

## The Effectiveness of Snakes and Ladders Game on Mother's Activeness in Participating of Pregnant Women's Classes in South Amanatun District, Timor Tengah Selatan

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### ABSTRACT

Pregnant Women Class was a means learning together about health for pregnant women in the form of face-to-face in groups, which aims to increase the knowledge and skills of mothers regarding pregnancy, prenatal care, childbirth, postpartum care, newborn care, myths, comorbidities. The lack of learning media in pregnant women's classes can have an impact on the activeness of mothers taking classes for pregnant women. Based on the initial study conducted by the researcher, there was a gap between expectations and reality, namely that the activeness of mothers could reach (100%) but in reality, it only reached (50%), because the delivery media in the pregnant women class only used leaflets, flip sheets and KIA books as well as the delivery method in the mother class. conventional pregnancy. This type of research was a Quasi Experiment that uses a Posttest only Control Group design. The population in this study were all pregnant women in the South Amanatun sub-district, South Central Timor in September 2021, totaling 59 people. The samples used were all pregnant women with a gestational age of 20-32 weeks. In this study, there were 2 groups, namely a control group of 15 people who did not get an experiment and an experimental group of 15 people who got an experiment with the snake and ladder game method. Based on the results of the analysis using the *Mann Whitey U Test* p-value of 0.000, because the -value  $<0.05$  means  $H_0$  was rejected, and  $H_1$  was accepted. There was an effect of the application of the snake and ladder game method with the activeness of mothers participating in classes for pregnant women in partu mothers in the South Amanatun District.

**Keywords:** activeness, pregnant women class, snakes and ladders game



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## INTRODUCTION

Health development was the implementation of health efforts to increase awareness, willingness and ability to live for every resident in order to achieve optimal health status. The definition of health development also includes health-oriented development, community and family empowerment, and health services (Ministry of Health, 2013). Currently, health development in Indonesia was Still prioritized on efforts to improve the health status of mothers and children, especially for the groups most vulnerable to health, namely pregnant women, giving birth and babies during the perinatal period. This was indicated by the high Maternal Mortality Rate (MMR) and Infant Mortality Rate (IMR).

In Indonesia, maternal mortality was still a big problem. The Maternal Mortality Rate (MMR) according to the Indonesian Demographic and Health Survey (IDHS) in 2012 increased to 359/100,000 live births and in 2017 there were 177/100,000 live births. While the Health data for the Province of East Nusa Tenggara in 2019 the Maternal Mortality Rate was 98 and in Timor Tengah Selatan Regency as many as 10 people (East Nusa Tenggara Provincial Health Office, 2020).

One of the government's efforts to reduce MMR was by providing antenatal care (ANC), and holding classes for pregnant women (KIH). ANC visits at least 6 times during pregnancy. Namely Antenatal Care (ANC) in normal pregnancy at least 6x with details 2x in the 1st trimester (1 to 13 weeks of gestation), 1x in the 2nd trimester (14 to 27 weeks of gestation), and 3x in the 3rd trimester (gestational age). 28 to 42 weeks) (Ministry of Health, 2020).

Pregnant Women Class was a means learning together about health for pregnant women in the form of face-to-face in groups, which aims to increase the knowledge and skills of mothers regarding pregnancy, pregnancy care, childbirth, postpartum care, newborn care, myths, comorbidities. According to the 2019 Maternity Class Manual, pregnant women class participants should be pregnant at 20 to 32 weeks of gestation, namely at the end of the second trimester and the beginning of the third trimester, because at this gestational age the mother's condition was strong, not afraid of miscarriage, effective to do pregnancy exercises.

The problem that was often encountered by many pregnant women was that they did not know the importance of attending classes for pregnant women. Mothers assume that classes for pregnant women are monotonous, causing pregnant women to be less motivated to take classes for pregnant women (Kemenkes, 2011). The class program for pregnant women was also a form of prenatal education that can increase knowledge of pregnant women, positive behavior changes occur so that mothers check their pregnancy and give birth to health workers, thereby increasing deliveries to health workers and reducing maternal and child mortality.

One of the health programs that was expected to play a role in reducing morbidity and mortality due to pregnancy, childbirth and the postpartum period was the Maternal and Child Health book (KIA book). The MCH handbook was a book that contains records of maternal and child health as well as information on how to maintain health and cope with sick children. However, not all mothers are willing/able to read MCH books, so one solution is to organize Maternity Classes for pregnant women.

Based on an initial study conducted in the Puskesmas area of South Amanatun District, the implementation of the pregnant women class was carried out in 2019 in 9 villages out of 13 existing villages, but the activity of pregnant women in the pregnant women class was still lacking due to the method used, namely conventional teaching methods and the delivery media in the pregnant women class only uses leaflets, flipcharts and the MCH handbook so that researchers are interested in applying the snake and ladder game method as a medium to increase the activity of pregnant women in the pregnant women class.

The general purpose of this study was to analyze the effectiveness of the application of the snake and ladder game method on the activeness of mothers taking classes for pregnant women. While the specific objectives are to identify the activeness of mothers in the class of pregnant women with conventional learning methods, identify the activities of pregnant women with the learning method of using snakes and ladders and analyze the effectiveness of the application of the snake and ladder game method on the activity of mothers taking classes for pregnant women.

## METHODS

In this study, the design used was a quasi-experimental design using a *post-test* with a control group (*The Posttest-Only Control Group Design*). The time of the study was on September 6 – September 11, 2021 with the target being all pregnant women in the South Amanatun District, with a population of all pregnant women in South Amanatun District and a sample of all pregnant women with a gestational age of 20-32 weeks totaling 30 pregnant women that I took in research. At this stage, an analysis was carried out based on those who took classes for pregnant women using the snake and ladder game method and those who took classes for pregnant women using the comprehensive method or lectures.

With the validity test using the Product moment correlation formula and *Spearman Rank*. The validity test in this study was to determine the accuracy of the questionnaire used. To see the difference in value between the independent and dependent variables, the P value was compared with the value of  $\alpha = 0.05$ . If the P value  $< \alpha$ , then there was a significant difference in value between the independent variable and the dependent variable. But if P value  $> \alpha$ , then there was no significant relationship between the independent variable and the dependent variable. And the reliability test was the Alpha Cronbach technique. In general, the questions in the questionnaire are said to be reliable if they have a coefficient greater than 0.6. Then the  $r_{\alpha}$  value and the table  $r$  value were compared. If  $r_{\alpha} > r_{\text{table}}$ , then the question was reliable. On the other hand, if  $r_{\alpha} < r_{\text{table}}$ , then the question was not reliable.

## RESULTS

Table 1.1. Distribution of respondents frequency based on mother's age in South Amanatun District, South Central Timor Regency

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	>20 years	6	20.0	20.0	20.0
	20 -35	20	66.7	66.7	86.7
	>35	4	13.3	13.3	100.0
	Total	30	100.0	100.0	

According to the table 1.1, it was most of the respondents were aged between 20-35 years

Table 1.2. Distribution of respondents frequency based on mother's education in South Amanatun Subdistrict, Timor Tengah Selatan Regency

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No School	1	3.3	3.3	3.3
	Elementary School	4	13.3	13.3	16.6
	Junior High School	4	13.3	13.3	29.9
	Senior high/SMK	16	53.4	53.4	83.3
	Universities	5	16.7	16.7	100.0
	Total	30	100.0	100.0	

Based on table 1.2 it was known that the majority of respondents' education was high school as many as 16 people (53.4 %).

Table 1.3. Frequency distribution of respondents based on mother's occupation in South Amanatun District, South Central Timor Regency

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Working	9	30.0	30.0	30.0
	Not working	21	70.0	70.0	100.0
	Total	30	100.0	100.0	

Based on table 1.3 it was known that the majority of respondents do not work as many as 21 people (70 %).

Table 1.4. Distribution of respondents frequency based on mother's parity in South Amanatun District, South Central Timor Regency

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Primipara	11	36.7	36.7	36.7
	Multipara	19	63.3	63.3	100.0
	Total	30	100.0	100.0	

Based on table 1.4 it was known that the majority of parity respondents are multipara as many as 19 people (63.3 %).

Table 1.5. Distribution of respondents frequency based on the activeness of mothers in conventional learning

No	Learning Method	Mother's Activity								Total	
		Very Active		Active		Less Active		Inactive			
		F	%	F	%	F	%	F	%	F	%
1	Conventional	0	0.0	7	23.3	8	26.7	0	0.0	15	50.0

Based on table 1.5 it was known that the level of activeness of mothers with conventional learning methods obtained data that 8 respondents, namely 26.7% have a less active category and some of the respondents are 7 respondents (22.3%) with an active category.

Table 1.6. Frequency distribution of respondents based on the activity of mothers in learning using snakes ladder

No	Learning Method	Mother's Activity								Total	
		Very Active		Active		Less Active		Inactive			
		F	%	F	%	F	%	F	%	F	%
1	Snake and Ladder	12	40.0	3	10.0	0	0.0	0	0.0	15	50.0

Based on table 1.6 it was known that almost half of mothers have a level of maternal activity with the learning method with very active snakes and ladders as many as 12 mothers (40.0%) and 3 respondent (10%) with active category.

Table 1.7. Distribution of respondents' frequency based on the effectiveness of the application of the snake and ladder game method on mother's activity

No	Active	Frequency	Percentage (%)
1	Very Active	12	40.0
2	Active	3	33.3
3	Less Active	8	26.7
4	Inactive	0	0
Total		30	100

Based on table 1.7, it was known that almost half of the mothers have a very active level of 12 mothers by 40.0%.

Table 1.8. Cross tabulation and *mann whitney* effectiveness of the snake and ladder game method and the activeness of mothers attending classes for pregnant women

No	Learning Method	Mother's Activity								Total	
		Very Active		Active		Less Active		Inactive			
		F	%	F	%	F	%	F	%	F	%
		1	Conventional	0	0.0	7	23.3	8	26.7	0	0.0
2	Snakes and Ladders	12	40.0	3	10.0	0	0.0	0	0.0	15	50.0
	TOTAL	12	40.0	10	33.3	8	26.7	0	0.0	30	100.0

Mean : 8.00 P value 0.000 : 0.05

Based on table 1.8 above, it shows that the level of activity of most of the mothers who take the class for pregnant women has a level of activity. very active as many as 12 people (40.0%) After being tested with the Mann Whitney test using a computer, a p-value of 0.000, because the -value <0.05 means H0 was rejected, and H1 was accepted, which means that there was an effect of using the snake and ladder game method with the mother's active participation in classes for pregnant women in the working area of the Oinlasi Health Center, South Amanatun District, South Central Timor Regency. Meanwhile, the mean value of 8.0 indicates that mothers who take classes for pregnant women using the conventional method or lectures are 8% less active than mothers who take classes with pregnant women using the snake and ladder game method.

## DISCUSSION

### Mother's activeness of pregnant women by conventional learning methods or lectures

Characteristics of Respondents in the South Amanatun District in 2021 based on the use of conventional learning methods for pregnant women in the class of pregnant women as many as 15 respondents (50%). Based on the results of the research from 15 respondents, 8 respondents (26.7%) had a low level of activity and the remaining 7 respondents (23.3%), were in the active category.

According to Djamarah (2016) conventional learning methods are traditional learning methods or also called the lecture method, because this method has long been used as an oral communication tool between teachers and students in the learning and learning process. Sukandi (2013) describes that the purpose of conventional learning was that students know not being able to do something. During the learning process students listen more.

According to the researcher, it can be seen that the conventional learning referred to in this study was a learning process that was more dominated by the teacher in this case as the facilitator as a "transfer of knowledge", while pregnant women are more passive as "recipients" of knowledge. The facilitator dominates the learning process in the class for pregnant women. Based on that, when the learning process in the class of pregnant women will be less effective because mothers as respondents are less active in the learning process. In the class for pregnant women, mothers should be more active because all the material in the class for pregnant women will be very useful for mothers.

#### **Activity of pregnant women with the learning method using snakes and ladders**

Characteristics of respondents in the South Amanatun District in 2021 based on the application of the learning method using snakes and ladders to mothers in the class of pregnant women as many as 15 respondents (50%). Based on the results of the research from 15 respondents, 12 respondents (40.0%) had a very active level of activity and the remaining 3 respondents (10%), had an active level.

Snakes and Ladders was a game that uses dice to determine how many steps the pawns must take. This game was included in the "board game" category or similar board games with monopoly games, halma, ludo, and so on. (M. Husna A, 2019). Snakes and ladders include game media, this was in accordance with the opinion of Arief S. Sadiman (2003), that games are every contest of players who interact with each other by following certain rules to achieve certain goals. According to Husna (2019), the game of snakes and ladders can be made into an effective learning medium, because the simple and fun nature of the game can make students enthusiastic and more active in learning.

Based on the theory from these experts, according to the researchers, this snake and ladder learning media not only invites students to be more active in learning but also trains aspects such as knowledge, skills, and attitudes in learning. In contrast to conventional learning methods here, the mother dominates in learning, while the facilitator here only directs and clarifies if there was something lacking in delivery.

#### **The effectiveness of the application of the snake and ladder game method on the activity of participating in the class of pregnant women**

In practice, after completing the learning activity, it ended by filling out a questionnaire and then the results were carried out by cross tabulation of the application of the snake and ladder game method from health workers with the activeness of the mother taking classes for pregnant women in the South Amanatun District. After that, it was tested with the Mann Whitney test using the SPSS application, obtained a p value of 0.000, because the -value <0.05, then H<sub>0</sub> was rejected, and H<sub>1</sub> was accepted, which means that there was an effect of applying the snake and ladder game method to the

mother's active participation in classes for pregnant women. mother inpartu in the District of South Amanatun. Meanwhile, the mean value of 8.0 indicates that mothers who participate in the class of pregnant women using the conventional method are 8% less active than mothers who take the class of pregnant women using the snake and ladder game method.

The class for pregnant women has great benefits in preventing problems during pregnancy and childbirth. Research (Nugroho & Cahyanti, 2017) shows that classroom activities for pregnant women can reduce anxiety and stress in dealing with childbirth. Snakes and ladders game as a health promotion medium was an effective tool in providing information and educational interest to adolescents and was able to improve their knowledge and attitudes and has been proven to make students more enthusiastic in implementing learning and students can enjoy the movement of the snake and ladder game from beginning to end (Zamzami, 2014; Yusniarita and Sari, 2019).

Activity affects the learning process of pregnant women in the class of pregnant women. When viewed from the results of the overall research on the activeness of pregnant women in attending classes for pregnant women with the snake and ladder game method, it shows good results, because the learning process using the game method makes pregnant women attend classes more efficiently, more flexible, more creatively and with ease. higher morale compared to pregnant women who attend classes for pregnant women using conventional methods or lectures.

According to the researcher's assumption, the use of the snake and ladder game method affects the activeness of mothers in attending classes for pregnant women. Mothers who in their learning when attending classes for pregnant women apply the use of the snake game method in the learning process experience a better level of activity compared to mothers who when taking classes for pregnant women use conventional learning methods or lectures. According to the researcher, one of the things that made the implementation of classes for pregnant women less successful or the activity of mothers in participating in classes for pregnant women decreased, namely the role of the Health Service in encouraging the implementation of Classes for Pregnant Women (KIH) such as clear management of KIH implementing organizations, intensive training of facilitators and facilities. KIH operational support, so it appears that KIH operations are more of a burden to the Puskesmas. The snake game method makes mothers better understand the material given in class so that it has a good impact on mothers. However, the application of this snake game method must be implemented in classes for pregnant women in the South Amanatun sub-district.

## CONCLUSION

The conclusion of this study was that the application of the snake and ladder game method was effective in increasing the activeness of mothers in attending classes for pregnant women in the South Amanatun District. It was recommended for Puskesmas staff that it can be used as input so that they can apply the use of the snake and ladder game method in the class of pregnant women because it was effective in increasing the activity of mothers taking part in the class of pregnant women. For further researchers, it was recommended to take more samples, this aims for better data accuracy in their

research, conducting ongoing research so that they can see and assess any changes in respondent behavior from time to time and it was hoped that there will be additional other variables that may also affect many things in this research.

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