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Comparison Effectiveness of Health Promotion using Video and Metaphor to Level of Knowledge of Pregnant Woman about Stunting in Palembang

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ABSTRACT

Mother's knowledge about risk factors of stunting are one of many efforts to prevent stunting. Health promotion could contribute to increase level of knowledge about stunting. Commonly used methods are video and speech. This study was conducted to compare effectiveness of health promotion using video and metaphor to level of knowledge of pregnant woman about stunting in Palembang. This study was a quasi-experimental nonequivalent control group pretest-posttest. Population are pregnant woman in Palembang. Samples was obtained by purposive sampling. The research data was collected by questionnaire. Pretest and posttest data was analyzed by Wilcoxon. Effectiveness of health promotion method valued by difference of pretest and posttest score between methods using Mann Whitney. Result of the study was significantly increasing knowledge of pregnant woman about stunting after health promotion ($p=0,000$). The most effective method of health promotion is video with p -value 0,05. Health promotion could increase knowledge of pregnant woman about stunting. Effective method for health promotion was video better than metaphor.

1. Introduction

Children are future investment. Children growth and development is necessary to build qualified future society. Stunting is a global burden. Among all stunting toddler around the world, 55% from Asia that 14,9% are from Southeast Asia.¹ Stunting in Indonesia is a majority nutrition-related issues among others. Stunting toddler would be more challenging to obtain optimum physical growth and cognitive capability.

Stunting means children under 5 has length or body height less than its supposed to based on WHO grow chart $<-2SD$. Stunting caused by chronically malnourished. Nutrition intake is affected by many

dimension. Mothers significantly contribute to child growth and nutritional status. Mother's knowledge about stunting still low. Level of knowledge especially pregnant woman about stunting and its risk factors remains low in Palembang.² Mother's knowledge about stunting and nutritional intake for baby significantly influence prevalence of stunting.³ Mothers who has knowledge about nutritional needs to their child could give them foods that actually be needed. That was hoped to reduce prevalence of stunting.

Health promotion is necessary as an effort to increase mother's level of knowledge about stunting.



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Many studies shows that health promotion could increase knowledge of respondents. But, delivered information altered by the method. There are various methods of health promotion. The most effective methods is debatable. Because of the reason, this study is conduct.

This study is to compare effectiveness of health promotion using video and metaphor to level of knowledge of pregnant woman about stunting in Palembang.

2. Methods

The study was a a quasi-experimental nonequivalent control group pretest-posttest to compare effectiveness of health promotion using video and metaphor to level of knowledge of pregnant woman in Palembang. Population are all pregnant woman in Palembang. Number of samples required for this study was calculated using Slovin formula and the minimum sample needed is 100 person each method. Sample was taken by purposive sampling.

This study was using primary data that acquired by questionnaire. Respondents filled the same questionnaire that was given before and after health promotion. Data was collected and evaluated based on study criteria.

Data was obtained, analyzed by *Statistical Package for Social Science* (SPSS) 16.0 for Windows. Univariate analysis for determine frequency descriptive. Bivariate analysis was used to assessed increase of knowledge after health promotion using

Wilcoxon. Then, difference between pretest and posttest score each method of health promotion analyzed by Mann Whitney.

3. Results and discussion

There were 210 respondents of this study obtained. One hundred and five persons received health promotion using video and the remain metaphor. Youngest respondent was 17 years old and the oldest was 44 years old. See table 1, majority was over 25 years old.

Mostly, preganant woman in their second trimester (43.8% and 41.9%). Followed by third trimester and first trimester (20% and 21%). Respondents of this study mostly ever been pregnant and gave birth (65.7%). There were 36 persons never been gave birth in both method group. Respondents's level of education in metaphor group were 31 respondents (29.5%) who graduated high school and attended college (average-high) and 74 (70.5%) pregnant woman received basic education. Same result was obtained in video group.

Knowledge of pregnant woman about stunting before received health promotion were mostly average. (n=136;64.8%). High knowledge mother has fewer in number than mother whose low knowledge. After health promotion, the number changed. Majority respondents had high level of knowledge (n=129;61.4%) and only one person had low knowledge. (n=1;0.5%).



Table 1. Relations of demographic data and level of knowledge (n=210)

Demographic	Level of Knowledge (pretest)			Level of Knowledge (posttest)			P
	Low	Average	High	Low	Average	High	
Age (year)							
<20	4	5	0	0	3	6	Pretest 0.051 Posttest 0.416
21-29	38	68	8	1	38	75	
≥30	15	63	9	0	39	48	
History of labour							
0	24	43	5	1	24	47	Pretest 0.53 Posttest 0.193
1	19	44	6	0	23	46	
>1	14	49	6	0	33	36	
Education							
Basic	3	13	0	0	8	8	Pretest 0.001 Posttest 0.001
Average	49	104	8	1	69	91	
High	5	19	9	0	3	30	
Gestational Age							
Trimester 1	13	23	7	0	14	29	Pretest 0.242 Posttest 0.585
Trimester 2	25	59	6	0	35	55	
Trimester 3	19	54	4	1	31	45	
Method							
Metaphor	25	71	9	1	51	53	Pretest 0.553 Posttest 0.003
Video	32	65	8	0	20	76	
TOTAL	57	136	17	1	80	129	

Analysis of difference mean of level of knowledge about stunting before and after health promotion used Wilcoxon nonparametric test because data wasn't normally distributed. There were significantly difference of level of knowledge after health promotion ($p < 0.05$). There was increase score in posttest after received health promotion.

Difference means of level of knowledge based on methods of health promotion showed that video has higher mean than metaphor. This analyzed by Mann Whitney because data wasn't normally distributed.

Table 2. Difference means of level of knowledge of pregnant woman about stunting before and after health promotion (n=210)

Result	n	P Value
Pretest > Posttest	1	0.000
Pretest < Posttest	205	
Pretest = Posttest	4	
Total	210	
Mean	Pretest 26.7 Posttest 40.4	



Table 3. Difference means of level of knowledge of pregnant woman about stunting based in health promotion method (n=210)

Result	n	%	Mean	P value
Metaphor	105	50	12.2	0.05
Video	105	50	15.3	
Total	210	100		

Data was obtained by questionnaire that directly filled by respondents in several local government clinic in September 30 – October 21 2019. There were 210 pregnant woman who filled the questionnaire and fulfilled of study criteria. Characteristic of subjects can be seen in table 1. The youngest pregnant woman was 17 years old. Majority of respondents were over 25 years old. Most pregnant woman was in second trimester.

Majority respondents have been gave birth. Respondent's level of education in metaphor group were 31 respondents (29.5%) who graduated high school and attended college (average-high) and 74 (70.5%) pregnant woman received basic education. Same result was obtained in video group.

Level of knowledge was assessed by ten questions based on information about stunting. Definition of stunting and mostly risk factors of stunting and the impact of it. Each question has 5 answer choices with different score to assessed knowledge. Level of knowledge before promotion dominated by average knowledge, followed by low knowledge and fewer had high level of knowledge about stunting. After health promotion, there were increase knowledge significantly about stunting. The same result was obtained in these study.^{4,5,6}

Knowledge commonly influenced by several factors, they are age, experience, cognitive intelligent, occupation, level of education, culture and economic.⁴ Educational background of respondents were influential to level of knowledge. Group who has average to high educational background tend to had high level of knowledge than people who had lower

educational background. Other factors such history of labour, gestational age and mother's age wasn't significantly influence level of knowledge.⁷

In this study, information about stunting was explained by 2 methods, video and metaphor. This health promotion is structured the basic of knowledge such know. That would be assessed by questionnaire. Method of health promotion determined the level of knowledge about stunting. The same result was obtained.^{4,5} Before health promotion, respondents received pre test to assess respondents knowledge.⁹

This study showed influence of health promotion to increase level of knowledge of pregnant woman about stunting (p-value<0.5). Method of promotion was proven able to increase knowledge of pregnant woman. Fauziyyah obtained the same result in her study.^{7,9} There were difference of increase level of knowledge between methods (video and metaphor). Mean score knowledge of pregnant woman who received information by video had higher score (p-value<0.05). Other studies showed that video was more effective to increase knowledge than speech.^{5,6}

Based on statistical analysis difference mean, video was more effective to increase knowledge than metaphor. This caused by the limitations of speaker's ability to elaborate the information.^{10,11}

4. Conclusion

This study obtained that health promotion significantly increase knowledge of pregnant woman about stunting. Video was more effective than metaphor.



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