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THE EFFECT OF PROVIDING *DEEP BREATHING* RELAXATION TECHNIQUES IN REDUCING ANXIETY LEVELS IN *SECTIO CAESAREAN* SURGERY PATIENTS AT RSIA PASUTRI BOGOR

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ABSTRACT

Background: In patients who will perform *sectio caesarea* surgery in general feel feelings of excessive anxiety due to worry in the process of surgery, and fear of the equipment used in the operating room. **Objective:** This study aims to determine and analyze the effect of *deep breathing* relaxation techniques in reducing the anxiety level of *sectio caesarea* surgery patients in the Operating Room of RSIA Pasutri Bogor. **Method:** This study used a *quasy experimental* research design with One Group *pre test - post test*. The population in the study was 55 mothers who performed *sectio caesarea* surgery in the operating room of RSIA Pasutri Bogor. The sample technique used in this study was *purposive sampling.* **Results:** From the results of the analysis in this study using the *Wilcoxon signed test* obtained *p value* = 0.000 ($\alpha < 0.05$). **Conclusion:** So it can be concluded that there is a significant effect of providing *deep breathing* relaxation techniques in reducing the anxiety level of *sectio caesarea* surgery patients at RSIA Pasutri Bogor. **Suggestion:** Conduct more studies and the application of *deep breathing* relaxation techniques in reducing anxiety levels in *cesarean section* surgery patients.

Keywords: Anxiety, *Deep Breathing* Relaxation Technique, *Sectio Caesarea*

INTRODUCTION

The World Health Organization (WHO), states that the overall number of surgery cases is increasing every year around the world. Research conducted in more than 50 countries in the world estimates that the number of surgeries per year reaches 230 million[1]. Where more than 4 million patients undergo surgery and it is estimated that 50% to 75% experience anxiety during the period leading up to surgery. In the same sense, anxiety is considered a public health problem, given that it affects 15% of the global morbidity rate[2]

Based on data obtained from WHO, the incidence of anxiety worldwide in 2017 reached more than 200 million people with a ratio between the population and anxiety of 3.6%[3]. In 2015, anxiety data in Southeast Asia reached more than 60 million people or about 23% of the population[4] .

In Indonesia, the prevalence of anxiety is estimated at 9%-12% of the general population, while the population rate of preoperative patients who experience anxiety is 80%, of which 65% experience severe anxiety, 35% experience moderate anxiety[5]. Basic Health Research data in 2018, shows the percentage of emotional disorders including anxiety is 9.8% in the adult population. The total adult population in Indonesia is approximately 185 million, so it can be said that there are currently 18 million adults experiencing emotional disorders of anxiety[3] .

The percentage of SC delivery in Indonesia is 17.6%, the highest in the DKI Jakarta region at 31.3% and the lowest in Papua at 6.7%[6] . Based on data on the number of deliveries at RSIA Pasutri Bogor, the total number of deliveries with *cesarean section* in May 2023 was 152 patients. The indications for *cesarean* section surgery include labor with dystocia, hypertension in pregnancy, pre-eclampsia, fetal distress, fetal disproportion, *oligohydramnios*, premature rupture of membranes, *CPD* and a history of previous *cesarean section* surgery.

Although *sectio caesarea surgery* has become a common and routine procedure in modern obstetric practice, it is not uncommon for patients to experience high levels of anxiety before and during surgery. Surgery is a stressor for patients because it can pose potential and actual threats to one's body, integrity and spirit, resulting in emotional reactions such as fear, anger, anxiety, and agitation. Everyone in the face of anesthesia or surgery 99% will have the potential for anxiety[7] .

The peak of anxiety of most individuals while in the waiting room for surgery with symptoms in the form of frequent questions, anxiety, rapid pulse, increased tension of 20% to 30%[8] . Preoperative patient anxiety is very noteworthy, one of the nursing actions to overcome anxiety problems in patients can be independent actions by nurses such as teaching relaxation techniques and distraction techniques.

Babies who are born through *cesarean section* generally often experience respiratory distress because the birth is too fast. The baby does not adapt to the transition from the world inside the womb to outside the womb which can cause tachypnea in the baby. Complications that arise after SC in the mother such as pain in the incision area and the potential for thrombosis[9]. Other complications include the potential for decreased functional ability, decreased elasticity of the abdominal muscles and pelvic floor muscles, bleeding, bladder injury, infection, and acute pain[10].

The selection of complementary therapies needs to be applied by nurses to support patient care and improve quality of life. The modality/complementary therapy will activate sensory perception to provide a relaxing effect, reducing physiological indicators such as pulse rate, blood pressure and respiration. Cognitive behavioral interventions include relaxation, the effects of relaxation are also beneficial in preventing sleep disorders, pain and anxiety.

Several types of relaxation techniques include pregressive muscle relaxation, diaphragmatic breathing, visualization, meditation, *massage,* music therapy, yoga and deep breath relaxation. The purpose of *deep breathing* relaxation techniques is to improve alveoli ventilation, maintain gas exchange, prevent lung atelectation, increase cough efficiency, reduce stress both physical and emotional stress, namely reducing pain intensity and also reducing anxiety[11] .

Based on preliminary data from interviews on June 16, 2023 with 3 respondents, they tend to be anxious, afraid, worried about the operation process, afraid of all the equipment in the operating room and afraid after surgery whether the situation can return to its original state, whether it will be painful during surgery, whether when put to bed can wake up again as before. Based on this data, the researcher is interested in knowing how the effect of providing *deep breathing* relaxation techniques in reducing anxiety levels in *sectio caesarea* surgery patients at RSIA Pasutri Bogor.

Destination

Knowing and analyzing the effect of *deep breathing* relaxation techniques in reducing the anxiety level of *sectio caesarea* surgery patients in the Operating Room of RSIA Pasutri Bogor.

Methods

In this case the researchers used a quantitative type of research using the *Quasy Experiment* (Pre Test and Post Test) method[12] . The population in this study were all *sectio caesarea* surgery patients in June 2023 in the operating room of RSIA Pasutri Bogor as many as 123 patients. The sampling technique used in this study used *purposive sampling* technique[13] . The sample size needed for this study was 55 samples[14] .

Research Results

A. Univariate Analysis

a. Anxiety Level

Table 1

***Pre-test* Frequency Distribution Based on Anxiety Level of *SC* Respondents at RSIA Pasutri Bogor**

Anxiety Level	Frequency	Percentage
No anxiety	**0**	0
Mild Anxiety	2	3,63
Moderate Anxiety	13	23,64
Severe Anxiety	29	52,73
Very Severe anxiety/panic	11	20
Total	**55**	**100,0**

Based on table 1, the results of the frequency distribution of the anxiety level of the most respondents were severe anxiety levels, namely 29 respondents or 52.73%.

Table 2

Frequency Distribution of *Post Test* given *Deep Breathing* Relaxation Technique to *Sectio Caesarea respondents at RSIA Pasutri Bogor*

Anxiety Level	Frequency	Percentage
No anxiety	5	9,1
Mild Anxiety	24	43,63
Moderate Anxiety	11	20
Severe Anxiety	15	27,27
Very Severe anxiety/panic	0	0

Total	55	100,0

Based on table 2, the results of the frequency distribution of the anxiety level of respondents who appeared a lot were mild anxiety levels, namely 24 respondents or 43.63%

C. Bivariate Analysis

Table 3

Differences in *Pre Test* and *Post Test* Anxiety Levels given *Deep Breathing* relaxation techniques to Sectio Caesarea respondents at RSIA Pasutri Bogor

Anxiety Level	N	Min	Max	Mean	Median	SD	*P* value
Pre Test	55	20	48	33.40	32.00	7.420	0.000
Post Test	55	8	36	21.65	20.00	7.019	

Discussion

A. *Pre* and *Post* operative anxiety levels

The results of descriptive data processing showed that the average anxiety of respondents, namely in severe anxiety during the *pre-test was* 52.73% while the *post- test* decreased to 27.27%. In the observation of respondents, it was found that out of 55 respondents, 11 respondents experienced a decrease in anxiety from severe anxiety / panic to 0, a decrease was also found in the level of severe anxiety from the initial 29 respondents to 15, at the moderate anxiety level a decrease of 2 respondents, an increase was experienced by 22 respondents at the mild anxiety level, and at no anxiety increased to 5 people, after the *post-test*.

In developing countries, the incidence is even higher with 15.6% of pregnant women in developing countries experiencing anxiety during their pregnancy, and this increases to 19.8% in the lead up to and after delivery. In some cases, mothers who experience high levels of anxiety even contemplate suicide. In addition, mothers who experience anxiety will have a negative impact on the growth and development of their children, in this case, the fetus they are carrying will be negatively affected as well. This can certainly be overcome through the provision of effective interventions by health workers. In addition, WHO also said that 1 in 10 women in developed countries and 1 in 5 women in developing countries will experience anxiety during pregnancy or after childbirth. This is because many women experience changes, one of which is changes in mental health during pregnancy or after childbirth[6] .

Patients who are about to undergo *sectio caesarea* surgery experience anxiety because they often think, such as fear of pain after surgery, fear of malignancy, fear of facing the operating room and fear of surgery failure. Decreasing anxiety and fear is very important during the pre-anesthesia period, because emotional stress coupled with physical stress increases the risk of surgery. Empowering the patient by taking control of the situation can reduce anxiety. Involving the patient to make decisions or participate in care

management will make the patient feel in control of the situation. Patients can also be assisted in choosing activities or exercises that can reduce anxiety such as distraction, relaxation, providing pre-surgical information and spiritual support (Anjar, 2019). In addition, non-pharmacological therapy is also given, namely *deep breathing* relaxation therapy to respondents in reducing their anxiety level.

Research conducted by Arifin et al., (2021), states that of the 70 respondents who experienced surgery 2 or 2.9% experienced mild anxiety, 26 people or 37.1% experienced moderate anxiety, 41 people or 58.6% experienced severe anxiety and 1 person or 1.4% experienced panic.

In the author's opinion, the success of reducing the anxiety level of preoperative *sectio caesaria* patients by giving *deep breathing* relaxation techniques is strongly influenced by the frequency and duration of implementation. Where the effective time to perform this technique is 1 hour before surgery or when the patient is in the operation preparation room. Because in this period if the relaxation technique is given, it affects the decrease in anxiety felt by the respondent.

B. Effect of *deep breathing* relaxation technique on anxiety level of *sectio caesarea* surgery

In the results of bivariate data processing that compares between groups before giving *deep breathing* relaxation techniques and re-measuring anxiety levels after *sectio caesarea* surgery, the *p value is* 0.000 ($p < 0.05$), this means that there is a significant difference between anxiety levels in *sectio caesarea* surgery respondents before and after being given *deep breathing* relaxation techniques. Based on the results of the author's research, it can be concluded that Ho is rejected and Ha is accepted, which means that there is a significant relationship between the provision of *deep breathing* relaxation techniques in reducing the anxiety level of *cesarean section* surgery patients at RSIA Pasutri Bogor.

The results of this study are in line with research conducted by Miming (2018) with the existence of therapeutic communication carried out which aims to approach, provide complete information, and focus on patient recovery can reduce anxiety in Pre Operative patients will help patients to reduce and eliminate anxiety.

Several types of relaxation techniques include pregressive muscle relaxation, diaphragmatic breathing, visualization, meditation, *massage*, music therapy, yoga and deep breath relaxation. The purpose of *deep breathing* relaxation techniques is to improve alveoli ventilation, maintain gas exchange, prevent lung atelectation, increase cough

efficiency, reduce stress both physical and emotional stress, namely reducing pain intensity and also reducing anxiety[11] .

Anxiety management in the form of providing *deep breathing* relaxation techniques in preparation 1 hour before surgery is proven to significantly reduce the anxiety level of preoperative patients at RSIA Pasutri Bogor. The results of this study can be used as a basis for improving surgical services at the RSIA Pasutri Bogor.

Limitations

From the results of direct experience in the research process, there are several limitations experienced so that it can be a number of factors that can be considered for future researchers to further refine their research, because this researcher himself certainly still has shortcomings that need to be improved. Some of these limitations include: There is no data on what actions were taken by midwives / nurses in an effort to reduce anxiety, In the questionnaire there were no specific anxiety statements, such as: the cause of fear of *cesarean section* surgery, *the* extent of knowledge related to *cesarean section* surgery.

Conclusion

Based on the results of the study, it can be concluded that there is a significant effect of providing *deep breathing* relaxation techniques in reducing the anxiety level of *sectio caesarea* surgery patients at RSIA Pasutri Bogor. For further researchers it is recommended to take a more diverse sample, conduct ongoing research to be able to see and assess any changes in respondent behavior over time and the addition of other variables that can affect anxiety levels before *cesarean section* surgery.

ETHICAL CONSIDERATIONS

This research has conducted an ethical test with Number: 313/LPPM/ITS.PKU/VII/2023.

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Mother's Knowledge and Child Nutritional Status Relationship

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Abstract

Background: Children are a group that has a high risk of their nutrition. Improper breastfeeding and lack of knowledge about nutrition or ability to apply information in daily life, especially mother's knowledge, can increase mortality much higher. Eating patterns, birth weight and economic status are not related to the incidence of malnutrition. This proves that the mother's role is very important in her child's growth and development which can affect nutritional status.
Purpose: To determine the relationship between mother's knowledge and child nutritional status in Makasar Community Health Center, East Jakarta, Indonesia.
Method: This study used cross sectional design. The research sample consisted of 30 respondents. The sampling technique uses purposive sampling. The research instrument is mother's knowledge about child nutrition. Data analysis used the chi-square test to determine the relationship between variables.
Results: It was found that 3.3% of child experienced malnutrition with a low level of mother's knowledge and 50% child experience good nutrition with a good level of mother's knowledge. The results of the study obtained a p value of 0.001 <0.05 which indicates that there is a relationship.
Conclusion: There is a relationship between mother's knowledge and child nutritional status in Makasar Community Health Care.

Keywords: child nutrition, pediatric nutrition, malnutrition

Introduction

WHO shows that an estimated 149.2 million children under the age of five experience stunting, and 45.4 million children are underweight and 38.9 million are overweight or obese.[1] Basic Health Research (Riskesdas) data in Indonesia shows that in 2019 3.9% of toddlers experienced malnutrition, 13.8% of toddlers experienced malnutrition and 27.67% of toddlers who were stunted.[2] In the Food and Agriculture Organization (FAO) report, Indonesia's population is recorded as the country with the highest number of people suffering from malnutrition in Southeast Asia. There are around 17.7 million Indonesians who suffer from malnutrition.[3] Indonesian government had a program aimed at reducing child mortality and improving the quality of life for mothers as part of the fourth and fifth Millennium Development Goals (MDGs) programs. One of them is Infant and Child Feeding (IYCF). IYCF aims to improve the health, nutritional status, growth and development and survival of children in Indonesia.[4]

Based on data from the Jakarta Province Central Statistics Agency (BPS), in 2019 there were 36 residents suffering from malnutrition. in 2020 there were 6,047 children under five. Meanwhile, in the East Jakarta area, there are 1,826 toddlers suffering from malnutrition, compared to other areas of DKI Jakarta. The study at the Makasar Community Health Center, East Jakarta, show cases of toddlers with nutritional problems with specifications of 44 cases of very low body weight in toddlers, 29 cases of stunting in toddlers, 33 cases of malnutrition in toddlers and 8 cases of malnutrition in toddlers.

Children are a group that has a high risk of their nutrition. Growth is very fast, including physical growth, psychomotor, social and mental development. Toddlers should get more attention. Because, the higher the risk factors that apply to the toddler, the greater the possibility that the toddler will have nutritional problems. One of the causes of nutritional disorders in toddlers is insufficient nutrition. Toddlers who do not have enough nutrition will have an impact on nutritional disorders such as shortness or stunting. Stunting is low height compared to age which indicates chronic disturbances in growth hormone.[5] Overweight and obesity in children is a health problem whose

number of sufferers is increasing.[22] Sleep duration is related to overweight and obesity development in infants. Changes in dietary pattern are also related to sleep debt, being one of the mechanisms that contribute to excessive weight gain. [23]

Implementing balanced nutrition in families is very necessary to ensure adequate nutrition in the family, especially for children under five. Because toddlers really need attention in meeting the nutritional needs they consume. If food nutrition for toddlers is not balanced with the body's needs, malnutrition will occur.

Malnutrition includes over-nutrition and under-nutrition which is a problem that occurs in Indonesia, which has not yet been resolved. The causal factors are food and disease which can directly cause malnutrition. Indirect diseases include inadequate family food security, child rearing patterns, inadequate health services and the environment. And the main problem in society is the lack of utilization of community resources.

There are factors that influence the nutritional status of toddlers, namely mother’s knowledge.[6] According to researchers, mothers who are knowledgeable know how to fulfill their child's nutrition and are able to prepare good nutritional intake, then the child's nutritional status will be good and vice versa. Mother’s knowledge is a risk factor for malnutrition in toddlers.[7] Mothers with poor knowledge about nutrition are 22.6 times more likely to have children with malnutrition compared to mothers who have good knowledge. Eating patterns, birth weight and economic status are not related to the incidence of malnutrition. This proves that the mother's role is very important in her child's growth and development which can affect nutritional status.

Improper breastfeeding and lack of knowledge about nutrition or ability to apply information in daily life, especially mother’s knowledge, can increase mortality much higher. One of the susceptible diseases that often occurs in babies is infection. The cause is poor nutritional status and can be influenced by the mother's lack of knowledge about nutritious food.[8] Nutritional disorders can be influenced by various factors. Apart from education, social environmental factors and frequency of contact with mass media also influence nutritional knowledge.[9] One of the causes of nutritional disorders is a lack of nutritional knowledge or the ability to apply information about nutrition in daily life.

Method

1. *Research design*

   This study used cross sectional design; observation, measurement and recording of each independent variable and related variables are carried out simultaneously and measurements are carried out only once on research subjects.[10] The researcher measured mother's knowledge using a valid and reliable questionnaire.

2. *Setting and samples*

   This research was conducted in August 2023 at Makasar Community Health Center, East Jakarta. The sample in this research is a total of 30 participants who had met the inclusion and exclusion criteria with the total sampling technique.

3. *Measurement and data collection*

   The questionnaire used in this research is a questionnaire designed by the researcher himself. Research instruments are methods or tools to collect data in research work. Questionnaire with checklist method functions as a measuring tool in this research. The research instrument used was made in the form of a questionnaire to obtain information and data from respondents, containing demographic data and a questionnaire on mother's knowledge about nutrition which contained a list of 25 true and false questions. Based on results the validity and reliability test in this research, all valid statements are proven by significance values greater than 0.468 and reliability value was 0.855. Nutritional status is assessed by measuring the child's weight and height.

4. *Data analysis;*

   The techniques used for data analysis, including the computer software used, SPSS (Statistical Package for the Social Sciences). Bivariate analysis in this research by using the *chi-square* test. The test results are said a relationship if the p value is < 0.05.

Results

Based on data analysis in this study, the following results are known:

Table 1
Characteristics of Child Respondents

Variables	Frequency	Percentage (%)
Female	6	20.0
Male	24	80.0
1 y.o.	21	70.0
2 y.o.	4	13.3
3 y.o.	2	6.7
4 y.o.	3	10.0
5 y.o.	0	0.0
7-10 kg	18	60.0
11-15 kg	11	36.7
16-20 kg	1	3.3

Notes. y.o. = years old.

Based on Table 1, characteristic of respondents based on gender in shows that most of the respondents are female, namely 6 respondents (20.0%), most of the respondents are 1 years old as many as 21 respondents (70.0%), and most of the weight of child are 7-10 kg.

Table 2
Characteristics of Mother Educational Background

Educational Background	Frequency	Percentage (%)
Junior High School	1	3.3
Senior High School	17	56.7
Diploma	5	16.7
Bachelor	7	23.3

Based on Table 2, characteristic of respondents based on educational background in shows that most of the respondents graduated from senior high school (56.7%).

Table 3
Characteristics of Mother Knowledge

Mother Knowledge	Frequency	Percentage (%)
Low	1	3.3
Enough	13	43.3
Good	16	53.3

Based on Table 3, the respondents (mother) showed that the low knowledge were represented by 1 respondent (3.3%), the enough knowledge were represented by 13

respondents (43.3%), and the good knowledge were represented by 16 respondents (53.3%).

Table 4
Characteristics of Child Nutritional Status

Nutritional Status	Frequency	Percentage (%)
Waste	5	16.7
Underweight	5	16.7
Normal	17	56.7
Overweight	3	10.0

Based on Table 4, the nutritional status variables with the waste category were represented by 5 respondents (16.7%), the underweight category were represented by 5 respondents (16.7%), the normal category were represented by 17 respondents (17%), and the overweight category were represented by 3 respondents (10%).

Table 5
Bivariate Analyses

Mother Knowledge	Child Nutritional Status								
	Waste		Underweight		Normal		Overweight		P value
	F	%	F	%	F	%	F	%	0.001
Low	1	3.3	0	0	0	0	1	3.3	
Enough	4	13.3	4	13.3	2	6.7	13	43.3	
Good	0	0	1	3.3	15	50	16	53.3	

Based on Table 5, the results of the analysis showed chi square test results obtained p value (0.001) < (0.05) then Ho is rejected and Ha is accepted, which means that there is a relationship between variables.

Discussion

Based on the results of the chi-square test that was the p = 0.001 is obtained, it can be concluded that there is a relationship between mother's knowledge about nutrition and the nutritional status of toddlers at the Makasar Community Health Center. The results of this research are in line with research conducted by Susilowati in the journal of the relationship between the level of knowledge of mothers about toddler nutrition and the nutritional status of toddlers in the working area of Gajah 1 Demak Community Health Center.[11] Based on this research; it can be seen that the majority of mothers with good knowledge have toddlers with good nutritional status. That research showed a

significant relationship between the level of mother's knowledge about toddler nutrition and the nutritional status of toddlers.

Based on another research, it can be seen that there is a relationship between mother's knowledge about nutrition and the nutritional status of toddlers.[12] The relationship between the level of mother's knowledge about nutrition and the nutritional status of toddlers in the work area of the Purworejo Community Health Center also show that there is a relationship between mother's knowledge about toddler nutrition and the nutritional status of toddlers.[13]

This phenomenon shows that although knowledge is not a direct factor influencing the nutritional status of children under five, nutritional knowledge has an important role, because by having sufficient knowledge you can know various health problems that will arise.[14] Mother education will have an influence on mother's knowledge of toddler nutrition. The knowledge in this research is the understanding of mothers of toddlers about the nutritional needs of toddlers, including understanding nutrients, the types, benefits and signs of malnutrition. The higher a person's level of knowledge, the easier it is to receive information with a relatively high mindset to apply.

Education is the ability to absorb a person's educational knowledge which is related to a person's attitude towards the knowledge they absorb. The higher the level of education, the easier it is to absorb information in the health sector. The ease with which a person absorbs information will influence the formation of behavior.[15]

However, research conducted by Burhani et al., stated that there was no relationship between the mother's level of knowledge and the family's economic level and the nutritional status of toddlers.[16] The results of a similar study conducted by Morani (2008) on toddlers in Kotaruopan District, Mandailing Natal Regency, also stated that there was no significant relationship between the level of mother's knowledge and the nutritional status of toddlers. This is because there are many things that can influence toddler nutrition, such as food availability, consumption patterns, infectious diseases, the role of community leaders, and mother activities. Mother and family parenting patterns for toddlers and the number of family members also influence the nutritional

status of toddlers with current technological developments, mothers can easily find out information from various media, so that mothers can increase their knowledge.[17]

The mother's level of knowledge about toddler nutrition greatly influences the toddler's nutritional status because the mother is the person with the greatest attachment to the child. The mother's relationship with her child is greater than that of other family members, so she understands all the needs of the child better. The knowledge that mothers have is the main key to meeting toddlers' nutritional needs. Knowledge based on good understanding can foster new good behavior as well. Mothers' knowledge about nutritional needs that is well understood will be accompanied by behavior in providing nutritious food for toddlers. Knowledge can be obtained from information from various media such as TV, radio or newspapers, as is the case in this research. Mothers receive information about the nutritional needs of toddlers from counseling provided by the community health center every time the Posyandu program is implemented. This information increases knowledge which is accompanied by new behavior in providing nutritious food for toddlers so that nutritional status becomes better. This opinion is supported by the theory that information will also have an influence on a person's knowledge. Even though someone has low education, if they get good information from various media such as TV, radio or newspapers, they will be able to increase a person's knowledge.[18]

According to the researchers' assumptions in this study, it was found that there was a relationship between mother’s knowledge about nutrition and the nutritional status of toddlers at the Makasar Community Health Center. In the research, it was found that (3.3%) of toddlers experienced malnutrition with a poor level of mother’s knowledge. (50.0%) toddlers experienced good nutrition with a good level of mother’s knowledge of 15 respondents. This means that the lower the mother's level of knowledge, the worse the nutritional status of the toddler. There are several factors that can influence the mother's level of knowledge, one of which is the level of education. The research results show that the majority of mothers' education is high school with a total of 17 respondents. This shows that the better the mother's level of knowledge, the better the toddler's nutritional status.

Limitation

During conducting this research, the researcher realizes that there are limitations of the researcher such as: the number of respondents was only 30 people, of course still not enough to describe the real situation. In the data collection process, the information provided by respondents through questionnaires sometimes does not show the respondents' true opinions

Conclusion

Based on the results of the frequency distribution of mother's knowledge at the Makasar Community Health Center, it was found that 3.3% of toddlers experienced malnutrition with a low level of mother's knowledge and 50% toddlers experience good nutrition with a good level of mother's knowledge. There is a significant relationship between mother's knowledge and the nutritional status of toddlers at the Makasar Community Health Center.

Ethical Considerations

This research had an approval from the health research ethics committee.

Acknowledgment

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Conflict of Interest

There is no conflict of interest among authors.

Author Contribution

We encourage authors to provide statements outlining their individual contributions or roles to the manuscript.

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Factors Associated with Adherence to Tablet FE Consumption in Adolescents

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Abstract

Background: Anemia has a significant impact on people's health, especially in adolescent girls. Anemia in adolescents can inhibit psychomotor development, interfere with cognitive abilities and learning. Therefore, the problem of bleeding deficiency must be prevented and treated since adolescence with consuming blood tablets regularly. But, based on the data, there are still 4,444 adolescent girls who do not obedience and realize the importance of taking blood-added tablets as an effort to prevent anemia. Thus, this study aimed to determine the correlation between the factors that relate to the obedience of consuming Fe tablet in adolescent girls.

Method: This study used observational analytics with a cross-sectional approach starting from March to July 2023 in SMAN 1 Bojongsoang. This research was conducted on 85 respondents. The data research instrument in this study used MMAS-8 questionnaire and additional questionnaire to explore the cause of disobedient of

consuming Fe tablet then were analyzed by using Spearman's rho test.

Result: The results showed that there was 16.5% samples with low obedience, 43.5% moderate obedience, and 40% high obedience. There was a relationship between Fe tablet's favor with obedience of consuming Fe tablet (r -0.255, p 0.019). There was no relationship of Fe tablet t's preferences (p 0.927), parent's alert (0.325), teacher's alert (0.207), inconvenience of taking Fe tablet (p 0.623), completed Fe tablet (0.547), and forgetting to take Fe tablet with obedience of consuming Fe tablet (0.988).

Conclusion: There was a relationship between Fe tablet's favor with obedience of consuming Fe tablet in adolescent girls in SMAN 1 Bojongsoang. Suggestions for education institution is to optimize the socialization about the risk of anemia and the urgency of consuming Fe tablet. Thus, for student can increase the obedience of consuming Fe tablet regularly.

Keywords: Anemia, Fe tablet, Obedience, Adolescent girls

Introduction

Adolescence is a time of psychic, physical and mental changes, during which there is a transition from childhood to adulthood. The WHO organization defines youth as people between the ages of 10 and 24. At this age, when adolescents enter puberty, as many as 4,444 women will experience menstruation. Menstruation will bleed 16 to 33.2 cc and will lose iron ± 1.3 mg per day. In this condition, adolescent girls during menstruation are susceptible to anemia.(1)

Women of childbearing age tend to suffer from nutritional anemia because women menstruate every month and this is exacerbated by the lack of iron in the food they consume. Anemia is an iron deficiency caused by depleted iron stores due to the formation of hemoglobin.(2)

Anemia is a health problem that occurs throughout the world, especially in developing countries, including Indonesia. According to data obtained from the World Health Organization (WHO) in 2018, the incidence of anemia cases worldwide is quite high, including those that occur in adolescents, especially adolescent girls, by 26.2%, while the incidence of anemia cases is 26.2%. Anemia occurs in 49.1% of women.(3) The World Health Organization says more than 30% of the world's population suffers

from anemia.

The prevalence in developed countries is 4.3-20 and in developing countries 30-48 have iron nutrition anemia. Globally, 4,444 of the 43% of affected people had children, 38% of pregnant women, 4. 444 of the 29% of women were not pregnant, and 29% of the 4,444 women of childbearing age were diagnosed with anemia.(4)

In Indonesia, iron deficiency anemia (iron nutrition anemia) is one of the nutritional problems that is still unresolved, both in pregnant women and adolescents. Based on RISKESDAS data in 2018, anemia in pregnant women increased by 11.8% compared to 2013. 37.1% of pregnant women were anemic in 2013 and 48.9% in 2018. This figure is due to the high rate of anemia in adolescent girls, especially in women of childbearing age by 25% and 17% (Kementerian Kesehatan RI. Surat Edaran tentang Pemberian Tablet Tambah Darah pada Remaja Putri dan Wanita Usia Subur.(5)

In general, anemia can reduce physical strength and the body's ability to fight infectious diseases. In adolescent girls, the impact of anemia can reduce the ability to concentrate and pay attention to schoolwork. Anemia in adolescent girls can be caused by irregular menstruation and menstruation, as well as a diet that is less nutritionally balanced. Eating a balanced diet can provide enough energy for the body, but on the other hand it can have an impact on decreasing brain capacity and decreasing interest in learning in adolescents.(6)

Anemia has a significant impact on people's health, especially in pregnant women, anemia pregnant women will cause bleeding in pregnant women, premature babies, low birth weight babies, heart, kidney, and brain disorders, death during childbirth. While anemia in adolescents can inhibit psychomotor development, interfere with cognitive abilities and learning. Aulakh R. Adolescent Anemia: Risk Factors.2016;. Therefore, the problem of bleeding deficiency must be prevented and treated since adolescence, because 4,444 adolescents will become pregnant later.(7)

Examining Means of Reaching Adolescent. Giving blood tablets is an effective way to overcome the problem of anemia. If consumed regularly then Hb levels will increase to. Raghvendra G. Weekly Iron Folate Supplementation in Adolescent Girls – An Effective Weekly Iron Folate Supplementation in Adolescent Girls – An Effective Nutritional Measure for the Management of Iron Deficiency Anaemia.2014;(May 2013). In addition, according to research, Falkingham et al (2010) stated that consuming

TTD can increase levels in women and adolescents and increase IQ in people with anemia.(8) A study conducted in India by Deshmukh et al (2008) states that Fe tablets have less impact if taken for three months in early pregnancy and it is recommended to store iron in sufficient quantities before pregnancy.(9)

Based on RISKESDAS 2018, it is known that the coverage of TTD received by adolescent girls is 76.2%, out of 76.2%, 80.9% receive TTD at school (students). Based on the figure of 80.9%, blood tablets consumed by adolescent girls ≥52 items are only 1.4%, while <52 items are 98.6% of the Indonesian Ministry of Health. Key Results of RISKESDAS 2018. 2018; That is, there are still 4,444 adolescent girls who do not realize the importance of taking blood-added tablets as an effort to prevent anemia.

Adherence of adolescent girls in taking Fe tablets is an indication of the success of the prevention and management program of anemia in adolescents. Non-adherence to consumption of Fe tablets can inhibit the benefits of iron supplementation thereby inhibiting the absorption of iron by the body. Similarly, if young women obediently take Fe tablets, then their bodies can inhibit iron absorption due to forward movement.(10)

According to Yuniarti (2015), adolescent girls are still not obedient to taking Fe tablets because they do not clearly understand Fe tablets and also because of the side effects of taking Fe tablets 51.8% of subjects experience side effects such as nausea, nausea, constipation, feces turn black causing non-compliance with Fe tablet consumption. Another reason is the taste of Fe tablets which are not easy to swallow and also smell fishy. Young women are also often depressed, do not remember and are also afraid to take Fe tablets.

According to Erwin's research (2017), adherence of adolescent girls in using Fe tablets is also influenced by young women's attitudes towards Fe tablets, specifically these attitudes are positive or negative. Adolescent girls who had a positive attitude were 4,444 more likely to consume Fe pellets compared to adolescent girls who had a negative attitude 4,444 were more likely to be non-compliant with Fe pellet consumption. The results of the chi-square statistical test obtained a p-value of 0.001 ($p < 0.05$), so it can be concluded that there is a relationship between the attitudes of adolescent girls in adherence to Fe tablet consumption.

Method

This study used observational analytics with a cross-sectional approach. The population of this study was 515 adolescent girls in SMAN 1 Bojongsoang. This research starting from March to July 2023. This research was conducted with 85 respondents based on Sopiyudin Dahlan's formula using proportionate stratified random sampling.

The research sample was according to the inclusion and exclusion criteria. The inclusion criteria in this research design were 1). Grade I-III students in SMAN 1 Bojongsoang ; 2). female students; 3). Present during the research; 4). willing to be a respondent. The exclusion criteria were those who uncooperative during the research. Data processing and analysis used the Spearman test to analyze the correlation between the factors that associated with the obedience of Fe tablet consumption. The significance of the test results was determined based on the p-value <0.05. The data research instrument in this study used MMAS-8 questionnaire and additional questionnaire to explore the cause of disobedient of consuming Fe tablet.

Results

Table 1
Distribution of the Variable Characteristics

No	Variable	Frequency (n)	Percentage (%)
1	Age (years)		
	15	6	7.1
	16	39	45.9
	17	35	41.2
	18	8	5.9
2	Fe tablet's preferences		
	Yes	35	41.2
	No	50	58.8
3	Fe tablet's favor		
	Yes	15	17.6
	No	70	82.4
4	Parent's allert		
	Yes	36	42.4
	No	49	57.6
5	Teacher's allert		
	Yes	39	45.9
	No	46	54.1
6	Inconvenience of taking Fe tablet		
	Yes	48	56.5
	No	37	43.5

7	Completed Fe tablet		
	Yes	14	16.5
	No	71	83.5
8	Forgetting to take Fe tablet		
	Yes	76	89.4
	No	9	10.6

As displayed in Table 1, most adolescent girls's aged 16 years (45.9%), almost all adolescent girls's respon no for Fe tablet's preferences (58.8%), almost all adolescent girls's respon no for Fe tablet's favor (82.4%), almost all adolescent girls's respon no for parent's alert (57.6%) and teacher's alert (54.1%) to make them obedience to consume Fe tablet regulary. Part of them agree that inconvinience of taking fe tablet become a factor to disobey in consuming fe tablet (56.5%). Almost of them incomplete of consume Fe tablet (83.5%), and almost all of them agree that forgetting to take Fe tablet as a factor to disobey of consuming Fe Tablet.

Table 2
Distribution of obedience of consuming Fe tablet

Obedience of consuming Fe tablet	Frequency (n)	Percentage (%)
High	14	16.5
Moderate	37	43.5
Low	34	40

The results of table 2 showed that out of 43 adolescent girls had moderate obedience (43.5%), 34 adolescent girls had (40%) low obedience and 14 adolescent girls (16.5%) experienced high obedience.

Table 3
The correlation between factor and obedience of consuming Fe tablet

No	Variable	*r*	*p*
1	Fe tablet t's preferences	0.010	0.927
2	Fe tablet's favor	-0.255	0.019
3	Parent's allert	-0.108	0.325
4	Teacher's allert	-0.138	0.207
5	Inconvenience of taking Fe tablet	0.054	0.623
6	Completed Fe tablet	0.067	0.545
7	Forgetting to take Fe tablet	-0.002	0.988

The results of table 3 showed that based on data analysis, the relationship

between Fe tablet's favor with obedience of consuming Fe tablet conducting coefficient correlation's value was (r) -0.255 and p value = 0.019 < α = 0,05. Thus, there was a relationship between Fe tablet's favor with obedience of consuming Fe tablet (r -0.255, p 0.019). Then, there was no relationship of Fe tablet t's preferences (p 0.927), parent's alert (0.325), teacher's alert (0.207), inconvenience of taking Fe tablet (p 0.623), completed Fe tablet (0.547), and forgetting to take Fe tablet (0.988) with obedience of consuming Fe tablet because all p value > α = 0,05

Discussion

As displayed in Table 1, most adolescent girls's aged 16 years (45.9%), almost all adolescent girls's respon no for Fe tablet's preferences (58.8%), almost all adolescent girls's respon no for Fe tablet's favor (82.4%), almost all adolescent girls's respon no for parent's alert (57.6%) and teacher's alert (54.1%) to make them obedience to consume Fe tablet regulary. Part of them agree that inconvinience of taking fe tablet become a factor to disobey in consuming fe tablet (56.5%). Almost of them incomplete of consume Fe tablet (83.5%), and almost all of them agree that forgetting to take Fe tablet as a factor to disobey of consuming Fe Tablet.

WHO data (2017) explains that the prevalence of anemia in 2016 of 33% occurred in women of childbearing age, with around 613 million women aged between 15 and 49 years. The results of Riskesdas (2013) explain the anemia rate of 21.7%, according to the age group the incidence rate in children aged 5-14 years is 26.4% and in children aged 15-24 years is 18.4%. Data shows that 23.9% of women suffer from anemia.

This research is supported by research by Yuniarti, Rusmilawaty, and Tunggal, T. (2015, p34) entitled "The Relationship of Adherence to Taking Fe Tablets with the Incidence of Anemia in Young Women in Ma Darul Imad, Tatah Makmur District, Banjar Regency" explained, adolescents aged 15 to 18 years are a group that is vulnerable to anemia. The main cause of nutritional anemia in adolescent girls is malnutrition.nutrition through diet, while the need for iron in the body and menstruation is relatively high. Above average. Iron loss can occur in young women who are on a diet and have more and longer menstrual periods. Young women are prone to low levels of haemoglobin when not accompanied by a balanced iron intake. Another reason is because young women often maintain their appearance and desire to stay slim or thin by

dieting or eating less. A diet that is not balanced with the body's nutritional needs will cause the body to lack nutrients.(11)

Knowledge is one of the factors that influence individual behavior in using blood supplements, because knowledge is the dominant factor in shaping a person's actions. Knowledge is all information that someone receives from outside and is accompanied by an understanding of the information obtained.(12)

In line with research on the relationship between family support and compliance with Fe tablet consumption at Nanggalo Health Center, Nanggalo District, Padang City in 2015. The results showed that 59.4% of respondents received low family support and 71.9% of respondents had low adherence to Fe tablet consumption. From statistical tests, it can be concluded that there is a relationship between family support and adherence to Fe tablet consumption ($p<0.05$). For this reason, it is recommended to nurses or other health workers to start inviting and involving family members.(13)

Based on research on the relationship between family support and compliance with the use of Fe tablets at the Nanggalo Health Center, Nanggalo District, Padang City in 2015. The results showed that 59.4% of respondents had low family support and 71.9% of respondents had low adherence in using Fe tablets. From statistical tests, it can be concluded that there is a relationship between family support and adherence to Fe use ($p < 0.05$). For this reason, other medical personnel should start inviting and involving family members.(13)

Consistent with Susanti's (2016) research which concluded that adherence to iron tablet consumption is high after high motivation in school, especially if supplementation is combined with monthly education/teaching sessions. This research is in line with research conducted (14) at SMPN 9 December, most of which received good academic/teacher support of up to 74.4%.

Some of the reasons cited by subjects for not taking supplements include laziness/boredom (29.1%), pill breaking/loss (20.0%), and forgetting (19.4%). The most complaints of subjects after the use of supplements were dizziness (38.8%), nausea / irritability (34.3%), and easy drowsiness (21.1%).(15)

The results of table 2 showed that out of 43 adolescent girls had moderate obedience (43.5%), 34 adolescent girls had (40%) low obedience.

The results showed that people who were obedient to using fe tablets were

mostly poor and non-compliant people, namely 37 adolescent girls (43.5%). In this study, respondents did not routinely take Fe tablets distributed at school every Friday and did not routinely take Fe tablets once a week. Respondents said the reason they did not take Fe tablets was because young women thought they did not need to take Fe tablets because they did not feel any symptoms. Another reason is that teenagers do not take fe pills because they are forgetful, bored, lazy and fe pills smell fishy. Respondents also experienced side effects after taking Fe tablets, namely dizziness, nausea, and drowsiness. These reasons explain why young women do not take Fe tablets regularly.

Obedience is a change in behavior from non-compliant behavior. Adherence problems are an obstacle in giving iron supplements every day, therefore maintaining compliance with iron supplement consumption can be done by taking iron supplements directly witnessed by management representatives, sending short messages to research samples.(16)

The results of table 3 showed that based on data analysis, the relationship between Fe tablet's favor with obedience of consuming Fe tablet conducting coefficient correlation's value was (r) -0.255 and p value = 0.019 < α = 0,05. Thus, there was a relationship between Fe tablet's favor with obedience of consuming Fe tablet (r -0.255, p 0.019). Then, there was no relationship of Fe tablet t's preferences (p 0.927), parent's alert (0.325), teacher's alert (0.207), inconvenience of taking Fe tablet (p 0.623), completed Fe tablet (0.547), and forgetting to take Fe tablet (0.988) with obedience of consuming Fe tablet because all p value > α = 0,05.

One of the causes of anemia in adolescent girls is at the time of menstruation which can occur between the ages of 10 to 16 years or in early adolescence, the amount of blood flowing during menstruation causes iron loss ranging from 12 to 15 mg per month or equivalent to 0.4 to 10mg mg per month 0.5 mg per day (Retno, 2017). During menstruation, women not only lose iron but also lose basal iron, so that in total women lose 1.25 mg of iron per day. The amount of bleeding per month is about 30 to 50 cc. This condition causes anemia in women. Anemia is characterized by low levels of hemoglobin (Hb) or hematocrit above the threshold value due to low production of red blood cells (erythrocytes) and Hb, increased red blood cell damage, or excessive blood loss.(17)

In accordance with the research of Cahyaningtyas (2017), statistical test results

show that consumption of Fe pellets is effective in increasing hemoglobin levels in adolescent girls of SMA 2 Ngaglik Sleman. This study showed an increase in hemoglobin levels after consuming Fe pellets. The intervention given to respondents by taking Fe tablets is very helpful in overcoming iron anemia. Factors that influence the increase in hemoglobin concentration in adolescent girls are age, menstrual frequency, nutritional status, diet, type of food consumed, consumption of Fe pellets and physical activity.(18)

Researchers assume that the Hb value can be influenced by lack of awareness in consuming Fe tablets or lack of intake of foods containing iron, because more adolescents do not like vegetables and more instant or ready-to-eat foods are consumed.(18)

Another factor that also influences this phenomenon is the lack of family support, because some parents work and pay less attention to their children, so adolescents often forget to take Fe tablets independently. A particularly supportive factor is teacher support and young women's understanding of the importance of taking Fe tablets.(19)

The results of this study are in line with several previous studies, including a literature review conducted by Amir Nelda (2019) analyzing all Indonesian adolescents, showing that there is no significant relationship between knowledge and compliance with Fe pellet consumption.Research conducted by Lestari et al (2015) at SMAN 2 Banguntapan Bantul analyzed data using the Fisher Exact correlation test and stated that there was no relationship between knowledge and compliance Fe consumption in adolescents. The third study was conducted by Risva et al (2016) at Diponegoro University using the chi-square method and obtained p value = 0.875 and P > 0.005 meaning there is no relationship between knowledge and Fe tablet usage habits.(19)

This research is supported by research by Saptarini and Susilowati (2015) which found that 53.3% did not adhere to taking Fe tablets, 49 respondents reported experiencing more than one complaint after taking Fe tablets. As many as 73.6% of respondents felt nauseous after taking iron tablets In addition to nausea, 18.9% of respondents complained of an unpleasant smell of iron tablets and 7.5% of respondents complained of dizziness after taking iron tablets. The most common complaint of those surveyed was dizziness due to the metallic smell of iron tablets. Based on the results of

the study showed that there was a relationship between the level of preference for the use of Fe tablets and adherence to taking Fe tablets (r -0.255, p 0.019).(20)

In addition to being influenced by behavioral factors and knowledge, Fe pellet consumption in adolescents is also influenced by the taste of Fe pellets, causing Fe pellet consumption to be unpleasant. The number of foods fortified high in iron is also one of the causes of adolescents absorbing Fe tablets less. This study is in line with the research of Budiarni and Subagio (2012), 48.2% of subjects did not consume TTD because it tasted bad and smelled fishy. Therefore, few subjects appreciated the efficacy of blood supplements and adhered to their consumption (Rahmawati, 2012).

Researchers assume that consumption of vegetables containing iron can also affect Hb values. More growing adolescents prefer vegetables and tend to eat instant foods and junk food to increase blood after menstruation.

Researchers also assume that the existence of this association may be influenced by adolescent adherence to taking Fe tablets. If adolescents consume Fe tablets regularly, Hb levels will also increase. Meanwhile, if adolescent compliance is lacking in consuming Fe tablets, the Hb value will decrease. If Fe can be combined with the taste of food or drinks that young women tend to like, the better the level of adherence of young women in consuming Fe ablet will result in an increase in Hb value.

Limitation

Some limitations of this study include external variables that affect Fe pellet consumption are not well controlled by researchers, such as the reason survey participants use Fe pellets, and parental roles, cognition, interests, emotional/psychological habits, body image, availability of Fe tablets, personal and socioeconomic experiences. But researchers hope that with adequate knowledge, consumption of Fe tablets during menstruation in adolescent girls can be increased.

Conclusion

The most research subject was in moderate obedience (43.5%). There was a relationship between Fe tablet's favor with obedience of consuming Fe tablet (r -0.255, p 0.019). There was no relationship of Fe tablet t's preferences (p 0.927), parent's alert (0.325), teacher's alert (0.207), inconvenience of taking Fe tablet (p 0.623), completed

Fe tablet (0.547), and forgetting to take Fe tablet with obedience of consuming Fe tablet (0.988). Suggestions for education institution is to optimize the socialization about the risk of anemia and the urgency of consuming Fe tablet. Thus, for student can increase the obedience of consuming Fe tablet regularly especially for adolescent girls in SMAN 1 Bojongsoang.

Ethical Considerations

Please describe the ethical issues in the study, including how informed consent was obtained from respondents/participants. Provide a statement of approval from the health research ethics committee, including its reference number.

Request new consent when there are indications of undesirable events during the study (which did not previously exist). Researchers should be neutral to new findings, not give opinions about their findings and leave it to experts. The researcher keeps the findings confidential, if forced then the researcher opens the secret after explaining to the subject about the necessity of the researcher to keep the secret and how much the researcher has violated this principle, by revealing the secret. There is an IC Sheet with explanation (PSP) that will be submitted to participants. There is an explanation of the process of obtaining consent, using appropriate procedures (feasibility of obtaining subject consent). Data confidentiality guarantee, the subject understands that the subject's data is kept confidential, unsolicited, and applies to all subjects. The element of coercientity is present or not, how do researchers explain that participation in this study is not coercive, there is no coercion.

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Conflict of Interest

The author declares that there is no conflict of interest regarding the publication of this article. All authors have disclosed financial or personal relationships with individuals or organizations that could potentially influence the research presented in this work. In addition, there are no competing financial interests that may influence the interpretation or presentation of the findings.

Sri Lestari, Intan Yusita, alyxia Gita Stellata stated that there is no other potential conflict of interest, including but not limited to patent ownership, consulting agreements, or other situations that can cause conflicts. If a new conflict of interest arises or becomes apparent after the publication of this article, the author commits to promptly update this disclosure.

Author contribution

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Work:

Sri Lestari, Intan Yusita, Alyxia Gita Stellata as authors on the research presented in this article is conducted independently of external influences, and the author maintains full control over the research process and its results.

Sri Lestari and Hasna Shafa Huwaida as data miner

Alyxia Gita Stellata as a data analysist expert

Sri Lestari, Intan Yusita, Alyxia Gita Stellata as an editor

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The authors Sri Lestari, Intan Yusita, alyxia Gita Stellata have personal relationships

that can influence the work presented in this article.

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Analysis of Postpartum Blues In Postpartum Mothers In West Kedaung Health Center Working Area, Tangerang District in 2023

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Abstract

Postpartum Blues is influenced by age, education, parity, type of delivery, physical fatigue, husband's support, and family support. This research aims to determine the factors associated with the incidence of postpartum blues in west Kedaung Health Center Working Area, Tangerang Regency in 2023. This research design uses a cross-sectional quantitative descriptive approach. Research respondents The population in this study was parturient mothers in West Kedaung Health Center Working Area, Tangerang Regency, in October-December 2023, totaling 183 people. The sampling technique used is proportional sampling. The results of the research showed that the frequency distribution of postpartum blues was 20%, the age of postpartum mothers who were not at risk was 20-35 years, 65.7%, mothers with low education were 77.1%, multiparous mothers were 57.1%, and the type of birth was normal. 82.9%, 61.4% of postpartum mothers experienced physical fatigue, 57.1% of mothers did not receive husband support, and 58.6% of mothers did not receive family support. Postpartum mothers need to know information about postpartum blues so that mothers can prevent or overcome the occurrence of postpartum blues.

Keywords: Education, Family Support, Husband's Support, Parity, Physical Fatigue, Postpartum Blues, Type of Childbirth

Introduction

Postpartum begins when the baby is born and the placenta comes out of the uterus, until the next six weeks, accompanied by the recovery of organs related to the womb, which experience changes such as injuries and so on related to childbirth.[1]

Postpartum mothers will experience physiological, psychological, and social adaptations. However, not all postpartum mothers can go through the postpartum

adaptation smoothly. Postpartum mothers may experience psychological disorders during the postpartum period, one of which is anxiety and anxiety can result in postpartum blues.[2] Often mothers who experience postpartum blues develop longer and are more severe in intensity. Mothers experience deep sadness and feel worthless, so they feel disturbed in carrying out daily activities. Around 15% of postpartum mothers experience Postpartum Depression (postpartum depression) which is a continuation of untreated postpartum blues. The impact of postpartum depression is that the mother will experience prolonged and increasingly severe depression to the point of wanting to hurt the baby or herself.[1]

Women with postpartum blues will show symptoms such as crying frequently, feeling anxious easily, being irritable, sensitive, lacking concentration, easily stressed, feeling fragile and helpless, restless, and experiencing sleep disorders.[3] Changes in mood such as frequent crying, irritability, and often being sad or quickly changing to happy, feeling worried about the condition of her future pregnancy, starting from fear of miscarriage, fear of giving birth, worry about the future of her child in the future, and many other things. Of every 1000 pregnant women, about 17% of women will visit a psychiatric unit. Five percent will experience mild depressive mood disorders in the first week after giving birth, namely postpartum blues and 2% will develop psychosis during the postpartum period. Between 10 and 15% will develop depression after giving birth. Postpartum blues occurs in around 50% of women within 4-5 days after giving birth.[1]

Factors that cause postpartum blues include family support, knowledge, pregnancy status, type of delivery, and hormonal factors (in the form of changes in estrogen, progesterone, prolactin, and estriol levels that are too low. Estrogen levels drop significantly after giving birth, apparently, estrogen has an effect suppression of the activity of non-adrenaline and serotonin enzymes which play a role in mood and depression), demographic factors (parity and age), occupation, postpartum mother's background, physical factors, inability to adapt, experience in the process of pregnancy and childbirth.[4]

Research conducted by Dina R.S (2020) on factors related to the incidence of postpartum blues in the 2020 Youth Health Center area of East Kalimantan, the results of the research showed that statistical tests concluded that there was a relationship between maternal age and postpartum blues carried out using the chi-square test with a

level significant alpha 5%. The statistical test results obtained a value of X2 = 14.387 with P-value = 0.000 < 0.05.

Method

This research aims to determine the factors associated with postpartum blues in West Kedaung PUSKESMAS Working Area, Tangerang Regency in 2023. This research design uses a cross-sectional, quantitative descriptive approach. Research respondents the population in this study was parturient mothers in In West Kedaung PUSKESMAS Working Area, Tangerang Regency, in October - December 2023, totaling 183 people. The sampling technique used is proportional sampling. The sample in this study was 70 respondents. Based on recapitulation data in the work area of the West Kedaung Community Health Center with an age range of 15-44 years, an average of 70 respondents were obtained in 3 months. The sampling technique used is proportional sampling.

Results

Table 1. Frequency Distribution of Postpartum Blues for Postpartum Mother's in West Kedaung Health Center Working Area, Tangerang Regency in 2023

Postpartum Blues	Frekuensi (f)	Persentase (%)
Yes	14	20,0
No	56	80,0
Sum	**70**	**100**

Based on Table 1 above, it can be seen that of the 70 respondents who did not experience postpartum blues, there were 56 respondents (80%) while those who experienced postpartum blues were 14 respondents (20.0%)

Table 2. Frequency Distribution of Factors that Influence the Occurrence of PostPartum Blues in Postpartum Mother's in West Kedaung Health Center Working Area, Tangerang Regency in 2023

Factors Affecting PostPartum Blues	Frequency	Percentage (%)
Age		
Risk	24	34,7
No Risk	46	65,3
Education		
Tall	16	22,9
Low	54	77,1
Parity		
Primipara	30	42,9
Multipara	40	57,1
Types of Childbirth		
Normal	58	82,9
Section	12	17,1
Physical Fatigue		
Yes	27	38,6
No	43	61,4
Husband Support		
No	40	57,1
Yes	30	42,9
Family support		
No	29	41,4
Yes	41	58,6

Table 2 shows the frequency distribution of factors that influence PostPartum Blues in postpartum mothers. For the age factor, of the 70 respondents, 46 respondents (65.3%) were not at risk, while 24 respondents (34.7%) were at risk. After that, of the 70 postpartum mothers who had low education, there were 54 respondents (77.1%) while those with higher education were 22.9% or 16 respondents. Furthermore, regarding the parity factor, of the 70 respondents, 40 respondents were multiparous (57.1%) and 30 respondents were primipara (42.9%). Apart from that, there were 70 respondents regarding the type of delivery, 58 respondents (82.9%) were normal birth types, while 12 respondents (17.1%) were cesareans. After that, in the physical fatigue category of the 70 respondents, there were 43 respondents (61.4%) who experienced fatigue while 27 respondents (38.6%) did not experience fatigue. Regarding husband's support, of the 70 postpartum mothers who did not have husband's support, there were 40 respondents (57.1%) while those who had husband's support were 30 respondents (42.9%). Finally, for family support, of the 70 respondents, 41 respondents (58.6%) had family support, while 29 respondents (41.4%) had no family support.

Discussion

Age

Based on the research results, it is known that there is a relationship between age and postpartum blues in postpartum mothers in the work area of the West Kedaung Community Health Center, Tangerang Regency in 2023 as evidenced by the value ρ (0.003) < α (0.05). Statistical test results also obtained an OR value of 5.714 ≈ 5.7, meaning that respondents who were at risk age had a 5.7 chance of experiencing postpartum blues. With a 95% confidence level, it is believed that the CI value is (1.925 – 16.965).

Age is a unit of time that measures the time a living creature has existed. The older you get, the more mature a person's level of maturity and strength will be in thinking and working. A woman's age during pregnancy and childbirth is often associated with the woman's mental readiness to become a mother. Most people believe that the right time for a woman to give birth is between 20-35 years of age, and this is optimal for a mother to care for the baby.[4]

The mother's emotional emotions are in line with research conducted by Dina (2020) regarding factors related to the incidence of postpartum blues in the 2020 Youth Health Center area of East Kalimantan. The results of the research showed that statistical tests concluded that there was a relationship between maternal age and postpartum blues carried out using the chi-test square with an alpha significance level of 5%. The statistical test results obtained a value of X2 = 14.387 with a P-value = 0.000 < 0.05.

The author's analysis in this research shows that every pregnant woman can adapt to face changes in her life. Some can adjust and some are unable to adjust, then feelings of sadness, worry, and other stress occur which are called postpartum blues. The mother's age at birth is divided into ages at risk and not at risk. The mother's age influences the incidence of postpartum blues because of the mother's physical and mental preparation process for new changes, namely the presence of a baby in her life.

Education

This is in line with Kurniasari's research which shows that there is a significant relationship between education and the incidence of postpartum blues with p-value = 0.00, OR = 2.625, where respondents with low education have a 2.625 times greater

chance of experiencing postpartum blues. The same research was also made by Irawati and Yuliani which stated that those in education below high school experienced the most postpartum blues compared to those in higher education. Mothers who have low education tend to have many children and lack techniques for caring for babies. This is also supported by Manuring's research which states that mothers with elementary/middle school education are four times more likely to experience postpartum blues than mothers with high school or Diploma I education.[6]

Based on the research results, it is known that there is a relationship between education and postpartum blues in postpartum mothers in the work area of the Kedaung Barat Health Center, Tangerang Regency in 2023, as evidenced by the value ρ (0.015) < α (0.05). Statistical test results also obtained an OR value of 3.864 ≈ 3.9, meaning that respondents who had low education had a 3.9 chance of experiencing postpartum blues. With a 95% confidence level, it is believed that the CI value is (1.405 – 10.625).

According to Green (2018), the level of education is a predisposing factor for a person to behave so educational background is a very basic factor in motivating a person towards healthy behavior and a reference for one's learning. The mother's education level greatly influences the incidence of postpartum blues. The more the mother understands the importance of knowledge about postpartum blues, the higher the mother's awareness of dealing with postpartum blues. Educational status also showed a significant relationship between respondents who had secondary school education and the incidence of postpartum blues compared to women who had elementary school education.[5]

In line with research conducted by Wulan, Mawati, and Sutandi (2023) regarding the relationship between maternal age and education and the incidence of postpartum blues in Mijen Village, Kaliwungu District, Kudus Regency in 2019, the results of the research showed that the results of statistical tests showed that there was a relationship between maternal education and incidence of postpartum blues with p value 0.008 (> 0.05)

The author's analysis in this study is that these results mean that highly educated people can overcome postpartum blues. Likewise, postpartum mothers with low education tend to have a low level of rationality so they are unable to get through the postpartum period well.

Parity

Based on the research results, it is know that there is a relationship between parity and postpartum blues in postpartum mothers in the work area of the Kedaung Barat Health Center, Tangerang Regency in 2023 as evidenced by the value ρ (0.017) < α (0.05). Statistical test results also obtained an OR value of 4.071 ≈ 4.1, meaning that respondents who have primiparous parity have a 4.1 chance of experiencing postpartum blues. With a 95% confidence level, it is believed that the CI value is (1.392 – 11.904).

This is in line with research conducted by Devi (2018), namely that the incidence of postpartum blues mostly occurred in primiparous obstetric status, namely 6 respondents (20%) with a p-value = 0.011 (<0.05). Meanwhile, there were 3 respondents (10%) who were multiparous, meaning there was a relationship between obstetric status and the incidence of postpartum blues. Other researchers also said that postpartum mothers with primiparous status who experienced baby blues syndrome had a greater frequency (70%) compared to postpartum mothers with primiparous status who did not experience baby blues syndrome (55%).

Postpartum disorders related to parity status are the patient's obstetric history which includes the history of pregnancy and delivery as well as whether there were complications from previous pregnancies and childbirth and occur more often in primiparous women. It is more common for primiparous women to suffer from postpartum blues because after giving birth, primiparous women are in an adaptation process, previously only thinking about themselves once the baby was born, if the mother did not understand her role, she would become confused while the baby had to be cared for.[6]

According to researchers, parity does not affect postpartum blues, which can be seen again from the mother's pre- and postpartum emotional and mental readiness. Apart from that, support from the surrounding environment can also influence the mother's mental development, and other factors can influence the occurrence of postpartum blues, such as a continuity of care program carried out by student midwives or independent practice midwives for the mother from the time of pregnancy until the mother decides she wants to use the device. contraception so that during the monitoring period the pregnant mother's condition has received counseling in dealing with pregnancy by determining family planning.

Types of Childbirth

Based on the research results, it is know that there is a relationship between the type of delivery and postpartum blues in postpartum mothers in the work area of the West Kedaung Health Center, Tangerang Regency in 2023, as evidenced by the value ρ (0.023) < α (0.05). Statistical test results also obtained an OR value of 11,600 ≈ 11.6, meaning that respondents who had a normal type of delivery had an 11.6 chance of experiencing postpartum blues. With a 95% confidence level, it is believed that the CI value is (1.659– 81.102).

Based on Henshaw's theory, labor complications are related to the occurrence of postpartum blues. A long labor will make the mother have an unsatisfactory birth experience, so that the mother shows a negative self-image and can continue to become angry which can complicate the mother's adaptation process to her new role and function. A stressful labor process will make it more difficult for the mother to control herself, making the mother more irritable and can reduce the mother's effective coping abilities.[7]

The results of this research are in line with research conducted by H.A.P. Desthalia (2014) shows that the value is 0.036 (ρ value < 0.05) and the odds ratio is 4.89 (OR = 4.89). So it can be interpreted that there is a relationship between the type of delivery and the incidence of postpartum blues. This research concludes that there is a relationship between the type of delivery and the incidence of postpartum blues in postpartum mothers at the Balung Regional Hospital, Jember Regency.

The author's analysis in this study is that the type of delivery can influence the incidence of postpartum blues because a person has had a bad experience that causes psychological trauma which can reduce the mother's ability to care for herself and the baby. Nurses can carry out the role of nurses in providing education and carrying out routine antenatal care during the mother's pregnancy so that the mother can know the condition of the fetus she is carrying and can prepare for the birth that will take place, provide education to the mother and family about the impact of this type of delivery, carry out further studies or providing information and counseling to postpartum blues mothers.

Physical Fatigue

Physical fatigue can trigger postpartum blues. The addition of new roles and

responsibilities for mothers in caring for babies, long labor processes that have never been experienced before, and lack of rest and sleep can cause physical fatigue in mothers.[8]

Based on the research results, it is know that there is a relationship between physical fatigue and postpartum blues in postpartum mothers in the work area of the Kedaung Barat Health Center, Tangerang Regency in 2023, as evidenced by the value ρ (0.003) < α (0.05). Statistical test results also obtained an OR value of 2.319≈ 2.3, meaning that respondents who were physically exhausted had a 2.3 chance of experiencing postpartum blues. With a 95% confidence level, it is believed that the CI value is (0.476 – 11.285).

Mothers who only work at home taking care of their children can experience a crisis situation and reach emotional disturbances/blues because of the tiredness and exhaustion they feel. Housewives who take care of all household affairs them selves are likely to have pressure on their responsibilities either as a wife or as a mother.[9]

According to researchers' assumptions, work is related to the incidence of postpartum blues, because of the existing and increasing workload. There is a dual role conflict as a mother and wife, which can create new problems for women who only do housework and take care of children. After carrying out this research, mothers can prepare themselves to face the dual role of mother and wife or when mothers have work outside of housework so that mothers can divide their time and mental health during the postpartum period.

Husband Support

Based on the research results, it is known that there is a relationship between husband's support and postpartum blues in postpartum mothers in the work area of the Kedaung Barat Health Center, Tangerang Regency in 2023, as evidenced by the value ρ (0.032) < α (0.05). Statistical test results also obtained an OR value of 3.357≈ 3.4, meaning that respondents who did not have a husband's support had a 3.4 chance of experiencing postpartum blues. With a 95% confidence level, it is believed that the CI value is (0.476 – 11.285).

Many factors can influence postpartum mothers to experience postpartum blues, based on the results of researchers' interviews, several reasons why mothers experience postpartum blues include a lack of information on how to care for a baby, lack of

readiness to accept their new role as a mother, and support from both husband and family which is still felt to be lacking. This research is in line with Kurniasari's research which showed that as many as 17.1% of respondents experienced postpartum blues.[5]

A husband's support is defined as a caring attitude shown in the form of good cooperation, providing moral and emotional support. The husband's social support is a form of husband's support in providing psychological assistance in the form of motivation, attention, and acceptance. Husband's support is a relationship that is helpful and has special value for the wife as a sign of a positive bond.[5]

Husbands play an important role in the occurrence of postpartum blues and it is hoped that husbands will realize that their wives need them at certain times and husbands are expected to be there when their wives need them. This support is not only in the form of psychological support but physiological, assessment, information, and financial support which is needed by the wife and in a relationship that mutually gives and receives real help, this help will place the individuals involved in the social system which in the end will be able to provide love and attention, so the support provided is packaged in its entirety so that the wife feels comfortable and can give birth well.[10]

The results of this study support research conducted by (Irawati & Yuliani, 2014) showing that there is an influence of husband's support on the occurrence of postpartum blues with a p-value of 0.013. The results of this research are in line with research conducted by (Anggraini & Husada, 2014) based on the results of the chi-square statistical test with a P value of 0.000. This supports the opinion expressed by Videbeck in the journal Irawati & Yuliani, (2014), namely that husband's support is the biggest factor in triggering postpartum blues. This is because the husband's support is an important coping strategy when experiencing stress and functions as a preventive strategy to reduce stress. Husbands play an important role in the occurrence of postpartum blues and it is hoped that husbands will realize that their wives need them at certain times and husbands are expected to be there when their wives need them.

According to researchers' assumptions, a husband is a family member who is very close to the mother. All forms of action taken by the husband related to the mother's postpartum period will have an impact on the mother's psychological condition and the smoothness of the mother's postpartum period. In the first week postpartum, mothers need psychological and material support from their husbands. After conducting

this research, it is hoped that the husband, as someone very close to the mother, can provide positive support and more attention to the mother during the postpartum period.

Family supports

The family support referred to in this research is moral support and physical support from in-laws, siblings, and the mother's parents who live or are close to the postpartum mother who can directly help the mother. Social factors are quite closely related to the occurrence of postpartum blues because first-time mothers find it difficult to adjust to their new role as mothers.[11] Caring for a baby is not an easy task, especially for new mothers, in postnatal care family support is very necessary. If the family does not provide support, it makes the mother sad and overwhelmed in caring for her baby in the first days.[8]

Based on the research results, it is know that there is a relationship between family support and postpartum blues in postpartum mothers in the work area of the Kedaung Barat Health Center, Tangerang Regency in 2023, as evidenced by the value ρ (0.016) < α (0.05). Statistical test results also obtained an OR value of 4.016 ≈ 4, meaning that respondents who did not have family support had a 4 chance of experiencing postpartum blues. With a 95% confidence level, it is believed that the CI value is (1.404 – 11.483).

Caring for a baby is not an easy task, especially for new mothers. In post-natal care, family support is very importan, because the direction of the husband and family, especially the mother, is very influential and becomes an important reference for the mother in caring for her baby daily. If the husband and family do not provide support, it will make the mother sad and overwhelmed in caring for her baby in the first days.[8]

The results of this research are in line with research by Rahmadayanti (2018) in Palembang which states that there is a significant relationship between family support and the incidence of postpartum blues with a p-value of 0.030. The same results were also found in Kamila's (2019) research on the relationship between birth history, socio-economics, and family support with the incidence of postpartum blues which obtained a p-value of 0.013, meaning there is a relationship between family support and the incidence of postpartum blues. Likewise, research by Fatmawati and Gartika (2019) on the relationship between social support and pregnancy planning and the incidence of postpartum blues states that there is a relationship between family social support and the

incidence of postpartum blues with a p-value of 0.000, meaning that family support greatly influences the occurrence of postpartum blues in mothers.

According to researchers' assumptions, there is a relationship between family and postpartum blues because most postpartum mothers live with extended families such as in-laws, siblings, and the mother's parents. A small number live with a nuclear family consisting of only their husband and children.

Conclusion

Based on the analysis of research results and discussion, it was concluded that the frequency distribution of postpartum blues was 20%, the age of postpartum mothers who were not at risk was 20-35 years, 65.7%, mothers with low education was 77.1%, and multiparous mothers were 57.1%. , the type of birth was normal as much as 82.9%, postpartum mothers had experienced physical fatigue as much as 61.4%, mothers did not receive husband support as much as 57.1%, mothers did not receive family support as much as 58.6%. It was also found that there was a significant relationship between maternal age (p-value = 0.003), education (p-value = 0.015), parity (p-value = 0.017), type of birth (p-value = 0.023), physical fatigue (p-value = 0.03), husband's support (p-value = 0.032), family support (p-value = 0.016) with postpartum blues in the Kedaung Barat Health Center Working Area, Tangerang Regency.

Based on the research results, it is recommended that respondents know information about postpartum blues so that mothers can prevent or overcome the occurrence of postpartum blues

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The Effect of Murrotal Al-Qur'an Audio on First Stage Labor Pain among Maternity Women

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Abstract

The purpose of this study is to determine the effect of Murrotal Al-quran Audio on first stage labor pain among maternity women in Prof. dr. J. A Latumeten Hospital Maluku Province, Indonesia. The study design is quasy experimental. The population is all maternity women who were in the first stage labor in Januari 2022 which consisted of 68 women. 30 women were selected purposively and agreed to join the study. The inclusion criteria are muslim women who had no hearing problems and labor complication. The intervention was an audio of Murrotal Al-quran Surah Ar-Rahman for 30 minutes. A numeric rating scale was used to measure the pain level before and after intervention. The bivariate analysis was done by Mann Whitney test. The results show that majority of women (60%) experienced a moderate level of pain before and after intervention in the control group. While, in the experiment group, majority of women (60%) experienced moderate level of pain before intervention and majority of them (66,6%) experienced mild level of pain after intervention. The bivariate analysis shows that there was a significant difference of pain score between experiment and control group after intervention (p= .005). In addition, there was a significant difference of pain score before and after intervention in the experiment group (p= .005). There was an effect of Murrotal Al-quran Audio on first stage labor pain among maternity women in Prof. dr. J. A Latumeten Hospital Maluku Province, Indonesia in 2022. The Murrotal Al-quran Audio is effective to decrease labor pain among maternity women. Nurses and midwives who work in the labor room are urged to implement the murroral Al-quran Audio to help maternity women in decreasing labor pain.

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Keywords: murrotal, labor, pain.

Introduction

Childbirth is the process where the baby, placenta, and amniotic membranes exit the uterus of the birth mother[1]. Normal delivery occurs at term gestational age/after 37 weeks of gestation or more without complications. The labor process begins (inpartu) when the uterus contracts and causes bleeding in the cervix (opening and thinning) and ends with the complete birth of the placenta .

Labor pain is a physiological condition that begins to arise in the first stage of labor in the latent phase and the longer the pain is felt, the stronger it becomes, the peak of pain occurs in the active phase. The intensity of pain during labor affects the psychological condition of the mother, the birth process, and the well-being of the fetus. The birthing process causes many mothers to experience anxiety when they are about to give birth. Uterine contractions are one of the causes of painful sensations, making the mother anxious about childbirth[2].

At the end of pregnancy, the mother and fetus prepare themselves to face the birth process. The fetus grows and develops in the process of preparing for life outside the womb. Mothers undergo various physiological changes during pregnancy in preparation for the birth process and to play the role of mother. Labor and birth is the end of pregnancy and the starting point of life outside the womb for newborns. Labor begins when the uterus contracts and causes changes in the cervix which opens and thins and ends with the complete birth of the baby and placenta. The experience of labor can be experienced by mothers for the first time (primi), or the second or more (multi). 60% of primiparas described uterine contraction pain as "unbearable, intolerable, extremely severe, or excruciating," with the other 30% describing it as "moderately severe". Childbirth pain ranked among the most intense pains recorded compared with other sources of acute pain (such as a fracture or deep laceration)[3,4,5].

Factors related to labor pain are parity, age, perception, anxiety, fear of childbirth, culture, coping style, previous experience, husband or family support, individual perception of pain, the role of the midwife in childbirth, education, expectation regarding pain, and socio economic status[6,7,8]. The impact of labor pain are Chronic pain, Post-partum stress syndrome, Undesired psychological (anxiety), Physiological consequences (increasing of sympathetic nervous system, changes in blood pressure, heart rate, breathing) and Prolong labour[6].

The management of labor pain can be done by pharmacological and non-pharmacological therapy. Pharmacological therapy is analgesic. Nowadays, non-pharmacological methods using distraction techniques are starting to gain a lot of interest. Distraction is the act of diverting the pain experienced by doing something else, so that the patient does not focus on the pain. Non Pharmacological therapu are acupressure, acupuncture, cold compresses, warm compresses, hydrotherapy, hypnotherapy, endorphine massage, relaxation and distraction techniques, ex murotal al-quran therapy[10,11]. Indonesian Government has released a to ensure the midwifery care for childbirth as stated in Indonesian Law for Healht No. 17 in 2023, Chapter V that Maternal health efforts need to be carried out during pre-pregnancy, pregnancy, childbirth and post-partum.

Rumkit TK.II.Prof.dr.J.A.Latumeten is one of the hospitals in Ambon City. Based on data obtained from the hospital, the number of births is uncertain every month but on average there are 60 births a month or every day an average of 2-3 births are Muslim. Apart from that, a preliminary study conducted by researchers showed that all mothers who gave birth experienced moderate to severe pain when facing the first stage of labor and had never been given non pharmacological therapy. Based on this background, the author is interested in conducting research on the effect of murottal therapy on maternal pain in the first stage of labor at Rumkit TK.II.Prof.dr.J.A.Latumeten.

Method

Method should be structured as follows:

1. *Research design*

   This study is a quasy experimental with control group.

2. *Setting and samples*

   The study was conducted in Rumkit.Tk II.Prof.dr.J.A. Latumeten Ambon (Hospital), January to February 2022. The Population was all maternity women (primiparous) who were in childbirth during the study period (N=68). However, 60 women were recruited as the sample. The inclusion critera are muslim, first stage active phase labor, no hearing disorders, not > 7 cm of CD, normal fetal heart rate, latent phase no more than 12 h, chepalic presentation, no maternal/ fetal

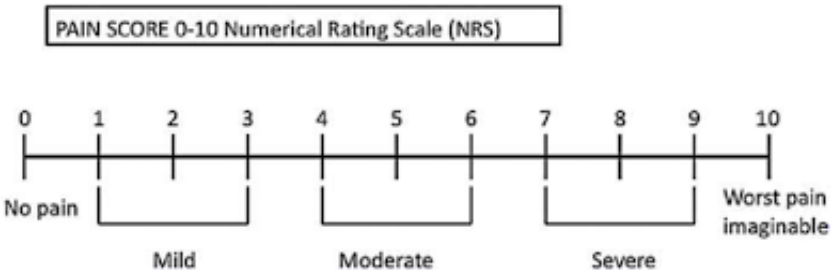
complications, labor support from the family, no contraindication for vaginal delivery.

3. *Intervention (applies to experimental studies)*

The intervention was murrotal alquran audio (Surah Ar-Rahman) for 30 minutes. it was played for all women who were in experiment group. The routine care was provided in both experiment and control group. The instrument used were numeric rating scale, tape, and handphone.

4. *Measurement and data collection*

The numeric rating scale was used to measure the pain score before and after intervention. The score then was classified into:



Picture 1. Pain score classification

5. *Data analysis;*

Data were analyzed by univariate and bivariate analysis. Univariat analysis was used to determine the level of pain and bivariate analysis was used to analyze the differences of pain score within and between group. Mann whitney test and Wilcoxon sign rank test were used to anayze the data.

Results

Univariate Analysis

Table 1
Pain Levels Before and After Intervention in the Experiement and Control Group

Variable	Labor Pain Level	Frekuency (f)	Percentage(%)
Pre-Test control	Mild	2	13,0%
	Moderate	9	60%
	Severe	4	26,7%
	Mild	1	6.7%

Variable	Labor Pain Level	Frekuency (f)	Percentage(%)
Post-Test control	Moderate	9	60.0%
	Severe	4	26.7%
	Very severe	1	6.7%
Pre-Test Experiment	Moderate	9	60,0%
	Severe	4	26,7%
	Very severe	2	13,3%
Post-Test Experiment	Mild	10	66.6%
	Severe	4	26.7%
	Very severe	1	6.7%
Total		15	100%

In table 4.2, it can be seen that the Pre-Test Control with 15 respondents had a majority of mild pain levels which was 2 people (13.3%), and moderate pain was 9 people (60.0%) and severe pain was 4 people (26.7). Then in the Post Control group, it was found that the level of mild pain was 1 person (6.7%) and moderate pain was 9 people (33.3%), as well as severe pain was 4 people (26.7%) and very severe pain was 1 person (6.7%).

Bivariate Analysis

Table 2.

The differences of pain score pre and post-test in the experiment and control group

Pain pre test						**Mean Dif**	**p**
	N	**SD**	**Min**	**Max**	**Mean**		
Control	15	594	2	4	3.27	0.6	0.000
Experiment	15	743	3	5	3.87		
Pain post test							
Control	15	516	3	4	3.47	1.4	0.000
Experiment	15	254	2	3	2.07		

Based on table 2, the mean difference of pain score before intervention between group is 0.6 (p = .000). In addition, the mean difference of pain score after intervention between group is 1.4 (p= .000).

Table 3. The differences of pain score before and after intervention within experimental group.

Pain Level	N	SD	Min	Max	Mean	Mean Diff	p
Pre Experiment	15	743	3	5	3.87	1.8	0.000
Post Experiment	15	254	2	3	2.07		

Table 3 shows that the mean difference of pain score after intervention within experiment group is 1.8 (p= .000). It can be concluded that there is an effect of murrotal alquran audio on the decreasing of labor pain among maternity women.

Discussion

Labor pain is pain that originates from subjective, rhythmic, increasing movements (contractions) of the uterus. The frequency and severity with which the baby is removed. The intensity of the pain is proportional to the strength of the contraction and the pressure that occurs, the pain increases when the cervix is fully dilated due to the pressure of the baby against the pelvic structures followed by stretching and tearing of the birth canal[11].

The difference in pain between each respondent before murottal therapy was caused by how the respondent responded to the pain they experienced and this was related to the respondent's psychological condition. Labor pain is unique and different for each individual because pain is not only associated with physical conditions, but is also related to the psychological condition of the mother during childbirth. The psychological condition in question is excessive fear and anxiety which will cause or even worsen pain due to physical conditions.

Murottal therapy is a therapy that listens to the recitation of Al-Quran verses to the patient to help the patient divert his mind from the pain he is feeling. Murottal Al-Quran therapy with its regular correct reading is also Al-Quran music that is able to bring calm to the person who hears it. The condition of a mother in labor is a condition that requires a lot of support and suggestions, including the reality of awareness of the existence of God Almighty. This situation which causes the brain to be in alpha waves is

a state of brain energy at the Hz frequency, here the brain responds to stress and anxiety. So that the mothers who gave birth during the first active phase, who were research respondents, looked more relaxed and calm in dealing with the labor pain they felt and when the pain scale was measured, most of them stated that the pain had decreased. The theory of pain proposed by Melzak da Wall (1965) states that the existence and intensity of pain depends on certain transmission of nerve impulses, the gate mechanism along the nervous system controls and controls the transmission of pain, if the door is opened a pain impulse is felt, and vice versa if closed door pain impulses are not felt[4].

Providing Murottal AL-Qur'an therapy to mothers in the first active phase of labor who were research respondents, closed the gates of the pain transmission nervous system. Because respondents were distracted from the pain they were feeling, most said the pain had become somewhat reduced. The Al-Quran, which was recited with great emotion, listened to with submission, brought respondents who were mothers giving birth during the first active phase, to an awareness of the majesty and greatness of Allah SWT, so that a total awareness of surrender to the power of Allah SWT emerged, which ultimately made respondents were more calm, relaxed and religious in dealing with pain and the birth process.

Esmaeili *et al.* (2019) evaluated the influence of Quranic verses on labor pain severity[11]. They reported that the intervention group's pain frequency was considerably different, and women had less pain during the fourth and fifth hours of the active phase. Bayrami & Ebrahimipour (2014) conducted a similar study in which they evaluated maternal and neonatal variables in nulliparous women after listening to the sound of the Quran[12]. They discovered that the sound of the Quran had an effect on the level of pain during the initial stage of labor in nulliparous moms. The feeling of pain that arises during labor is caused by uterine contractions which will push the baby out of the uterus gradually little by little. Due to the pushing force of these contractions, the cervix gradually begins to open, stretching little by little, to pave the way for the baby to come out. Providing murottal therapy to mothers in the first active phase of labor who were research respondents, closed the gate of the nervous system of pain transmission.

The current study's findings corresponded with those of Saged et al., (2018), who investigated the effects of the Quran on the treatment of psychological disorders and spiritual illnesses, demonstrating that the Holy Quran's sound is an effective therapy

for individuals who are distressed by spiritual and psychological concerns[13]. In addition, These results were agreed upon with Abbas et al., (2016) they reported that pulse rate, blood pressure, and respiratory rate were lowered significantly in the Quran group than in the Non-Quran group[14].

Pain is a very individual phenomenon with a person's sensory and emotional components, which is what causes mothers' perception of pain during the first active phase to be different. Where the characteristics of the research respondents are from the ages of 20 to 40 years, so the perception of pain between young mothers is of course very different from that of older mothers, as well as differences in the characteristics of the number of children, where the pain between primiparous mothers is certainly different from the pain of multiparous mothers. This happens because multiparous mothers have more mental readiness and birth experience compared to primiparous mothers in facing the birthing process.

Limitation

The limitation of this study are non-probability sampling and no clinical outcome were masured.

Conclusion

The majority of respondents in the control pre-test had a moderate pain level that were 9 people (60%), the majority of respondents in the control post-test had a moderate pain level that were 9 people (60%), while the majority of respondents in the experimental pre-test group that were at the 9 people (60.05%) had moderate pain and in the experimental post-test the majority of respondents had mild level of pain that were 10 people (66.6%). There was a significant difference of pain score between pre and post pain in the control group and the experimental group. There was a significant reduction of the level of labor pain during the active phase of the first stage in the pre and post experimental groups after Murottal therapy was administered. In conclussion, the murrotal alquran audio promote pain reduction during childbirth. This study

recommend that nurses and midwives need to introduce this kind of intervention to reduce pain during childbirth in order to improve the clinical outcomes of the labor.

Ethical Considerations

This study has gained the ethical approval from Faculty of Medicine, Pattimura University (Letter No. 017/ FK-KOM.ETIK/VIII/2022.

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Conflict of Interest

There is no conflict of interest in conducting this study.

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Comic Media Improves Female Student Behavior In Facing Menarche

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Abstract

Background: Knowledge about menstruation should have been acquired since elementary school, but in reality it is still rare for elementary schools to provide additional lessons about menstruation. This results in low student behavior in approaching menarche.

Purpose: Analyze differences in female students' behavior in facing menarche before and after receiving Health Education through comic media

Methods: This research uses a quasi-experimental method, namely by providing information regarding menarche and the practice of preparing for menarche through broadcasting e-comics and distributing comics to read at home.

The target is elementary school students in class V and class VI, who have not experienced menarche, are in good health and are willing to be the target of the activity. Location of Service at SDN 26 Pemecutan, Tegal Kertha Village, West Denpasar. The Wilcoxon statistical test was used because the data was not normally distributed.

Results: The result is that health education through comic media can improve female students' knowledge, attitudes and practices regarding readiness to face menarche. The output achieved is Comic book product IPR with Number EC00202153064, dated 7 October 2021.

Conclusion: there are differences in female students' behavior in dealing with menarche before and after receiving Health Education through comic media

Keywords: **attitude, comics, knowledge, menarche, practice.**

Introduction

Puberty in girls generally occurs at the age of 9-12 years, while puberty in boys occurs at an older age, namely 9-14 years. According to the World Health Organization (WHO), the age limit for teenagers is 12 to 24 years, while according to the Ministry of

Health, those aged 10 to 19 years are unmarried. In the world, it is estimated that the number of teenagers is 1.2 billion or 18% of the world population (1). The United States Health Resources and Services Administration Guidelines states that the age range for adolescents is 11-21 years (2)

Adolescent reproductive health problems apart from having a physical impact, can also affect mental health, emotions, economic conditions and social welfare in the long term. These long-term impacts not only affect the teenagers themselves, but also their families, communities and the nation in the end. The transition from childhood to adolescence is known as puberty. Clinically, puberty is marked by the appearance of secondary genitalia and ends when the ability to reproduce is present. Important events in puberty are rapid physical growth, the emergence of secondary sexual characteristics, menarche and psychological changes (3).

Menstruation is a new event that can cause a young woman stress or other negative changes. Menarche is the first menstruation which usually occurs between the ages of 10-16 years or in early adolescence in the middle of puberty before entering the reproductive period (4). The menarche period for teenage girls in Indonesia varies between 10-16 years and the average age of menarche is 12.5 years, the age of menarche is earlier in urban areas than those living in villages and also later in women who work hard (5). Suindri's research (2021), shows that the average age of menarche for the research target is 12.08-12.17 years (6).

In general, the symptoms that arise during the first menstruation (menarche) are anxiety or fear which is reinforced by the desire to resist physiological processes. So many first menstruation events are experienced as a traumatic experience (7). Surveys report that in America, 50% of women were found to suffer from severe symptoms of pre-menstrual syndrome. A survey of women in France reported that approximately 38% of women suffered from pre-menstrual syndrome (Head, 2007 in (3)), while a study of high school students in Indonesia found that pre-menstrual syndrome was the most frequently experienced (75.8 %) of various types of menstrual disorders (8). Based on the 2017 SDKI, as many as 29% of adolescent girls had their first menstruation when they were 13 years old, and 24% of adolescent girls had their first menstruation at the age of 14 years. Nearly half of teenage girls discuss menstruation with friends before they get their first period. Sources of information about menarche were mothers (41%), siblings (13%) and teachers (12%). The sources of knowledge about physical changes most frequently mentioned by young women were

teachers (61%) and friends (29%) as sources of knowledge about physical changes. The source of knowledge about physical changes from parents (mothers and fathers) for female adolescents is much higher (20%) compared to male adolescents (6%) (9).

Readiness to face the first menstruation (menarche) is a condition that shows that a person is ready to reach physical maturity, namely the arrival of the first menstruation (menarche). This is characterized by having in-depth knowledge and understanding of the menstrual process so that they are ready to accept and experience the first menstruation (menarche) as a normal process (10).

Knowledge can be gained anywhere. Knowledge about menstruation should have been acquired since elementary school, but in reality it is still rare for elementary schools to provide additional lessons about menstruation because it is not included in the school curriculum. The government has also not implemented a special program related to menarche or menstruation issues. Meanwhile, at home and in the environment where teenagers live, there is also not much open information regarding matters related to reproductive health properly. Most parents still think that menstruation is a taboo subject that doesn't need to be discussed with their children. This results in students' low knowledge about menstruation (4). In fact, the role of parents is very influential, as shown in Fajri & (10)'s research, namely that there is a positive relationship between mother and child communication on readiness to face menarche, which means that if the child's mother's communication is effective, teenagers will be ready to face the first menstruation (menarche).

The results of the Indonesian Adolescent Reproductive Health Survey show that the level of adolescent knowledge about Adolescent Reproductive Health (KRR) is low, namely that adolescent girls' knowledge about menstruation is a sign of the functioning of the female reproductive system, namely around 6.5% (11). According to (12), it is also said that knowledge of teenagers in Indonesia about KRR is still relatively low, especially regarding knowledge of puberty and the fertile period, namely 39.6%. Elementary school students' knowledge of menstruation according to research results from (13) at SDN Cemorokandang 01 and 02 Malang City is 2 people (10%) have good knowledge, 12 people (60%) have sufficient knowledge, and 6 people (30%) have poor knowledge. .

Lack of knowledge about menstruation means that teenagers will think that the arrival of menarche is a symptom of an illness, causing panic, and some teenagers also think that they feel very dirty during their first menstruation, so they feel embarrassed, this makes

young women not ready to face its arrival. menarche. According to (14), the impact of not being ready to face menarche is that there is a 4,079 times risk of bad vulva hygiene behavior compared to young women who are ready to face menarche.

Lack of knowledge about menarche will be very detrimental. Adolescents need to be given information through good and positive health education from parents, peers, school teachers and the community, because during this period adolescents experience important development, namely cognitive, emotional and sexual. Correct knowledge about menarche will make teenagers better prepared to face menarche. In line with the results of Susilawati's research in Ruspawan regarding the influence of reproductive health education on the readiness to face menarche of class VII students at SMPN 3 Tampaksiring, Gianyar Regency, the results show an increase in the readiness of female students to face menstruation (15). The research was conducted using comic media. Comics are media that are simple, clear and easy to understand, therefore comics can be informative and educational media. Apart from that, comics also have extraordinary appeal so that the message conveyed is easy to digest and understand and does not seem patronizing. Based on this, research was conducted using comic media to improve female students' behavior in facing menarche.

Method

1. *Research design*

This research uses a quasi-experimental method, namely by providing information related to menarche and the practice of preparing for menarche through broadcasting e-comics and distributing comics to read at home. Before and after broadcasting e-comics and distributing comics to read, a pretest and posttest were carried out by filling out questionnaires for knowledge and attitudes. Practical assessment of how to clean genetalia and apply sanitary napkins is carried out by demonstration on a phantom and evaluation using a checklist for assessing action procedures.

2. *Setting and samples*

The sample in this research was elementary school students. The target number for this activity is 80 class V and VI female students at SDN 26 Pemecutan, Denpasar. The target criteria are female students who have not experienced menarche, female students who are in good health, and female students who are willing to be the target of activities. Location of Service at SDN 26 Pemecutan, Tegal Kertha Village, West Denpasar.

3. *Intervention (applies to experimental studies)*

The activities were divided into 4 pretest activities and research implementation with a target number of 20 people, as well as 4 posttest activities. This is an effort to avoid crowds and implement health protocols. Group activities began with providing informed consent, followed by completing a pretest by distributing questionnaires regarding knowledge and attitudes regarding menarche. Then, observations of practices/skills in carrying out genetic hygiene as well as the practice of placing sanitary napkins are carried out, which are assessed using a check list/check list by the staff. Next, screening of literacy e-comics. Female students are reminded to read comics at home, and will be evaluated 1 (one) week later. Posttest activities were carried out a week after the pretest.

4. *Measurement and data collection*

The knowledge and attitude instrument uses a questionnaire and to assess the practice of caring for external genitalia during menstruation and installing sanitary napkins using a check list. The instrument was prepared by the author and tested for validity and reliability.

5. *Data analysis;*

The statistical test used is the Wilcoxon test to analyze the results of the pretest and posttest regarding knowledge, attitudes and practices in readiness for menarche.

Results

1. Students' knowledge about Menarche

The results of the data normality test show that knowledge, attitudes and practices are not normally distributed so the data is tested using Wilcoxon and presented in the form of minimum, maximum and median values. The results of the analysis with Wilcoxon are presented as follows:

Tabel 1. Differences in female students' knowledge before and after being given information through showing e-comics at SDN 26 Pemecutan

Knowledge	n	Min	Max	Median	P value
Pretest	80	67	87	80	0,001
Posttest	80	73	93	87	

The data in table 1 shows the lowest pretest knowledge is 67 and the highest is 87, with a median value of 80. The lowest posttest knowledge is 73, the highest is 93, and the median

value is 87. The results of the analysis show that there is a significant difference in the target's knowledge before and after being shown e-comics with a value p = 0.001.

2. Female students' attitudes about menarche

The results of data analysis of female students' attitudes towards menarche are as follows:

Tabel 2. Differences in Attitudes of Female Students Before and After Being Given Information through E-Comics Screening at SDN 26 Pemecutan

Attitudes	n	Min	Max	Median	p value
Pretest	80	60	73	88	0,001
Posttest	80	73	100	90	

The data in table 2 shows the lowest pretest attitude is 60 and the highest is 73, with a median value of 88. The lowest posttest attitude is 73, the highest is 100, and the median value is 90. The results of the analysis show that there is a significant difference in the target's attitude before and after being shown the e-comic with the value p = 0.001.

3. Practices regarding Readiness for Menarche

The results of practical data analysis regarding readiness to face menarche are as follows:

Tabel 3. Differences in Practices/Skills of Female Students Before and After Being Given Information through E-Comics Screening at SDN 26 Pemecutan

Practices/Skills	n	Min	Max	Median	p value
Pretest	80	27	91	64	0,001
Posttest	80	73	100	93	

The data in table 3 shows that the lowest pretest practice/skill is 27 and the highest is 91, with a median value of 64. The lowest posttest attitude is 73, the highest is 100, and the median value is 93. The results of the analysis show that there is a significant difference in the target practice/skill before and after being given the screening. e comic with p value = 0.001.

Discussion

Based on the results of the analysis, the discussion can be structured as follows:

1. Students' knowledge about Menarche

Knowledge about menstruation greatly influences teenagers in facing menarche, which can influence attitudes and behavior during the next menstruation. Increased knowledge about menarche and menstruation can be given at an earlier age so that it can increase healthy behavior during menstruation (16). Negative views regarding menstruation are caused by not all girls receiving information about the menstrual process and health during menstruation so they cannot make sufficient preparations to recognize and welcome menstruation (17)

The results of this study show that there is a difference in knowledge before and after health education was carried out through broadcasting e-comics about readiness to face menarche. These results indicate that the research activities carried out have succeeded in increasing target knowledge. Health education according to (18) is a learning experience process that aims to influence knowledge, attitudes and behavior related to individual or group health. In this case, the health education provided is aimed in the short term at changing wrong knowledge about acceptance of menstruation, and in the long term it is aimed at changing behavior in readiness for facing menarche.

Health education in this research activity uses e-comic media and comic books which are taken home for the target to read at home. Research (19,20) shows that health education provided using audio-visual media can increase a person's knowledge and participation. Comics as a visual medium used to support learning have advantages. Comics are a very effective medium targeting children and teenagers, because apart from being able to explain the meaning of the images. Comics also have advantages in teaching and learning activities, namely increasing the reader's vocabulary, making it easier for students to grasp abstract things or formulations, and can develop children's interest in reading and other areas of study (21,22).

2. Female students' attitudes about menarche

The results of this study show that there are differences in attitudes before and after health education was carried out through broadcasting e-comics about readiness to face menarche. These results indicate that the research activities carried out have succeeded in improving the target's attitudes. Changes in attitudes for the better can be caused by increased knowledge caused by the learning process. The information received forms attitudes because with the information, the object of information in this research activity is menarche, which

can be accepted pleasantly or not. If the object is received pleasantly, it will be believed and can then encourage good behavior. A person's exposure to information will influence knowledge and attitude formation (3.23).

Health education in this research activity is supported by comics so that it can make it easier for respondents to receive the information conveyed by service providers. (24) stated that to improve knowledge and attitudes through learning, it is very effective if supported by media. Comic media has the advantage of being able to display images. Comic media provided in health education can stimulate more of the five senses used, such as the senses of sight and hearing, to actively participate in capturing the information provided. The results show an increase in attitudes towards acceptance of menarche and readiness to face menarche.

3. Practices regarding Readiness for Menarche

The results of this study show that there are differences in practices/skills before and after health education through broadcasting e-comics about readiness for menarche. These results indicate that the research activities carried out have succeeded in improving target practices/skills.

Health education in this research activity conveyed material on the practice of caring for external genitalia during menstruation and installing sanitary napkins through pictures in comics and also carried out demonstrations using a pelvic phantom and external genitalia, this was done during the post test, in order to provide a deeper understanding regarding these practices.

The objectives of health education according to (24) include behavior change, behavior coaching, and behavior development. The intended change in behavior is a change in the behavior of young women in dealing with menstruation from previously having excessive anxiety or unreal anxiety about menstruation to behavior that is in accordance with health values without being accompanied by excessive anxiety. In this case, with the existence of health education about menarche, it is hoped that the anxiety experienced by respondents in facing menarche will decrease. Apart from that, in accordance with the aim of health education regarding behavioral development, namely coaching aimed at the behavior of young women in facing menarche who are already healthy and do not experience anxiety so that it can be maintained and developed so that it becomes even better. Health education using comic media, which has many advantages, can improve female students' practice/skills

regarding how to care for their genitalia when experiencing menarche and how to apply sanitary napkins correctly and appropriately.

Conclusion

Based on the results of research activities and discussions, it can be concluded that research activities through comic media for grade V and VI elementary school students regarding readiness to face menarche can improve the knowledge, attitudes and practices/skills of female students. Knowledge is an important domain in shaping a person's attitudes and actions/practices. One effort that can be made to improve healthy behavior is health education with interesting media, namely comics.

Ethical Considerations

The ethical process carried out is informed consent and at the end of the activity giving comic book souvenirs and masks.

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Conflict of Interest

There aren’t a conflict of interest among authors.

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FACTOR ANALYSIS OF STUNTING IN CILINCING PUBLIC HEALTH CENTER NORTH JAKARTA

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Abstract

Background: According to the Ministry of Health announced the results of the Indonesian Nutrition Status Survey (SSGI) at the BKKBN National Work Meeting, where the prevalence of stunting in Indonesia fell from 24.4% in 2021 to 21.6% in 2022. Therefore, the Government of Indonesia has a target for 2024 for the stunting rate to fall by around 14%. So that the reduction in stunting rates is still far from the target set by the Government. Indonesia is still experiencing problems in nutrition and child development. UNICEF suggests that around 80% of stunted children are found in 24 developing countries in Asia and Africa. **Objective:** This study aims to determine the factors related to stunting in Cilincing Public Health Center, North Jakarta in 2024. **Methodology:** Descriptive correlation research with cross sectional research design. Population 74 respondents aged 24-59 months with purposive sampling technique. The instrument used to perform variable calculations uses a questionnaire. Variables include Immunization History, Clean and Healthy Living Behavior (PHBS), Exclusive Breastfeeding History, Parenting Patterns and Diarrhea History. This data was analyzed using descriptive statistics chi-square. **Results:** The research results showed that the number of health workers who experienced stunting was greater (68.9%) compared to normal ones (31.1%). There is an average value of stunted toddlers with a complete immunization history (56,%), good PHBS (66,2%), exclusive breastfeeding history (77%).), less good parenting patterns (51.4%) and history of diarrhea with Diarrhea (60.8%). So there is a significant relationship between the factors history of immunization, PHBS, Parenting Patterns and History of Diarrhea (p value <0.05). **Conclusion and Suggestion:** The availability of educational activities for the Cilincing Public Health Center in providing education on the knowledge of parents of toddlers about the factors of stunting incidence at the Cilincing District Public Health Center in 2024. The Puskesmas can provide education related to food diversity/variety, especially sources of animal protein.

Keywords: Clean and healthy living behavior, Exlusive Breastfeeding History, Immunization, Diarrhea, Stunting.

Introduction

Stunting is one of the problems that hinder human development globally. Currently, there are around 162 million children under the age of five who are stunted. If this trend continues, it is projected that by 2025 127 million children under the age of five will be stunted. According to the United Nations Children's Emergency Fund (UNICEF), more than half of stunted children, 56%, live in Asia, and more than a third or 37% live in Africa.[1]

According to the Ministry of Health, it announced the results of the Indonesian Nutritional Status Survey (SSGI) at the BKKBN National Working Meeting, where the prevalence of stunting in Indonesia fell from 24.4% in 2021 to 21.6% in 2022. Therefore, the Government of Indonesia has a target for 2024 to reduce the stunting rate by around 14%.[2] So that the reduction in stunting rates is still far from the target set by the Government. Indonesia is still experiencing problems in child nutrition and development. UNICEF said around 80% of stunted children are found in 24 developing countries in Asia and Africa. Indonesia is the second country in Southeast Asia and fifth in the world that has the highest prevalence of stunting children after India, China, Nigeria and Pakistan. Currently, the prevalence of stunted children under 5 years old in South Asia is around 38%.[3]

The results of Basic Health Research recorded the prevalence of stunting in 2007 which was 36.8% had dropped to 35.6% in 2010, but increased to 37.2% in 2013, briefly dropping to 21.6% in 2022. From this prevalence, it can be seen that the prevalence of stunting in Indonesia actually decreased by 2% in the period 2013-2021 or 1% per year. According to WHO, the prevalence of short toddlers becomes a public health problem if the prevalence is 20% or more. Therefore, Indonesia has a target that in 2024 the stunting rate will decrease to 14%. Therefore, the percentage of short toddlers in Indonesia is still high and is a health problem that must be addressed.[4]

According to standards, the WHO Organization identifies that the stunting rate in DKI is still quite low. Even so, by region. There are 3 cities above the prevalence of

stunting toddlers in DKI Jakarta and the remaining 3 cities are below the provincial average. Especially the first Seribu Islands is the area with the highest prevalence of stunting toddlers in DKI Jakarta in SSGI 2022, which is 20.5%. This figure increased by 1.2 points from 2021 which was 19.3%, followed by the second region with the highest regional prevalence of stunting Jakarta North with 18.5%, West Jakarta with 15.2%, East Jakarta with 14.4%, Central Jakarta with 14.0% and followed by stunting rate with the lowest prevalence in South Jakarta with 11.9%.[1]

The Central Jakarta area still faces challenges in nutrition problems (stunting). The prevalence of short toddlers in DKI Jakarta in 2021 is 20.5%. The prevalence of short toddlers in North Jakarta is higher when compared to the results of Riskesdas, which is 18.5%. According to the Data and Information Center, the highest prevalence of stunting toddlers is in Kacamatan Cilincing with as much as a prevalence value. Puskesmas Cilincing District with the number of stunting toddlers as many as 100 in August, 96 in September and 92 months, so that the sample population of stunted toddlers is 74 toddlers.

Stunting (short) or chronic malnutrition is another form of growth failure. Chronic malnutrition is a condition that has occurred for a long time, not like acute malnutrition. Children who are stunted are often seen to have a proportional normal body, but actually their height is shorter than the normal height of children their age. Stunting is a cumulative process and is caused by insufficient intake of nutrients or recurrent infectious diseases, or both. Stunting can also occur before birth and is caused by very poor nutritional intake during pregnancy, very poor parenting, low quality of food in line with the frequency of infection so that it can inhibit growth.[3]

The adverse effects that can be caused by nutritional problems (stunting), in the short term are disruption of intelligence brain development, impaired physical growth, and metabolic disorders in the body. While in the long run the adverse consequences that can be caused are decreased cognitive ability and learning achievement, decreased immunity so that it is easy to get sick, and a high risk for the emergence of diabetes, obesity, heart and blood vessel disease, cancer, stroke, and disability in old age, as well as uncompetitive work quality which results in low economic productivity.[5]

Stunting in children is a serious problem, as it is associated with a greater risk of morbidity and mortality, obesity, and non-communicable diseases in the future, short adulthood, poor cognitive development, and low productivity and income. Every year about 10.5 million child deaths are related to malnutrition problems. Where 98% of these deaths are reported to occur in developing countries.[6]

Exclusive breastfeeding of less than six months is also one of the factors that lead to stunting. A study conducted in Nepal stated that children aged 0-23 months have a significantly lower risk of stunting, compared to children aged > 23 months. This is due to the protection of breast milk obtained. Economic status also significantly affects the incidence of stunting in children aged 0-59 months, children with families who have low economic status tend to get less nutritional intake. Other studies have shown that children's health depends on the socioeconomic status of the household.[7]

According to WHO, prevention efforts in stunting can begin in adolescence. Young women can begin to be given knowledge and understanding of the importance of fulfilling nutrition as adolescents. Fulfillment of nutrition during adolescence can prevent the occurrence of malnutrition during pregnancy. Adequate nutrition during pregnancy can prevent stunted growth in the fetus conceived.[8]

In addition, stunting prevention is also focused on the First 1,000 Days of Life (HPK), namely on pregnant women, breastfeeding mothers, children 0-23 months. The 1,000 HPK period is an effective period in preventing stunting because it is a period that determines the quality of life. At 1,000 HPK children will experience a period of "Golden Period" where child growth will take place rapidly. Therefore, in this period nutritional coverage must be met starting from 270 days during pregnancy and the first 730 days after the baby is born. However, according to WHO, stunting prevention does

not only start at 1,000 HPK, but begins during adolescence by improving nutrition during adolescence.[9]

Prevention carried out in pregnant women can be done by improving the nutrition of pregnant women. Nutritional improvements that can be done during pregnancy are by giving blood tablets at least 90 tablets during pregnancy. In addition, mothers who experience Chronic Energy Deficiency (SEZ) need to get additional food to improve the nutrition of pregnant women. Improving breastfeeding practices is also one of the measures to prevent stunting. Early initiation of breastfeeding and exclusive breastfeeding for six months may provide protection against gastrointestinal infections.[10] This statement is supported by research conducted by Tiwari which states that children who are exclusively breastfed are likely to suffer from stunting lower than children who are not exclusively breastfed.

According to the results of Lestari's research (2014) risk factors for stunting include low family income, incidence of diarrhea, low levels of energy and protein adequacy, low birth weight, not exclusive breastfeeding , premature breastfeeding, poor parenting and genetic factors , one of which is parental height. Parental height is related to stunting in toddlers, especially maternal height. Mothers with a short height will have the possibility of giving birth to a short baby as well. Research conducted in Egypt found that babies born to mothers who have a height of less than 150 cm, are more at risk of growing into stunted children (Amin, 2014). Stunting is a nutritional problem that cannot only be seen from one causative factor, but seen from several interrelated causative factors.[11]

Research by Tula et al (2012) in Nepal shows that the main risk factor for stunting is improper parenting. Parenting is the ability of families to spend time, support and attention to children so that children grow and develop physically, mentally and socially (Sulistiyani, 2011). Parenting is divided into three, namely feeding practices, psychosocial stimulation and health care. Parenting is influenced by the level of knowledge and education of parents. A low level of education will affect parenting, due to limited knowledge about feeding toddlers. Feeding toddlers need Pay attention to creativity and diversity so that toddler nutrition can Fulfilled. If toddler nutrition is lacking, it will inhibit growth and the gradual development of the child.[12] Research conducted by Loya (2017:84-93) in Sumba Regency, East Nusa Tenggara, shows that,

Toddlers are vulnerable to nutritional problems if not supported by parenting the right one. Based on this description, it can be said that, the need for substances Child nutrition will be fulfilled if given good and adequate parenting. In addition to parenting, one of the risk factors for stunting that is no less important is hygiene-related behavior.[13]

Handwashing behavior is considered a trivial matter in society. Though hand washing is one of the behaviors that contribute to improve the degree of public health. Handwashing is the most important basic technique in the prevention and control of infectious diseases, because the hands of the body parts are most polluted with dirt and seeds of disease. Research conducted by Burton et al (in Purwandari et al, 2013) washing hands using soap is more effective for removing germs than washing hands using only running water. In addition, diarrhea is also caused by the low use of healthy latrines so that people still defecate in the open. In the study, it was also found that the use of latrines was related to diarrhea, people who did not use latrines 19.4% experienced diarrhea, compared to people who used latrines (Winarti and Suci, 2016).

Method

1. Research design

This study used a type of correlational descriptive research with *a cross-sectional* research design. With this study, the prevalence or incidence of stunting (dependent variable) will be obtained associated with the causative factor (independent variable).

2. Setting and samples

The population of this study consisted of parents and toddlers aged 24-59 months totaling 288 total toddlers where toddlers of stunted age. The sampling technique used in this study was purposive sampling with inclusion criteria for children aged 24-59 months registered in the study area; Recorded natives of the study area; Biological children; Children under five are recorded in the report of posyandu dipuskesmas; and Parents and toddlers are willing to be respondents. After calculating the number of samples, a sample of 74 respondents was obtained. This research was conducted at the Nutrition Poly Puskesmas Cilincing, North Jakarta.

3. Intervention (applies to experimental studies)

In this study, the variables used were independent variables consisting of several factors, namely Immunization History, PHBS, Exclusive Breastfeeding History,

Parenting Style, and Diarrhea History. While the dependent variable is the incidence of stunting.

4. Measurement and data collection

The instrument used to obtain data for each variable uses a questionnaire. Anthropometric Table of stunting measurement and MCH Book. All data obtained are categorized, in the Stunting variable into 1 *Stunting*: Z-score -3SD to < -2SD and 2 Normal: Z-score -2 SD to 2SD (Riskesdas, 2018); History of immunization to be 1 complete, if following the complete basic immunization of BCG-Measles and 2 incomplete if Not following one of the complete basic immunizations of BCG-Measles; PHBS variable 1. Both = 21-40 and 2. Less = 1-20; History of Exclusive Breastfeeding 1. Yes, if only breast milk is given for 6 months and 2. No, if any additional food is given to children aged <6 months; Parenting 1. Good = 18-35. and 2. Less = 1-17 ; History of Diarrhea 1. Do not experience diarrhea >3 times in 24 hours with the consistency of liquid stools.2. Diarrhea more than >3 times in 24 hours with the consistency (shape) of feces to liquid within the last 3 months.

5. Data analysis;

The data is categorized and then analyzed using a computer application with chi square test analysis.

Results

Frequency Distribution of Research Variables

Table 1. Frequency Distribution of Research Variables

Category	Frequency (f)	Percentage (%)
Status Stunting		
Stunting: Z-score-3SD to <-2SD	51	68.9%
Normal: Z-score -2 SD to 2 SD	23	31.1%
Total	**74**	**100%**
Immunization History		
Complete	42	56.8
Incomplete	32	43.2
Total	**74**	**100%**
Clean and Healthy Lifestyle		
Good	49	66.2
Less	25	33.8
Total	**74**	**100**
History of Exclusive Breastfeeding		
Yes (Exclusive)	57	77
No (not Exclusive)	17	23

Total	**74**	**100**
Parenting		
Good	36	48.6
Less	38	51.4
Total	**74**	**100**
History of diarrhea		
No diarrhea	29	39.2
Diarrhea	45	60.8
Total	**74**	**100**

Based on the table above, it was obtained that from 74 toddlers, there were 68.9% stunted toddlers with stunting (Zccore -3SD to <-2SD) and Normal Toddlers (Normal: Z-score - 2 SD to 2 SD) by 31.1%. Complete Immunization History of 42 toddlers (56.8%) and Incomplete as many as 32 toddlers (43.2%). A Healthy and Healthy Lifestyle in toddlers was obtained as many as 49 toddlers (66.2%) and Less Good as many as 25 toddlers (33.8%). History of Exclusive Breastfeeding is Yes (Exclusive) as many as 57 toddlers (77%) and No Exclusive Breastfeeding as much as 17 (23%). Parenting is Good as many as 36 toddlers (48.6%) and Less Good as many as 38 toddlers (51.4%). History of Diarrhea is toddlers who have a history of no diarrhea as many as 29 toddlers (39.2%) and have a history of diarrhea as many as 45 toddlers (60.8%).

The Relationship between Immunization History, Clean and Healthy Lifestyle, History of Exclusive Breastfeeding, Parenting and Diarrhea with the Incidence of Stunting in Toddlers 24-59 Months at Cilincing Health Center

Table 2. The Relationship Between Immunization History and Stunting Incidence

History Immunization	Stunting				Total		P value	OR
	Usual		Stunting					
	n	%	n	%	n	%	0.000	34.10
Complete	22	52.4	20	47.6	42	100		
Incomplete	1	3.1	31	96.9	32	100		
Total	23	31.1	51	68.9	74	100		

Results of the analysis of the relationship between the incidence of stunting with Immunization History obtained with stunting samples of 51 toddlers and normal 23 toddlers. That there are as many as 31 (96.9%) Short Toddlers with Incomplete Immunization History and 20 (47.6%) stunted toddlers with Complete Immunization History. Based on the results of the Chi-square test obtained a P value of 0.000, it can be concluded that there is a difference in the proportion of tunting events with Immunization History between Short and Normal Toddlers (there is a significant relationship between stunting and Immunization History). From the results of the analysis, an OR= 34.10 value

was obtained, meaning that the incidence of stunting with a history of immunization has a 34 times chance of stunting.

Table 3. The Relationship between PHBS and the Incidence of Stunting

PHBS	Stunting				Total		PValue	OR
	Usual Stunting							
	n	%	n	%	n	%		
Good	22	44.9	27	55.1	49	100	0.001	19.556
Less	1	4.0	24	96.0	25	100		
Total	23	31.1	51	68.9	74	100		

The results of the analysis of the relationship between the incidence of stunting and a Clean and Healthy Lifestyle (PHBS) were obtained with stunting samples of 51 toddlers and normal 23 toddlers. That there are as many as 27 (55.1%) Short Toddlers with good PHBS and 24 (96.0%) stunted toddlers with poor PHBS. Based on the results of the Chi-square test obtained a P value of 0.001, it can be concluded that there is a difference in the proportion of tunting events with PHBS between Short and Normal Toddlers (there is a significant relationship between stunting and PHBS). From the results of the analysis, an OR= 19,556 value was obtained, meaning that stunting events with a history of PHBS have a 19 times chance of stunting.

Table 4. The Relationship between History of Exclusive Breastfeeding and the Incidence of Stunting

History of Exclusive Breastfeeding	Stunting				Total		P Value
	Usual Stunting						
	n	%	n	%	n	%	
Yes (Exclusive)	21	36.8	36	63.2	57	100	0.96
No (Exclusive)	2	11.3	15	88.2	17	100	
Total	23	31.1	51	68.9	74	100	

Based on the results of the analysis of the relationship between the incidence of stunting in the Cilincing Sub-District Health Center and the history of exclusive breastfeeding, it was found that there were 36 (63.2) short toddlers with a history of exclusive breastfeeding and 21 (36.8%) normal toddlers with a history of exclusive breastfeeding.

The results of the statistical test obtained a value of p = 0.96 so it can be concluded that there is no difference in the proportion of tunting events with SI-Exclusive History between short and Normal (there is no significant relationship between stunting and ASI-Exclusive History).

Table 5. The Relationship between Parenting and the Incidence of Stunting

Parenting	Stunting				Total		P Value	OR
	Usual		Stunting					
	n	%	n	%	n	%	0.000	14.583
Good	20	55.6	16	44.4	36	100		
Less	3	7.9	35	92.1	38	100		
Total	23	31.1	51	68.9	74	100		

The results of the analysis of the relationship between the incidence of stunting and parenting were obtained with stunting samples of 51 toddlers and normal 23 toddlers. That there are as many as 35 (92.1%) stunting toddlers with poor parenting and 20 (55.6%) stunting toddlers with good parenting.

Based on the results of the Chi-square test obtained a P value of 0.000, it can be concluded that there is a difference in the proportion of tunting events with parenting between short and normal (there is a significant relationship between stunting and history of breastfeeding). From the results of the analysis, an OR= 14,583 value was obtained, meaning that the incidence of stunting with parenting has a 14 times chance of stunting.

Table 6. The Relationship Between History of Diarrhea and the Incidence of Stunting

History of diarrhea	Stunting				Total		P Value	OR
	Usual		Stunting					
	n	%	n	%	n	%		
No diarrhea	21	72.4	8	27.6	29	100	0.000	56.438
Diarrhea	2	4.4	43	95.6	45	100		
Total	23	31.1	51	68.9	74	100		

The results of the analysis of the relationship between the incidence of stunting and history of diarrhea were obtained with stunting samples of 51 toddlers and normal 23 toddlers. That there are as many as 43 (95.6%) stunted toddlers with a history of diarrhea and 8 (16.2%) stunted toddlers have never had diarrhea. Based on the results of the Chi-square test obtained a P value of 0.000, it can be concluded that there is a difference in the proportion of tunting events with a history of diarrhea between short and normal toddlers (there is a significant relationship between stunting and a history of diarrhea). From the results of the analysis, an OR= 56,483 value was obtained, meaning that the incidence of stunting with a history of diarrhea has a 56 times chance of stunting.

Discussion

The Relationship between Immunization History and Stunting in Toddlers at the

Cilincing District Health Center

Based on the results of the study above, it shows that respondents in stunted toddlers with Incomplete Immunization History by 96.9%, Complete Immunization History by 47.6% and Normal Toddlers with Incomplete Immunization History by 9.9% and Complete Immunization History by 52.4%. based on the results of the Chi-square TEST, a P Value of 0.000 was obtained, it can be concluded that there is a significant relationship between Immunization History and the incidence of stunting experienced by toddlers at the Cilincing District Health Center in 2024.

Immunization is one of the efforts to increase immunity and eradicate infectious diseases. The high infant and toddler mortality rate in Indonesia causes a decrease in the degree of public health, one of the efforts to overcome masalah.ini is the basic immunization program for infants and toddlers completely. Immunization works by stimulating antibodies against certain organisms, without causing a person to get sick first. The body's defense system then reacts into the vaccine that is introduced into the body, just like if microorganisms invade the body by forming antibodies. Then it will kill the vaccine like killing microorganisms that attack.

Berendsen (2016) The results of the study stated that it is not in line with the theory that vaccines can reduce the risk of death in children. Early administration of vaccines can reduce the incidence of stunting. If the vaccine is given too late, it can increase the incidence of stunting. In line with research conducted by Fajariyah & Hidajah (2020) which shows that immunization status has no relationship with the incidence of stunting in children aged 2-5 years in Indonesia. Immunization status is not related to the incidence of stunting in toddlers in Kedung Jati Village.

Nasrul conducted a study in 2016 and concluded that children who do not immunize are 1.6 times more at risk of stunting compared to children who immunize. This is in line with research conducted by Picauly in 2013 and concluded that children who do not immunize are 1.9 times more at risk for stunting compared to children who are immunized. Most respondents in the study did not receive complete immunization because of the lack of parental knowledge about the importance of immunization (Nasrul, 2015 &; Picauly, 2013). 1000 HPK is very important for the future of children because if there are parental mistakes in making decisions, the consequences felt by children can be felt for life, therefore parents need to be educated not to be late in vaccinating their children (Nasrul,

2015 &; Picauly, 2013).

Immunization in children is very important to increase their immune system. If not done, it will increase the risk of developing infectious diseases and cause decreased appetite and impaired absorption of nutrients which causes the intake of nutrients received is very small. Micro and macro substances at the age of the first 2 years of life are very important to support the growth of children. (Sutriyawan, 2020 & Syamsiah, 2020).

According to researchers, in this study the status of stunting toddlers with immunization history occurred a lot in toddlers with incomplete immunization history by 31 toddlers (96.9%). While toddlers with a Complete Immunization History, who have stunting toddlers are only 20 (47.6%). Immunization is one of the efforts to increase immunity, immunization stimulates antibodies against certain organisms, without causing a person to get sick first. So that it builds the immune system when one day the body is attacked by microganism that is the same as the vaccine, the antibodies will protect the body and prevent infection. With incomplete immunization can cause toddler immunity to become weak, making it easy to develop infectious diseases. Children who have infections if left unchecked can be at risk of becoming stunted.

The Relationship between PHBS (Clean and Healthy Lifestyle) and Stunting in Toddlers at the Cilincing District Health Center.

Based on the results of the study above, it shows that respondents in stunted toddlers who have a Clean and Healthy Lifestyle (PHBS) of 96.0% PHBS are not good, 55.1% of PHBS is good and Normal Toddlers who have PHBS of 4.0% are not good and good by 44.9%. based on the results of the Chi-square TEST, a P Value value of 0.001 was obtained, it can be concluded that there is a significant relationship between PHBS and the incidence of stunting experienced by toddlers at the Cilincing District Health Center in 2024.

Stunting is a complex nutritional problem because it can be affected by many things, one of which is the influence of the mother's condition. The condition of the mother has a great contribution to the health of the child, from the child in the womb (fetus) to toddlers. Also other factors that affect health indirectly (Purwanto &; Rahmad, 2020). Nutritional intake in toddlerhood and clean and healthy living behavior are closely related to nutritional knowledge of parents and families (Uliyanti et al., 2017). The role

of a mother in a family is very important because the mother is the driving force of behavior in the family. Event *stunting* It is directly influenced by several things, namely variables of nutritional intake, history of infection, as well as knowledge of maternal nutrition and nutritional levels. Meanwhile, clean and healthy living behavior (PHBS) affects the incidence *stunting* indirectly through a history of infectious diseases (Uliyanti et al., 2017).

Another study conducted in Waru Jaya Village, Parung District, Bogor Regency with the aim of determining the relationship between PHBS and the incidence *stunting* for toddlers in Waru Jaya Village, Parung District, Bogor Regency using the method *Cross sectional* It was found that there was a relationship between PHBS and events *stunting* in toddlers (Kurniawati & Puspowati, 2022).

Based on the results of the study, it can be interpreted from the 74 respondents studied, it was found that as many as 27 toddlers (55.1%) who had clean and healthy living behaviors (PHBS) both as respondents with the highest frequency. Behavior is a process of interweaving with the environment in aspects of actions, attitudes, and knowledge (Notoatmodjo, 2012). Behavior is influenced by various aspects, such as knowledge, level of education, beliefs, and fulfillment. Based on the results of research on respondents that one of the causes of stunting in toddlers with good PHBS is due to, among others, lack of consumption of fruits, vegetables and other physical activities. This causes the nutritional status of children to be lacking due to insufficient maternal knowledge of the importance of giving vegetables and fruits to toddlers. Moreover. The behavioral factor of mothers who do not always weigh toddlers every month is also a lack of supervision of the nutritional status of toddlers. Some of the things above make the implementation of PHBS in the family cannot be implemented perfectly.

Based on the results of the study, it can be interpreted from the 74 respondents studied, it was found that as many as 24 toddlers (96.0%) PHBS was not good. This result was found in the results of the questionnaire obtained that the majority of mothers do not know the points of PHBS indicators and who has a role in the implementation of PHBS. The level of knowledge of mothers also determines whether or not a mother absorbs and understands the nutritional knowledge obtained. This knowledge is needed so that someone, especially mothers, is more responsive to nutritional problems in the family. A mother who does not have a good knowledge of PHBS causes a deficiency. Preventive

measures for family health problems. Especially with regard to children. Mothers are the most important role holders in the process of caring for and caring for toddlers. Mothers can also be called role models in the family because housewives are at home every day.

The Relationship between Breastfeeding-Exclusive History and Stunting in Toddlers at the Cilincing District Health Center

Based on the results of the study above, it shows that respondents in stunted toddlers who breastfeed exclusively by 63.2%, not exclusively breastfed by 88.2% and normal toddlers who are exclusively breastfed by 36.8% and not exclusively breastfed by 11.8%. based on the results of the Chi-square TEST, a P Value of 0.96 was obtained, it can be concluded that there is no significant relationship between the History of Exclusive Breastfeeding and the incidence of stunting experienced by toddlers at the Cilincing District Health Center in 2024.

Stunting occurs starting from the fetus is still in the womb and only appears when the child is two years old. Stunting in toddlers needs special attention because it can hinder children's physical and mental development. Stunting is associated with an increased risk of illness and death as well as stunted growth of motor and mental abilities also has a risk of decreased intellectual ability, productivity, and an increased risk of degenerative diseases. Stunted children also tend to be more susceptible to infectious diseases, so they are at risk of experiencing a decrease in the quality of learning at school and at risk of more frequent absences, resulting in long-term economic losses for Indonesia (Kartikawati, 2011 in Indrawati, 2016).

According to the Unicef Framework, one of the factors causing stunting in toddlers is unbalanced food intake. Unbalanced food intake is included in exclusive breastfeeding that is not given for 6 months (Wiyogowati, 2012 in Fitri, 2018). Breast milk (breast milk) is milk produced by the mother and contains nutrients needed by the baby for the needs and development of the baby. Babies are only breastfed, without the addition of other liquids such as formula milk, lemon juice, honey, tea water, water and without the addition of solid foods such as bananas, papaya, milk porridge, biscuits, rice porridge and teams, for 6 months (Mufdlilah, 2017).

Based on the results of the study, it can be interpreted from the 74 respondents studied, it was found that 36 toddlers (63.2%) had a history of exclusive breastfeeding as

respondents with the highest frequency. The causes of exclusive breastfeeding failure are baby conditions such as low birthweight, congenital abnormalities, infections and others and maternal conditions, such as swollen breasts / abscesses, worry and lack of confidence, malnutrition and working mothers. In addition, inexperienced motherhood, parity, age, marital status, smoking, lack of family support, lack of knowledge, attitudes, and skills, sociocultural factors and health workers, low lactation education, and prenatal and hospital policies that do not support exclusive lactation or breastfeeding. All of which can contribute to breastfeeding failure and can lead to stunting in toddlers.

The Relationship between Parenting and Stunting in Toddlers at the Cilincing District Health Center

Based on the results of the study above, it shows that respondents in stunted toddlers who have good parenting by 44.4%, poor parenting by 92.1% and normal toddlers who have good parenting by 55.6% and poor parenting by 7.9%. based on the results of the Chi-square TEST, a P Value value of 0.000 was obtained, it can be concluded that there is a significant relationship between Parenting and the incidence of stunting experienced by toddlers at the Cilincing District Health Center in 2024.

Rahmawati's research is in line with Kasim (2019) which explains the relationship between parenting and the incidence of stunting. One of the risk factors for stunting is the parenting style of parents towards their children which is interpreted as a sense of affection and attention attached to children by caring, fostering, and educating children at an age where they cannot do everything themselves and need the help of others. Rahmawati conducted a study in 2020 and concluded that the risk factor for stunting is poor parenting because the child is not fulfilled nutritional and nutritional intake.

According to UNICEF, parenting is one of the factors causing stunting in addition to the quality of health services, environmental quality, and food security. Good parenting consists of early initiation of breastfeeding, exclusive breastfeeding and complementary foods, with these three things, children who are treated have a small risk of stunting (Ministry of Health R1, 2019). Parenting is influenced by knowledge where the knowledge is determined by information obtained from the environment, both mass media and social media, cadres, and other health workers. One of the efforts that has been made to reduce stunting is through strengthening the capacity of cadres at the community

level in conducting socialization efforts regarding stunting prevention to parents.

According to researchers, in this study the status of stunting toddlers with parenting style is more common in toddlers with poor parenting by 35 toddlers (95.1%). Meanwhile, of all respondents of mothers with good parenting, those with stunting toddlers only amounted to 16 (44.4%). However, poor parenting can be one of the factors in stunting caused by the lack of affection and attention attached to children by caring, fostering and educating because parents are busy working so they cannot pay attention to their children at home and provide nutritious food, can only provide fast food. So it is expected that parents will provide good care for children so that their growth is optimal. Therefore, the role of parents determines whether children grow stunting or not.

The Relationship Between History of Diarrhea and Stunting in Toddlers at the Cilincing District Health Center

Based on the results of the study above, it shows that respondents in stunted toddlers who have a history of diarrhea by 95.6%, do not have a history of diarrhea by 27.6% and normal toddlers who have a history of diarrhea by 4.4% and do not have a history of diarrhea by 72.4%. based on the results of the Chi-square TEST, a P Value of 0.000 was obtained, it can be concluded that there is a significant relationship between the History of Diarrhea and the incidence of stunting experienced by toddlers at the Cilincing District Health Center in 2024.

Stunting occurs as a result of chronic malnutrition in the first 1000 days of life. The cause of chronic malnutrition itself is not known with certainty, according to epidemiological studies stunting occurs due to less than optimal breastfeeding, MPASI, micronutrient deficiencies and repeated infections (Predergast, 2014). Infectious diseases / infectious diseases are diseases caused by pathogens or toxin products transmitted from infected people, animals or objects to the appropriate host, either directly or indirectly (Seventer, 2017). Infection is one of the health problems whose prevalence is still high with morbidity and mortality rates that are also still high, according to data from the Indonesian Ministry of Health (2020)

Diarrhea is a risk factor for stunting in children which is a health problem in Indonesia. Diarrhea is caused by various reasons such as infection *Shigella* Sp. *Salmonella, Campylobacter,* and *Escherichia coli*. In addition, the trigger factors for

diarrhea are intolerance to substances in foods such as lactose and fructose, allergies to a food, side effects of drugs, geography of an area, level of sanitation and hygiene (Firmanyah, 2021).

Children aged 2 years more often experience diarrhea because the intestines are more sensitive to substances that enter the food. Diarrhea is an infectious disease characterized by changes in the shape of the stool that becomes soft, the frequency of bowel movements increases, and is accompanied by vomiting, resulting in lack of fluid in the patient's body or severe dehydration. Finally, if you do not get help immediately, it can lead to serious health problems and even death (Torlesse, 2016 & Bayu, 2014).

Desyanti (2017) The results of the study concluded that a history of diarrhea has a risk of 3,619 times greater incidence of stunting in children under five due to hygiene practices, parenting, microorganisms in water, and other chemicals [15]. This research is in line with the research of Aguayo &; Zul Fikar which explains that children can get diarrhea due to microorganisms in water and other chemicals and cause stunting due to fluid loss and a number of nutrients that are essential for the body (Aguayo, 2016 & zul fikar, 2019).

According to researchers, in this study the status of stunting toddlers with a history of diarrhea was more common in toddlers who had a history of diarrhea as many as 43 toddlers (95.6%) and did not have a history of diarrhea 8 toddlers (27.6%). This study found that unfavorable environmental conditions allow various diseases including diarrhea and infectious diseases. Environmental sanitation is closely related to the availability of clean water, the availability of latrines, other types of houses and the cleanliness of tableware in each family. The more available clean water for daily needs, the less risk of children getting infections, malnutrition. Infectious diseases and diarrhea cause the metabolism of nutrients in the body to be disrupted so that it can cause malnutrition during growth.

Conclusion

Based on the results of data analysis from the discussion of factors such as History of Exclusive Breastfeeding, Clean and Healthy Living Behavior (PHBS), Parenting, History of Immunization and History of Diarrhea as factors of stunting events, it can be concluded that toddlers in the Cilincing District Health Center who are stunted (68.9%),

PHBS is not good (96.0%), History of Exclusive Non-Breastfeeding (88.2%), Poor Parenting (92.1) and who have a History of Diarrhea (95.6%). There is a significant relationship between Immunization History (0.000), Clean and Healthy Living Behavior (PHBS) (0.001), Parenting Style (0.000) and History of Diarrhea (0.000) with the incidence of stunting in Cilincing District Health Center in 2024. There is no significant relationship with the history of exclusive breastfeeding not with the incidence of stunting at the Cilincing District Health Center in 2024 with a P value of 0.96. The greatest variable opportunity based on the results of the questionnaire is History of Diarrhea with a value of OR = 56,483. It is hoped that Health Workers, especially in Puskesmas, can Conduct educational activities to increase the knowledge of mothers or prospective mothers regarding the diversity / variety of foods, especially food sources of animal protein by holding cooking activities together and teaching parents to eat portions for toddlers that eating in toddlers in principle with balanced nutrition is not full and provide education to parents of toddlers to anticipate diarrhea in toddlers so that they can prevent diarrhea and do not have an impact on stunting with complete immunization, clean and healthy living behavior well, good parenting

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ANALYSIS OF FACTORS OF HIV-AIDS PREVENTION BEHAVIOR STREET TEENAGER BOGOR CITY

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Abstract

Background: Report of the Director General of PP & PL Ministry of Health of the Republic of Indonesia (2012) until June 2012 it was reported that the largest proportion of AIDS sufferers was of productive age, with the most being aged 20-29 years totaling 13,761 cases (47.42%) of that age when viewed from the incubation period is classified into the adolescent age group, while the report from the Bogor city social service, is answered about 24200 the number of people with HIV-AIDS, in the city of Bogor alone there are 210 people with HIV-AIDS, some of them are street children who are registered in the social service city of Bogor. in 2006-2012 there were 6 street teenagers died while in 2012-2018 there were 9 people died due to being infected with HIV-AIDS.
Objective: to determine the contribution of the frequency of HI-AIDS prevention behavior based on knowledge, attitudes, peer influence, and the relationship of attitudes, knowledge, and peer influence to the prevention of HIV-AIDS in the streets of Bogor City in 2018 .
Methodology: This research design uses analytical methods with a cross sectional approach. The population in this study were all street adolescents who were registered in the Bogor city social service. The research sample was taken using random sampling techniques. Data analysis using univariate and bivariate analysis.
Results: The results of this study showed that there was a relationship between knowledge (ρ value = 0.009), and the influence of peers (ρ value = 0.008) on HIV-AIDS prevention behavior in Street teenagers in the city of Bogor in 2019.
Conclusions and suggestions: knowledge, attitudes, and influence of peers influence HIV-AIDS prevention behavior in adolescents on the streets of Bogor. It is hoped that adolescents can further enhance their knowledge of HIV-AIDS.

Keywords: HIV-ADS prevention behavior, attitude, knowledge, peer influence.

Introduction

HIV/AIDS is caused by infection with the Human Immunodeficiency Virus which attacks the immune system, causing sufferers to experience decreased body resistance making it very easy for them to become infected with various other diseases. This disease is transmitted through the patient's body fluids which occurs through sexual intercourse, blood transfusions, sharing

contaminated needles, and transmission from mother to child in the womb through the placenta and breastfeeding. Based on the mode of transmission, the highest cumulative percentage of cases is through heterosexual intercourse while the lowest percentage is through blood transfusions (Ministry of Health, 2010).

The spread of the HIV virus has entered the feminization stage (infected women are increasing). This can be proven from UNAIDS research (2009), that in Asia in 2008 it was estimated that 50 million women were at risk of being infected with HIV from their intimate partners. One of the causes of the feminization of AIDS is gender inequality which is still strong in society. UNAIDS Global HIV Epidemic Report 2013, estimated 35.5 million (32.2 – 38.8 million) people with HIV worldwide in 2012 There were 2.3 (1.9 – 2.7) million new HIV infections globally , this figure shows a decrease of 33% from the number of new infections in 2001, namely 3.4 (3.1 – 3.7) million. (UNSAIDS, 2016)

In Indonesia, the number of new HIV positive cases reported from year to year tends to increase and in 2017 there were 48,300 cases reported. Meanwhile, the number of AIDS cases shows a tendency to increase in new discoveries until 2013, which then tends to decrease in the following years. This decrease is thought to occur because the number of reported AIDS cases from the regions is still low, in 2016, namely 9,280. Cumulatively, AIDS cases up to 2017 amounted to 102,667 cases. (Indonesia Health Profile, 2017)

In West Java in 2016 there were 23,301 cases. During the 2004-2016 period, the pattern of finding positive HIV cases tended to increase, however in 2016 there were 3,672 recorded, a decrease compared to 2015 of 4,303, with infected locations spread across 27 districts/cities. HIV cases based on gender were 58.42% male and 41.68% female, based on the age group <4 years it was 3.30%, the 5-14 year group was 1.59%, the 15-19 year group was 2 .5%, the 20-24 year group is 16.78%, the 25-49 year group is 72% and the >50 year age group is 3.83%. (West Java Health Profile, 2016)

In the city of Bogor in 2017, there were 4,164 positive HIV cases found in Bogor, with a percentage reaching 37.30% (from the target of 20%). The prevalence of HIV/AIDS in 2017 was 0.15%, still meeting the expected HIV/AIDS prevalence target of <0.5. (Bogor City Health Profile, 2017).

In the report of the Director General of PP & PL, Ministry of Health of the Republic of Indonesia (2012) up to June 2012, it was reported that the largest proportion of AIDS sufferers were of productive age, namely 13,761 cases (47.42%) aged 20–29 years, followed by the 30–39 age group. years as many as 9,632 cases (31.09%), age group 40–49 years as many as 3,192 cases (10.30%), age group 15–19 years as many as 1,134 cases (3.67%), unknown age group as many as 1023 cases (3.30%), the age group 50–59 years was 1,008 cases (3.25%), the age group 1-4 years was 459 cases (1.48%), the age group < 1 year was 296 cases (0, 96%), the age group > 60 years had 255 cases (0.82%) and the 5-14 year age group had 221 cases (0.71%) (Ministry of Health, 2012).

From the data above it can be seen that the largest proportion is in the 20–29 year age group, namely 47.42%. If this is related to the incubation period for AIDS, which is 7-10 years, it can be concluded that most sufferers get the disease when they are 13-22 years old. Likewise with the phenomenon of street teenagers who are more likely to be exposed to HIV-AIDS. Ages 13-22 years are classified as teenagers, the age when someone is experiencing the process of sexual maturation, also the age when someone is looking for their identity so they tend to think short-term without paying attention to the risks involved. will occur as a consequence of his actions.

Likewise, statistics on HIV/AIDS cases in Indonesia show that heterosexual risk factors are at the top with 58.20%, IDU 31.98%, unknown 3.59%, homo-bisexual 3.16%, perinatal transmission 0.23% and blood transfusion 0.23% (Ministry of Health, 2012).

It is answered that there are around 24,200 HIV-AIDS sufferers, in the city of Bogor alone the number of HIV-AIDS sufferers is 210, some of whom are street children registered with the Bogor city social service, in 2006-2012 there were 6 street teenagers who died while in 2012-2018 there were 9 people die as a result of being infected with HIV-AIDS. Where these street teenagers live in a halfway house at the Bogor City Social Service. Interview results from the Social Service (2019)

Based on this description, the author is interested in conducting research entitled "Analysis of HIV¬-AIDS Prevention Behavior Factors among Street Teenagers in Bogor City in 2019".

Method

Method should be structured as follows:

1. *Research design*

Research design is essentially a research action plan in the form of a set of logically sequential activities that connect the research question to be answered and the research conclusion which is the answer to the research problem (Rahadjo, 2017)

This research uses analytical methods with a cross sectional approach to determine the prevention of HIV-AIDS among street teenagers in the city of Bogor in 2019.

2. *Settings and samples*

The population in this study was all street teenagers in the city of Bogor in 2019 who were registered with social services totaling 313 people. This sample was taken using a random sampling technique, using the Slovin formula. The number of samples is 176 respondents.

The sample in this study were all street teenagers in the city of Bogor who were registered with the Social Service who had the following criteria:

1. Inclusion Criteria
   a) Teenagers who are registered as street children at the Bogor City Social Service are male and female.
   b) Bogor city street teenagers, male and female at the time of the research.
   c) Bogor city street teenagers who are ready to become respondents
   d) Street teenagers who can read and write
2. Exclusion Criteria
   a) Bogor City Street Teenagers, Boys and Girls who were not present at the time of the research
   b) Bogor City Street Teenagers, Men and Women who were not selected as respondents.
   c) Street teenagers who are not ready to become respondents
   d) Street teenagers who can't read and write

3. *Measurement and data collection*

The instrument used in this research was a questionnaire with closed questions and informed consent. Before the questionnaire sheets were distributed to respondents, validity and reliability tests were carried out first .

4. *Data analysis;*

Data analysis uses univariate and bivariate analysis.

Results

Table 1
Frequency Distribution of HIV-ADS Prevention Behaviors

Behavior	Frequency	Percentage
Risky	116	65.9
No risk	60	34.1
Total	**176**	**100.0**

Table 2
Frequency Distribution of Knowledge, Attitudes and Peer Influence on HIV-AIDS Prevention among street teenagers in Bogor City in 2019

Knowledge	Frequency	Percentage
Not enough	131	74.4
Good	45	25.6
Total	**176**	**100.0**

Table 3
Frequency Distribution Based on Hiv-Aids Prevention Attitudes among Teenagers on the Streets of Bogor City 2019

Attitude	Frequency	Percentage
Negative	103	58.5
Positive	73	41.5
Total	**176**	**100.0**

Table 4
Frequency Distribution Based on Peer Influence

Peer influence	Frequency	Percentage
There is influence	113	64.2
No influence	63	35.8
Total	**176**	**100.0**

Table 5
The relationship between knowledge and HIV-AIDS prevention behavior among street teenagers in the city of Bogor in 2019

Knowledge Category	HIV-AIDS prevention Risky		not risky		Amount		*P* value	OR
	n	%	N	%	N	%		
Not enough	94	71.8%	37	28.2%	131	100%	0.009	2,656
Good	22	48.9%	23	51.1%	45	100%		
total	**116**	**65.9**	**60**	**34.1%**	**176**	**100.0%**		

Table 6
The relationship between attitudes and HIV-AIDS prevention behavior among street teenagers in the city of Bogor in 2019

Attitude Category	HIV-AIDS Prevention Behavior Risky		not risky		Amount		*P* value
	n	%	N	%	N	%	
Negative	69	67%	34	33%	103	100%	0.843
Positive	47	64.4%	26	35.6%	73	100%	
total	**116**	**65.9**	**60**	**34.1%**	**176**	**100.0%**	

Table 7
The relationship between peer influence on HIV-AIDS prevention behavior among street teenagers in the city of Bogor in 2019

Peer Influence Category	HIV-AIDS Prevention Behavior Risky		not risky		Amount		*P* value	OR
	N	%	N	%	N	%		

There is influence	83	73.5%	30	26.5%	113	100%	0.008	2,515
There isn't any Influence	33	52.4%	30	47.6%	63	100%		
total	**116**	**65.9%**	**60**	**34.1%**	**176**	**100.0%**		

Discussion

Univariate Analysis

1. Frequency Distribution of HIV-ADS Prevention Behaviors.

Based on the results of research conducted on 176 respondents, it was stated that 116 people (65.9%) had risky behavior, 60 people (34.1%) were not at risk of HIV-AIDS prevention behavior. This is confirmed by Yakup's research. J. Tamaka (2015), previously conducted regarding factors related to the increase in HIV-AIDS in adolescents, stated that the percentage of respondents who carried out risky HIV-AIDS prevention behavior was 62.22%, while the percentage of respondents who carried out HIV-AIDS prevention behavior was 62.22%. 37.8% are not at risk. According to him, this is because teenagers have easy access to HIV-AIDS. Apart from that, environmental factors also greatly influence this.

According to the researcher's assumption, the high level of HIV-AIDS risk behavior among street teenagers is influenced by various factors, including the attitude of teenagers who are indifferent to knowledge about HIV-AIDS prevention, teenagers only socializing with a limited environment, lack of knowledge received from parents and community leaders. religion, and health workers and so on.

2. HIV-AIDS prevention behavior based on knowledge among street teenagers in Bogor City in 2019

Based on the results of research conducted on 176 respondents, it was stated that those with poor knowledge numbered 131 (74.4%), and those with good knowledge numbered 45 (25.6%).

This is in accordance with previous research conducted by MPS A 2013 which stated the influence of lifestyle and level of religiosity on adolescent knowledge in preventing the spread of HIV-AIDS, that there was a significant relationship between knowledge and HIV-Aids analysis behavior in adolescents with a P value of 0.022. This means that those with poor knowledge have a greater chance of behavior that tends to use Hiv-Aids compared to those with good knowledge.

According to the researcher's assumption, it was found that respondents who had more or less knowledge compared to respondents who had good knowledge, this could be influenced by the lack of interest among teenagers in education starting with sex and Hiv-Aids, lack of counseling about Hiv-Aids prevention, and so on.

3. HIV-AIDS prevention behavior based on attitudes among street teenagers in Bogor City in 2019

Based on the results of research conducted on 176 respondents, it was stated that 103 people (58.5) had a negative attitude, more than 73 people (41.5%) had a positive attitude.

According to research by Agustini (2013) regarding the relationship between adolescent attitudes and adolescent sexual behavior, it shows that 32 respondents had negative attitudes and bad behavior (25.6%), 28 respondents had positive attitudes and bad behavior (21, 1%). Respondents who had negative attitudes and good behavior were 22 people (16.5%) and respondents who had positive attitudes and good behavior were 49 respondents (36.8%). The statistical test results obtained a p value = 0.005, in this case the p value < 0.05 means Ho is rejected and the Ha statement is accepted, so it can be concluded that there is a relationship between attitudes and adolescent sexual behavior. Analysis of the close relationship between the two variables obtained OR = 2.705 (95% CI: 1.331-5.497). This means that respondents with negative behavior have a greater chance of adolescent sexual behavior compared to respondents with positive behavior.

4. HIV-AIDS prevention behavior based on peers among street teenagers in Bogor City in 2018

Based on the results of research conducted on 176 respondents, it was stated that there were 113 respondents who had peer influence (64.2) more than 63 respondents who had no peer influence (35.8%).

Lina's (2015) research shows that bad behavior for Hiv-Aids prevention occurs more often in respondents who have negative peer relationships. The Fisher Exact test results showed that there was a significant relationship between peer interactions and sexual behavior in class XI IPS students at SMA Negeri 1 Semin Gunung Kidul Yogyakarta (p < 0.05).

According to the researcher's assumption, research conducted on street teenagers in Bogor City shows that peers can influence behavior. Prevention of HIV-AIDS is caused by many trigger factors, namely social interactions between peers which mutually influence one individual and another. Teenagers also feel more comfortable talking or expressing emotions and other things with their peers. Teenagers' closeness to their peers tends to exceed closeness to their parents, so that teenagers are more easily influenced by their peers. Adolescents who are in a social environment with peers who have risky behavior are also affected. In line with this, an unfavorable teenage environment will greatly affect other teenagers.

Bivariate Analysis

1. The relationship between attitudes and HIV-AIDS prevention behavior on the streets of Bogor City

Attitude is a reaction or response that is still closed from a person to a stimulus or object (Fitriani, 2017). Attitude is not the same as behavior and behavior does not always reflect a person's attitude. Because it often happens that a person can change by showing actions that are contrary to his attitude. A person's attitude can change by obtaining additional information about the object through persuasion and pressure from their social group.

From the results of research conducted by researchers, it can be seen that there is a relationship between respondents' attitudes regarding HIV-AIDS prevention behavior among street teenagers in Bogor City in 2019.

According to research by Agustini (2013) regarding the relationship between adolescent attitudes and adolescent sexual behavior, it shows that 32 respondents had negative attitudes and bad behavior (25.6%), 28 respondents had positive attitudes and bad behavior (21, 1%). Respondents who had negative attitudes and good behavior were 22 people (16.5%) and respondents who had

positive attitudes and good behavior were 49 respondents (36.8%). The statistical test results obtained a p value = 0.005, in this case the p value < 0.05 means Ho is rejected and the Ha statement is accepted, so it can be concluded that there is a relationship between attitudes and adolescent sexual behavior. Analysis of the close relationship between the two variables obtained OR = 2.705 (95% CI: 1.331-5.497). This means that respondents with negative behavior have a greater chance of adolescent sexual behavior compared to respondents with positive behavior.

The better the respondent's attitude, the better the action towards HIV-AIDS prevention behavior. Vice versa, the less good the respondent's attitude, the less good the actions towards HIV-AIDS prevention behavior will tend to be. Respondents who have attitudes in the good category tend to have better preventive measures against HIV-AIDS compared to respondents who have attitudes in the less good category.

2. The Relationship between Knowledge and HIV-AIDS Prevention Behavior among Street Teenagers in Bogor City

Knowledge is the result of knowing and this occurs after people sense a particular object (Febriyanto, 2016).

Based on previous research conducted by Jesy Anggareini (2016) which stated that there was a significant relationship between knowledge and behavior in analyzing Hiv-Aids in adolescents with a P value of 0.022. This means that those with poor knowledge have a greater chance of behavior that tends to use Hiv-Aids compared to those with good knowledge.

Based on the results of Nurmita's research (2016), it is known that out of 175 students, 99 (76.2%) respondents had poor knowledge, and 25 respondents (55.6%) had good knowledge. P value = 0.015 in this study, knowledge has a relationship which is significant because it is known that <α (0.015<0.05) means there is a relationship between knowledge and sexual behavior in adolescents.

This research is also strengthened by previous research conducted by Cut Hafizah (2009). It can be concluded that there is a significant relationship between knowledge and premarital sexual behavior and HIV-AIDS among students at SMA XX Semarang with a p value = 0.003. Thus it can be concluded that Ha is accepted, namely that there is a relationship between knowledge and sexual behavior. Thus the data above has a high level of relationship between knowledge and sexual behavior in adolescents.

According to the researcher's assumption, it was found that respondents who had more or less knowledge compared to respondents who had good knowledge, this could be influenced by the lack of interest among teenagers in education starting with sex and Hiv-Aids, lack of counseling about Hiv-Aids prevention, and so on.

3. The Relationship between Peer Influence and HIV-AIDS Prevention Behavior among Street Adolescents in Bogor City.

Peers are children or teenagers who are more or less the same age or maturity level. Peers have a huge influence on teenagers' social lives. In their personality development, teenagers really crave acceptance from their peers. Acceptance by this group is part of an effort to find self-identity. With peer groups, teenagers communicate with each other and share their hearts. They complained to each other and told each other their feelings and what was in their hearts. Due to the same level of growth and development in life and the similarity of experiences, all of this encourages the quality of relationships between peer groups to become more familiar, intimate, not more free.

Lina's (2015) research shows that bad behavior in Hiv-Aids prevention occurs more often in respondents who have negative peer relationships. The Fisher Exact test results showed that there was a significant relationship between peer interactions and sexual behavior in class XI IPS students at SMA Negeri 1 Semin Gunung Kidul Yogyakarta ($p < 0.05$).

Based on the results of Nurmita's research (2016), it is known that out of 175 students there were 22 (52.4%) respondents who had no influence from peers, and 102 (76.6%) respondents who had influence from their peers, P Value = 0.005 In this study, peer influence has a significant relationship because it is known that $<\alpha$ ($0.005 \leq 0.05$) means there is a relationship between peers and sexual behavior in adolescents.

This is in line with previous research by Ajamjah (2009) conducted on respondents, the results obtained were *p value* = 0.000 ($p < 0.05$). Thus, it can be concluded that Ha is accepted, namely that there is a relationship between peer influence on sexual behavior and HIV-ADS.

The results of this research are supported by research conducted in Surakarta. The results of the *chi square test* show *p value* = 0.001, which shows that there is a significant relationship between the role of peers and premarital sexual behavior. The Odds Ratio shows that teenagers who are influenced by peers are 19.727 times more likely to engage in premarital sexual behavior .

Conclusion

Based on the results of research conducted in the Bogor city area, the following conclusions were obtained.

1. Frequency Distribution Based on HIV-AIDS Prevention Behavior, the highest in the At-Risk category was 116 people, 65.9%.
2. Frequency Distribution of HIV-AIDS prevention Behavior Based on Knowledge, the highest category is Less, 131 74.4%, Attitude, Knowledge, the highest category is Negative, 103 people, 8.5%, Influence of peers, Knowledge, the highest category, there is influence, 113, 64.2%.
3. There is a relationship between knowledge, attitudes, peer influence on HIV-AIDS prevention among street teenagers in Bogor City 2019.

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THE EFFECT OF BABY MASSAGE ON THE WEIGHT OF BABIES AGED 3-6 MONTHS IN THE TPMB OF THE KELAPA GADING REGION, NORTH JAKARTA

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Abstract

Regular monitoring of children's growth and development must start from an early age as an effort to obtain quality human resources. Baby massage can reduce morbidity rates, baby massage is useful for increasing baby weight, increasing growth, increasing endurance, increasing breast milk production, improving blood circulation and breathing and improving sleep quality. Baby massage can also optimize baby growth and development. The aim of the research was to determine the effect of baby massage on the weight of babies aged 3-6 months in the TPMB Kelapa Gading area, North Jakarta. This research uses a Quasi Experimental method with a pretest and posttest research design. The sample in this study was 20 babies aged 3-6 months. The sampling technique uses purposive sampling. Data analysis used General Linear Model (GLM) Repeated Measures design with Pretest-Posttest Design. The type of contrast used is difference contrast. During the first week of massage, the average baby's weight increased by 102.5 grams. And by the fourth week, the average baby's weight increased to 297 grams. Overall, the average increase in baby weight was 780.5 grams, this proves that baby massage has proven effective in increasing baby weight. It was found that there was a difference in the average weight of babies before and after baby massage of 780.5 grams at TPMB in the Ranting Kelapa Gading area, Jakarta.

Keywords: Baby, Baby Massage, Baby Weight

Introduction

The baby's growth and development must be monitored by the baby's parents every month, what is observed is the child's weight, body length, development of motor and sensory movements. Regular monitoring of children's growth and development must start from an early age as an effort to obtain quality human resources (Sutriyawanet al., 2019).

Baby massage can reduce morbidity rates, baby massage is useful for increasing baby weight, increasing growth, increasing endurance, increasing breast milk production, improving blood circulation and breathing and improving sleep quality. Baby massage can also optimize baby growth and development[10].

The World Health Organization (WHO) reports that more than 200 million children under 5 years of age in the world do not fulfill their developmental potential. The incidence of developmental delays in the United States ranges from 12-16%, Thailand 24%, and Argentina 22%, while in Indonesia it is between 29.9%[16].

According to UNICEF (United Nations International Children's Emergency Fund) in 2015, data was obtained that the incidence of growth and development disorders in children under five, especially motor development disorders, was still high (27.5%) or 3 million children experienced disorders[15].

National data according to the Indonesian Ministry of Health shows that in 2014, 13% - 18% of children under five in Indonesia experienced growth and development disorders [18]. According to the Basic Health Survey (Riskesdas, 2018) organized by the Ministry of Health, the proportion of underweight children in Indonesia aged 0 - 23 months is 3.8% and the proportion of underweight children is 11.4%. In children aged 0 - 59 months, body weight was 3.9% and weight loss was 13.8%. There were 4,740,342 live births in Indonesia in 2020, of which 1.3% were at the age of 0-23 months, 1.3% were very low, 5.4% were low, 1.2% were malnourished and 4.1% were malnourished. Meanwhile, at the age of 0-59 months, very low body weight is 1.4%, low weight is 6.7%, malnutrition is 1.1%, malnutrition is 4.3% [12].

According to BPS (Central Statistics Agency) in the province of DKI Jakarta, the birth rate was recorded at 132,350 people, while in the city of North Jakarta it was 22,684 people. By looking at the high live birth rate for babies, it is very important to provide stimulus during the golden age period so that there are no developmental delays [8].

Babies' brains are twice as active as toddlers [5]. Monitoring and stimulating the growth and development of babies is one of the midwives' duties. In accordance with the Decree of the Minister of Health of the Republic of Indonesia Number 369/Department of Health/SK/III/2007 concerning Standards for Professional Midwives. Massage therapy is one of the stimulation suggestions developed to stimulate growth and development (Prasetyono, 2017). According to Health Law No. 36 of 2009, baby massage is a traditional health service which is included in the type of skill. According to Minister of Health Regulation Number 1109 of 2007, baby massage can be categorized as complementary - alternative medicine because it has been obtained through structured education based on biomedical science.

According to research conducted by Rosi Kurnia (2016), the results showed that babies who received massage once a day experienced an average increase in body weight of 1.08 kg, and

babies who received a massage twice a day experienced an average increase in body weight of 1.08 kg. .28 Kg while babies who were not massaged experienced an increase in weight of 0.89 Kg, so it is proven that baby massage is effective in increasing baby weight[13].
In research conducted by Astriana (2017), the results showed that the average weight of babies before massage was 4.86 Kg, the average weight of babies after massage was 5.72 Kg, it is proven that there is an effect of baby massage on increasing body weight in children. babies [1].
According to a preliminary study carried out at the TPMB Ranting Kelapa Gading Region, North Jakarta. Results of interviews on 3-5 April 2023 with 10 mothers who have babies from 3-6 months old found (30%) mothers who only knew about baby massage but did not do it independently at home, (10%) mothers knew the techniques and benefits of baby massage and did it at home independently, (60%) mothers said he did not know the techniques and benefits of baby massage, one of which is to increase the baby's weight.
Mothers think that baby massage does not need to be mastered, it is only done if the child is fussy by a midwife and baby massage performed by a midwife or midwife is the same. The aim of this research is to determine the effect of baby massage on the weight of babies aged 3-6 months in the TPMB Kelapa Gading area, North Jakarta.

Method

This research uses a Quasi Experimental method with a research design pretest and posttest without control (without control group). This research uses General Linear Model (GLM) Repeated Measures design analysis with a Pretest-Posttest Design, namely before the baby's massage, the baby's body weight is weighed (Pre-test) and after the baby's massage, the baby's weight is weighed (Post-test). The type of contrast used is Difference contrast.
Weighing is carried out every week on the same day. The research was conducted for four weeks, namely in the first, second, third and fourth weeks after the baby massage.
A sample is a portion of the population whose characteristics are measured and later used to estimate the characteristics of the population [9]. Sampling was carried out using purposive sampling technique and collected using observation techniques. The sample for this study were babies aged 3-6 months in the TPMB Kelapa Gading area, North Jakarta who met the inclusion criteria and exclusion criteria, totaling 20 babies.
As a sample size relative to the current population. Guidelines for determining sample size by Roscoe (1975) to Uma Secalan (1992) state that simple experimental research with strict control of sample size can use 10 – 20 items (Hatmawan & Riyanto, 2020), after collecting data using observation sheets, analysis tests are carried out General Linear Model (GLM) data with SPSS to determine the effect of baby massage on body weight.

Results

The results of data processing and analysis use GLM Repeated Measures analysis.

Table 1
Average baby weight at first, second, third and fourth week measurements

Baby Weight	Mean	Std. Deviation	N
Intial Baby Weight	6764.00	1040.220	20
First week weight	6866.50	1045.156	20
Second week weight	7061.50	1048.323	20
Third week weight	7247.50	1033.191	20
Fourth week weight	7544.50	968.409	20

Based on table 1 above, the research results show that the 20 babies who received massage experienced an increase in body weight. Before the baby massage was carried out, the average baby's weight was 6764.00 grams. After the baby massage was carried out in the first week, the average weight increased by 6866.50 grams. Furthermore, the average weight for the second week was 7061.50 grams, the average weight for the third week was 7247.50 grams, and the averageweight for the fourth week was 7544.50 grams.

Table 2
Statistical test results for increasing baby weight after baby massage within 4 weeks

Effect		Sig.
Factor 1	Pillai's Trace	.000
	Wilks' Lambda	.000
	Hotelling's Trace	.000
	Roy's Largest Root	.000

Based on table 2 above, it can be seen that there are various testing methods such as Pillai's Trace, etc. Based on the results of statistical testing, the same value was obtained, namely p = 0.000, which means α = 0.05, rejecting the null hypothesis. If the p value obtained in the study is <0.05, it means that there is an effect of baby massage on increasing body weight aged 3-6 months in the TPMB Kelapa Gading area, North Jakarta

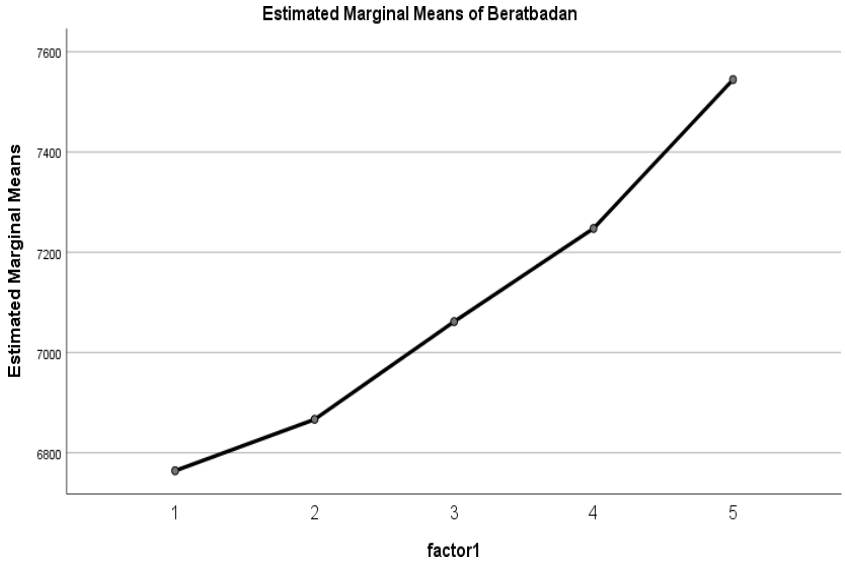
Table 3
Statistical Test Results on Increase in Baby's Weight After Baby Massage According to Comparison of Body Weight Measurements Using Difference Contrast

		df	Mean Square	F	Sig.
	weekly weight measurements				

weekly weight measurements	Initial Baby Weight vs. First Weight Week	1	210125.000	50.939	.000
	Second Weight Week vs Previous Week's Weight.	1	1212781.250	152.658	.000
	Third Weight Week vs. Previous Week's Weight	1	2452333.889	201.214	.000
	Fourth Weight Week vs. Previous Week's Weight	1	6263602.812	69.061	.000
Error(weekly weight measurements)	First Weight Week vs. Initial Baby Weight	19	4125.000		
	Second Weight Week vs. Previous Week's Weight	19	7944.408		
	Third Weight Week vs. Previous Week's Weight	19	12187.690		
	Fourth Weight Week vs. Previous Week's Weight	19	90696.891		

Based on table 3 above, the results of the baby weight measurement test per week show that the baby's weight in the first week is compared with the initial weight (p value = 0.000), the second week is compared with the initial weight and the first week (p value = 0.000), at week thirdly compared with initial body weight, first week and second week (p value = 0.000), and in the fourth week compared with initial body weight, first week, second week and third week (p value = 0.000). If each level of measurement has a p value <0.05 then there is an increase in the baby's weight every week.

Figure 1. Graph of Baby's Weight Increase After Baby Massage According to Weekly Measurements



Based on Figure 1 above, it shows that there is an increase in the average weight of babies after baby massage according to weekly measurements.

Discussion

Univariate Analysis

Average baby weight at first, second, third and fourth week measurements

Based on table 1 above, the results of the research before the baby massage was carried out, the average weight of the baby was 6764.00 grams and after the baby massage was carried out in the fourth week it was 7544.50 grams. The results of this study are in line with research conducted by Astriana (2017) which states that the average weight of babies before massage is 4.86 Kg, the average weight of babies after massage is 5.72 Kg, it is proven that there is an effect of baby massage on increasing body weight in babies [1].

The results of this research are also in line with Field's (2017) theory. One way to stimulate weight gain is with baby massage. Baby massage therapy increases baby weight. The mechanism is an increase in vagus nerve activity which stimulates gastric motility, thus stimulating the production of hormones that increase nutrient absorption, namely gastrin and insulin. Gastric motility, gastrin and insulin maximize nutrient absorption and cause the baby to gain weight. Another mechanism is the secretion of the growth hormone IGF-1 which then increases cell mitosis and affects body weight.

Bivariate Analysis

Statistical test results for increasing baby weight after baby massage within 4 weeks

Based on the results of statistical testing, the same value was obtained, namely $p = 0.000$, which means $\alpha = 0.05$, rejecting the null hypothesis. If the p value obtained in the research <0.05 means that there is an effect of baby massage on increasing body weight aged 3-6 months in the TPMB Ranting Kelapa Gading area, North Jakarta. The results of this research are in line with research conducted by Virgia which stated that based on research results processed using the Mann Whitney test, a P value of 0.000 was found to be smaller than the α value (0.05), which means that there is a significant influence of baby massage on the development of neonates [16].

Statistical test results regarding the increase in baby weight after baby massage according to comparison of weight measurements using difference contrast

The test results measuring the baby's weight per week show that there is a value (p value = 0.000). If the measurement p value is <0.05 then there is an increase in the baby's weight every week. These results are in line with research conducted by Irva et al which stated that there was an increase of 700 grams after massage for two weeks with a p value of 0.000 (p < 0.05) (Irva, et. al., 2014). The results of this research are in line with research conducted by Elvira and Azizah which stated that the weight gain of babies who received massage was 800 grams/month, and babies who did not receive massage was 233.33 grams/month [1].

Graph of Baby's Weight Increase After Baby Massage According to Weekly Measurements

The results of the study showed that there was an increase in the average weight of babies after baby massage according to weekly measurements. This research is in line with research conducted by Rosi Kurnia (2016). The results of the study showed that the average weight of babies who received massage once a day increased by 1.08 kg, and babies who received a massage twice a day experienced an average increase in body weight. -an average of 1.28 kg, while babies who were not massaged experienced an increase in weight of 0.89 kg, so it is proven that baby massage is effective in increasing baby weight [13]. In line with the theory of Juwita and Jayanti (2019) that the benefits of massage for babies are that it can increase body weight, increase the growth and development of the baby, increase the baby's concentration, make the bounding stronger, create a feeling of comfort and can stimulate blood circulation. According to researchers' assumptions, baby massage provides enormous benefits for the baby's growth, especially increasing the baby's weight, whether carried out by professionals or the baby's mother herself. Baby massage can be done by anyone, including parents, as an expression of love for their child and baby massage will provide great benefits if done regularly. Baby massage does not completely affect weight gain because weight gain can be influenced by providing quality breast milk. The reason why there is no weight gain in the following week is because the baby is sick so the baby is fussy and reluctant to breastfeed. Based on the testimony given by the baby's parents at the end of the research activity, there was a difference felt after the massage, namely an increase in the quality of the baby's sleep, the baby became less fussy, the recovery when the baby had a cough and cold was faster, the parents felt happy because of the weight gain. more babies than the previous month when baby massage was not carried out, and the baby's parents were very grateful because participating in this activity was a moment to increase knowledge about baby massage, thus breaking the assumption that baby massage carried out by midwives and dukuns is the same as that. is not true, and parents of babies are also motivated to continue giving baby massages and are no longer afraid to massage their babies independently at home. Researchers concluded that baby massage can increase body weight because with baby massage the blood circulation becomes smoother, the quality and quantity of the baby's sleep becomes better, which will affect the baby's weight.

Limitation

This research has limitations that can be taken into consideration by future researchers in order to obtain better research results. These limitations include, urgent needs or the holiday atmosphere making respondents return home for a long time so they are scheduled for a massage but cannot attend. If the baby has a fever or post-immunization, the researcher must reschedule the baby massage schedule, when the baby's condition allows for a massage, and this research only examined 20 respondents due to limited time and energy and the absence of a comparison group to strengthen the research.

Conclusion

Based on the results of research regarding the effect of baby massage on the weight of babies aged 3-6 months in the TPMB Ranting Kelapa Gading area, North Jakarta. So the author can conclude that of the 20 babies who will be massaged, the average weight of the baby is 6764.00 grams. After massage for 4 weeks, the average baby weight was found to be 7544.50 grams and it was found that there was a difference in the average baby weight before and after the baby massage was 780.5 grams.

Ethical Considerations

This study was approved by the local ethics committee (registration no. 014/KEPK/UNPRI/VI/2023)

Acknowledgment

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Conflict of Interest

None, a complete expression of interest form can be viewed online for supporting information.

Author contribution

RY, RK and JAS conceptualized and initiated the research. All authors commented and provided feedback on the manuscript and approved the final version for publication.

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THE EFFECT OF PRENATAL EXERCISE TOWARD CLINICAL OUTCOME ON DELIVERY PROCESS AT PERMATA BUNDA CLINIC, SERANG IN 2018

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Abstract

Prenatal exercise is one of activities in services during pregnancy. Prenatal exercise result in a better pregnancy product and better delivery outcome, compared to the mothers that do not follow prenatal exercise. Delivery is a physiological process. If the mother gets no clear information and do not examine her pregnancy regularly, it becomes pathological. The research aims to determine the effect of prenatal exercise toward clinical outcome in the delivery process at Permata Bunda clinic Serang 2018. The method used in the research was quasi Experimentt control group design. The samples were 20 pregnant mothers who follow prenatal exercise at Permata Bunda Clinic Serang. The result shows that prenatal exercise affect clinical outcome during the delivery process phase I,II,III,IV which is significant among experiment group (p = 0,000). Prenatal exercise could decrease pain and accelerate labor process. Permata Bunda Clinic needs to socialize the prenatal exercise program regularly.

Keywords: *Clinical Outcome, Delivery Process, Prenatal Exercise,*

Introduction

According to data from the World Health Organization (WHO), MMR in the world in 2015 reached 303,000 people per year who died during pregnancy or childbirth. MMR in Southeast Asian countries such as Brunei is 23 per 100,000 live births, Thailand is 20 per 100,000 live births, and Malaysia is 40 per 100,000 per live birth. Meanwhile in Indonesia, the MMR reached 126 per 100,000 live births [25]. Based on data obtained from the Banten Province Health Office in 2016, it reached 252 per 100,000 live births (Banten Province Health Office, 2016).

Factors that influence the causes of complications during childbirth include bleeding, infection, one of which is caused by difficult or long labor and eclampsia. The factors that cause prolonged labor are weak strength such as: contractions of the abdominal wall muscles, contractions of the pelvic diaphragm or pushing strength, tension and contraction of the round ligament, passanger (abnormal position of the fetus, low-lying placenta), passage (narrow birth canal).) (Guyton, 2007).

According to (Titin Sutriyani, et al 2017) in his research entitled the influence of therapeutic communication and pregnancy exercise on the process of labor in stages I, II, III, IV, this research states that pregnancy exercise is a process in preparation for childbirth, while the benefits of pregnancy exercise include improving blood circulation, reduces swelling, especially legs, improves muscle balance, reduces leg spasms/cramps, strengthens abdominal muscles, improves fetal position [6]. One of the effective health interventions to prevent maternal morbidity and death is prenatal care The main function of prenatal services includes health promotion during pregnancy through health education facilities, which are provided individually and in groups. Therefore, researchers chose pregnancy exercise because they wanted to see the effect of pregnancy exercise on clinical outcomes during the birth process.

In general, the birth process is physiological, if during pregnancy you do not receive clear information and do not carry out regular pregnancy checks, then the physiological process becomes pathological. Pregnancy exercise will produce better birth outcomes, compared to pregnant women who do not do pregnancy exercise. The benefits of pregnancy exercise have been reported to reduce the occurrence of low birth weight babies, decrease heart rate abnormalities, umbilical cord and meconium, decrease energy use, reduce pain, reduce the occurrence of premature births, reduce the incidence

of caesarean sections, and improve the Apgar and psychomotor scores of the fetus. Pregnancy exercise can also reduce the risk of stress and pain during childbirth. Apart from that, the essence of pregnancy exercise itself is to train your breathing before giving birth, so that when the baby is born, the mother can relax and control the situation (JNPKKR, 2007). The aim of this research is to determine the effect of pregnancy exercise on clinical outcomes in the birthing process.

Based on the description above, researchers are interested in conducting research with the title "The Effect of Pregnancy Exercise on Clinical Outcomes in the Childbirth Process at the Permata Bunda Clinic, Serang City in 2018".

Method

This research is a quasi-experimental research with a control group design. This type of research is used to look for cause and effect by providing treatment with a treatment technique at a certain time compared to the standard technique that has been used for a long time, then studying the effect of the treatment. The population used in this study were all pregnant women who underwent ANC examinations at the Permata Bunda Clinic, Serang City in May with a total of 30 pregnant women. Sampling in this study used accidental sampling technique, samples were obtained from a population of 20 pregnant women, who were divided into 2 groups. Group 1 was given the pregnancy exercise intervention with a total of 10 pregnant women (experimental group) and group 2 was not given the intervention with a total of 10 pregnant women (control group). To reduce bias in this study, inclusion and exclusion criteria were determined. Inclusion criteria are criteria or standards that are established before research or research is carried out. Meanwhile, exclusion criteria are criteria where research subjects cannot represent the sample because they do not meet the requirements as a sample. The instruments used in this research were observation tools and questionnaires. The data collection used was to differentiate the provision of intervention in the experimental group and non-intervention in the control group, observation and questionnaires were filled out by researchers to determine the clinical outcome in the delivery process for pregnant women who took part in pregnancy exercise in the experimental group and the control group.

Results

Univariate Analysis Results

Frequency Distribution of Respondents Based on First Stage of Labor

Table 1 Frequency Distribution of Respondents Based on First Stage of Labor at Permata Bunda Clinic Serang City in 2018

Variable		Stage I					
		Experiment		Control		Total	Percent %
		F	%	F	%		
Systole	100	-	-	1	10%	1	5,0%
Pressure	110	3	30%	9	90%	12	60,0%
	120	7	70%	-	-	7	35,0%
Total		**10**	**100%**	**10**	**100%**	**20**	**100%**
TD	70	-	-	6	60%	6	30,0%
dyastole	80	10	100%	4	40%	14	70,0%
Total		**10**	**100%**	**10**	**100%**	**20**	**100%**
Pulse	78	-	-	5	50%	5	25,0%
	80	5	50%	5	50%	10	50,0%
	81	2	20%	-	-	2	10,0%
	82	2	20%	-	-	2	10,0%
	84	1	10%	-	-	1	5,0%
Total		**10**	**100%**	**10**	**100%**	**20**	**100%**
tempera	36,2	-	-	2	20%	2	10,0%
tue	36,3	-	-	2	20%	2	10,0%
	36,4	-	-	2	20%	2	10,0%
	36,5	4	40%	3	30%	7	35,0%
	36,6	2	20%	1	10%	3	15,0%
	36,7	2	20%	-	-	2	10,0%
	36,8	2	20%	-	-	2	10,0%
Total		**10**	**100%**	**10**	**100%**	**20**	**100%**
breathing	18	-	-	2	20%	2	10,0%
	19	-	-	4	40%	4	20,0%
	20	6	60%	3	30%	9	45,0%
	21	2	20%	1	10%	3	15,0%
	22	2	20%	-	-	2	10,0%
Total		**10**	**100%**	**10**	**100%**	**20**	**100%**
fetal	136	-	-	2	20%	2	10,0%
heart rate	137	-	-	1	10%	1	5,0%
	138	1	10%	3	30%	4	20,0%
	139	-	-	1	10%	1	5,0%
	140	3	30%	2	20%	5	25,0%
	142	1	10%	1	10%	2	10,0%
	143	2	20%	-	-	2	10,0%
	144	1	10%	-	-	1	5,0%
	145	1	10%	-	-	1	5,0%
	148	1	10%	-	-	1	5,0%
Total		**10**	**100%**	**10**	**100%**	**20**	**100%**
Length	360	3	30%	-	-	3	15,0%
of first	540	-	-	1	10%	1	5,0%
stage of	600	7	70%	4	40%	11	55,0%
labor	770	-	-	1	10%	1	5,0%
	780	-	-	2	20%	2	10,0%
	800	-	-	1	10%	1	5,0%
	840	-	-	1	10%	1	5,0%
Total		**10**	**100%**	**10**	**100%**	**20**	**100%**

Based on table 1, it can be seen that the blood pressure of the respondents did not experience much change, namely 110 mmHg in 12 respondents (60%), normal systolic blood pressure was 100-120 mmH. Diastolic pressure did not change much, namely 80 mmHg in 14 respondents (70%), normal 70-80 mmHg. It can be seen that the pulse of the respondents is not much different, namely 80 x/minute in 10 respondents (50%), normal pulse is 60-100 x/minute. It can be seen that the body temperature of the respondents did not experience much change, namely 36.50C in 7 respondents (35%), normal body temperature was 36.50C - 370C. It can be seen that the respondents' breathing is not much different, namely 20 x/minute in 9 respondents (45%), normal breathing is 16-24 x/minute. It can be seen that DJJ in respondents did not experience much change, namely 140 x/minute in 5 respondents (25%), normal DJJ was 120-160 x/minute. In the first stage of labor, the length of labor changed, namely 600 minutes in primigravida, 11 people (55%) experienced faster labor, normal first stage of labor was 10-12 hours. In multigravida, namely 360 minutes, 3 respondents (15%) experienced a faster labor process of 6-8 hours, which is normal.

Frequency Distribution of Respondents Based on Second Stage of Labor

Table 2 Frequency Distribution of Respondents Based on Second Stage of Labor at Permata Bunda Clinic Serang City in 2018

Variable		Stage II					
		Experiment		Control		Total	Percent %
		F	%	F	%		
Pressure	100	-	-	5	50%	5	25,0%
systole	110	7	70%	5	50%	12	60,0%
	120	3	30%	-	-	5	15,0%
Total		**10**	**100%**	**10**	**100%**	**20**	**100%**
Pressure	70	1	10%	8	80%	9	45,0%
dyastole	80	9	90%	2	20%	11	55,0%
Total		**10**	**100%**	**10**	**100%**	**20**	**100%**
Pulse	78	-	-	4	40%	4	20,0%
	79	-	-	1	10%	1	5,0%
	80	4	40%	5	50%	9	45,0%
	81	1	10%	-	-	1	5,0%
	82	4	40%	-	-	4	20,0%
	84	1	10%	-	-	1	5,0%
Total		**10**	**100%**	**10**	**100%**	**20**	**100%**
Tempera	36,4	-	-	2	20%	2	10,0%
ture	36,4	-	-	3	30%	3	15,0%
	36,5	2	20%	3	30%	5	25,0%
	36,6	3	30%	1	10%	4	20,0%
	36,7	1	10%	1	10%	2	10,0%
	36,8	1	10%	-	-	1	5,0%
	36,9	1	10%	-	-	1	5,0%
	37,0	2	20%	-	-	2	10,0%
Total		**10**	**100%**	**10**	**100%**	**20**	**100%**
Breathin	18	-	-	4	40%	4	20,0%

g	19	-	-	2	20%	2	10,0%
	20	4	40%	2	20%	6	30,0%
	21	3	30%	2	20%	5	25,0%
	22	3	30%	-	-	3	15,0%
Total		**10**	**100%**	**10**	**100%**	**20**	**100%**
Length	80	1	-	-	-	1	5,0%
of second	85	1	-	-	-	1	5,0%
stage of	90	3	30%	1	10%	4	20,0%
labor	95	3	30%	7	70%	10	55,0%
	100	2	20%	1	10%	3	15,0%
	110	-	-	1	10%	1	5,0%
Total		**10**	**100%**	**10**	**100%**	**20**	**100%**

Based on table 2, it can be seen that the blood pressure of the respondents did not experience much change, namely 110 mmHg in 12 respondents (60%), normal systolic blood pressure was 100-120 mmHg. Diastolic pressure did not change much, namely 80 mmHg in 11 respondents (55%), normal diastole was 70-80 mmHg. It can be seen that the pulse of the respondents is not much different, namely 80 x/minute in 9 respondents (45%), the normal pulse is 60-100 x/minute. It can be seen that the body temperature of the respondents did not experience much change, namely 36.50C in 6 respondents (30%), normal body temperature was 36.50C - 370C. It can be seen that the respondents' breathing is not much different, namely 20 x/minute in 7 respondents (35%), normal breathing is 16-24 x/m. In the second stage of labor, the length of labor changed, namely 50 minutes in primigravida, 5 people (25%) experienced faster labor, normal second stage labor was 1-1.5 hours. In multigravida, namely 30 minutes, 3 respondents (15%) experienced a faster labor process, normal second stage labor is 0.5-1 hour.

Frequency Distribution of Respondents Based on Third Stage of Labor

Table 3 Frequency Distribution of Respondents Based on Third Stage of Labor at Permata Bunda Clinic Serang City in 2018

Variable		Stage III					
		Experiment		Control		Total	Percent %
		F	%	F	%		
Pressure	100	-	-	7	70%	7	35,0%
systole	110	7	70%	3	30%	10	50,0%
	120	3	30%	-	-	3	15,0%
Total		**10**	**100%**	**10**	**100%**	**20**	**100%**
Pressure	70	1	10%	9	90%	10	50,0%
dyastole	80	9	90%	1	10%	10	50,0%
Total		**10**	**100%**	**10**	**100%**	**20**	**100%**
Pulse	78	-	-	6	60%	6	30,0%
	80	5	50%	4	90%	9	45,0%
	81	2	20%	-	20%	2	10,0%
	82	3	30%	-	30%	3	15,0%
Total		**10**	**100%**	**10**	**100%**	**20**	**100%**

Tempera ture	36,4	-	-	3	30%	3	15,0%
	36,5	3	30%	5	50%	8	40,0%
	36,6	-	-	1	10%	1	5,0%
	36,7	2	20%	1	10%	3	15,0%
	36,8	2	20%	-	-	2	10,0%
	36,9	3	30%	-	-	3	15,0%
Total		**10**	**100%**	**10**	**100%**	**20**	**100%**
Breathin g	19	-	-	4	40%	4	20,0%
	20	3	30%	5	50%	8	40,0%
	21	4	40%	1	10%	5	25,0%
	22	3	30%	-	-	3	15,0%
Total		**10**	**100%**	**10**	**100%**	**20**	**100%**
Length of third stage of labor	5	5	50%	-	-	5	25,0%
	7	1	10%	-	-	1	5,0%
	8	1	10%	-	-	1	5,0%
	10	3	30%	8	80%	11	55,0%
	15	-	-	2	20%	2	10,0%
Total		**10**	**100%**	**10**	**100%**	**20**	**100%**
Blood loss in the fourth stage of labor	100	2	20%	-	-	2	10,0%
	110	1	10%	-	-	1	5,0%
	120	1	10%	-	-	1	5,0%
	124	1	10%	-	-	1	5,0%
	130	2	20%	-	-	2	10,0%
	140	2	20%	2	20%	4	20,0%
	150	1	10%	1	10%	2	10,0%
	160	-	-	1	10%	1	5,0%
	180	-	-	1	10%	1	5,0%
	185	-	-	3	30%	3	15,0%
	190	-	-	2	20%	2	10,0%
Total		**10**	**100%**	**20**	**100%**	**20**	**100%**

Based on table 3, it can be seen that the blood pressure of the respondents did not experience much change, namely 110 mmHg in 10 respondents (50%), normal systolic blood pressure was 100-120 mmHg. Diastolic pressure did not change much, namely 80 mmHg in 10 respondents (50%), normal diastole was 70-80 mmHg. It can be seen that the pulse of the respondents is not much different, namely 80 x/minute in 9 respondents (45%), the normal pulse is 60-100 x/minute. It can be seen that the body temperature of the respondents did not experience much change, namely 36.50C in 8 respondents (40%), normal body temperature was 36.50C - 370C. It can be seen that the respondents' breathing is not much different, namely 20 x/minute in 8 respondents (40%), normal breathing is 16-24 x/m. In the third stage of labor, there was not much change, namely 10 minutes, namely 11 respondents (55%). Third stage blood output was 140 cc, namely 4 respondents (20%), normal ≤ 500 cc during labor.

Frequency Distribution of Respondents Based on Fourth Stage of Labor

Table 4 Frequency Distribution of Respondents Based on Fourth Stage of Delivery at Permata Bunda Clinic Serang City in 2018

Variable		Stage IV					
		Experiment		Control		Total	Percent %
		F	%	F	%		
Pressure	100	1	10%	8	80%	9	45,0%
systole	110	7	70%	2	20%	9	45,0%
	120	2	20%	-	-	2	10,0%
Total		**10**	**100%**	**10**	**100%**	**20**	**100%**
Pressure	60	-	-	2	20%	2	10,0%
dyastole	70	3	30%	7	70%	10	50,0%
	80	7	70%	1	10%	8	40,0%
Total		**10**	**100%**	**10**	**100%**	**20**	**100%**
Pulse	78	-	-	6	60%	6	30,0%
	80	5	50%	4	40%	9	45,0%
	81	1	10%	-	-	1	5,0%
	82	4	40%	-	-	4	20,0%
Total		**10**	**100%**	**10**	**100%**	**20**	**100%**
Tempera	36,3	-	-	4	40%	4	20,0%
ture	36,5	3	30%	3	30%	6	30,0%
	36,6	-	-	3	30%	3	15,0%
	36,7	3	30%	-	-	3	15,0%
	36,8	1	10%	-	-	1	5,0%
	36,9	3	30%	-	-	3	15,0%
Total		**10**	**100%**	**10**	**100%**	**20**	**100%**
Breathin	19	-	-	3	30%	3	15,0%
g	20	2	20%	5	50%	7	35,0%
	21	2	20%	2	20%	4	20,0%
	22	6	60%	-	-	6	30,0%
Total		**10**	**100%**	**10**	**100%**	**20**	**100%**
Length	30	3	30%	-	-	3	15,0%
of second	45	-	-	1	10%	1	5,0%
stage of	50	4	40%	1	10%	5	25,0%
labor	55	2	20%	-	-	2	10,0%
	60	1	10%	1	10%	2	10,0%
	70	-	-	2	20%	2	10,0%
	90	-	-	1	10%	1	5,0%
	110	-	-	1	10%	1	10,0%
	130			3	30%	3	15,0%
Total		**10**	**100%**	**10**	**100%**	**20**	**100%**

Based on table 4, it can be seen that the blood pressure of the respondents did not experience much change, namely 110 mmHg in 9 respondents (45%), normal systolic blood pressure was 100-120 mmHg. Diastolic pressure did not change much, namely 70 mmHg in 10 respondents (50%), normal diastole was 70-80 mmHg. It can be seen that the pulse of the respondents is not much different, namely 80 x/minute in 9 respondents (45%), the normal pulse is 60-100 x/minute. It can be seen that the body temperature of

the respondents did not experience much change, namely 36.50C in 5 respondents (25%), normal body temperature was 36.50C - 370C. It can be seen that the respondents' breathing is not much different, namely 20 x/minute in 6 respondents (30%), normal breathing is 16-24 x/m. IV blood output was 95 cc, namely 10 respondents (50%), normally no more than 500 cc during labor.

Bivariate Analysis

Differences in the First Stage of Labor between the Experimental and Control Groups

Table 5 Differences in the First Stage of Labor between the Experimental Group and the Control Group at the Permata Bunda Clinic, Serang City in 2018

No	Research group	N	Mean	Deviation Standard	T-Count	P-Value
1	Pressure systole					
	Experiment	10	117,00	4,830	4,382	0,000
	Control	10	109,00	3,162		
2	Pressure dyastole					
	Experiment	10	80,00	0,00	3,764	0,002
	Control	10	74,00	5,164		
3	Pulse					
	Experiment	10	81,00	1,333	3,721	0,002
	Control	10	79,00	1,054		
4	Temperature					
	Experiment	10	366,20	1,229	3,951	0,001
	Control	10	363,90	1,370		
5	Breathing					
	Experiment	10	20,60	843	3,239	0,005
	Control	10	19,30	949		
6	Heart Fetal					
	Rate	10	142,30	2,946	3,520	0,002
	Experiment	10	138,40	1,897		
	Control					
7	Length of first stage of labor					
	Experiment	10	528,00	115,931		
	Control	10	691,00	111,599	-3,203	0,005

Based on table 5 above, it shows that the average blood pressure of respondents was stable and did not experience much change, with the lowest systolic pressure occurring in the control group, namely 109 mmHg and the highest occurring in the experimental group, namely 117 mmHg (p = 0.000 t = 4.382). The lowest diastolic pressure in the control group was 74 mmHg and the highest in the experimental group was 80 mmHg (p = 0.002 t = 3.764). The lowest pulse in the control group was 79 x/minute and the highest in the experimental group was 81. The lowest temperature in the control group was 36.30C and the highest in the experimental group was 36.60C (p = 0.001 t = 3.951).

The lowest respiration occurred in the control group 19 times/minute and the highest in the experimental group 20 times/minute (p = 0.005 t = 3.239). The lowest FHR occurred in the control group 138 x/minute and the highest in the experimental group 142 x/minute (p = 0.002 t = 3.520). The lowest duration of first stage labor occurred in the experimental group 528 minutes (p = 0.005 t = -3.203) and the highest in the control group 691 where the experimental group experienced a quicker labor process than the control group.

Differences in the Second Stage of Labor between the Experimental and Control Groups

Table 6 Differences in the Second Stage of Labor between the Experimental Group and the Control Group at the Permata Bunda Clinic, Serang City in 2018

No	Research Group	N	Mean	Deviation Standart	T-Count	P-Value
1	Systole Pressure					
	Experiment	10	113,00	4,830	3,539	0,002
	Control	10	105,00	5,270		
2	Dyastole Pressure					
	Experiment	10	79,00	3,162	4.200	0,001
	Control	10	72,00	4,216		
3	Pulse					
	Experiment	10	81,30	1,337	4,174	0,001
	Control	10	79,10	994		
4	Temperature					
	Experiment	10	367,10	1,663	3,701	0,002
	Control	10	364,90	876		
5	Breathing					
	Experiment	10	21,40	843	4,233	0,000
	Control	10	19,90	738		
6	Length of second stage of labor					
	Experiment	10	46,00	11,499	-3816	0,001
	Control	10	89,00	33,731		

Based on table 6 above, it shows that the average blood pressure of respondents was stable and did not experience much change, with the lowest systolic pressure occurring in the control group, namely 105 mmHg and the highest occurring in the experimental group, namely 113 mmHg (p = 0.002 t = 3.539). The lowest diastolic pressure in the control group was 72 mmHg and the highest in the experimental group was 79 mmHg (p = 0.001 t = 4.200). The lowest pulse in the control group was 79 x/minute and the highest in the experimental group was 81 x/minute (p = 0.001 t = 4.174). The lowest

temperature in the control group was 36.40C and the highest in the experimental group was 36.70C (p = 0.002 t = 3.701). The lowest respiration occurred in the control group 19 times/minute and the highest in the experimental group 21 times/minute (p = 0.000 t = 4.233). x/minute (p = 0.002 t = 3.520). The lowest duration of second stage labor occurred in the experimental group, 46 minutes (p = 0.001 t = -3.816) and the highest in the control group, 691 minutes, where the experimental group experienced a faster labor process than the control group.

Differences in the Third Stage of Labor between the Experimental and Control Groups

Table 7 Differences in the Third Stage of Labor between the Experimental Group and the Control Group at the Permata Bunda Clinic, Serang City in 2018

No	Research Group	N	Mean	Deviation Standart	T-Count	P-Value
1	Systole					
	Pressure	10	113,00	4,830	4,629	0,000
	Experiment	10	103,00	4,830		
	Control					
2	Dyastole					
	Pressuree	10	79,00	3,162	5,657	0,000
	Experiment	10	71,00	3,162		
	Control					
3	Pulse					
	Experiment	10	80,80	919	4,575	0,000
	Control	10	78,80	1,033		
4	Temperature					
	Experiment	10	367,50	2,068	3,478	0,003
	Control	10	365,00	943		
5	Breathing					
	Experiment	10	21,00	816	3,881	0,001
	Control	10	19,70	675		
6	Length of third stage of labor					
	Experiment	10	7,00	2,309	-4,045	0,001
	Control	10	11,00	2,108		
7	Third stage blood loss					
	Experiment	10	127,40	20,998	-4,618	0,000
	Control	10	170,50	2,108		

Based on table 7 above, it shows that the average blood pressure of respondents was stable and did not experience much change, with the lowest systolic pressure occurring in the control group, namely 103 mmHg and the highest occurring in the experimental group, namely 113 mmHg (p = 0.000 t = 4.629). The lowest diastolic pressure in the control group was 71 mmHg and the highest in the experimental group was 79 mmHg

(p = 0.000 t = 5.657). The lowest pulse in the control group was 78 x/minute and the highest in the experimental group was 80 x/minute (p = 0.000 t = 4.575). The lowest temperature in the control group was 36.50C and the highest in the experimental group was 36.70C (p = 0.003 t = 3.478). The lowest respiration occurred in the control group 19 times/minute and the highest in the experimental group 21 times/minute (p = 0.001 t = 3.881). The lowest length of labor in the third stage occurred in the experimental group, 7 minutes (p = 0.001 t = -4.045) and the highest in the control group, 11 minutes, where the experimental group experienced a faster ureter expulsion process than the control group. The lowest third stage blood output in the experimental group was 127 cc and the highest in the control group was 170 cc (p = 0.000 t = 4.618).

Differences in the Fourth Stage of Labor between the Experimental and Control Groups

Table 8 Differences in the fourth stage of labor between the experimental group and the control group at the Permata Bunda Clinic, Serang City in 2018

No	Research Group	N	Mean	Deviation Standart	T-Count	P-Value
1	Systole					
	Pressure	10	111,00	5,676	4,025	0,001
	Experiment	10	102,00	4,216		
	Control					
2	Dyastole					
	Pressuree	10	77,00	4,830	3,394	0,003
	Experiment	10	69,00	5,676		
	Control					
3	Pulse					
	Experiment	10	80,90	994	4,632	0,000
	Control	10	78,80	1,033		
4	Temperature					
	Experiment	10	367,20	1,932	3,560	0,002
	Control	10	363,60	1,265		
5	Breathing					
	Experiment	10	20,90	876	3,562	0,002
	Control	10	19,20	1,229		
6	Length of fourth stage of labor					
	Experiment	10	92,00	6,325	-3,264	0,004
	Control	10	101,00	6,687		

Based on table 8 above, it shows that the average blood pressure of respondents was stable and did not experience much change, with the lowest systolic pressure occurring in the control group, namely 102 mmHg and the highest occurring in the experimental

group, namely 111 mmHg (p = 0.001 t = 4.025). The lowest diastolic pressure in the control group was 69 mmHg and the highest in the experimental group was 77 mmHg (p = 0.003 t = 3.394). The lowest pulse in the control group was 78 x/minute and the highest in the experimental group was 80 x/minute (p = 0.003 t = 3.394). The lowest temperature in the control group was 36.30C and the highest in the experimental group was 36.70C (p = 0.002 t = 3.560). The lowest respiration occurred in the control group 19 times/minute and the highest in the experimental group 20 times/minute (p = 0.002 t = 3.562). The lowest IV blood output in the experimental group was 92 cc and the highest in the control group was 101 cc (p = 0.004 t = -3.264).

Discussion

Univariate Analysis

Frequency distribution of respondents based on systolic, diastolic, pulse, temperature, respiration, fetal heart rate, duration of labor and blood loss in stages I, II, III, IV between the experimental group and the control group.

Based on the research results, it can be concluded that out of the total number of pregnant women, namely 20 respondents in the experimental group, they got good outcomes. Pregnancy exercise is movement training therapy to prepare pregnant women physically and mentally to face childbirth quickly, safely and spontaneously [13]. Pregnancy exercise is basically training for healthy pregnant women to prepare their physical condition, maintain the condition of their muscles and joints which play a role in the process and mechanisms of childbirth. In this case, the abdominal wall muscles, ligaments, pelvic floor muscles and so on are related to the birthing process. One of the requirements for participating in pregnancy exercise is a normal pregnancy with the recommendation of a doctor and midwife where the vital signs of the mother and fetus are within normal limits [21].

This is in line with research Rusmini et al, 2017 based on the results of research that pregnant women who do pregnancy exercises more often or regularly, the labor process is relatively spontaneous and the birth time takes place at the right time. Increased stamina is needed during the birthing process, the muscles will be formed and strong [19].

The results of this study are different from research conducted by Irfana et al, 2017 in that their research found that problems arising from negative stories about childbirth

were something that pregnant women were very worried about in the third trimester so that it would affect the mother's psychology, which was characterized by difficulty concentrating [11].

According to researchers, the difference in research results is thought to be due to many factors, most of whom do not take part in pregnancy exercise due to their busy lives, such as: trading, taking care of the household, etc., even though participating in pregnancy exercise has the benefit of gaining knowledge and skills for preparation. facing childbirth so that the mother is better prepared to face the birth process calmly, safely and smoothly.

Based on observations made by researchers at the Permata Bunda Clinic, Serang City, it is known that there are still pregnant women who have not participated in pregnancy exercises, lack knowledge about pregnancy exercises, so that the majority of respondents experience difficulties during the birthing process. This is the same as observations made by other health workers saying that mothers in labor experience difficulties during the birthing process.

Bivariate Analysis

Differences in Systolic Blood Pressure, Diastole, Pulse, Temperature, Respiration, FHR, Length of Labor and Blood Expenditure in Stage III, IV between the experimental group and the control group. Based on the research results, it is known that the average outcome in the experimental group is different from the control group. Pregnancy exercise is one of the activities in services during pregnancy. Pregnancy exercise will provide a better pregnancy product and birth outcome, compared to mothers who do not do pregnancy exercise [21].

These results are in line with research Titin et al, 2017which states that there are significant differences in results, meaning there is an influence on changes in systolic, diastolic, pulse, temperature, respiratory pressure, duration of labor and bleeding in stages I, II, III and IV [23]. The results of this study are different from research conducted by (Hendarmin Aulia et al, 2017) in that their research found that from the results of the independent sample test, it was found that there was a difference in the length of the second stage of labor between pregnant women with normal and abnormal labor .

In the researcher's opinion, the difference in research results is thought to be due to

other factors that were not examined in this study, for example the mother's compliance in carrying out pregnancy exercises, the mother's knowledge about pregnancy exercises. Maybe if the mother's level of knowledge about pregnancy exercise is high, it can prevent and reduce pain during the birth process.

From the results of the test on the effect of providing the pregnancy exercise intervention, it turns out that pregnancy exercise is very influential in helping the birthing process. This is because pregnancy exercise makes it easier for mothers to carry out labor tasks with their own strength and confidence under the guidance of a helper during a normal (physiological) birth. So that pregnant women who are given pregnancy exercise treatment are only able to prepare for childbirth physically, namely strength when giving birth (Manuaba and Chandranita, 2009). The benefits of pregnancy exercise are improving blood circulation, reducing swelling, especially the legs, improving muscle balance, reducing leg spasms/cramps, strengthening abdominal muscles, speeding up healing after delivery, improving fetal position [6].

Based on observations made by researchers at the Permata Bunda Clinic, Serang City, it is known that there are still pregnant women who have not participated in pregnancy exercises, lack knowledge about pregnancy exercises, so that the majority of respondents experience difficulties during the birthing process. This is the same as observations made by other health workers saying that mothers in labor experience difficulties during the birthing process.

Therefore, health workers can encourage pregnant women to do pregnancy exercises more often at home by watching videos of pregnancy exercises after being given pregnancy exercises at a health service, making it easier for mothers to do pregnancy exercises and reducing pain during the birth process.

Limitation

This research was conducted over a short period of time, namely 30 days with a small number of respondents.

Conclusion

It can be seen that the frequency distribution of clinical outcomes from 20 pregnant women at the Permata Bunda Clinic, Serang City, Banten Province in 2018, in the

intervention group, there were better outcomes, namely systolic blood pressure obtained normal results, diastole obtained normal results, pulse obtained normal results, temperature get normal results, get normal breathing results, and shorten the first, second, third stages of labor, with less blood loss in the third and fourth stages. Apart from that, it can also be seen that the differences in clinical outcomes in the intervention group have an influence on systolic blood pressure, pulse, temperature, respiration, length of labor and bleeding in stages I, II, III and IV with (p = 0.000) which means there is a significant difference on clinical outcomes in the experimental group and control group.

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