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Coping Mechanisms and Anxiety During Menarche in Elementary School Students

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ABSTRACT

Menarche (first menstruation) is a stressor that will be responded to in the form of stress. Many girls at menarche experience psychological pressure. The impacts of psychological pressure include anxiety and fear. Each individual responds differently to stress due to menarche. This response can be adaptive or maladaptive. A maladaptive stress response is a necessary coping mechanism. This study aimed to identify coping mechanisms used by elementary school children to reduce anxiety during menarche. The novelty of this research lies in identifying the types of coping and coping mechanisms in elementary school children when they first menstruate. This type of research was observational with a cross-sectional design. The research population was Aisyah I Nganjuk elementary school children. The inclusion criteria were female students, already menstruating and willing to be respondents. The sample size was 58 students taken by random sampling. The instrument to measure the type of coping uses way of coping, while the level of anxiety is measured using the HARS instrument. The results of the study describe the age characteristics of children in the range of 10-11 years, the most common age at menarche was 10 years, and the coping mechanisms that were often used were regression, projection, isolation, compensation, and apathy. The results of the Chi-square statistical test showed a relationship between coping mechanisms and anxiety during menarche.

Keywords: coping mechanism; anxiety; menarche

INTRODUCTION

Menarche or first menstruation is stress, so it is responded to as stress in the form of anxiety^(1,2). Menarche is a sign that a woman is entering puberty. The stress response during menarche can be adaptive or maladaptive⁽³⁾, depending on personal readiness and environmental influences⁽⁴⁾. The anxiety scale ranges from mild to severe depending on a person's mental, physical, and personality condition. Girls obtain information about menarche and menstruation from teachers, birth mothers, and peers.^(5,6) The problem that often occurs is that not all children receive complete information about menarche and menstruation. Low knowledge about menarche and the menstrual cycle has an impact on the use of coping mechanisms that tend to be ineffective (maladaptive). Manifestations of ineffective use of coping can cause anxiety, worry, fear, depression, frequent isolation, denial, anger, decreased learning achievement, and social isolation.^(7,8) The novelty of the research lies in studying the types of coping and coping mechanisms used by children during menarche. It is hoped that the discovery of the types and mechanisms of coping in children during menarche can provide the right solution to reduce anxiety during menarche.

The prevalence of menarche in school-age children in Indonesia is 96.2%, and the prevalence in East Java reaches 16.3% of the total population aged 11-15 years. The prevalence of menarche in Nganjuk Regency in 2019 was 30% of the total population aged 11-15 years. In a preliminary study conducted on January 22 2021 at the Aisyah 1 Nganjuk elementary school, of the 21 female students interviewed, 71.4% were anxious during menarche and 28.6% did not experience anxiety.⁽⁹⁾

Factors that influence age at menarche are always inconsistent from one study to another, including genetic factors^(10,11), socio-economic conditions⁽¹²⁾, disease and lifestyle⁽¹³⁾, nutritional status^(14,15), activity physical⁽¹⁶⁾, and household conflict factors^(17,18). Thomas et al, in Mishra⁽¹⁹⁾ stated that the age of menarche is determined by

extrinsic factors which are dominant due to living conditions. The main early life factors associated with early menarche are 1) Higher growth rates in childhood, 2) Higher child socio-economic factors, 3) Family conflict and parental divorce, 4) Presence of a stepfather, and 5) Exposure to stressors during or shortly before menarche^(7,20).

Children who always think positively are better prepared to face menarche than children who often complain or think negatively. Research by Putri Via, et al (2019) shows that age and knowledge about menarche in elementary school children influence readiness to face menarche⁽²¹⁾. The younger the age at menarche, the higher the level of stressors. Children need information support from family, teachers, and peers to be able to face the stressors caused by menarche.

Menarche is a natural reproductive condition due to hormonal physiology. Menarche as a stressor is not disturbed because it is natural, but the child's perception of menarche is what is disturbing. Stress conditions are an interdependent system that is determined by the nature, intensity, duration, perception, assessment, and effectiveness of coping⁽²²⁾. A coping mechanism is "a mechanism for dealing with changes received or burdens received."^(14,23) Using successful coping mechanisms means that individuals can adapt to change. The heavy burden that is felt turns into light because of the use of good coping. Coping mechanisms arise when individuals receive heavy burdens or unpleasant conditions. An individual's ability to use coping mechanisms depends on temperament, perception, and cognition of the stressors received.⁽²⁴⁾ Coping mechanisms are formed through learning and remembering activities.^(13,25,26)

An individual's ability to manage stress depends on coping mechanisms. According to Stuart and Sundeen, coping mechanisms are categorized as adaptive and maladaptive^(27,28). Characteristics of adaptive coping mechanisms include: being able to control emotions, carrying out constructive activities, having a broad perception, receiving support from others, and being able to solve problems effectively. Characteristics of maladaptive coping mechanisms include: behavior tends to be destructive, activities carried out are unhealthy, unable to think/disorientated, behavior tends to avoid, and unable to solve problems.

This research focuses on identifying the effectiveness of coping mechanisms used by children to overcome anxiety due to menarche. The variables studied include the type of coping and coping strategies used by children during menarche, in dealing with anxiety due to menarche. This research took place in an elementary school with the hope that researchers would be able to prove the concept of the stress model as a response. This solution is still relevant in the current situation, by knowing the types and coping strategies that children face during menarche, it can be used as a reference for educators to provide help when children experience anxiety due to menstruation by using effective types and coping strategies.

The research aim is to analyze the relationship between coping mechanisms and anxiety about facing menarche in elementary school children. The specific aims of the research are to identify the features of children's anxiety during menarche, identify the types of coping and coping strategies used by children when they are anxious because of menarche, and analyze the relationship between coping mechanisms and anxiety.

METHODS

The type of research carried out was observational analytic with a cross-sectional design. The research location was Aisyiah 1 Nganjuk Elementary School, Nganjuk Regency, East Java, Indonesia. The accessible population was 67 grade 5 and grade 6 elementary school children. The sample size was 58 children, determined based on the Slovin formula. Inclusion criteria were: female, already menstruating, and willing to be researched. The sampling technique was simple random sampling by drawing lots.

The independent variable was coping mechanisms. The dependent variable was anxiety during menarche. The research instruments were a way of coping questionnaire and a HARS questionnaire. Data was collected using interviews to obtain data on coping mechanisms and filling out questionnaires to obtain data on anxiety. The data analysis technique to answer the research objectives and prove the hypothesis uses the Chi-square statistical test with a significance level of 0.05.

This research had passed the ethical feasibility test at the Surabaya Health Polytechnic Ethics Commission Number: EA/738/KEPK-Poltekkes_Sby/III/2022.

RESULTS

The age range of the children studied was 10-13 years. The maximum age was 11 years, 55%, the minimum age was 13 years, only 8.3%. The highest age of menarche was 10 years old at 66.7%, the lowest age of menarche was only 8.3%. Complete description as in Table 1.

The types of coping most often used by students when they were anxious are regression (41.7%), denial (21.6%), and preparing themselves (20%). Projections (11.7%) and the rest were isolation (5%). A complete description of the results of research on types of coping was as follows in Table 2.

Table 3 below, describes children's coping mechanisms when facing anxiety due to menarche, categorized as ineffective at 93.3%, the remaining 6.7% effective.

The stress response level of female students during menarche was mostly anxious (92%), and the rest were not anxious (8%). A clear picture can be seen in Figure 1.

Table 1. Distribution of students characteristics based on age and menarche

Characteristics	Age	Frequency	Percentage
Child's age	10 years	16	26.7
	11 years old	33	55
	12 years old	6	10
	13 years old	5	8.3
Menarche	10 years	40	66.7
	11 years old	9	15
	12 years old	6	10
	13 years old	5	8.3

Table 2. Frequency distribution of types of coping used by children when facing anxiety due to menarche

No	Types of coping	Type	Frequency	Percentage
1	Direct action	Preparing myself	12	20
		Aggression	0	0
		Dodge	0	0
		Apathy/hopelessness	0	0
2	Palliation or palliation as a self-defense mechanism	Fantasy	0	0
		Denial	13	21.6
		Rationalization	0	0
		Identification	0	0
		Introjection	0	0
		Repression	0	0
		Regression	25	41.7
		Projection	7	11.7
		Reaction setup	0	0
		Sublimation	0	0
		Compensation	0	0
		Wrong move	0	0
		Release	0	0
		Isolation	3	5
		Sympathy	0	0
		Cast	0	0
Emotional isolation	0	0		

Table 3. Coping mechanisms used by children when facing anxiety due to menarche

No	Coping mechanisms	Frequency	Percentage
1	Maladaptive	56	93.3
2	Adaptive	4	6.7

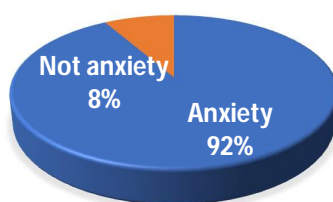


Figure 1. Students's anxiety response during menarche

The cross table of the relationship between coping mechanisms and female students' stress response due to menarche (Table 4) illustrates the proportion of female students who use maladaptive coping mechanisms, most of whom experience anxiety (96.4%), while the proportion of female students whose coping mechanisms are maladaptive but not anxious is only 3.6%. On the other hand, among female students whose coping mechanisms were adaptive, there was 1 child (25%) who experienced anxiety. The results of the Chi-Square statistical test obtained a significance value of 0.000, so there is a relationship between coping mechanisms and anxiety levels during menarche.

Table 4. Cross table between coping mechanisms for children's anxiety at menarche

Coping mechanisms	Worry		Total	Pearson Chi-Square	df	p
	Anxious	Not anxious				
Maladaptive	54 (96.4%)	2 (3.6%)	56	24.935	1	0.000
Adaptive	1 (25%)	3 (75%)	4			

DISCUSSION

This research was designed to solve problems related to the effectiveness of elementary school children's use of coping mechanisms in dealing with menarche anxiety. Puberty is a stressor that can cause stress. Many students who are in the early stages of puberty often experience uncomfortable situations (stress). They often use self-defense mechanisms which sometimes harm themselves, but the problem can be resolved in a moment. The coping strategies used by elementary school-age children (11-13) to deal with problems vary according to various studies, using self-confidence⁽²⁹⁾, the need for assistance from parents and teachers⁽³⁰⁾, hiding the problem and refusing⁽³¹⁾, ask peers for information about the problems they face, besides doing physical activity (sports).⁽¹⁶⁾

School-aged children are in a period of rapid growth and development, including in terms of sexuality, especially puberty. Based on Freud's Psychosexual theory, school-age children are in a latent period. In this phase, children's growth and sexual development begin to occur.^(32,33) Most school-age children experience changes in sexuality which are marked by the arrival of menarche⁽³⁴⁾ so it is feared that it could disrupt the child's daily life.⁽³⁵⁾

The maximum age of the children studied was 11 years old (Table 1), but most menarche was at the age of 10 years. The research results are the same as the research report by Sanders, et al. that girls in New York had menarche at the age of 10 years⁽³⁶⁾. The results of this study are different in Bangladesh and Cameroon in that girls there experience menarche at the age of 12 years⁽³⁷⁻³⁹⁾, in Colombia menarche occurs in girls aged 11 years⁽⁴⁰⁾.

Lifestyle and obesity influence age at menarche in Bangladesh and Cameroon.^(37,38) The age of menarche is also influenced by family conflict, history of childhood infections, and life difficulties.⁽³⁶⁾ Factors that influence the age of menarche include genetic factors^(41,42), socio-economic conditions⁽⁴³⁾, disease and lifestyle⁽⁴⁴⁾, nutritional status^(39,45), physical activity⁽⁴⁶⁾, and household conflict factors.⁽⁴⁷⁾ Thomas et al, in Mishra⁽¹⁹⁾ suggest that the age of menarche is determined by extrinsic factors which are dominant due to living conditions.

The types of coping used by girls in facing menarche include preparing themselves, denying, regressing, projecting, and isolating. The role of teachers and parents is very dominant in preparing girls to face menarche. On the other hand, quite a few children are not ready to accept menarche, which every girl naturally experiences. Some types of ineffective coping include childish behavior, self-isolation, denial, and projection. The impact of using ineffective types of coping includes frequently not going to school⁽³⁵⁾, blaming peers, and impaired willpower.⁽⁴⁸⁾ Differences in children's use of coping types are influenced by the area where they live. Children who live in rural areas use coping differently from children who live in urban areas.^(21,49)

How a person manages stressors depends on perception, intensity, and frequency.^(13,28) The more frequently a stressor is received, the more normal it will be perceived, likewise the intensity of the usual stressor will also be perceived as normal. Not all girls who use adaptive coping mechanisms do not experience anxiety, conversely, not all children whose coping mechanisms are not adaptive also do not experience anxiety. Most children who have reached menarche, if they use maladaptive coping mechanisms, will experience anxiety. The proportion of anxious and non-anxious events in this case depends on the child's perception of menarche as a stressor.^(50,51) Anxiety is an unpleasant feeling with an uncertain cause or no real object.⁽²³⁾

The proportion of girls who use maladaptive coping mechanisms turns out to have a higher level of anxiety about facing menarche. On the other hand, girls whose coping mechanisms are adaptive also experience anxiety during menarche. Children aged between 10-11 years already have a better understanding of themselves.⁽⁵²⁾ Children of this age are already prepared to enter junior high school. They are prepared to explore new social environments. Girls generally experience faster physical development and enter puberty earlier than boys.^(53,54) This transition period usually triggers emotional changes in children⁽⁵⁵⁾. These changes include feelings of shame, confusion, worry, and anxiety. Socially, 10-11 years still have group ties playing with their peers.⁽³⁷⁾

Therefore, parents are obliged to help children use adaptive coping mechanisms due to uncomfortable situations such as frustration, anger, anxiety, sadness, tension, and crisis due to pressure.⁽⁵⁶⁾

The psychological changes experienced by early adolescents tend to be emotionally unstable. Hormonal changes factor as a trigger for physical and psychological changes. The hormones estrogen and progesterone begin to control the female reproductive organs. Coping mechanisms are highly dependent on individual perception. Perception of this stimulus is what can generate neurotransmitters at the ends of nerve cells.⁽⁵⁷⁾ When an individual is exposed to a stressor whose intensity is quite severe, epinephrine and serotonin will be released. These two chemicals affect a person's mood, resulting in emotional changes.⁽⁵⁸⁾ According to research by Lutfiya, (2017) It is stated that positive behavior is one of the determinants of women facing menarche.⁽⁶⁰⁾ The research results show that the most common age at menarche is 10 years. This age is still called child but has already experienced the puberty phase. This phase is marked by the maturation of the reproductive system by the action of the gonadotropin hormone. This hormone determines the secondary sex characteristics of women and men.⁽⁶¹⁾

Girls experiencing menarche often experience anxiety due to a lack of information and knowledge about changes in female reproductive organs. Lack of understanding regarding menarche has an impact on the individual's lack of readiness in dealing with menarche stressors.^(18,48,62) An effort to reduce this psychological pressure is to use peer groups to obtain information about menarche. Individuals who do not utilize peer groups to seek information about menarche will have a negative perception of menarche.⁽⁶³⁾ For children who are still in elementary school, puberty is still taboo, so they have difficulty adapting or responding to the arrival of menarche which makes children feel anxious and panicked.⁽⁶²⁾

The results of the Chi-Square test analysis prove that there is a relationship between the use of coping mechanisms and the level of anxiety during menarche. The results of this research are supported theoretically, if children are not prepared to face menarche from an early age it can cause girls to experience confusion, tension, fear, shock, and worry. Research by Kholifah, et al. reports that girls' lack of readiness to face menarche gives rise to negative (maladaptive) behavior, one of which is anxiety, which can lead to depression, decreased academic achievement, and social isolation.⁽⁶⁴⁾ The coping strategies used by girls in dealing with menarche vary depending on each individual's perception. Some choose to deal with stress with a problem-focused coping strategy and some choose to deal with stress with emotion-focused coping.

Factors that influence a person's coping include age, stage of life, gender, temperament, genetic factors, intelligence, education, ethnicity, culture, economic status, and physical condition.⁽⁶⁵⁾ In theory, it is stated that age development causes differences in the choice of coping strategies.⁽²⁴⁾ A person's psychological structure and resources for coping will change according to age and will differentiate a person's response to pressure. On the other hand, individuals who use the Problem-Focused Coping (PFC) strategy will overcome it by learning new ways or skills. Individuals will tend to use this strategy if they believe they can change the situation. Coping mechanisms focused on solving problems are more often used by adults.⁽⁶⁶⁾

Direct variables that influence anxiety were not studied, such as hormone levels in the blood, blood pressure measurement results, pulse frequency, respiratory frequency, and body temperature. This research also did not screen whether girls who were in elementary school when interviewed for data collection were under academic pressure due to schoolwork, online learning, and other internal factors. The shortcomings of the results of this study can be followed up by examining direct variables that influence anxiety.

CONCLUSION

The research results show that there is a relationship between coping mechanisms and girls' anxiety due to menarche. Girls who use maladaptive coping mechanisms mostly experience anxiety at menarche, while girls who use adaptive coping mechanisms experience very little anxiety at menarche. Types of unhealthy coping that are often used by female students include denial, regression, projection, and isolation. The type of coping that is classified as healthy is preparing yourself. Assistance from parents, school teachers, and older sisters is needed to prepare girls to accept the female reproductive cycle in the form of menarche.

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