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## RELATIONSHIP BETWEEN READINESS AND ANXIETY LEVEL IN ELEMENTARY SCHOOL STUDENTS FACING MENARCHE IN PADEMAWU SUB-DISTRICT, PAMEKASAN

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### ABSTRACT

The signs of puberty in teenagers are including physical changes such as breast development (thelarche), pubic hair growth (pubarche) and armpits, menarche, and ovulation. Menstruation that occurs for the first time is known as menarche. Teenagers facing menarche require good preparation since anxiety and fear will likely appear. Anxiety that occurs makes teenagers experience selective attention that disrupts their concentration. Preliminary studies that have been conducted by researchers are known to have elementary school students who experience anxiety facing menarche in Pademawu (sub-district) as the subjects. This study aims to analyze the relationship between readiness and anxiety level of elementary school students facing menarche in Pademawu, Pamekasan (district). The quantitative cross-sectional study is a research design chosen by researchers. The number of research samples of 75 students was obtained through cluster random sampling. The clusters used as research samples are in different schools and the same sub-district. Multinomial logistic regression is a statistical test for analyzing data. The results of the study were 49.3 percent of students had sufficient knowledge about menarche. As many as 38.7 percents of students received family support about moderate menarche. Furthermore, 68 percent of students were not ready to face menarche, and 45.3 percent of students experienced moderate anxiety. In the statistical test results obtained a correlation value of 0.001. In this research, it is known that there is a relationship between readiness and anxiety level in dealing with menarche in elementary school students in Pademawu, Pamekasan. Family willingness and support are factors that influence respondents' anxiety in facing menarche. Parents are expected to be active in educating their daughters by providing information and motivation in dealing with menarche.

**Keywords:** readiness, anxiety level, menarche, teenagers

### ABSTRAK

Tanda remaja mengalami pubertas adalah perubahan fisik seperti, pembesaran payudara (thelarche), munculnya rambut pubis (pubarche) dan ketiak, menarche serta ovulasi. Menstruasi yang terjadi pertama kali pada perempuan dikenal dengan menarche. Remaja dalam menghadapi menarche memerlukan kesiapan yang baik karena perasaan cemas dan takut akan muncul. Kecemasan yang terjadi membuat remaja mengalami perhatian yang selektif sehingga mengganggu konsentrasi mereka. Studi pendahuluan yang telah dilakukan peneliti diketahui ada siswi sekolah dasar yang mengalami kecemasan menghadapi menarche di Kecamatan Pademawu. Penelitian ini bertujuan menganalisis hubungan antara kesiapan dengan tingkat kecemasan menghadapi menarche pada siswi sekolah dasar negeri (SDN) di Kecamatan Pademawu Kabupaten Pamekasan. Studi kuantitatif dengan cross sectional merupakan rancangan riset yang dipilih peneliti. Banyaknya sampel penelitian sebesar 75 siswi yang diperoleh melalui cluster random sampling. Klaster yang dijadikan sampel penelitian berada sekolah yang berbeda dan di wilayah kecamatan yang sama. Regresi logistik multinomial adalah uji statistik untuk menganalisa data. Hasil dari penelitian yaitu 49,3 persen siswi memiliki pengetahuan yang cukup tentang menarche. Sebanyak 38,7 persen siswi mendapatkan dukungan keluarga tentang menarche yang sedang. Selain itu, 68 persen siswi tidak siap menghadapi menarche, dan 45,3 persen siswi mengalami kecemasan sedang. Pada hasil uji statistik didapatkan nilai korelasi sebesar 0,001. Pada riset ini diketahui adanya hubungan antara kesiapan dengan tingkat kecemasan dalam menghadapi menarche pada siswi sekolah dasar negeri di Kecamatan Pademawu Kabupaten Pamekasan. Kesiapan dan dukungan keluarga adalah faktor yang mempengaruhi kecemasan responden menghadapi menarche. Orang tua diharapkan aktif dalam mendidik anak perempuannya melalui pemberian informasi dan motivasi dalam menghadapi menarche.

**Kata kunci:** kesiapan, tingkat kecemasan, menarche, remaja

## INTRODUCTION

A sign of puberty that continues until sexual maturity indicates someone is entering adolescence. Some signs of a person experiencing puberty are physical changes such as the appearance of hair in the vagina (pubarche), enlarged breasts (thelarche), the appearance of hair in the armpits, menarche, and ovulation (O'Grady, 2008). The beginning of menstruation or menarche is generally experienced by women aged around 10-16 years or classified as early adolescence (Proverawati and Misaroh, 2009).

The average age of women experiencing menarche is 12.4 years, but that age varies based on the ethnic or racial background (Lacroix and Langaker, 2019). White women in the United States experience first menstruation in the average age of 12.6 years, and black women, the average age of 12.1 years (O'Grady, 2008). Based on the 2012 IDHS results, in Indonesia, 89% of women experience their first menstruation (menarche) at the age of 12–15 years. If a woman experiences physical changes, it can be said that they have reached sexual maturity and are ready to reproduce (Central Bureau of Statistics, National Board of Population and Family Planning, Indonesian Ministry of Health, 2013).

The psychological risk of teenagers facing puberty is a lack of preparedness (UNESCO and National Board of Population and Family Planning, 2013). Readiness to face menarche is a condition ready to face the first menstruation which is one of physical maturity (Fajri and Khairani, 2011). According to Retnaningsih, Wulandari and Afriana (2018), 77.8% of students are not ready for early menstruation (menarche). Those who do not have the readiness to face menarche risk of having vulva hygiene behavior that is not good and can cause anxiety (Sholeha, 2016).

Anxiety will arise due to a lack of self-exploration regarding the first menstruation. They consider blood coming out of the genitals to be scary and negative (Siska, Asmuji, and Permatasari, 2016). Someone who experiences or has anxiety will cause irritable insomnia, appearing to worry and concern, a sense of uneasy and nervous arises, the motor activities are undertaken become without meaning and purpose. In general, young women feel fear, anxiety, difficulty concentrating, and tense when they hear the word menarche. This then

makes teenagers less concentrated so they have difficulty in learning (Slavin, 2009). Anxiety makes individuals focus their thoughts on things that are important and put aside others, thus making someone experience selective attention and can not think of other thing (Stuart, 2007). The level of anxiety can affect teenagers' learning achievement because the learning process will succeed if someone can focus on the lesson, but if there are psychiatric problems such as anxiety, sadness, etc., it will affect students' learning achievement (Sistyaningtyas, 2013).

Adolescent Health Care Services (AHCS) is one of the approaches used by the Indonesian government to develop the Youth Health Program. The government uses this approach as an effort to overcome various problems in adolescents. From 2012 to 2014 it was discovered that coverage for adolescents health services in Pamekasan had not yet reached the target. Factors not achieving these targets are AHCS Puskesmas not functioning optimally (Pamekasan District Health Office, 2014). Researchers then conducted a preliminary study to 10 sixth grade female students at the Public Elementary School in Pademawu, Pamekasan. It is known that they are 11–12 years old and do not have menarche yet. The results of the study showed that 4 (40%) young women experienced severe anxiety, 3 (30%) experienced moderate anxiety, 2 (20%) experienced mild anxiety, and 1 young woman experienced very severe anxiety.

Based on the description, the researchers plan to examine the relationship between readiness and anxiety level of elementary school students facing menarche in Pademawu, Pamekasan. The purpose of this research is to analyze the relationship between readiness and anxiety level of elementary school students facing menarche in Pademawu, Pamekasan.

## METHODS

Researchers used quantitative methods with observational analytic types. The study design used is cross-sectional. The population of this research is class VI students of public elementary schools in Pademawu, Pamekasan in 2019 as many as 556 students. The student data was obtained from the Pamekasan District Education Office. Determination of the population through consideration that students in sixth grade elementary school have an

average age of 11–12 year old which is nearing the beginning of the first menstrual period. Furthermore, Pademawu was chosen by researchers because based on the 2014 Pamekasan District Health Profile, the location was one of the areas where the AHCS program was not functioning optimally. After all, its service coverage had not yet reached the target.

The sample size was 75 class of the sixth grade students of public elementary schools in Pademawu, Pamekasan. The sample size is obtained through calculations using the cluster random sampling formula. The criteria for the technique of taking a large sample are the population consisting of clusters or groups of public elementary schools in one subdistrict, in which some students are 11–12 years old, experience transition to puberty, and have different knowledge about menarche. The total cluster in the study area was 46 groups (public elementary schools).

Researchers took a random cluster of population members from 46 public elementary schools and obtained a sample of 6 schools. The determination of the number of 6 public elementary schools is based on the consideration that the number of class VI girls in these schools has met the minimum number of samples that have been determined previously. The school locations used as research sites include Murtajih 3 Public Elementary School, West Pademawu 1 Public Elementary School, Sentol 1 Public Elementary School, Lawangan Daya 3 Public Elementary School, East Barurambat 1 Public Elementary School, and Murtajih Public Elementary School 1. Researchers conducted this research in March to August 2019.

Student readiness to face menarche is the independent variable used in this study. The anxiety level of students facing menarche is the dependent variable used in this study. Besides, the external variables studied were student knowledge about menarche and family support in dealing with menarche.

Data collection techniques by questionnaire (questionnaire) is a technique used in this research. Researchers used a closed questionnaire as a tool to find out the description of knowledge, family support, readiness, and anxiety of students in dealing with menarche. Validity and reliability tests have been conducted by researchers so that the questionnaire becomes a data collection tool with a high degree of accuracy. Before

collecting data, respondents are given an explanation before approval (EBA) first, then asked to fill out informed consent, and then answer or follow the questionnaire given.

Univariable analysis and multivariable analysis are the analysis of the data used. Adolescent knowledge variables about menarche, family support variables, readiness variables, and anxiety level variables facing menarche are described using univariable analysis. Multinomial Logistic Regression is a statistical test used as multivariable analysis. The statistical test is to see the relationship between readiness and anxiety level to deal with menarche, as well as the influence of external variables on anxiety levels.

## RESULT

### Respondents' Knowledge about Menarche

Measurement of respondents' knowledge was carried out using a questionnaire. The results of research based on good, enough, and fewer categories. The respondents' knowledge is said to be good if the value or measurement results are 76%–100%, the category is sufficient if the value is 55%–75%, and the category is less with a value of  $\leq 55\%$  (Arikunto, 2013). Next is the distribution of knowledge of young women regarding menarche.

**Table 1.** Respondents Knowledge about Menarche

Knowledge	Total	Percentage (%)
Less	11	14.7
Enough	37	49.3
Well	27	36
Total	75	100

The results of the study (table 1) showed that the majority of respondents (young women) totaling 37 female students (49.3%) had sufficient knowledge about menarche. Female students who were well-informed about menarche totaling 27 female students (36%). Furthermore, 11 students (14.7%) had less knowledge about menarche.

### Support from Respondents' Family about Menarche

Researchers want to see the amount of family support received by respondents in dealing with menarche which is measured using

a questionnaire. Measurement results are based on low, medium, and high categories. The category is based on component scores that use the norm, low ( $X < M - 1SD$ ), Medium ( $M - 1SD \leq X < M + 1SD$ ), and High ( $M + 1SD \leq X$ ) (Azwar, 2010).

**Table 2.** Respondents' Family Support about Menarche

Family Support	Total	Percentage (%)
Low	27	36
Medium	29	38.7
High	19	25.3
Total	75	100

The results in the table (table 2), it is known that the majority of respondents totaling 29 students (38.7%) received support from families who were facing menarche. Furthermore, 27 respondents (36%) received low family support in dealing with menarche. 19 female students (25.3%) received high family support in dealing with menarche.

#### Student readiness to face Menarche

Readiness to face menarche in students was measured using a questionnaire. The results of measurement of readiness in facing menarche based on the categories of ready and not ready. The categorization results are based on a quantitative approach so that the mention of operational measurement results in the measurement results, namely not Ready ( $X \leq 50\%$ ) and ready ( $X > 50\%$ ) (Sugiyono, 2017).

The results in the above table (table 3) show that there are 51 students (68%) who are not ready to face menarche. On the other hand, respondents who were prepared to face menarche numbered 34 students (32%).

**Table 3.** Respondents' Readiness to face Menarche

Readiness	Total	Percentage (%)
Not ready	51	68
Ready	34	32
Total	75	100

#### Student Anxiety Facing Menarche

The anxiety of respondents examined by researchers was measured through an anxiety questionnaire created by Hamilton (HAR-S).

The measurement results used are mild, moderate, and severe anxiety levels. Hamilton (1959) categorizes the measurement of anxiety level that is mild (total value:  $<17$ ), moderate (total value: 18–24), and weight (total value: 25–30).

**Table 4.** Respondents' anxiety in facing Menarche

Anxiety Level	Total	Percentage (%)
Light	18	24
Medium	34	45.3
Weight	23	30.7
Total	75	100

The results in table 4, show that 34 students (45.3%) experienced anxiety in facing menarche. Furthermore, 23 female students (30.7%) experienced severe anxiety. Respondents who experienced mild anxiety totaling 18 students (24%).

#### The Readiness with Anxiety Level in Facing Menarche

In the table 5, it is known that respondents (female students) who are not ready to face menarche have moderate anxiety by 49% (25 people). The results also showed that more students who were ready to face menarche had mild anxiety of 62.5% (15 people).

The results of the study (table 6) showed that the independent variable was readiness, the p-value was  $0.001 < 0.05$  and the Odds Ratio (OR) was 30.099. These results can be interpreted that there is a significant relationship between the variables of readiness and elementary school students' anxiety level in facing menstruation for the first time. OR values indicate that students who are not ready to face menarche are 30,099 times more likely to experience moderate anxiety than those who experience mild anxiety. Additionally, it is known that the low family support received by students to face menstruation first affects the moderate level of anxiety, with a  $p 0.045 < 0.05$ . The OR results of low family support variables indicate a value of 8.215. The meaning of these results is students with low family support will risk 8,215 times experiencing moderate anxiety when compared to those experiencing mild anxiety.

**Table 5.** The Relationship Between Readiness and Anxiety Levels in Elementary School Students Facing Menarche in Pademawu, Pamekasan

Readiness to Face Menarche	Anxiety in Facing Menarche			Total
	Mild anxiety	Medium anxiety	Severe anxiety	
Not ready	3 (5.9%)	25 (49%)	23 (45.1%)	51 (100%)
Ready	15 (62.5%)	9 (37.5%)	0 (0.0)	24 (100%)
Total	18 (24%)	34 (45.3%)	23 (30.7%)	75 (100%)

**Table 6.** Multinomial Logistic Regression Analysis Variables Level of Knowledge, Family Support, and Readiness towards Anxiety Levels in Facing Menarche

Anxiety Level *			Value of p	OR
Medium	Knowledge	Less	0.177	0.148
		Medium	0.295	2.604
		Well	-	-
	Family support	Low	0.045 **	8.215
		Medium	0.722	1.313
		High	-	-
Readiness	Not ready	0.001 **	30.099	
	Ready	-	-	
Weight	Knowledge	Less	0.265	0.174
		Medium	0.124	5.427
		Well	-	-
	Family support	Low	0.065	12.222
		Medium	0.178	4.902
		High	-	-
	Readiness	Not ready	-	4445688080
		Ready	-	-

\* The reference category is mild anxiety

\*\* Significant ( $p < 0.05$ )

## DISCUSSION

The research that has been conducted to the sixth grade students of public elementary schools in Pademawu, Pamekasan, of the 75 respondents surveyed found that most of the students (49.3%) had a sufficient level of knowledge about menarche in the category. The following research conducted by Putri (2017) showed that the majority of research subjects in SDN 3 Bantul, Yogyakarta there were 30 respondents from 40 students (71.4%) had sufficient knowledge. In contrast to the research conducted by Lutfiya (2017), young women (61.8%) in Surabaya have lack of knowledge.

According to Notoatmodjo (2014), several factors such as age, education, occupation, environment, and social culture will affect individual knowledge. The researchers believe that students' knowledge about menarche is quite influenced by several things, namely education, age, and the environment. When

students' research is at the level of basic education, so information received by respondents regarding reproductive health is only through the introduction of the human body, how to maintain a good body, and how to politely dress. Information is more easily accepted by someone if he has a high education (Notoatmodjo, 2014). In line with opinions Ilmiawati and Kuntoro (2017), that knowledge is very related and related to education, which means that if someone has a high education, it will also have high knowledge.

In this research, the average students are 11–12 years old, where it is still considered to do not reach maturity in thinking process, so that knowledge about menarche is still not optimal. Notoatmodjo (2014) argues that someone who is old enough, will have the ability and strength with a more mature level in thinking and working. Moreover, students in Pademawu also spent more time in the school environment, so that their development and

behavior processes were influenced by friends and teachers. The environment can eventually influence the students' thinking process about menarche. This is based on the opinion of Notoatmodjo (2014) that the development and behavior of individuals or groups can be influenced by the environment around individuals. The socio-cultural system of the community can influence one's attitude in receiving information.

According to research data findings show, the majority of students (38.7%) in this study received support from families who were facing menarche. The research is in line with Ulfah (2011) at SMP Muhammadiyah 5 Yogyakarta which shows that most respondents received family support mean of 20 respondents (58.8%).

Family support that is given, whether emotionally, information, appreciation, or hope and instrumental is what is needed by a young woman to face menstruation that occurs the first time in her life (Salangka, et al., 2018). Respondents only received the four types of support with an intensity that is not too often (sometimes). The results of the family support questionnaire show that the majority of respondents (>50%) choose the answers sometimes compared frequently to the questions given. This is affecting the low level of family support received by public elementary school students facing menarche.

The availability of social support such as providing information, direct assistance, or material assistance will affect someone, such as feeling loved and cared for and valued. The family functions to provide affection, love, and support to family members, both emotional support, information, appreciation, or hope (Cahyani, 2017). Affection given continuously will provide effective development to children (Silalahi and Meinarno, 2010).

The results of the study on the readiness to deal with menarche, it was found that the majority of students (68%) were not ready to face menarche. These results are consistent with research Wardhani (2013) in SDN 1 Purworejo, Madiun (district), from 28 respondents, 25 students (89%) were not prepared to face menarche. In that study, most respondents were not ready in terms of psychology, refused by asking questions about their mothers' gestures, were afraid of menarche, menstruation was considered forbidden to talk about, menstruation was considered dirty, and

considered troublesome because they needed to replace and bring sanitary pads.

In this study, the majority of respondents had the notion that menstruation would occur to them as dirty thing, something that was forbidden to be told to others, and troublesome. The changes that will occur after menarche create a lack of confidence in them. They also feel confused in dealing with it and are not sure they can deal with the pain or pain that will appear during menstruation. Furthermore, students feel unhappy that they will experience menarche, so they do not wait for the first menstruation. This shows the lack of aspects of understanding and appreciation of students in dealing with menarche so that the majority of respondents are not ready.

The researcher believes that the child's age, sources of information and knowledge, and attitudes influence the lack of understanding and self-exploration aspects of students in dealing with menarche. This is based on the findings Jayanti (2012) that factors that influence adolescent readiness to face menarche include age, information sources, knowledge, and attitudes. The age of the respondents is still young around 11–12 years old, where their emotional and psychosocial development is still immature so they feel less confident, confused, and so on. Sources of information received by young women about menarche came from the school. However, the information provided is not detailed and clear. In addition, according to the school, health workers have never conducted counseling related to adolescent reproductive health. More or less information received by students will affect their knowledge about menarche. Students have a negative attitude towards menarche. They are not happy and proud of the phenomenon (menarche). The existence of a negative attitude will later affect the readiness in dealing with menarche.

After the researchers conducted a study at a public elementary school in Pademawu, the results showed that the majority of respondents (45.3%) experienced anxiety while facing menarche. These results are consistent with research Ridwan and Probo (2014) conducted at SDN Ketawang 02 Purwoasri, that the level of anxiety of adolescent girls facing menarche from 35 respondents, found 25 students (71.5%) experienced moderate anxiety. Similar results were also obtained from the research of Retnaningsih, Wulandari and Afriana (2018), that the level of anxiety facing menarche in

SDN 1 Plalangan Semarang was moderate anxiety (55.5%).

According to researchers based on respondents' answers from the questionnaire given, all students (100%) showed symptoms of anxiety both mild and severe symptoms. Symptoms that appear a lot, such as physiological responses are a sense of tension, the emergence of urogenital symptoms, and autonomic symptoms. Furthermore, affective responses that arise such as feelings of anxiety and depressed mood, as well as cognitive responses, namely the onset of sleep disorders (insomnia).

The anxiety that arises in young women can be influenced by age, knowledge, physical condition, environment, and family support. The age that is too young (11–12 years) will affect the psychological child in dealing with various existing problems. The environment around young women such as school, peers, or family contributes to the emergence of anxiety in themselves. Lack of information provided by health workers or schools (teachers) regarding reproductive health (menarche) will indirectly affect the knowledge possessed by young women about menarche. High and low family support provided will affect the anxiety experienced by adolescents.

It is known that 49 percent of students who are not ready to face menarche have moderate anxiety. Readiness is needed by a young woman in facing menarche. Rindwati (2014) argues that the rejection of physiological processes (menarche), the emergence of negative assumptions, and the emergence of a sense of fear and anxiety are a form of response that appears in adolescents who are not ready to face menstruation for the first time. Furthermore, adolescents who are not ready to face menarche are at risk of poor vulva hygiene behavior and can cause anxiety (Sholeha, 2016).

Based on research that has been done to the public elementary school students in Pademawu, Pamekasan, it is known that there is a relationship between readiness and anxiety levels in dealing with menarche in young women there, with a  $p$ -value of  $(0.001) < 0.05$ . The results obtained by these researchers are following the study Sholeha (2016) regarding the relationship between readiness to deal with menarche and the level of anxiety in state elementary school students conducted in Ajung Village, Kalisat, Jember.

Roy (1991) argues that internal factors such as age and knowledge, as well as external factors such as the environment and family support, will affect one's anxiety. Based on statistical tests that have been done, low family support is a factor that influences students' anxiety levels in dealing with menarche. According to research data findings show that low family support will cause students at risk 8,215 times (8 times) experiencing moderate anxiety compared to those experiencing mild anxiety. Students who are not ready to face menarche will be at risk 30,099 times (30 times) experiencing moderate anxiety compared to those experiencing moderate anxiety.

Individuals who have moderate levels of anxiety will make themselves focus on something important and put others aside, make perceptions narrow, and selective attention. This will make students less concentrated in learning so that later it affects their learning achievement. Family support and readiness are very much needed by young women. Students who already have readiness about menarche will feel calm in facing this event because they can control their emotions well. Therefore, support is needed from various parties to prepare young women for menarche so that anxiety does not occur to them. Readiness to face the first time menarche can be done by providing education and explanation related to menarche, as well as giving more attention to students in order to prepare them facing the event calmly and readily.

## CONCLUSIONS AND SUGGESTIONS

### Conclusion

Researchers can conclude that public elementary school students in the Pademawu sub-district, Pamekasan District have sufficient knowledge about menarche. They also receive support from families who are facing menarche. In addition, female students from public elementary school in Pademawu, Pamekasan are not ready to face menarche and have a moderate level of anxiety. The results showed a relationship between readiness and elementary school students' anxiety level in dealing with menarche in Pademawu, Pamekasan.

### Suggestion

It is expected that elementary school students in the sub-district will find a lot of

information about menarche by actively asking mothers or sisters, and having discussions with peers. Furthermore, parents, especially mothers, are expected to play an active role in educating their daughters by providing information and motivation in dealing with menarche. The researcher hopes that the local Education Office can provide training to teachers as facilitators in providing comprehensive reproductive health education for elementary school adolescents. It is also expected that the Puskesmas can develop and foster peer counselors or other parties who can improve healthy behaviors and skills in adolescents, such as madrasah, youth clubs, boarding schools, and so on.

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