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THE EFFECT OF DIRECT INSTRUCTIONAL TRAINING MODEL ON BREASTFEEDING PREPARATION KNOWLEDGE AND SKILLS IN PREGNANT WOMEN AT IDAMAN PADANG CLINIC

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ABSTRACT

Background: Preparation for breastfeeding is the knowledge and skill in pregnant women to give breast milk to the baby without any additional food or drink except drugs and vitamins, for 6 consecutive months. Cases of low knowledge and skills of breastfeeding preparation in pregnant women every year increase. Based on Data and Information on Indonesia's Health Profile in 2022, the coverage of Exclusive Breastfeeding increased to 55.4%, but data from the Padang City Health Office in 2022 the coverage rate of Exclusive Breastfeeding was 73.7%. This is far below the national target of 80%. Preparation for breastfeeding should be started when pregnant women are physically by paying attention to nutrition, getting enough rest, and preparing the breasts by doing breast care. Psychological preparation by believing that she is ready to breastfeed, able to produce enough milk for her baby and getting support from the surrounding environment and health workers. **Objective:** To improve the knowledge and skills of pregnant women about breastfeeding preparation using the Direct Instructional Training model which is one way to improve the knowledge and skills of pregnant women about breastfeeding preparation, so that pregnant women have basic knowledge to produce good breast milk. **Method:** This study used quasi-experiments. Data using questionnaires and observation sheets. Statistical tests using t-tests. Data analysis was presented to illustrate the Effect of Direct Instructional Model Training on the Knowledge and Skills of Pregnant Women on Breastfeeding Preparation at Idaman Clinic in Padang City. **Result:** The results showed that there were differences in knowledge and skills of pregnant women in preparing for breastfeeding after being given direct instructional training (p = 0.000). **Conclusion:** Research is expected to provide direct benefits by increasing the knowledge and skills of pregnant women in preparing themselves for breastfeeding before giving birth, as well as increasing the rate of exclusive breastfeeding for infants in Indonesia.

Keywords : Knowledge; Skills; Direct Instructional

INTRODUCTION

The readiness of pregnant women to exclusively breastfeed is a serious problem in Indonesia. Knowledge and skills of breastfeeding preparation in pregnant women are still low, thus impacting the nutritional status of children. According to Basic Health Research, only 55.4% of infants receive exclusive breastfeeding for up to 6 months, while the national target is 80%.[1,2] Although in Padang City, the achievement of exclusively breastfed babies reached 73.7%, but the rate dropped dramatically at the Padang dream clinic in 2022, with an exclusive breastfeeding coverage rate of 34.7%.[3,4] This is due to the lack of knowledge and skills of pregnant women in preparing themselves for breastfeeding before giving birth. Therefore, the study aims to examine the effect of direct instructional training model on knowledge and skills of breastfeeding preparation in pregnant women in Padang dream clinic. This emphasizes the importance of knowledge and skills of pregnant women in preparing exclusive breastfeeding.[5] Preparation for breastfeeding should be started when the mother is physically pregnant by paying attention to nutrition, getting enough rest, and preparing the breasts by doing breast care.[6] Psychological preparation by believing that she is ready to breastfeed, able to produce enough milk for her baby and get support from the surrounding environment and health workers.[7] Based on observational data at the dream clinic, there has been an increase in cases of low readiness of pregnant women in breastfeeding. In 2020 there were 12 cases, in 2021 there were 15 cases and in 2022 it increased again to 19 new cases. In January and February 2022, they experienced poor growth and nutrition in toddlers.[8, 9, 10] The problem-solving approach in this study is to provide a direct instructional training model to pregnant women at the Padang dream clinic to improve knowledge and skills of breastfeeding preparation, in the hope of increasing the rate of exclusive breastfeeding for infants. Thus, the research is expected to provide solutions in overcoming the problem of low levels of exclusive breastfeeding in Indonesia, especially in Padang City.

The state of the art regarding this research is that low rates of exclusive breastfeeding for infants are still a serious problem in Indonesia.[11] This has an impact on children's nutritional status, which can lead to a variety of health and developmental problems.[12] Despite efforts to increase the rate of exclusive

breastfeeding, the resulting achievements are still far from the national target.[13, 14] One of the efforts that has been made is to provide education and training to pregnant women on the importance of exclusive breastfeeding and breastfeeding skills.[15] The novelty of this research lies in the use of a direct instructional training model aimed at pregnant women at the Padang dream clinic. The Direct Instructional Training Model is one way to improve the knowledge and skills of pregnant women about breastfeeding preparation, so that pregnant women have basic knowledge to produce good breast milk.[16, 17] In addition, the direct instructional method uses modules as a way of delivering material, where the material is arranged in such a way that participants are active in learning it.[18] The Direct Instructional Training Model (DITM) is a comprehensive approach to help pregnant women prepare for breastfeeding.[19] This involves providing expectant mothers with information and support about breastfeeding, as well as practical skills training to help them develop the confidence and knowledge they need to successfully breastfeed their babies.[20, 21] Through DITM, expectant mothers can learn about the benefits of breastfeeding, how to properly attach the baby to the breast, and how to deal with common problems that may arise during breastfeeding.[22]

MATERIALS AND METHODS

This study used quasi-experiments. This study was conducted to determine the knowledge and skills of prospective mothers before and after being given treatment in the form of providing training with direct instructional techniques. This study compared two groups of expectant mothers, namely the intervention group (the group given direct instructional training) and the control group (the group that was not given direct instructional training). Quasi-experimental research is aimed at revealing the effect and intervention / treatment on subjects and measuring the results of the effect of the intervention.[23] Taking research data by taking all prospective mothers who are in the Idaman Clinic area of Padang City. The intervention and control group research technique was carried out by giving a lottery to prospective mothers then made in the intervention group and control group, who got the intervention lot into the intervention group and who got the control lot into the control group. Data using questionnaires and observation sheets. Statistical tests using t-tests. Data analysis was presented to illustrate the Effect of Direct Instructional Model Training on Pregnant Women's Knowledge and Skills on Breastfeeding Preparation at Idaman Clinic in Padang City.

RESULT

This study used the research design "Quasi Experimental Pre-Post Test With Control Group" with direct instructional intervention. Simple Random Sampling research technique, namely the intervention and control group research technique is carried out by giving a lottery to 30 people samples then made in the intervention group and control group, who gets the intervention lot into the intervention group and who gets the control lot into the control group. So that it can be divided into both intervention groups of 30 people and control groups of 30 people.

The characteristic variables of pregnant women have 3 sub-variables, namely age, education level and occupation, the three sub-variables are categorical data so that they are analyzed using percentages and displayed with frequency distribution tables. The overall characteristic results can be seen in table 1.

Table 1. Frequency distribution of characteristics of control group respondents and intervention group based on age, education level and occupation of pregnant women at Idaman Padang Clinic (n = 30)

No	Characteristics of Respondents	Control Group		Intervention Group	
		f	%	f	%
1	**Age**				
	a. 20-24	18	60,00	15	50,0
	b. 25-30	7	23,3	8	26,7
	c. 31-35	5	16,7	7	23,3
2	**Education Level**				
	a. Elementary School Graduation	1	3,3	9	30,0
	b. Junior Secondary Graduation	5	16,6	9	30,0
	c. High School Graduation	22	73,3	11	36,6
	d. College Graduation	2	6,6	1	3,33

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The hypothesis can be formulated as follows :

1. Whether the knowledge and skills of pregnant women before and after following the direct instructioanal training model differ significantly?

Table 2. Distribution of Knowledge and Skills of Pregnant Women Before and After Attending Direct Instructioanal Training Module for Pregnant Women at Idaman Padang Clinic Paired Samples Test

		Paired Differences					t	dt	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Eror Mean	95% Confidence Inverval of the Differences				
					Lower	Upper			
Pair 1	Pretest Intervention – Postest Intervention	-46.10000	11.34825	2.07197	-50.33751	-41.86249	-22.250	29	.000
Pair 2	Pretest Control – Postest Control	-13.80000	11.72292	2.68803	-19.33096	-833570	-5.146	29	.000

RESEARCH QUESTION 1

The results of the analysis show that p-value = 0.000, so HO is rejected. Thus, it can be concluded that the knowledge and skills of pregnant women Before and After using the direct instructioanal training module differ significantly.

2. Is the knowledge and skills of pregnant women Before and After without following the direct instructioanal training model significantly different?

Table 3. Average Score of Knowledge and Skills of Pregnant Women Before and After Without Attending Direct Instructioanal Training Module for Pregnant Women at Idaman Padang Clinic Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Eror Mean
Pair 1	Pretest Intervention	38.5333	30	7.17146	1.30932
	Postest Intervention	84.6333	30	7.28477	1.33001
Pair 2	Pretest Control	37.8000	30	10.19263	1.86091
	Postest Control	51.6333	30	8.17685	1.49288

Paired Samples Correlations

		N	Correlations	Sig.
Pair 1	Pretest Intervention & Postest Intervention	30	-.232	.216
Pair 2	Pretest Control & Postest Control	30	-.276	.140

RESEARCH QUESTION 2

The results of the analysis show that p-value = 0.000, so HO is rejected. Thus, it can be concluded that the knowledge and skills of pregnant women Before and After without using direct instructioanal training modules differ significantly.

3. Is the knowledge and skills of pregnant women before without following the direct instructioanal training model significantly different?

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Table 4. Average Score of Knowledge and Skills of Pregnant Women Before Without Attending Direct Instructioanal Training Module for Pregnant Women at Idaman Padang Clinic Group Statistics

	Modul Direc Instructional	N	Mean	Std. Deviation	Std. Eror Mean
Initial Skill Knowledge	Modul Direc Instructional	30	38.5333	7.17146	1.30932
	Without Direc Instructional Modules	30	84.6333	10.19263	1.86091
Final Skill Knowledge	Modul Direc Instructional	30	37.8000	7.28477	1.33001
	Without Direc Instructional Modules	30	51.6333	8.17685	1.49288

RESEARCH QUESTION 3

The results of the analysis show that p-value = 0.748. This indicates that the p-value > 0.05, so H0 is accepted. Thus, it can be concluded that the knowledge and skills of pregnant women Before treatment between the intervention group and the control group did not differ significantly. Because the knowledge and skills of pregnant women before the direct instructioanal training treatment in the form of modules during the initial test both do not have knowledge and skills about breastfeeding preparation.

4. Is the knowledge and skills of pregnant women after following the direct instructioanal training model significantly different?

Table 5. Distribution of Knowledge and Skills of Pregnant Women After Attending Direct Instructioanal Training Module for Pregnant Women at Idaman Padang Clinic Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Inverval of the Differences	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Eror Difference	Lower	Upper
Initial Skill Knowledge	Equal variances assumed	2.776	.101	.322	58	.748	.7333	2.27537	-3.82132	5.28799
	Equal variances not assumed			.322	52.061	.749	.7333	2.27537	-3.83241	5.29907
Final Skill Knowledge	Equal variances assumed	1.217	.275	16.505	58	.000	33.0000	1.99941	28.99775	37.00225
	Equal variances not assumed			16.505	57.243	.000	33.0000	1.99941	28.99663	37.00337

RESEARCH QUESTION 4

The results of the analysis show that p-value = 0.000. This indicates that the p-value < 0.05, so H0 is rejected. Thus, it can be concluded that the knowledge and skills of pregnant women after treatment between the intervention group and the control group differed significantly.

DISCUSSION

More effective treatment of the intervention group and control group before and after following the direct instructioanal training model in preparation for breastfeeding for pregnant women at the Padang dream clinic. It is formulated using N-Gain. Normalized gain or N-Gain score is used to determine the increase in knowledge and thinking skills of pregnant women

after being given pretest and posttest questions, also aims to determine the effectiveness of using a certain method or treatment (treatment) in research one group pretest posttest design (experimental design or pre-experimental design) or research using control groups (quasi experimental or true experiment). By calculating the difference between the pretest and posttest scores or gain scores, we will be able to find out whether the use or application of a particular method can be said to be effective or not.

Formula:

$$\text{N Gain} = \frac{\text{Score Posttest} - \text{Score Pretest}}{\text{Score Ideal} - \text{Score Pretest}}$$

Table 6. Increasing the Knowledge and Skill Score of Pregnant Women Before and After Following the Direct Instructioanal Training Model in Breastfeeding Preparation for Pregnant Women at Idaman Padang Clinic Group Statistics

	Modul Direc Instructional	N	Mean	Std. Deviation	Std. Eror Mean
Improved Score	Modul Direc Instructional	30	742.7333	136.01215	24.83231
	Without Modul Direc Instructional	30	191.6333	236.05567	43.09950

Table 7. The Effect of Direct Instructional Training Model on the Knowledge and Skills of Pregnant Women in Breastfeeding Preparation at Idaman Padang Clinic Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Inverval of the Differences	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Eror Difference	Lower	Upper
Improved Score	Equal variances assumed	4.465	.039	11.079	58	.000	551.10000	49.74143	451.53170	650.66830
	Equal variances not assumed			11.079	46.343	.000	551.10000	49.74143	450.99567	651.20433

The results of the analysis showed that there was an Effect of Direct Instructional Model Training on the Knowledge and Skills of Pregnant Women about Breastfeeding Preparation at the Idaman Clinic in Padang City. This can be seen from sig. 0.000 < 0.05. The effect of the direct instructional training model on knowledge and skills before and after treatment and to see the contribution of patient characteristics to knowledge and skills in preparation for breastfeeding using the Wilcoxon Signed test. The level of significance (α) used is 0.05. Ho is rejected if $\rho < 0.05$ means that there is an effect of the direct instructional training model on knowledge and skills in preparation for breastfeeding in pregnant women. The results showed that there was a significant increase in the knowledge and skills of pregnant women about breastfeeding preparation after attending the Direct Instructional model training. The same study showed that pregnant women's knowledge and skills about breastfeeding preparation measured in the study included an understanding of the benefits of breast milk, breastfeeding techniques, breast care during pregnancy, and correct breastfeeding practices.[24] So do other studies, showing that the skills of pregnant women are measured by direct observation when pregnant women practice breastfeeding baby dolls.[25] These observations include breastfeeding techniques, correct breastfeeding positions, and breast care during breastfeeding Thus, Direct Instructional model training can have a positive influence on pregnant women's knowledge and skills about breastfeeding preparation. This training can be an effective alternative training method to improve the knowledge and skills of pregnant women about breastfeeding preparation.

CONCLUSIONS AND ADVICE

Based on the research that has been done, it can be concluded that there are differences in knowledge and skills of pregnant women in preparing for breastfeeding after being given direct instructional training (p = 0.000).

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