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Research Article

Peer Group Empowerment to Improve Teenagers' Behavior in Consuming Blood Supplement Tablets Through the Youth Integrated Healthcare Center Program

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ABSTRACT

Backgrounds: South Sulawesi Province ranks in the top 7 with a percentage of 58.9% coverage of TTD provision to adolescent girls. Based on data from the Gowa District Health Service in 2021, it shows that the number of coverage for taking blood-added tablets among young women is 57% of the accumulated achievements of 26 health centers, where the health center with the lowest number of coverage for taking blood-added tablets is one of the Kanjilo Community Health Centers with an achievement of 18% of 1239 targets targets. Youth Integrated Healthcare Center with a peer-group approach allows for continuous interaction between peer educators and their peers so that the delivery of information is more intensive. This research aims to determine the effect of peer group empowerment to increase adolescent behavior in consuming blood supplement tablets at the Youth Integrated Healthcare Center, Barombong District, Gowa Regency. Methods: This research uses a quantitative method of quasi-experimental design with a pre-test and post-test group approach. The population in this study were all members of the youth Integrated Healthcare Center in the Kanjilo health center working area, Barombong sub-district, South Sulawesi province, who were divided into two groups, namely the intervention group and the control group, each with 40 people. Results: The results of the study showed that there was a significant effect of peer group empowerment intervention on intention, self-efficacy, knowledge, attitudes, parental support, and teacher support in the intervention group and control group in consuming blood supplement tablets in youth Integrated Healthcare Center with a p-value < 0.05. Apart from that, the results showed that adolescent Integrated Healthcare Center participants were more disciplined in consuming blood supplement tablets because of peer invitations which made changes in adolescent behavior in a more positive direction. **Conclusion:** There is a significant influence between the intervention group and the control group before and after being given counseling and peer group empowerment training on adolescent behavior in consuming blood supplement tablets.

Keywords: Teenagers, peer groups, blood supplement tablets, youth Integrated Healthcare Center.

INTRODUCTION

The World Health Organization (WHO) in 2018 stated that around 1.2 billion people or 1 in 6 of the world's population are teenagers aged 10 to 19 years and more than 1.1 million teenagers aged 10-19 years died from anemia. Iron deficiency anemia is the second leading cause of disability and death in adolescents. Iron and folic acid supplements are solutions that can help improve health before teenagers become parents.[1]

Based on 2013 Riskesdas data, the proportion of anemia in women (23.9%) is higher than in men (18.4%). The proportion of anemia in the 15-24-year age group was 18.4% in 2013.[2] Then the 2018 Riskesdas data shows that the proportion of anemia in women (27.2%) is higher than in men (20.3%). The proportion of anemia in the 15-24 year age group is 32%, meaning that 3-4 out of 10 teenagers experienced anemia in 2018.[3] This shows that cases of anemia in adolescents are directly proportional to the low awareness of adolescent girls regarding the consumption of Blood Supplement Tablets (TTD) as an effort to prevent anemia.[4] Anemia is one of the main nutritional problems throughout the world, especially in developing countries. Indonesia is a country with a triple burden of disease, namely undernutrition, overnutrition, and micronutrient deficiencies such as anemia.[5]

The coverage of TTD provision for adolescent girls in Indonesia in 2020 was 39.1%. Maluku is the province with the highest percentage of TTD provision coverage, namely (76.2%), while South Sulawesi still ranks in the top 7 with a percentage of 58.9% coverage of TTD provision among young women.[6] Youth Integrated Healthcare Center is a form of Community Resource Health Effort (UKBM) that is managed and organized, by, for, and with the community, including teenagers, in implementing health development. It is hoped that the formation of the Youth Integrated Healthcare Center can become a forum to facilitate teenagers in understanding adolescent health problems and finding alternative solutions to problems.[7]

Based on data from the Gowa District Health Service, 2021 shows that the coverage of taking blood supplement tablets among young women is 57%, of the accumulated achievements of 26 community health centers in Gowa Regency, where the Lauwa Community Health Center has the highest achievement with a percentage of ≥90%. Meanwhile,

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the community health center with the lowest coverage of taking blood supplement tablets is Kanjilo Community Health Center with a reach of 18% of the 1239 targets, only 232 young women took blood supplement tablets, (an indicator of young women drinking ≥81% of blood supplement tablets, less than 50%).[8] Based on secondary data from the Kanjilo Community Health Center in the last three years, the consumption of blood supplement tablets among young women aged 12-18 years has never really been confirmed to reach the target, wherein 2019 the target number for the Kanjilo Community Health Center was 739 and all of them were only distributed to 2 schools. 1 middle school and 1 high school, without further evaluation and monitoring. In 2020, the target was 198, and the distribution achieved was 198, using the distribution method for each village/ward, through Integrated Healthcare Center cadres, without monitoring the behavior of taking blood supplement tablets (TTD) among young women. Meanwhile, in 2021 the targets for young women will increase drastically by 1239 targets, with a distribution of achievements of less than 50% or as many as 232 achievements. Based on all these achievements, there is no monitoring of the behavior of taking blood supplement tablets and they are only given through school teachers or health cadres at the baby/toddler Integrated Healthcare Center.

The absence of sustainable intervention and optimal youth empowerment is one of the reasons why this youth Integrated Healthcare Center is not running as it should. To answer the challenges of the main problems of teenagers, the existence of a reproductive health service center that is based on community empowerment and focuses on serving teenagers is very necessary. Fulfillment of adolescent health services through peer educators (adolescent health cadres) is also one of the determining factors for the success of the program. This can encourage teenagers to utilize health services and help them in decision-making.[9]

METHODOLOGY

Study design and participants

This research was conducted from May to June 2023 at the Kanjilo Community Health Center, Gowa Regency, South Sulawesi Province. This research uses a quantitative type of research with a non-equivalent group design. Non-Randomized Group Pre-Post Test Design Model. The research objects were female teenagers aged 12-18 years who were divided into two groups, namely the control group and the treatment group. The sampling technique in this research used a simple random sampling technique with a lottery for the entire sample. With a total sample of 80 people. The intervention group was given treatment in the form of counseling and training of cadres to implement the youth Integrated Healthcare Center, while the control group was only given treatment in the form of counseling without any training. The following is the flow of research implementation carried out in the control group and intervention group:

Control group

Before counseling is carried out, researchers first carry out a pre-test to measure intentions, knowledge, self-efficacy, and attitudes. After carrying out the counseling and pre-test, the researcher again conducted a post-test at a distance of 1 week after carrying out the pre-test to measure intentions, knowledge, self-efficacy, and attitudes.

Intervention group

Before counseling and training cadres, researchers first carried out a pre-test to measure intentions, knowledge, self-efficacy, and attitudes. After carrying out the pre-test, the cadre training intervention was carried out for three consecutive days. After the training, the intervention youth group provided peer group assistance at the Youth Integrated Healthcare Center at the Kanjilo Community Health Center once a week for one month. After completing the Youth Integrated Healthcare Center, researchers then carried out a post-test to measure intentions, knowledge, self-efficacy, and attitudes.

Tools

Adolescents' behavior/attitudes towards consuming blood supplement tablets were measured through an attitude questionnaire consisting of 10 statement items with four answer choices, namely strongly agree given a score of 4, agree given a score of 3, disagree given a score of 2, and strongly disagree given a score of 1. Cronbach alpha 0.839.

Adolescents' intention to consume blood supplement tablets was measured using a questionnaire consisting of 6 statement items with three answer choices, namely very intention given a score of 3, intention given a score of 2, and no intention given a score of 1. Cronbach alpha was 0.808.

Adolescents' self-efficacy regarding the consumption of blood supplement tablets was measured using a questionnaire consisting of 10 statements with four answer choices, namely very confident given a score of 4, confident given a score of 3, not very sure given a score of 2, very unsure given a score of 1. Cronbach alpha 0.785

Adolescents' knowledge of consuming blood supplement tablets was measured using a questionnaire consisting of 10 questions with two answer choices, namely yes and no.

To ensure the validity and reliability of the questionnaire, content validity was conducted, and reliability tests were carried out involving responses from 30 adolescents with the same characteristics outside the research sample, namely in the working area of the Mocobalang Community Health Center.

The data obtained in this research was analyzed using Statistical Package for Social Science (SPSS) version 22. Univariate analysis was used to describe the characteristics of respondents and the variables studied. Bivariate analysis used the Wilcoxon test to see the effect of the intervention on the consumption behavior of teenagers' blood supplement tablets before and after being given counseling and training in each group.

RESULTS

Based on Table 1, it shows that the majority of respondents were aged 15-16 years, namely 23 people (57.5%) in the intervention group and 30 people (75.5%) in the control group.

Table 2 shows that for the intervention group, it was found that teenagers' intentions to consume blood-added tablets in the pre-test were mostly in the intention category, namely 29 people (72.5%), after assistance, the level of teenagers' intention to consume blood-added tablets appeared to have increased. to 97.5%. Adolescents' self-efficacy for consuming blood supplement tablets in the pre-test was mostly in the confident category, namely 35 people (87.0%), after mentoring, the level of adolescent self-efficacy regarding consuming blood supplement

Table 1: Distribution of Respondents Based on Age in the Intervention Group and Control Group.

Characteristics	Intervention Group		Control Group	
	n	%	n	%
Age (Years)				
13-14	9	22.5	6	15.0
15-16	23	57.5	30	75.0
17-18	8	20.5	4	10.5
Total	**40**	**100**	**40**	**100**

Source: Primary data 2023

Table 2: Frequency Distribution of Blood Supplement Tablet Consumption Behavior among Adolescents at Kanjilo Community Health Center, Gowa Regency, South Sulawesi Province.

Variable	Intervention Group				Control Group			
	Pre-test		Post-test		Pre-test		Post-test	
	(n)	(%)	(n)	(%)	(n)	(%)	(n)	(%)
Intention								
Intend	29	72.5	39	97.5	16	40.0	31	77.5
Didn't Intend	11	27.5	1	2.5	24	60.0	9	22.5
Self-Efficacy								
Certain	35	87.0	37	92.5	32	80.0	38	95.0
Not su	5	12.5	3	96.5	8	20.0	2	5.0
Knowledge								
Good	17	42.5	37	92.5	33	82.5	38	95.0
Bad	23	57.5	3	7.5	7	17.5	2	5.0
Attitude								
Positive	29	72.5	38	95.0	31	77.5	37	92.5
Negative	11	27.0	2	5.0	9	22.5	3	7.5

Source: Primary data 2023

Table 3: Wilcoxon test on peer group empowerment.

Intervention Group	One Group Pre and Post Test p-value	Control Group	One Group Pre and Post Test p-value	Average value	Difference
Intention					
Pretest	**0,000**	*Pretest*	**0,000**	4.65	**0.96**
Posttest		*Posttest*		5.58	
Self Efficacy					
Pretest	**0.004**	*Pretest*	**0.005**	30.00	**2.97**
Posttest		*Posttest*		32.97	
Knowledge					
Pretest	**0,000**	*Pretest*	**0,000**	5.20	**3.85**
Posttest		*Posttest*		9.05	
Attitude					
Pretest	**0,000**	*Pretest*	**0,000**	26.90	**3.9**
Posttest		*Posttest*		30.80	

tablets appeared to have increased to 92.5%. Adolescents' knowledge regarding the importance of discipline in consuming blood supplement tablets in the pre-test was mostly in the poor category, namely 23 people (57.5%), while for adolescents who had good knowledge, only 17 people (42.5%), after mentoring, the level of knowledge Adolescents regarding the importance of discipline in consuming blood supplement tablets have seen an increase to 92.5%. As for the attitude variable, it was found that the attitudes of teenagers in consuming blood-added tablets in the pre-test were mostly in the positive category, namely 29 people (72.5%), after mentoring, the positive attitude of teenagers in consuming blood-added tablets was seen to have increased to 95.5%. Meanwhile, for the control group, as shown in Table 2, there was an increase in teenagers' intentions, self-efficacy, knowledge, and positive attitudes toward consuming blood supplement tablets after being given counseling.

Table 3, shows that the results of the Wilcoxon statistical test in the intervention group for the variables intention, self-efficacy, knowledge, and attitude have a p-value <0.05, meaning that there is an influence of peer group empowerment on all variables in the consumption of blood supplement tablets at the youth Integrated Healthcare Center. Meanwhile, in the control group, the variables of intention, self-efficacy, knowledge, and attitude obtained a p-value <0.05, meaning that there was an influence of health counseling/education on the intention, self-efficacy, knowledge, and positive attitude of teenagers in consuming blood supplement tablets. at the Youth Integrated Healthcare Center.

DISCUSSION

One strategic step to create motivation towards improving good behavior in accordance with the concept of health is with a strategy of community empowerment and community participation, namely with a very strong Peer Group influence program in adolescence. Teenagers often gather and interact in their peer groups, resulting in dynamics and mutual influence within the group. With the interactions and dynamics that develop within peer groups, good communication is formed, and teenagers can formulate, improve, and improve their communication through the group they belong to.[10]

This research shows that there is an influence of peer group empowerment on adolescent behavior in consuming blood supplement tablets in the intervention group and control group. Group discussions with peer group empowerment are the most effective health promotion method in this research, because in group discussions, respondents are not only given an understanding of blood supplement tablets, but respondents are also invited to think and play an active role in knowing and understanding the benefits and impacts of not consuming tablets. add blood to themselves, through the exchange of experiences between discussion groups so that respondents' understanding of blood-added tablets becomes stronger, which will have an impact on their compliance with consuming blood-added tablets. So overall, with the existence of an empowerment platform through the Youth Integrated Healthcare Center, both groups have a greater desire to consume blood supplement tablets, in accordance with their drinking rules.

In this study, it was found that peer group empowerment in the intervention group and counseling methods in the control group each had an influence on increasing teenagers' intentions, teenagers' self-efficacy, teenagers' positive attitudes, and teenagers' knowledge about taking blood supplement tablets. This research is in line with research conducted by Ruri Astuti, *et al*, showing that there is a higher increase in intentions and attitudes in the treatment group in preventing iron nutritional anemia occurred because in peer groups there was dynamic interaction between group members, providing each other with information support, guiding each other, and giving appreciation to each other, thus creating awareness and intention to behave appropriately. with his group.[11] Apart from that, this research is also in line with research conducted by Gustina, *et al* showing that the higher the level of self-efficacy in adolescents, the higher their confidence in taking action and making life choices for themselves.[12-20] Providing peer-group assistance and counseling was also found to influence teenagers' knowledge about consuming blood supplement tablets.[21-25] The results of this study are in line with research conducted in Pontianak by Syahrina *et al*, which showed results that there was an increase in knowledge (p = 0.001) and compliance (p=0.002) of adolescents in consuming Fe tablets before and after education.[13] In this study, it was also found that the positive attitude of teenagers increased significantly after being given peer-group assistance and counseling regarding the consumption of blood supplement tablets.[26-29] This research is in line with research by Simbolon, *et al* showing an increase in the positive attitude of female teenagers before and after peer group assistance in Middle School 9, Padang Serai District, Bengkulu City and at Middle School 16, Pasir Panjang District, Kupang City.[14]

CONCLUSION

Peer group empowerment and health education through the adolescent Integrated Healthcare Center program were found to increase adolescent behavior in consuming blood supplement tablets with indicators of increased intention, increased self-efficacy, increased knowledge, and increased positive attitudes of adolescents towards the discipline of consuming tablets Fe. Therefore, joint efforts from the government, educators, and health workers are essential. This can be achieved by 1) Health workers at community health centers must involve teenagers in taking on the role of implementers, not just as participants through massive empowerment. 2) Health Service Agency improvement monitoring and evaluation of the program Integrated Healthcare Center in all Community Health Centers in South Sulawesi. 3) The school collaborates with health workers to support improving the quality of adolescent health education in the consumption of blood supplement tablets to increase the coverage rate of giving Fe tablets to adolescent girls and reduce the incidence of anemia in adolescent girls.

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