



## Establishment of the Peer Counselor as an Effort to Conquer Nutritional Problems in Teenagers

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### Abstract

**Background:** Health problems in teenagers can start at a very young age. Residuals of infection and malnutrition during childhood will become a burden when they grow up. Risk factor for chronic fatigue syndrome (CFS) is more common for teenagers of 15 until 19 years old. Besides CFS, teenagers are also vulnerable to suffer from anemia problems. The school health programme has not empowered students to overcome this problem. One of the models of empowerment of students that can be developed is to form a peer counselor.

**Methods:** Research was conducted in the working area of Leyangan Health Center, Semarang Regency, Indonesia. The research design was quasi-experiment with nonrandomized pre and post-test group design. The sampling process was done through random sampling on female students. The selection of the control group and treatment group were randomly assigned. The data collected was knowledge of nutrition and health and also skills in counseling before and after the training.

**Results:** It was found that there was an increase in knowledge before and after the training for peer counselors with a p-value of 0.000. There was also a significant difference in attitude before and after the training which is shown by the p-value of 0.000. On anthropometric skills, significant results were obtained on how to measure body weight and height, with a p-value of 0.000.

**Conclusion:** Training of peer counselors has proven to be able to improve knowledge, attitude, and skills of the teenagers. It is recommended to increase peer counselor activities through improving facilities and socialization to all students.

**Keywords:** Knowledge, Skills, Teenagers, Peer Counselors.

### Introduction

Residuals of infection and malnutrition during childhood will become a burden when they grow up. Risk factor for chronic fatigue syndrome (CFS) is more common for teenagers of 15 until 19 years old. Besides CFS, teenagers are also vulnerable to suffer from anemia problems

(Ministry of Health Republic of Indonesia, 2014). Efforts to overcome CFS and anemia problems require cross-program coordination through the school health program and youth care health services, as well as nutrition and health counseling.

Not all school health programs and youth care health services are running as well as expected. The problems faced in each region are not the same, as school participation varies greatly. One of the factors that have considerable contributions in supporting the success of the program is the role of health workers, teachers, and students. Teacher's knowledge and skills are still limited, especially about anthropometry and the techniques of providing nutrition counseling. On the other hands, students have not been actively involved yet in these activities. The proper measurements of height, weight, and upper arm circumference and further counseling services need to be supported by skilled manpower, such as Leyangan Health Center paramedics.

Leyangan Health Center has 4 high schools as target schools. The forms of training that had been carried out by the Leyangan Health Center were only limited to lectures, so that teachers and students had not received practical skills, especially in conducting anthropometric measurements and techniques to provide counseling.

The success of the screening program can be carried out by empowering students as an active performer in influencing their friends for balanced nutritional behavior. The model of empowering students by forming peer counselors can be done in schools. They are expected to be "agent of change" or "motivator", especially to friends at school, as well as family and society in general. As a motivator, they are expected to be able to influence family and society, especially peers for balanced nutritional behavior. The method used was "learning by doing" or learning while practicing. After getting the knowledge and explanation of the theory, it is then followed by practical activities. Through these principles, the knowledge and messages of balanced nutritional behavior will be understood completely by students. It is predicted that peer counselors can play an active role in influencing their friends (Ministry of Health Republic of Indonesia, 2015).

Based on the description above, the researcher wanted to participate by conducting research to see the effectiveness of training in improving the capabilities of peer counselors. The form of training was counseling and technical assistance in increasing the knowledge and skills of peer counselors about anthropometry and counseling about nutritional problems in teenagers.

### Methods

The study design was nonrandomized pre and post-test control group design. This study looked at the effectiveness of training in the form of lectures, discussions, and practices on the knowledge and skills of peer counselors.

The research locations were four secondary schools assisted by Leyangan Health Center, Semarang Regency. The reason for choosing this location was because the school health program has been established in each school. The study was conducted for 4 months, from August to November 2017.

The population was all female students in four secondary schools assisted by Leyangan Health Center. The sample was taken from first-grade students with a ratio of 1 peer counselor for 10 female students. There weretotal of40 students for the intervention group and 40 students for the control group.

The data collected were tabulated and analyzed. Data were analyzed quantitatively using T-test to see the differences in knowledge and skills before and after the training of counseling skills. Repeated ANOVA tests were done later on.

### Results

The results of this research can be seen in Table 1. Most of the research respondents were 13 years old, namely 52.5% for the intervention group and 70% for the control group. From the table, the knowledge level of the control group is 100% insufficient, while the intervention group 67.5% of respondents have sufficient knowledge.

As much as 92.5% of the control group had insufficient skills in measuring body weight while

in the intervention group 77.5% of respondents had sufficient skills. During the pre-test to measure weight, the majority of respondents in the control group and intervention group did not apply the weighing device and did not remove the accessories on the subject being weighed, such as a belt.

Up to 95% of the control group had insufficient skills in measuring height while 32.5% of the intervention group had insufficient skills. At the

time of the pre-test to measure height, 32.5% of respondents in the control group and the intervention group did not apply the TB measuring instrument, read the results of the measurement with eyes not aligned and did not perfect the attitude of the measured subject. Based on the level of skills of the respondents in counseling, 100% of the control group had insufficient skills, while in the intervention group 82.5% of respondents had insufficient skills.

**Table 1** Results of the Research

Age (years old)	Intervention Group		Control Group	
	(n)	(%)	(n)	(%)
12	16	40	6	15
13	21	52.5	28	70
14	3	7.5	6	15
<b>Total</b>	40	100	40	100
Knowledge	Intervention Group		Control Group	
	(n)	(%)	(n)	(%)
Enough	27	67.5	0	0
Insufficient	13	32.5	40	100
Sikap	Intervention Group		Control Group	
	(n)	(%)	(n)	(%)
Support	39	97.5	0	0
Do not support	1	2.5	40	100
Body Weight Measurement	Intervention Group		Control Group	
	(n)	(%)	(n)	(%)
Enough	31	77.5	3	7.5
Insufficient	9	22.5	37	92.5
Body Height Measurement	Intervention Group		Control Group	
	(n)	(%)	(n)	(%)
Enough	27	67.5	2	5
Insufficient	13	32.5	38	95
Keterampilan Konseling	Intervention Group		Control Group	
	(n)	(%)	(n)	(%)
Enough	7	17.5	0	0
Insufficient	33	82.5	40	100

The results of the analysis using Repeated Measures ANOVA test showed that there was a significant difference with a p-value of 0.000 in the knowledge scores between the control and intervention group. Both control and intervention groups showed an increase in knowledge, but there was a more significant increase in knowledge in the intervention group. This was because the intervention group obtained information about balanced nutrition while the control group did not. The results of this study were supported by previous research conducted by

Aisah et al. (2010) in Semarang City, which concluded that peer education could improve knowledge of balanced nutrition.

The results of the analysis using the Repeated Measure ANOVA test showed that there was a significant difference with a p-value of 0.000 in attitude scores between the control group and intervention group. There was also a significant difference with a p-value of 0.000 in the skill of measuring body weight and body height in the control group and intervention group. The significant increase in scores in the treatment

group mostly occurred in the second post-test, which was 2 weeks after the training.

Comparison of the results of the intervention and control groups calculated using Mann Whitney data analysis obtained a p-value of 0.000 which showed that there were significant differences between the two groups. There were differences in counseling skills between the control and intervention groups. The increase in the average score in counseling skills in the intervention group is 0.9. This means that the intervention group had higher skills output in counseling compared to the control group.

### Discussion

Based on the obtained results, it can be concluded that the training of peer counselors has proven to be able to improve knowledge, attitude, and skills of the teenagers. The formation of peer counselors is very important in solving nutritional problems in teenagers. Peer counselors can be a model for other friends in doing a healthy lifestyle. Peer counselors can also be the agent of change for their friends in terms of giving encouragement and motivation to their peers. Peer counselors had a positive impact on improving knowledge, attitudes, and skills (Harini, 2014).

Another study also addressed the same results, especially on the knowledge and attitudes of the peer counselors after getting training on reproductive health in Semarang City (Husodo et al., 2008). Research involving peer counselors also showed a significant effect on knowledge about HIV/AIDS and drugs (Utami et al., 2017). It was found that there were differences in knowledge and attitudes in the group given an intervention with education about the prevention of premarital sex by peers (Oktarina et al., 2017). Another study showed a significant relationship between knowledge and attitudes about the prevention of sexually transmitted diseases and HIV/AIDS in students using peer counselor services (Wulandari, 2015). Concerning the discussion above, it is recommended to increase

peer counselor activities through improving facilities and socialization to all students.

### Conclusion

From this research, it was found that there was a significant increase in knowledge, attitude, and skills before and after the training for peer counselors. Training of peer counselors has proven to be able to improve knowledge, attitude, and skills of the teenagers. It is recommended to increase peer counselor activities through improving facilities and socialization to all students.

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