN 8 Tana Toraja his is because respondents who experience normal stress still complain while experiencing severe dysmenorrhea, nd also respond to respondents who do not experience severe dysmenorrhea but complain when experiencing moderate stress.. According to the researcher's assumption, the dysmenorrhea experienced by adolecent girls at SMAN 8 Tana Toraja is caused by the abnormal menstruation cycle , lack of knowledge among t he girls regarding dysmenorrhea prevention, and history of illness in the family .

This study is in line with the study conducted by Pialiani, et al., (2018) entitled The Relationship Between Stress Levels and Dysmenorrhea in Female Students of the Faculty of Medicine, Bandung Islamic University. The results of the study showed that the incidence of moderate dysmenorrhea in the group of subjects experiencing moderate stress was greater than mild stress, but statistically the relationship was not significant (p = 0.63) between stress levels and dysmenorrhea [18] .

The results of a study conducted by Aldona Feronika (2022), entitled. The Relationship between Stress Levels and the Incidence of Dysmenorrhea in Female Students of the Medical Education Study Program at Uin Maulana Malik Ibrahim Malang, stated that there was no significant relationship between stress levels and the incidence of dysmenorrhea. The results of this study are the same as the study conducted by Isra (2022) where there was no significant relationship between stress and dysmenorrhea in medical students of the University of Jambi, Class of 2019 [19] .

Stress is not the only cause of dysmenorrhea because increased prostaglandins are the main cause of dysmenorrhea. but in addition to this it is a chronic ailment and anemia which can also cause or aggravate the feeling painful pain during menstruation . There is also a theory which says that factors that mean narche i at an early age , duration of instruc ion that is greater than seven days i , lack of knowledge about the occurrence of dysmenorrhea, addiction to cigarettes and age factors can also trigger dysmenorrhea..

This research is not in line with research carried out by Azizah et al., (2024) , it is stated that based on the results of data analysis values were obtained which indicate that there is a strong positive relationship between stress and the occurance of dysmenorrhea [20] .

Research also conducted by Putri *et al.,* (2021), showed that there was a relationship between stress levels and the incidence of dysmenorrhea in female adolescents at SMKN 3 Palembang [21.] The results of this study are also not in line with research conducted by Ilmi *et al., (2018), showing that there was a significant relationship between stress levels and the incidence of dysmenorrhea, the results of the Chi-square* test obtained a p-value = 0.037 (p <0.05) which means there is a significant relationship between stress levels and the incidence of dysmenorrhea [22] .

5. The relationship between consumption behavior of fast food and the occurrence of dysmenorrhea

   Results of statistical tests with chi - square in difference value p= 0.023. Because the value p>α (0.05), then the alternative hypotesis is rejected. I think that there is no relationship between the consumption behavior of fast food and its occurrence in nore i in teenage girls at SMAN 8 Tana Toraja This is due to the fact that respondents who have positive fast food consumption behavior are also more likely to have severe menstrual disorders.

According to the assumption of the researcher, consumption of fast food is not the only cause of its occurrence od dysmenorrhea , other factors that influence dysmenrorrhea other than consumption of fast food in example lack of exercise , nutritional status , age, gender, instruction cycle that is not normal .

This study is in line with the study conducted by Sholihah MD (2019) at the Faculty of Public Health, Airlangga University, on fast food consumption. The study did not find a significant relationship between fast food and the incidence of dysmenorrhea [16] . This study is also in line with the study conducted by Tiara Annisa (2022) entitled The relationship between diet and dysmenorrhea in adolescents shows that there is no significant relationship between fast food consumption and dysmenorrhea [23] .

This research it is not in line with the research that has been carried out by Rismawati Simbung et al (2020) , who stated that there is a relationship between the consumption of fast food and the prevalence of dysmenorrhea in teenage girls at SMAN 12 Makassar [24] .

Research conducted by Windy Fira Thania *et al.* (2023), showed that there is a significant relationship between fast food and the incidence of dysmenorrhea in adolescents at SMP Budi Mulia Ciledug. The results of this study are also inconsistent with research conducted by Purwati (2020) on lifestyle and the incidence of dysmenorrhea in adolescent girls, that there is a significant relationship between fast food and dysmenorrhea [25] .

Fast food can affect the dysmenorrhea because it contains trans fatty acids which cause the emergence of prostaglandic hormones which will not affect the uterus to contract and cause pain to occur 3 (Mivanda, 2023). According to the previous opinion , the intention of consuming fast - food food will influence the occurrence in the nore , especially due to the habit of consuming fast - food food , which in particular means that there is a possibility of consumption of fast - food food .content that is within normal limits , so that absorption into the body requires a long process .As a result , it can affect various functions of the body 's organs , one of which has an unfavorable impact on the production organs , especially in women , in a way that directly influences events in the human body 26 (Aulya et al . , 2021) .

5. Conclusions

Based on the research objectives, the conclusions from the results of this research are:

1. It is known that the level of stress among teenage girls at SMAN 8 Tana Toraja .
   a. Normal stress as much as 53 respondents (66.3%)
   b. Mild Stress as much as 22 respondents (27.5%)
   c. Severe Stress as much as 5 respondents (6.3%)
2. We know about the consumption behavior of fast food among young women in SMAN 8 Tana Toraja, which is classified as positive there are many 71 respondents (88.8%), negative there are many 9 respondents (11.3%).
3. It is known that there is an occurrence of dysmenorrhea in female teenagers at SMAN 8 Tana Toraja.
   a. Light dysmenorrhea as much as 8 responden (10.0%)

b. Currenty dysmenorrhea as much as 55 responden (68.8%)
c. heavy dysmenorrhea as much as 17 responden (21.3%)

4. There is no relationship between the level of stress and the occurrence of dysmenorrhea in young women in SMAN 8 Tana Toraja based on the results of the chi-square test with a *p-value* = 0.435 > 0.05.
5. There is no relationship between fast -food consumption behavior and towards the occurrence of dysmenorrhea in young women at SMAN 8 Tana Toraja based on the results of the *chi - square test* with a *p-value* = 0.23 > 0.05 .

Suggestions from the results of this research are that it is hoped that teenagers will maintain a healthy lifestyle which can lead to depression , by searching for information from a variety of other things , it is hoped that educational institutions can give rise to the appearance of health problems . or counseling about the occurrence of dismei nore i in students and the impact it has so that female students can know the factors that influence the occurrence of dysmenorrhea, as well as for further researchers further researchers can research other factors that are related to the occurrence of dysmenorrhea by using a larger sample and using different tests in order to obtain more significant results.

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