



## The pelangi school health model as an alternative effort to revitalize UKS for health workers

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### ABSTRACT

#### Background

Improve community health status still a lot of health problems, especially primary school children. Efforts are being made on elementary school children through the school health program, but in the implementation of each of the provincial average was 13.6%. So, we need a comprehensive model in schools that are able to provide education and public health services, oral health and nutrition. The Pelangi School Health Model is a development of UKS program and implemented by three health workers collaborate among others: nurses, dental therapists and nutrition personnel who have followed training

#### Aim

The Pelangi School Health Model as an alternative effort to revitalize UKS for health workers.

#### Method

*Research and Development* (R & D) and testing of the model using experimental quasy tets control group pre-test and post-test design. Health personnel research subjects were divided into 2 groups: 1) intervention Pelangi School Health model and 2) program UKS as controls. The independent variables: training of pelangi school health model and the dependent variable: behavior (knowledge, attitudes and skills) for health professionals. Data were tested using normality test and repeatet measure anova.

#### Results

This model is effective to increase knowledge of health workers ( $p < 0.001$ ), attitude ( $p < 0.000$ ) and the skills of health service ( $p < 0.006$ ).

#### Conclusion

The Pelangi School Health Model training as an alternative effort to revitalize UKS for health workers

**Keywords:** Pelangi School Health model, alternative effort to revitalize UKS for health workers

## INTRODUCTION

Health services done through promotive, preventive, curative and rehabilitative either individually or in community implemented in an integrated, comprehensive and sustainable, but in the implementation of health problems still occur, especially in elementary school children [1].

Efforts are being made on elementary school children through UKS program to improve the health of school children in order to support the learning achievement of school age children as high as possible [2,3]. UKS program has three main pillars called TRIAS UKS among others, health education, health care and environmental development of healthy school life [4]. The average success rate implementation UKS program in every province in the Indonesia is 13.6% [5]. So we need a comprehensive model in schools that are able to provide education and public health services, oral health and nutrition.

The purpose of the provision of comprehensive services in schools, namely: 1) improve the health of the child, 2) implement the education and health services and 3) reduce absence of elementary school children. The benefits of comprehensive health services, among others: 1) to provide services directly, 2) health insurance more services near and 3) reduce health problems that occur in children of primary school children [2].

Comprehensive services that have been implemented in Pakistan in the form of healthy school programs can improve healthy degrees of elementary school children.[6], Whereas the model of comprehensive services that will implemented researchers will be given the name of the Pelangi school health model. The pelangi school health model held by three health workers collaborate among others: nurses, dental therapists and mouth as well as the power of nutritional with two core programs: education and health services. Which will be given to children in accordance with their respective competence of health personnel.

## METHODS

Method used in this research is the research and development (R & D) with quasy experiment control

group pre-tets and post-test design. This study aims to create a pelangi school health model as the development of the UKS program. Research and development procedure includes five steps, as follows: 1) the collection of information, 2) design models, 3) expert validation and revision, 4) test models and 5) the model results[7].

The sampling technique and training of health workers with purposive sampling amounted to 6 people consisting of 2 nurses, 2 dental therapists and 2 nutrition that will provide education and health services, and then divided into two groups consisting of people 3 intervention group and 3 people control group. Data measuring knowledge, attitudes and skills in conducting education and public health services, oral health and nutrition conducted by means of statistical tests. The research data using a ratio scale so do test for normality using the Shapiro-Wilk.

Statistical tests to analyze the variable data pairs in the intervention group and the control group, when the normal data using repeatet measure Anova test is abnormal while using Friedman test.

## RESULT

### Information collection

The collected information can be concluded that the implementation of the UKS program could be improved, among others: 1) the service time of primary school children were given to be continuously and sustainably, 2) medium-infrastructures are adequate, 3) need the support of all the citizens of the school, 4) the collaboration of personnel nursing, dental therapists and dental personnel and nutritionists so that the necessary innovation UKS program into pelangi school health model and 5) health workers has always been at the school in providing education and health services.

### Design of Model

The pelangi school health model is a health development efforts in improvement the health of primary school children. Pelangi school health model is designed to meet the needs of school children in dealing with health issues so as to create optimal health status.

**Validation Expert**

**Table 1. Test statistics vadilitas expert**

Vadilitas Expert *			
	N	f (%)	p-value
Relevant	10	100	0.031
Irrelevant	0	0	

\*Intraclass correlation coefficient

The results showed that the expert vadilitas p-value = 0.031, which means that the model is relevant pelangi school health program in education

and health care implementation primary school children.

**Test Model (Training of Health)**

**Table 2. Data normality test the intervention group and the control group**

Variables	Normality test*	
	p-value	
	Intervention (n-3)	Controls (n-3)
Knowledge (pre-test)	0843	0843
Knowledge (Post-tets 1)	0915	0672
Knowledge (Post-test 2)	1,672	0915
Attitudes (Pre-test)	0463	0637
Attitudes (Post-tets 1)	0637	1,000
Attitudes (Post-tets 2)	0637	1,000
Skills (pre-test)	1,000	1,000
Skills (Post-test 1)	0915	1,000
Skills (Post-tets 2)	0915	0915

\* Shapiro-wilk

Normality test results showed that the p-value> 0.05, so it can be concluded that the normal

distribution of data parameteric then proceed with the test.

**Table 3. Test Data pairs intervention and control groups**

Group		Knowledge			Attitude			skills			
		N	mean	SD	p-value	mean	SD	p-value	mean	SD	p-value
Intervention	pre		63.33	3,512		80.67	2,082		60.00	7,000	
	Post 1	3	86.68	6,506	0.001	94.33	1,528	0.000	86.68	1,528	0.006
	Post 2		91.00	10 149		98.33	1,528		93.33	6,506	
Control	pre		66.33	3,152		78.67	1,528		60.00	7,000	
	Post 1	3	82.00	10 149	0.009	93.00	1,000	0.000	80.00	7,000	0.015
	Post 2		86.76	6,506		96.00	2,000		86.67	6,506	

\*Repeatet measure anova

The test results show the effectiveness of the data pairs knowledge p-value 0.001 intervention group (p<0.05), and the p-value is 0.009 control group (p<0.05). The attitude shows p-value intervention group was 0.000 (p<0.05) and the control group was 0.000 (p<0.05). Skills shows the intervention group was 0.006 (p <0.05), and the p-value control group was 0.015 (p<0.05) means

that the Pelangi School Health Model and the school health program as an alternative effort revitalize UKS for health workers.

**Model Results**

The pelangi school model is output from development UKS program. Implementation of school health unit rainbow models with the type of

activities such as education and public health services, oral health and nutrition conducted by the nursing staff, dental therapists and nutrition.

## DISCUSSION

Based on the results obtained from the data that the program UKS applied not in accordance with TRIAS UKS, for general medical examination carried out every 2 years, the examination of the teeth and mouth do 1 year, little doctors performed 3 years, fostering healthy canteen conducted 1 year. To solve the problem required a solution in the form of programs in an effort to improve the health of children through innovation and the development of more specific UKS program in the form of Pelangi School Health model. Expert validation process is essential before it is implemented to the schools that will be targeted pilot program models. This is according to research conducted by Setiawan (2017), which states that the exert validation process is very important in developing the model so that it can produce models that are useful in improving the quality of education [8].

Intervention of education and public health services, oral health and nutrition can be provided by health workers for primary school children, but in the process of health workers need to be trained in advance because of the knowledge, attitude and skill about the health status of children of primary school-owned power health and able to perform the transfer of knowledge and skills to elementary school children [9], This is evidenced by research Santoso (2017), which states that the training very effective in improving knowledge, attitudes and skills of a person [10], As another study conducted by Kolbe (2019), which states the health worker training can improve knowledge, attitudes and skills, so that health workers can identify and resolve health problems that occur in children [11].

Training models rainbow school health unit conducted to improve the knowledge, attitudes and skills unless implemented through education and public health services, oral health, and nutrition owned health personnel so that health professionals are able to provide education and health services. This is according to research conducted by Trishandra (2019), which states health education is a learning process to acquire the knowledge and the

cultivation of positive attitudes about maintaining the self-order to stay healthy while health services are performed on school-age children through promotive and preventive [12, 13].

The test results effectiveness of health personnel to the pelangi school health model, shows that the value of knowledge p-value was 0.001, the attitude of the p-value is 0.000 and p-value 0.006 skills. The third value  $<0.05$  means the pelangi school health model and UKS program as an alternative effort revitalize UKS for health works.

Improved knowledge occurs because health authorities have received the material on the school health program model of the rainbow. This is evidenced by the researcher Claire (2017), which states that training can improve knowledge of health workers [14].

Improved attitudes toward implemented rainbow school health program models so that officers can healthy want to take action in accordance with the information obtained. This is evidenced by research Hosan (2018), which states that training can improve the attitude of health workers 15 and supporting this question by Notoadmojo (2012), stating that attitude is a readiness or willingness of a person to take action but are not included in the act[16].

Increasing the skills of the implementation of the pelangi school health program model especially health services provided to children of primary school age, because at this stage of the simulation training public health services, dental and oral health care and nutrition services. This is evidenced by research Trisnawati (2018), which states that training can improve the skills of health workers [17].

Health workers have been trained, a pilot model for elementary school children because of the expected further health workers will conduct education and health services in accordance with the model of the rainbow school health unit in an effort to improve health status of primary school children.

## CONCLUSION

From the results of the study, it can be concluded that the pelangi school health model training has proven feasible as an alternative to UKS revitalize the efforts for health workers.

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