

# 35. Arcs module (Attention, relevance, confidence, satisfaction)

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# ARCS Module (*Attention, Relevance, Confidence, Satisfaction*) to Increase Classroom Motivation for Pregnant Women at Public Health Center

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## ABSTRACT

**Background:** Maternal Mortality in Indonesia reached 359 each 100,000 live births, this figure is the number highest in the Asian region. Of 26 of the causes of maternal mortality is labor complications. The indirect cause of labor complication 28 self-efficacy of pregnant women How to deal with childbirth. In connection with this, during pregnancy classes are held for 27 pregnant women, but do not pay attention to self-efficacy so that in this study an ARCS module was created (*Attention, Relevance, Confidence, Satisfaction*).

**Methodology:** The ARCS module is designed to improve the learning 22 motivation of pregnant women so that mothers have strong self-efficacy in the face of childbirth. This study aims to analyze the effectiveness of ARCS modules in improving the learning motivation of pregnant women class participants. The research applied quasi- design experiments. The population was pregnant women at the Banjar Regency Public Health Center, South 15 Kalimantan Province, Indonesia. The sample was taken by simple random sampling technique, totaling 30 people consisting of 15 people in the intervention group and 15 people in the non-intervention group.

**Test Results:** The results of the Wilcoxon test showed p-value of 0.009;  $\alpha \leq 0.05$  and the test results of Mann-Whitney obtained p-value 0.020;  $\alpha \leq 0.05$  indicating the difference attitude after given the module.

**Conclusion:** Classroom learning of pregnant women using ARCS modules has proven to be effective in increasing learning motivation. Public health service facilities are recommended to use the ARCS module in pregnant women class learning programs.

**Keywords:** ARCS Module, Pregnant Mother, Maternity Classes

## INTRODUCTION

Childbirth is an extraordinary process for a mother. Labor complication is one of the causes of the high maternal mortality rate in Indonesia. A total of 2806 cases of obstetric complications with the amount of coverage handled were 112.83% including complicated delivery which ended with a cesarean section with various indications including fetal distress, induction failure, and

exhausted mothers. Among the cases who experienced obstetric complications were those who did not actively participate in a class learning for pregnant women.

The ARCS learning model is a set of motivational principles applied in the learning process which consists of components "attention," "relevance," "confidence," and "satisfaction." The model aims at that teacher, or the facilitator is to develop a learning plan that can motivate students optimally. In other words, the model aims to stimulate, improve, and maintain students' motivation in classroom learning even in any educational program<sup>(1)</sup>.

The learning module is a way of organizing subject matter that takes into account the function of education 16 in the form of program packages that are arranged in the

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form of a particular unit and designed in such a way as to facilitate the implementation of learning and guidance<sup>(2)</sup>. The learning module is designed systematically guided by a particular curriculum and prepared in the form of the smallest and possible learning unit to be studied to encourage the learning process in students.

This study aims to increase the learning motivation of pregnant women class participants to strengthen maternal self-efficacy in the face of childbirth to avoid complications due to lack of confidence to end labor by their strength.

## METHOD

This research using quasi-experiment<sup>(12)</sup> Samples of 30 pregnant women were divided into 15 people for the intervention group and 15 people for the control group who were selected using simple random sampling technique from the class of pregnant women. The study was conducted at the Banjarmasin Regency Public Health Center, South Kalimantan<sup>(19)</sup> Province, Indonesia. Data collection tool uses Instructional Materials Motivation Survey (IMMS)<sup>(3)</sup>. The research was carried out by giving lesson material to class participants of

pregnant women in the intervention group using the ARCS module as well as to the control group, given lessons using modules from the Ministry of Health of the Republic of Indonesia which is commonly run as a program at the entire Community Health Center in Indonesia. After finishing learning, the respondent was given an Instructional Materials Motivation Survey (IMMS) questionnaire. The results of data collection in the control group using the Ministry of Health module and the intervention group using the ARCS module, before and after the intervention were analyzed using the statistical Wilcoxon-test. To find out the changes in maternal learning motivation in the classroom learning of pregnant women between the intervention and control groups were analyzed using the test of Man Whitney.

## RESULTS

The results of research on the use of the ARCS module (attention, relevance, confidence, satisfaction)<sup>(7)</sup> in the classroom learning of pregnant women to improve self-efficacy in the face of childbirth at the Public Health Center of Banjarmasin Regency, South Kalimantan, Indonesia are shown as follows:

**Table 1: Level of classroom respondent motivation learning pregnant women on ARCS and non-ARCS module**

Category of Motivation	Non- ARCS Modules				ARCS Modules				Mann-Whitney test
	Before		After		Before		After		
		f%		f%		f%		f%	
Very Weak	0	0	0	0	0	0	0	0	0.020
Weak	0	0	0	0	1	7	0	0	
Adequate	5	33	2	13	4	27	1	7	
Strong	10	67	13	87	8	53	10	67	
Very Strong	0	0	0	0	2	13	4	27	
Wilcoxon Test	0.889				0.009				

Table 1 shows that the level of learning motivation in both of non-intervention and the majority intervention group showed a change in motivation categories. "Weak" motivation in the intervention group before was 7% and after is 0%. The category "strong" was 53% before the intervention, increasing to 67% after intervention. The category "very strong" before intervention as much as 13% and after the intervention increased to 27%. The results of the Wilcoxon test show that the increase

in learning motivation before and after in the ARCS module group has a degree of significance ( $p$ -value 0.009;  $\alpha$  5 0.05) and in the ARCS module group ( $p$ -value 0.889;  $\alpha$  > 0.05). The Mann-Whitney test results show that there are differences in the level of learning motivation between the ARCS module intervention class and the ARCS non-module class with a significance level ( $p$ -value 0.020;  $\alpha$  5 0.05).

**Table 2: Difference level class motivation before and after pregnancy at ARCS module and non-ARCS module**

Groups	Motivation			P*
	Before	After	Change	
	Mean	Mean	Mean	
ARCS Module	131	147	16	0,009
Non ARCS Module	128	133	5	0.889
P **	0454	0.005	0.036	

Description:  $p^*$  Wilcoxon Test  $p^{**}$  Mann-Whitney Test

**Table 3: Changes in the level of learning motivation for pregnant women in ARCS module and non ARCS-modules**

Group	Motivation				Total		P
	Increases		Fixed/decreased				
	n	%	N	%	n	%	
ARCS Modules	12	80	3	20	15	100	0.020
Non ARCS Module	6	40	9	60	15	100	

Table 2 shows the difference in mean motivation values before being given intervention in the ARCS module group was 131 and after interference is 147 with changes in mean value 16. Wilcoxon test results produced  $p = 0.09$   $\alpha \leq 0.05$ . Further, in the non-module ARCS group there is a difference in the mean motivation value before the intervention of 128 and after intervention is 133 with a change in mean value = 5. Wilcoxon test generated  $p = 0.889$   $\alpha > 0.05$ . Table 3 shows the intervention group experienced a change in learning motivation level as much as 80% "increased" and only 20% were fixed/decreased. While in the non-intervention group there was a change in the level of learning motivation as much as 40% increased and as much as 60% remained/decreased with a significance level of  $p = 0.020$   $\alpha \leq 0.05$ .

## DISCUSSION

Learning classes for pregnant women conducted by midwives at the community health center using modules or guidelines from the Ministry of Health shows that respondents' learning motivation is in the fairly up to high category. This illustrates that the motivation to learn between before and after being given intervention has increased. Although the learning approach used in the lecture and question and answer method with conventional learning media, still tends to increase. This means that whatever learning modules are used in the class of pregnant women, the most important is that they

get teaching materials that are appropriate to their needs and useful in maintaining health to prepare themselves for the delivery process. The finding strengthened the previous results which shows that there is an increase in scores of knowledge and skills between before and after the intervention. The average of education increased by 12.3 points and skills increased by 74.5 points after the intervention of the class of pregnant women using the pregnant mother class conventional module program<sup>(4)</sup>. Thus, the implementation of classroom learning for pregnant women using the ARCS module with learning components (attention, relevance, confidence, and satisfaction) using the model concept from aims to stimulate, improve, and maintain the motivation of the participants in class learning as proved in a previous study<sup>(5)</sup>.

Indicators of learning achievement from the aspect of attention were active participants responding to facilitator questions, listening to the material presented, and enthusiastically asking questions. The sign of learning achievement of the relevant aspect is that participants can verbally express the benefits of learning material with the current pregnancy experience. Indicators of achievement of positive aspects of learning are that participants can answer facilitator questions. The sign of the achievement of the satisfaction aspect is that the participants concentrate seriously on education, actively asking questions and enthusiastic to follow future learning.



The results showed that before the respondents followed the learning using the ARCS module, there were varying levels of learning motivation ranging from weak, sufficient, reliable and existing categories to very strong. Respondents in the vulnerable group and sufficient before the intervention tended to answer the questionnaire in a negative direction. The respondents with strong and extreme learning motivation categories before the intervention were caused by high enough enthusiasm to attend classes for pregnant women.

After the respondent followed the learning with the ARCS module, there was an increase in learning motivation in the relatively smaller category compared to the strong and very strong class based on a questionnaire consisting of 36 question points. The survey for the "attention" sub-variable contains questions that explore participants' interest from the start of learning and questions that stimulate participants' curiosity. From questionnaire questions that can examine the motivation of learning respondents who believe researchers that the results of this study can improve the learning motivation of pregnant women class participants.

The evaluation results illustrate that the ARCS module used in this study can improve the learning motivation of class participants of pregnant women with results that can be seen in Tables 2 and 3 showing that in the intervention group has a mean value before intervention 131, after intervention the mean value is 147 which means there is a change the mean value is 16. Based on the test results Wilcoxon  $p\text{-value} = 0.009$  which means that learning with the ARCS module is very significant in increasing the motivation to learn pregnant women. This means there is a change in the level of learning motivation of participants in the intervention group before intervention and after being given intervention. In table 2, it can be seen that there is a change that is an increase in learning motivation in the class of pregnant women after the intervention of ARCS module learning as much as 80% in the intervention group mothers. This is following the concept that explains that the learning process that is conditioned by the facilitator's environment can support the change in the behavior of the learners towards a better direction.

The results of this study were supported by the research on the classroom learning of pregnant women which showed an increase in self-control, especially in controlling pain and obtaining satisfaction in giving birth

(6). The result also in line with the results before which states that women attending antenatal education classes have greater self-efficacy in facing labor and lower labor pain (7,8,9).

The existence of differences in values that increase in the intervention class before and after the intervention using the ARCS module is likely because the form of a learning experience is different from the learning in the class commonly applied in public health centers in Indonesia. Determining that is implemented with the ARCS module is focused on directing learning motivation systematically using the steps in the ARCS component (attention, relevance, confidence, and satisfaction).

In the non-intervention group the mean value before intervention 128, after intervention 133 and mean value of change 5, using the test Wilcoxon  $p\text{-value} = 0.889 (> \alpha 0.05)$ . This means that there is no significant difference in learning motivation before and after intervention in the non-intervention group. In table 3, it can be seen that there is a change, namely an increase in learning motivation in the class of pregnant women after the intervention of learning using standard modules that are usually used in public health centers as much as 40%. Based on the test Mann-Whitney, significant results were obtained ( $p = 0.020 (< \alpha 0.05)$ ) which means that there are differences in learning motivation between the intervention group and the non-intervention group. The interventions showed that pregnant mother classroom learning using the ARCS module could be used to improve learning motivation is better than the standard module used usually in the class of pregnant women in public health centers in Indonesia.

## CONCLUSION

Class participants of pregnant women who were given learning using the ARCS module mostly experienced increased learning motivation from stable to extreme categories. Class participants of pregnant women in the learning intervention class used the ARCS module before and after the intervention with the level of change in learning motivation increased by 80% and the significance level of  $0.009 < \alpha 0.05$ . So it can be concluded that the classroom learning of pregnant women using the ARCS module increases learning motivation better than the standard module which is usually used in the class of pregnant women in public health centers in Indonesia.

**Ethical Clearance:** Ethical clearance was obtained from the Health Research Ethics Committee at the Ministry of Health Polytechnic Banjarmasin, Indonesia. We also wish to thank all the participants who contributed to this study.

**Conflict of Interest:** Nil.

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