



THE EFFECTIVENESS OF CLASS MOTIVATORS IN INCREASING COMPLIANCE WITH THE CONSUMPTION OF BLOOD SUPPLEMENT TABLETS IN JUNIOR HIGH SCHOOL GIRLS

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ABSTRACT

Blood supplementation tablets through the nutritional action program have been implemented, but coverage is still 74.29% of the 100% target. Peer support is thought to be an important factor influencing adherence to Fe tablet consumption. This study aims to determine the effectiveness of class motivators in increasing compliance with the consumption of blood supplement tablets among young women in Pidie Regency. This research is a quantitative research design as if the experiment were not equivalent use pretest and posttest control group design. Implemented in Pidie Regency from October 2023 to January 2024. The population consists of all female students at MTsN 5 Pidie (567) as the intervention group and SMP N 2 Delima (262) as the control group. The total sample was 628 female students who met the inclusion criteria, with 368 in the intervention group and 260 in the control group. Data collection was carried out through questionnaires, and the formation of class motivators in the intervention group. Data analysis used Mann Whitney and Wilcoxon test statistics using the Stata 14 program. The results showed that there were differences in changes in adherence to consuming blood supplement tablets, knowledge, HB levels, side effects of tablets, consumption of enhancer foods, consumption of inhibitor foods and belief in myths between the intervention groups. and the control group in increasing the consumption of blood supplement tablets, and there was no difference in changes in attitudes ($p=0.308$) between the intervention group and the control group in increasing the consumption of blood supplement tablets. Compliance with consuming blood supplement tablets among female students has increased in the group given class motivator intervention, which significantly increased compliance with consuming blood supplement tablets, knowledge, HB levels, side effects of tablets, consumption of enhancer foods, consumption of inhibitor foods and belief in myths. However, there was no difference in the attitudes of the intervention and control groups, this was because the respondents' attitudes were good from the start.

Keywords: blood increasing tablets; intervention; motivator; young women

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INTRODUCTION

Adolescents are individuals in the age category of 10 to 19 years old which is divided into two phases, namely the early adolescent phase which includes the age of 10-14 years and the late adolescent phase which ranges from the age of 15-19 years. Adolescence is a transitional period from childhood to adulthood, where there is development in all aspects or functions of the individual to enter the stage of maturity (Masthalina, 2015). In this situation, adolescents often experience nutritional problems, because the iron needs of adolescent girls increase with growth and the arrival of menstruation, which makes adolescent girls very susceptible to anemia (Wahyuningsih & Uswatun, 2019). Anemia due to iron deficiency is one of the main nutritional problems globally experienced by almost all age groups (Septiawati et al., 2019). Anemia is a condition in which hemoglobin (Hb) levels in the blood are below the normal

limit, which is less than 12 g/dL. The causes of anemia are very diverse, but some are thought to be due to iron deficiency (Runiari & Hartati, 2020).

Adolescent girls are at risk of anemia, because they have menstruation every month which produces 16-33.2 cc of blood and will lose approximately 1.3 mg of iron per day, causing adolescent girls to easily develop anemia, a condition in which red blood cells or hemoglobin concentrations in them are lower than usual (Hamranani et al., 2018). Anemia due to iron deficiency is not only affected by the amount of iron that enters the body, but also by the extent to which the iron can be absorbed. The process of iron absorption involves interaction with other substances, which can have a positive effect as an enhancer or a negative effect as an inhibitor (Listiwati, 2019). Adolescents' eating habits tend to change over time, often lacking the variety of foods that the body needs. Adolescents also often consume foods that contain high iron along with foods that can inhibit iron absorption, resulting in low hemoglobin levels in the body (Liliaprianty, 2020).

Adolescent girls who experience anemia have a high risk of developing anemia during pregnancy. This condition can cause adverse impacts on the growth and development of the fetus in the womb, can also cause problems during pregnancy and during childbirth and childbirth with low birth weight (BBLR) and even risk death for the mother and baby (Amir & Djokosujono, 2019). Previous research stated that pregnant women with anemia had a 15 times higher risk of miscarriage compared to pregnant women who did not have anemia, and had a 2,364 times risk of giving birth to a baby with BBLR (Septiawati et al., 2019). In an effort to meet the iron needs of young women, it is necessary to increase food intake through a balanced nutritious diet, which consists of a variety of foods, especially animal protein sources rich in iron such as liver, fish, and meat in sufficient amounts. In addition, plant food sources such as dark green vegetables and legumes also need to be increased even though their absorption is lower than that of animals (Iriani, 2019). However, it is often found that adolescent girls are not able to reach these foods according to their body's needs (Fitriana & Pramardika, 2019).

Riskesdas data in 2018 shows that 76.2% of Indonesia's adolescent girls get blood supplement supplements, 80.9% get blood supplement tablets at school. For Aceh province, 68.1% of adolescent girls received blood supplement tablets and 69.7% of adolescent girls received blood supplement tablets at school. The amount of proportion Based on the number of tablets taken by adolescent girls at school, it is <52 tablets at 98.6% and ≥52 tablets at 1.4% (Ministry of Health, 2018). Based on the Letter of the Director General of Public Health of the Ministry of Health of the Republic of Indonesia. PK NO. 05. 01/B/789/2022 dated October 6, 2022 concerning support in the activities of the National Movement for Nutritious Action, Pidie Regency since September 5, 2022 has carried out activities to mobilize nutritious action in schools at the junior and senior high school levels. A series of activities in the form of physical activities such as joint sports, eating together, nutrition education, and consuming joint blood supplement tablets for junior and senior high school girls who are the target of the national movement for nutrition action. Based on the report on Nutrition Action activities in Pidie Regency, there are 18,638 targets for high school and junior high school girls, with a total number of 13,845 adolescent girls who took Blood Supplement Tablets on September 5, 2022, meaning that there were 74.29% of adolescent girls who consumed Blood Supplement Tablets in the first week of the declaration.

MTsN 5 Pidie is one of the junior high schools in the Pidie sub-district area and is the location for the declaration of nutritious action activities in Pidie Regency on September 5, 2022 with

a total of 570 female students and the coverage of adolescent girls who drink TTD is 85% or 485 female students. Meanwhile, SMP N 2 Delima is located in Grong-grong district with a total of 262 female students and the coverage of adolescent girls consuming TTD is 95% or 250 female students. The purpose of this study is to determine the influence of class motivators on the adherence to the consumption of blood supplement tablets in adolescent girls in Pidie Regency.

METHOD

This study is a quantitative research with a non-equivalent quasi experiment design using pretest and posttest control group design. It will be held in Pidie Regency from October 2023 to January 2024. The population consisted of all female students in MTsN 5 Pidie (567) as the intervention group and SMP N 2 Delima (262) as the control group. The sample size was 628 female students who met the inclusion criteria, with 368 in the intervention group and 260 in the control group. Data collection was carried out through questionnaires, and the formation of class motivators in the intervention group. Data analysis using Mann Whitney and Wilcoxon test statistics through the Stata 14 program.

RESULT

Table 1
Frequency Distribution of Respondents' Environmental and Social Characteristics and Factors

Variabel	Group					
	Intervensi			Kontrol		
	f	%	Mean (SD)	f	%	Mean (SD)
Age	12,80 (0,77)			13,60 (0,97)		
Maternal Education						
Tall	127	34,51		14	5,38	
Intermediate	199	54,08		104	40,00	
Low	42	11,41		142	54,62	
Father's Education						
Tall	87	23,64		13	5,00	
Intermediate	234	63,59		126	48,46	
Low	47	12,77		121	46,54	
Mother's Work						
Work	125	33,97		95	36,54	
Not working	243	66,03		165	63,46	
Father's Work						
Work	364	98,91		250	96,15	
Not working	4	1,09		10	3,85	
Income						
≥ UMR	167	45,38		22	8,46	
< UMR	201	54,62		238	91,54	
TTD Availability						
Yes	368	100,0		260	100,0	
No	0	0,00		0	0,00	
Family support						
Good	119	32,34		138	53,08	
Not Good	249	67,66		122	46,92	
Action Implementation						
Nutritious						
Yes	368	100,0		260	100,0	
No	0	0,00		0	0,00	

Based on the results of Table 1 above, it shows that the average age of the respondents was higher in the control group, which was 14 years compared to the intervention group, which

was 13 years. Maternal education in the high category was higher in the intervention group by 34.51%, secondary education was higher in the intervention group by 54.08% and lower education was higher in the control group by 54.62%. Father's education in the high category was higher in the intervention group by 23.64%, secondary education was higher in the intervention group by 63.59% and lower education was higher in the control group by 46.54%. In mothers who worked, it was higher in the intervention group by 66.03%, while in mothers who did not work, it was higher in the control group by 63.46%. Fathers who worked were higher in the intervention group by 98.91% while fathers who did not work were higher in the control group by 3.85%. The income \geq UMR was higher in the intervention group by 45.38%. Meanwhile, the $<$ UMR income was higher in the control group by 91.54%. Good family support was higher in the control group by 53.08%, while poor family support was higher in the intervention group by 67.77%. All respondents are available TTD and implementation of nutritious actions.

Table 2
Distribution of Changes in Compliance Levels of Blood Supplement Tablets Consumption in Pretest and Posttest between the Intervention Group and the Control Group

Variabel	Intervensi	Kontrol
	Mean (SD)	Mean (SD)
Compliance with consuming blood supplement tablets	0,57 (0,57)	-0,13 (0,33)
Knowledge	2,87 (2,24)	0,01 (0,71)
Attitude	2,17 (13,20)	0,01 (0,74)
Up to HB	1,95 (1,91)	0,00 (0,00)
Side Effects of Blood Supplement Tablets	-1,08 (2,04)	0,05 (0,96)
Food consumption enhancer	2,22 (16,20)	0,02 (0,25)
Consumption of food inhibitors	0,67 (1,77)	0,01 (0,78)
Belief in myths	-1,09 (1,60)	0,00 (0,25)

Table 3
Difference in Average Pretest Score in the Intervention Group and Control Group

Variabel	Group						p value
	Intervensi			Kontrol			
	f	%	Mean (SD)	f	%	Mean (SD)	
Compliance with consuming blood supplement tablets							
Non-Compliance	305	82,88		222	85,38		0,4005
Obedient	63	17,12		38	14,62		
Knowledge	6,36 (2,15)			6,53 (1,95)			0,321
Attitude	33,35 (11,08)			33,63 (10,0)			0,727
Up to HB	11,25 (1,08)			11,11 (0,88)			0,715
Side Effects of Tablet Plus Blood	1,32 (1,63)			1,47 (1,98)			0,625
Food consumption enhancer	26,67 (13,29)			26,78 (10,41)			0,685
Consumption of food inhibitors	0,88 (1,35)			0,73 (1,09)			0,901
Belief in myths	1,69 (1,60)			1,68 (1,63)			0,855

At the time of the posttest, the mean change in compliance level was higher in the intervention group by 0.57. The average change in knowledge was higher in the intervention group by 2.87. The average change in attitude was higher in the intervention group by 2.17. The mean change in HB levels was higher in the intervention group by 1.95. The mean change in side effects of higher blood booster tablets decreased in the intervention group by 1.08. The average change in food consumption enhancer was higher in the intervention group by 2.22. The mean change in inhibitor food consumption was higher in the intervention group

by 0.67. The mean change in belief in myths was higher decreased in the intervention group by 1.09.

Table 4
The Effect of Respondents' Environmental and Social Characteristics and Factors on Classroom Motivator Intervention on Knowledge Change in Improving Compliance with the Consumption of Blood Supplement Tablets

Variabel	Coefficient (β)	T	95% CI	p-value
Age	0,088	0,58	-0,21-0,39	0,563
Maternal Education				
Tall				
Intermediate	-0,175	0,577	-0,79-0,44	0,577
Low	-0,591	0,217	-1,53-0,35	0,217
Father's Education				
Tall				
Intermediate	0,053	0,871	-0,59-0,70	0,871
Low	0,409	0,393	-0,53-1,35	0,393
Mother's Work				
Work				
Not working	-0,074	0,825	-0,73-0,58	0,825
Father's Work				
Work				
Not working	1,437	0,214	-0,83-3,71	0,214
Income				
\geq UMR				
$<$ UMR	0,092	0,772	-0,53-0,72	0,772
Family support				
Good				
Not Good	-0,442	0,088	-0,07-0,95	0,088

DISCUSSION

The influence of class motivators on knowledge in improving compliance with the consumption of blood-boosting tablets in adolescent girls

Based on the results of the above analysis, it can be seen that the average knowledge score of the respondents in the intervention group was higher at the *posttest* time, which was 9.23, compared to the average at the *pretest* time. The statistical test results obtained a p-value: 0.0001, which means that H_0 was rejected. It can be concluded that there is a difference in the knowledge of respondents in the intervention group between *pretest* and *posttest* in increasing compliance with consuming blood-boosting tablets. This research is in line with Sulastijah *et al.* (2015), showed that there was a difference between the intervention group and the control group with a p-value: 0.0001. This is because there is an influence of class motivators on the improvement of respondents' knowledge. This study shows that the average knowledge score of the respondents in the control group is slightly higher at the *posttest* time, which is 6.54, compared to the average at the *pretest* time. The results of the statistical test were obtained with a p-value: 0.163, which means that H_0 was accepted. It can be concluded that there is no difference in the knowledge of respondents in the control group between *pretest* and *posttest* in increasing compliance with consuming blood-boosting tablets.

This research is in line with Sulastijah *et al.* (2015), shows that p-value: 0.167. This means that there is no difference in knowledge at the time of *the pretest* or *posttest*. This study is also in line with Andini's (2022) research which showed a significant increase of 21.7 points in the knowledge score in the treatment group after the intervention with a P-value of 0.001, which indicates that the intervention succeeded in providing a meaningful improvement in

respondents' knowledge. Class motivators can play a role in conveying relevant information and education to class participants about the importance of consuming blood supplement tablets. This may include an explanation of the benefits of blood boosting tablets, the risks of iron deficiency, and their positive impact on health (Harlisa *et al.*, 2023). Classroom motivator interventions have the potential to play a crucial role in improving knowledge and adherence to the consumption of blood-boosting tablets, especially in the context of iron deficiency prevention. Through an educational approach, class motivators can convey accurate and relevant information to participants, providing a better understanding of the benefits of blood-boosting tablets, as well as the risks of iron deficiency. Studies show that an interactive and participatory educational approach can improve participants' information retention and motivation (Brown & Wright, 2020).

The importance of ensuring participants' understanding cannot be overlooked. Classroom motivators can adopt learning methods that actively involve participants, such as group discussions, case studies, or simulations, to ensure that information is conveyed in a way that can be understood and remembered well (Harrison *et al.*, 2021). Additionally, efforts to identify myths or distrusts that may exist among participants can help design more effective educational strategies (Harrison *et al.*, 2021). The importance of measuring knowledge and adherence before and after class not only helps evaluate the effectiveness of the class motivator program, but also provides insight into areas where change is needed. Long-term monitoring and continuous support need to be integrated into intervention strategies to ensure continued compliance (Smith *et al.*, 2020). The use of visual media, such as posters, presentations, or videos, can also help improve participants' memory and comprehension. Providing compelling visual resources can be an effective tool in reinforcing key messages regarding the consumption of blood-boosting tablets (Robinson *et al.*, 1998). In developing a classroom motivator program, it is important to recognize that these interventions should be part of a broader approach to public health, which includes community support, advocacy, and cross-sectoral collaboration (Organization, 2012). With a holistic approach, classroom motivators can be an important element in efforts to prevent iron deficiency and increase compliance with the consumption of blood supplement tablets.

The influence of class motivators on attitudes in increasing compliance with the consumption of blood-boosting tablets in adolescent girls

Based on the results of the analysis above, it can be seen that the average attitude score of the respondents in the intervention group was higher at the *posttest* time, which was 35.53, compared to the average at the *pretest* time. The results of the statistical test were obtained with a p-value: 0.003, which means that H_0 was rejected. It can be concluded that there is a difference in the attitude of respondents in the intervention group between *pretest* and *posttest* in increasing compliance with consuming blood supplement tablets. Meanwhile, the average attitude score of respondents in the control group was higher at the *posttest* time, which was 33.64, compared to the average at the *pretest* time. The results of the statistical test obtained a p-value: 0.182, which means that H_0 was accepted. It can be concluded that there is no difference in the attitude of respondents in the control group between *pretest* and *posttest* in increasing compliance with consuming blood-boosting tablets. This study is not in line with Andini's (2022) research, which shows that there is no significant difference in scores ($p=0.609$). This can be caused because the initial characteristics of respondents in the attitude variable have tended to be positive before the intervention is carried out. In the control group, the results showed that there was no difference in the average score of attitude and obedience, this can be due to the peer-group process itself, in the peer assessment process can provide feedback or comments on the performance of their friends so that there can be communication

with each other about appropriate information even though they are not educated. Another possibility is that the use of similar questions before and after the intervention makes adolescents more proficient at filling out similar questions.

The influence of class motivators on adolescents' attitudes in increasing adherence to the consumption of blood-boosting tablets can be an important element in efforts to prevent iron deficiency in this age group (Vaidyanathan & Menon, 2024). Class motivators can act as facilitators who help form positive attitudes towards the consumption of blood supplement tablets through the delivery of appropriate information, targeted education, and constructive interaction (Dehghan *et al.*(2011). Studies show that educational approaches involving peer groups and the use of motivational strategies can improve understanding and positive attitudes toward health behaviors, such as the consumption of blood-boosting tablets in adolescents (Dehghan *et al.*(2011). The use of interactive and inclusive learning methods can build a positive attitude towards compliance, by providing space for active participation and exchange of ideas in the classroom (Vaidyanathan & Menon, 2024).

The effect of class motivators on HB levels in increasing compliance with the consumption of blood-boosting tablets in adolescent girls

Based on the results of the above analysis, it can be seen that the average HB level of respondents in the intervention group was higher at the *posttest* time, which was 13.20, compared to the average at the time of *the pretest*. The statistical test results obtained a p-value: 0.0001, which means that H_0 was rejected. It can be concluded that there is a difference in the HB levels of respondents in the intervention group between *pretest* and *posttest* in increasing compliance with consuming blood-boosting tablets. This research is in line with Sulastijah *et al.* (2015), shows that p-value: 0.0001. This means that there was a difference in the HB levels of respondents in the intervention group between *the pretest* and *posttest* in increasing compliance with consuming blood-boosting tablets. This study is not in line with Mulyati & Yanti (2022), which stated that there was no difference in the average HB level between the control group and the intervention group with a P-value of 0.393. This is because both before and after the intervention that was carried out for 6 weeks did not measure Hb levels in connection with the pandemic situation. Researchers conducted a physical examination to see if there was paleness on the eyelids (conjunctiva), lips and the ends of the upper extremities.

Based on the results of the analysis, it was shown that the average HB level of respondents in the control group at the *posttest* and *pretest* was 11.11. The results of the statistical test obtained a p-value: 1,000, which means that H_0 was accepted. It can be concluded that there is no difference in the HB levels of respondents in the control group between *pretest* and *posttest* in increasing compliance with consuming blood-boosting tablets. This result is not in line with Sulastijah *et al.* (2015), shows that p-value: 0.011. This means that there is a difference in the HB levels of respondents in the control group between *the pretest* and *posttest* in increasing compliance with consuming blood-boosting tablets. Classroom motivators can play an important role in influencing hemoglobin (HB) levels through a variety of mechanisms involving education, motivation, and support. First, through the delivery of the right information, class motivators can provide participants with a better understanding of the importance of iron in the body and the crucial role of hemoglobin in carrying oxygen. The knowledge provided by motivators can form a deeper understanding of the link between the consumption of iron-containing blood-boosting tablets and increased hemoglobin levels (Ariyanti, 2023). Studies, such as those by Vaidyanathan & Menon (2024), show that a targeted educational approach can improve knowledge and understanding of

nutrients, including the importance of iron in preventing hemoglobin deficiency. This approach, if carried out by class motivators, can be an effective instrument in increasing class participants' understanding of blood health.

Additionally, classroom motivators can motivate behavior change through effective motivational strategies. By setting realistic goals and rewarding achievements, motivators can stimulate the individual's intention and motivation to actively increase adherence to the consumption of blood supplement tablets. This approach has been shown to be successful in changing health behaviors, as indicated in research by (Dehghan *et al.*(2011).The psychological and social support provided by the class motivator can also play a key role in improving adherence to the consumption of blood booster tablets. Building a supportive environment and providing emotional support can help individuals overcome psychological barriers that may hinder their compliance (Suarayasa, 2020). With this combination of approaches, class motivators can have a positive impact on adherence to the consumption of blood-boosting tablets, which can ultimately contribute to increased hemoglobin levels in individuals who need them (Rasyid *et al.*, 2022).

The effect of class motivators on side effects in increasing adherence to the consumption of blood-boosting tablets in adolescent girls

Based on the results of the above analysis, it can be seen that the average side effect score of the participant's blood-boosting tablets in the intervention group was higher at the *time of the pretest* , which was 1.32, compared to the average at the time of *the posttest*. The statistical test results obtained a p-value: 0.0001, which means that H_0 was rejected. It can be concluded that there are differences in the side effects of blood supplement tablets of respondents in the intervention group between *pretest* and *posttest* in increasing compliance with consuming blood supplement tablets. This study is in line with the results of a study conducted by Andini (2022), which showed a significant increase of 21.7 points in the knowledge score in the treatment group after the intervention, with a p-value of 0.001. These results indicate that the intervention in this study has succeeded in having a positive impact in increasing respondents' knowledge. In terms of side effects of blood supplement tablets, although there is no specific discussion, but with increased knowledge it can be considered as a positive factor that can affect the incidence of side effects, this can reduce discomfort or concern related to side effects that may arise from the consumption of blood supplement tablets.

Classroom motivators can influence the management of side effects in improving adherence to the consumption of blood-boosting tablets by creating a better understanding, providing psychological support, and stimulating a change in attitudes towards side effects. First, the class motivator can convey comprehensive information about the side effects that may occur due to the consumption of blood-boosting tablets. Good knowledge of side effects can help class participants prepare mentally and physically (Santoso & Ismail, 2009). Motivators can also serve as a source of psychological support by responding positively to class participants' concerns and needs regarding side effects. This support can help participants to overcome any anxiety or fears that may arise, thus increasing their likelihood of remaining compliant with the consumption of blood-boosting tablets (Mylsidayu, 2022).A study conducted by Izadirad *et al.* (2015), showed that counseling focused on side effect management can increase individuals' understanding and awareness of the medications they consume. This approach, if applied by a class motivator, can help participants to be better prepared and able to better manage side effects. Class motivators can also stimulate changes in attitudes toward side effects by helping participants see them as an integral part of the healing process. By imbuing with the understanding that side effects are temporary and manageable components, class

participants are more likely to remain consistent in their consumption of blood-boosting tablets. By bringing together an educational approach, psychological support, and attitude change, classroom motivators can make a significant contribution to improving adherence to the consumption of blood-boosting tablets, despite side effects (Rasdhian *et al.*, 2023).

The influence of class motivators on food consumption enhancer in increasing compliance with the consumption of blood-boosting tablets in adolescent girls

Based on the results of the above analysis, it can be seen that the average food consumption score of the respondents in the intervention group was higher at the *posttest* time, which was 28.88, compared to the average at the time of *the pretest*. The results of the statistical test were obtained with a p-value: 0.011, which means that H_0 was rejected. It can be concluded that there is a difference in the food consumption of respondents in the intervention group between *pretest* and *posttest* in increasing compliance with consuming blood-boosting tablets. Meanwhile, the average food consumption score of respondents in the control group was higher at the *posttest* time, which was 26, compared to the average at the time of *the pretest*. The results of the statistical test obtained a p-value: 0.317, which means that H_0 was accepted. It can be concluded that there is no difference in the food consumption of respondents in the control group between *pretest* and *posttest* in increasing compliance with consuming blood supplement tablets.

This research is in line with the results of research conducted by Anas *et al.* (2023), that there was a significant change in the nutritional intake of the intervention group and the control group before and after the intervention. In the intervention group, there was an increase in iron (Fe) nutrient intake from 15.38 to 20.50, while in the control group, iron intake increased from 13.38 to 16.83. This increase is significant with a $p \leq$ value of 0.05. In addition, in the protein nutrition intervention, the intervention group experienced an increase from 39.05 to 69.56, while the control group from 33.23 to 59.93. For vitamin C, the intervention group experienced an increase from 34.12 to 56.71, and the control group from 27.00 to 44.97. These two changes are also significant with a $p \leq 0.05$. Overall, it can be concluded that there were meaningful changes in iron, protein, and vitamin C intake before and after the intervention in both the study and control groups.

Food sources of iron enhancers are food sources that can speed up the process of iron absorption. Enhancer food sources include chicken, fish, eggs, tomatoes, and bananas. Iron inhibitor food sources are food sources that can inhibit the process of iron absorption (Rasdhian *et al.*, 2023). Class motivators can provide information and counseling about the importance of consuming foods that are rich in nutrients and contain food enhancers. Through improved understanding, class participants can become more aware of the benefits of food enhancers and how they can increase the nutritional value of their daily consumption, including the consumption of blood-boosting tablets (Lumbanbatu *et al.*, 2019). Class motivators can motivate class participants to adopt healthier consumption behaviors, including the use of food enhancers. Through motivational techniques, such as setting realistic goals and rewarding achievements, classroom motivators can stimulate positive intentions to improve better food consumption patterns (Rimawati *et al.*, 2018). Classroom motivators can act as models of positive behavior by demonstrating healthy food consumption practices, including the use of enhancer foods. By looking at motivators who integrate food enhancers into their daily diets, class participants can feel motivated to adopt similar habits (Rimawati *et al.*, 2018).

The effect of class motivators on food consumption inhibitors in increasing adherence to the consumption of blood-boosting tablets in adolescent girls

Based on the results of the above analysis, it can be seen that the average food consumption score of the respondents' inhibitors in the intervention group was higher at the *posttest* time, which was 1.55, compared to the average at the time of *the pretest*. The statistical test results obtained a p-value: 0.0001, which means that H_0 was rejected. It can be concluded that there is a difference in the food consumption of respondents' inhibitors in the intervention group between *pretest* and *posttest* in increasing compliance with consuming blood-boosting tablets. Meanwhile, the average food consumption score of the respondents' inhibitors in the control group was higher at the *posttest* time, which was 0.74, compared to the average at the pretest time. The results of the statistical test obtained a p-value: 0.525, which means that H_0 was accepted. It can be concluded that there is no difference in the food consumption of respondent inhibitors in the control group between *pretest* and *posttest* in increasing compliance with consuming blood-boosting tablets.

This study is in line with the results of a study conducted by Marda & Abdillah (2023) with the results of an analysis with Kruskal Wallis on the number of pre-intervention inhibitor consumption showing no significant difference in each group ($p > 0.05$), while the number of post-intervention inhibitor consumption showed a significant difference ($p < 0.05$). Further analysis was carried out by post hoc test using Kruskal Wallis post hoc to find out where the differences were between the intervention groups. The results of the analysis showed that there were differences between the intervention groups. Class motivators can play an important role in guiding class participants to reduce the consumption of inhibitor foods, thereby increasing adherence to the consumption of blood-boosting tablets. First of all, motivators can provide comprehensive information about the types of inhibitor foods that can affect iron absorption. By providing a deeper understanding of the relationship between food and iron absorption, motivators can help class participants make wise decisions in their daily food choices (Asakura *et al.*, 2017). In addition, class motivators can use motivational strategies to stimulate changes in class participants' eating behavior. By emphasizing the importance of reducing the consumption of food inhibitors to support the effectiveness of blood-boosting tablets, motivators can plan achievable goals and reward achievements. Study by Asakura *et al.* (2017), supports the idea that health education delivered through motivators can contribute to dietary changes and a better understanding of the link between food and iron absorption. Psychological support can also be an effective tool. Motivators can provide support and understanding of the challenges that class participants may face in changing their eating habits. By imbuing with the understanding that reducing the consumption of inhibitory foods is not a difficult task, class participants are more compliant with the advice (Asakura *et al.*, 2017).

The influence of class motivators on mythical beliefs in increasing adherence to the consumption of blood-boosting tablets in adolescent girls

Based on the results of the above analysis, it can be seen that the average score of confidence in the myth of the respondents in the intervention group was higher at the time of *the pretest*, which was 1.69, compared to the average at the time of *the posttest*. The statistical test results obtained a p-value: 0.0001, which means that H_0 was rejected. It can be concluded that there is a difference in belief in the myth of respondents in the intervention group between *pretest* and *posttest* in increasing compliance with consuming blood-boosting tablets. Meanwhile, the average score of confidence in the myth of the respondents in the control group was higher at the time of *the posttest*, which was 1.69, compared to the average at the time of *the pretest*. The results of the statistical test obtained a p-value: 0.994, which means that H_0 was

accepted. It can be concluded that there is no difference in the belief in the myth of the respondents in the control group between *the pretest* and *posttest* in increasing compliance with consuming blood-boosting tablets.

This research is not in line with the results of research conducted by Astuti *et al.* (2019) with the results of the analysis showing that there was a more significant reduction in stigma in the intervention group compared to the control group. The intervention group experienced an average reduction in stigma of 6.97 with the results of the Wilcoxon test (P-value 0.000). Meanwhile, in the control group, there was a decrease in stigma of 1.2 with a P-value of 0.001. Although both showed significant changes, a greater reduction in stigma occurred in the intervention group, signaling the effectiveness of the intervention program in reducing community stigma against the group. Classroom motivators can play an important role in changing mythical beliefs and increasing adherence to the consumption of blood-boosting tablets through several strategies of educational and motivational approaches. First, motivators can achieve this goal by providing accurate and scientific information about blood booster tablets, helping to reduce any mythical beliefs that class participants may have (Habib *et al.*, 2016). In addition, class motivators can plan interactive educational sessions that allow class participants to ask questions and discuss blood booster tablets. Through this discussion, myths that may be circulating can be identified, and motivators can provide clarification and replace false beliefs with accurate information (Vaidyanathan & Menon, 2024).

Furthermore, classroom motivators can utilize the story or case approach method to provide concrete examples of how other individuals have successfully overcome mythical beliefs related to the consumption of blood-boosting tablets and achieved positive outcomes. This case study can motivate class participants to open their minds to changes in beliefs and more positive actions (Vardanjani *et al.*, 2015). Class motivators can also utilize visual resources such as posters, graphics, or other educational materials to convey information in a more engaging and easy-to-digest way. The use of visual materials can help detail facts visually, help reduce mythical beliefs, and strengthen class participants' understanding of the benefits of consuming blood-boosting tablets (Goonewardene, 2021). In addition, class motivators can emphasize testimonials from individuals who have experienced positive benefits from the consumption of blood supplement tablets. Demonstrating that others have successfully overcome myths and getting good results can provide direct evidence and motivate class participants to adopt positive changes in their consumption habits (Asiedu *et al.*, 2018).

Classroom motivators as innovations to support nutritious action programs

The nutritious action program is a program launched by the government through the Ministry of Health in an effort to overcome the incidence of anemia in adolescent girls (Ministry of Health, 2020). The Nutrition Action is one of the strategic efforts in increasing TTD consumption compliance in adolescent girls which is also one of the indicators of specific nutrition intervention services in accelerating stunting reduction. Nutrition Action activities are carried out once a week during the current year through three main interventions, namely physical activities or gymnastics, the implementation of breakfast and drinking Blood Supplement Tablets (TTD) together in schools or madrasas, nutrition education involving various sectors with the aim of promoting healthy eating and physical activity, as well as communication to create relevant and comprehensive behavior change (<https://promkes.kemkes.go.id/aksi-bergizi--gerakan-sehat-untuk-remaja-masa-kini>, 2022). The Mobilization of Nutritious Action in Pidie Regency has been carried out since September 9, 2022 for young women in all junior and senior high schools. These activities include a series of activities, ranging from exercise sessions or physical activities together, the

implementation of breakfast, to the consumption of Blood Supplement Tablets (TTD) together. Through nutrition education, young women are given a deeper understanding of the importance of nutrition, especially iron, in maintaining body health and preventing anemia. The Nutrition Action activity also involves schools, teachers, and School Health Businesses (UKS) to ensure that the implementation of the program runs effectively. With the support of various parties in the school environment, it is hoped that program participants can experience real benefits from TTD consumption.

Classroom motivators are an innovative step that is indispensable to empower the success of the Nutrition Action program, especially in overcoming the challenges of adolescent girls' compliance with the consumption of Blood Supplement Tablets (TTD). In this effort, class motivators not only involve the role of classroom teachers and UKS teachers, but also include class representative students as agents of change. MTsN 5 Pidie is a school that was intervened by a class motivator for two months with a total of 567 female students spread across 30 classrooms. The formation of class motivators begins with advocacy with the school, followed by the election of class representatives by UKS teachers. Then provide orientation and assistance to the team that has been formed with the aim of increasing understanding of blood supplement tablets in an effort to prevent anemia in adolescent girls, so that they are able to motivate and accompany classmates in consuming TTD. The orientation was carried out by lecture and question and answer discussion methods, ppt material delivered about anemia, causes and effects of anemia for adolescent girls, how to prevent anemia, TTD program for adolescent girls, TTD consumption rules, side effect management, stigmas of blood supplement tablets and the use of TTD monitoring forms. The evaluation was carried out after the intervention ran for 8 weeks, by observing TTD control cards, distributing posttest questionnaires to respondents who had previously taken the pretest, and HB examinations were carried out on respondents who had previously been examined for HB.

Based on the results of the above analysis, it can be seen that there is a significant increase in adherence to the consumption of adolescent girls' blood supplement tablets in the group that is intervened by class motivators. The implementation of a classroom motivator intervention in MTsN 5 Pidie has proven to be a very effective step in improving adherence to the consumption of Blood Supplement Tablets (TTD) in adolescent girls. The formation of classroom motivators can be an example for other schools in an effort to increase compliance with TTD consumption and strengthen the Nutrition Action program as a whole. The positive experience of MTsN 5 Pidie can be used as an implementation model that can be adjusted to the needs and characteristics of each school in Pidie Regency. Cooperation between the Health Office/Puskesmas and schools is very important in the implementation of this intervention. This research does not calculate financing specifically. It can be suggested, for further research, it can calculate the budget needs in detail for this innovation activity. Another suggestion, the formation of a class motivator team can be added from teachers/homeroom representatives so that activities can continue.

The Effect of Class Motivators in Improving Compliance in Consuming Blood Supplement Tablets

There is a difference in the control group between the pretest and the posttest because before the motivator intervention given to the intervention group, there was already a program called nutritious action. One of the goals of the program is to increase compliance with consuming blood supplement tablets in students, then it is seen that the 3-month period after the initial intervention, after 3 months, the nutritious action intervention is no longer continued. And a

possttest was carried out. In this control group, it runs without being given any intervention in nutritious actions or class motivators so that at the time of the posttest there is a decrease in compliance with consuming blood supplement tablets in students. Compliance is a change in behavior from behavior that does not obey the rules to behavior that obeys the rules. Compliance issues are the main obstacle to daily iron supplementation, so weekly supplementation is an alternative to reduce these compliance problems. To maintain compliance with the consumption of iron supplements, various efforts can be made such as providing socialization at the beginning of the activity, taking iron supplements directly in front of the officers, and sending short messages to the research sample (Noverina *et al.*, 2020).

CONCLUSION

Adherence to the consumption of blood-boosting tablets in female students has increased in the group given the class motivator intervention, which significantly increased the adherence to the consumption of blood-boosting tablets, knowledge, HB levels, tablet side effects, food consumption enhancers, food consumption inhibitors and myth beliefs. However, there was no difference in the attitude of the intervention and control groups, this was because the attitude of the respondents from the beginning was good. The interventions that have been carried out have resulted in differences in compliance with the consumption of blood-boosting tablets, knowledge, HB levels, side effects of tablets, food consumption enhancers, food consumption inhibitors and beliefs in the intervention group between pretest and posttest in increasing the consumption of blood-boosting tablets. However, there was no difference in the attitude of the intervention group between the pretest and the posttest in the control group between the pretest and the posttest in increasing the consumption of blood tablets. The mean score was higher in the intervention group than in the control group. In terms of change values, adherence to taking blood-boosting tablets, knowledge, HB levels, side effects of tablets, food consumption enhancers, food consumption inhibitors and belief in myths experienced significant changes in the intervention group compared to the control group.

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