

Training and formation of the Anaemia Response Youth Groups (KRETA) in the vocational and senior high schools of the Muhammadiyah Pringsewu.

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ABSTRACT

The background of this activity is due to the high prevalence of anaemia in adolescents at 23.9%, which is divided into the prevalence of anaemia in women aged 5-14 years by 26.4% and in women aged 15-25 years by 18.4%. The aim was to solve the problem of high anaemia in Muhammadiyah Pringsewu vocational and high schools. Methods in this activity with Preparation, Implementation and Evaluation. The results of the activity, based on knowledge there is an increase in knowledge of adolescents participating in KRETA, an increase in Hemoglobin levels in KRETA participants, an increase in the ability to identify anaemia problems and counselling to overcome anaemia in KRETA participants. So it can be concluded that the activity was achieved and the formation of KRETA and it is hoped that there will be more similar activities with a wider range of schools.

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INTRODUCTION

The growth number of teenagers is increasing every year based on the Central Statistics Agency (BPS) in 2015, it shows that Indonesia's population is 155.18 million people and the proportion of teenagers (10–24 years) is 25%, requiring special attention due to the increasing risk of several non-communicable diseases (NCDs). and risk factors related to mortality and health in adolescents (UNICEF, WHO, 2021)

The prevalence of anemia in adolescents globally is 24.8%, and the prevalence of anemia in adolescents in developing countries is 40.7%. Anemia is a nutritional problem in the world, especially in developing countries, including Indonesia. According to the WHO, the prevalence of anemia of women in Indonesia is 23.9%, which is divided into the prevalence of anemia in women aged 5–14 years is 26.4%, and aged 15–25 years is 18.4%. Adolescent girls are ten times more likely to suffer from anemia than adolescent boys (Akib, Alfisnar dan Sumarmi, 2017)

Adolescent girls are a high-risk group for suffering from anemia; the prevalence of anemia at ages 13–18 is 23% compared to young men (Kemenkes RI, 2018) This is because young women are in their growth period and lose iron (Fe) during menstruation, so they need more Fe intake. Anemia is one of the impacts of nutritional problems on adolescent girls. (Junita, D., & Wulansari, 2021). Anemia is a condition where the hemoglobin (Hb) level in the blood is lower than the normal value for the group of people concerned. Physiologically, anemia occurs when there is a lack of hemoglobin to carriage oxygen to the tissues (Mursyidah Halim Baha dan DKK, 2021)

Anemia that occurs in adolescence can continue into adulthood, which can contribute greatly to maternal and infant mortality rates, premature births, and LBW babies. Adolescent girls, as mothers-to-be, need to receive attention regarding the treatment of anemia. However, adolescent girls' knowledge about anemia is still low (Novayanti, 2020). As well as other impacts, it can give birth to a generation of stunting and wasting, as well as other quite serious nutritional disorders, so preventing anemia in adolescents is an important effort to improve maternal and child health.

Anemia in teenage girls can be prevented by full fill iron needs from foods such as meat, tofu, eggs, fish, and consuming more fruit and vegetables with high vitamin C, as well as avoiding coffee and tea at mealtimes and other types of food that can inhibit the process of iron absorption in the body. And consume Fe tablets regularly during menstruation every month. Giving blood supplement tablets (TTD) is one method that is considered effective in preventing and treating anemia. The District Health Service of Pringsewu Lampung commit to provide blood supplement tablets (TTD) to young female students in middle school, high school, and vocational school. Young women are encouraged to regularly consume blood supplement tablets, both regularly and periodically, through distribution at health centers.

The existence of a program from the health center does not make female students consume TTD during menstruation. This is because most of them do not like the aroma, uncomfortable with the effects after consumption, and do not understand the correct way to consume Fe tablets. There is not introduction program which provides information about anemia and counseling on TTD as a nutritional supplement for adolescents in schools could be a factor in the lack of knowledge about TTD. The lack of activities to provide information to young female students causes the minimum knowledge and awareness of female students regarding TTD, so that many young women do not consume TTD. Muhammadiyah Pringsewu University, as part of the Muhammadiyah Charity Business, wants to participate in the success of efforts to prevent adolescent anemia through training and the formation of anemia response youth groups (KRETA).

KRETA comes from representatives' students from X and XI classes who will follow the training about anemia until the knowledge about teenagers' health. They will be the center of changing for teenagers' health problem especially the teenagers' anemia. The involvement of students as cadres begun with the idea that young female students would play a role in Indonesia's health development, especially in Pringsewu Regency, Lampung.

Based on the explanation and field conditions above, it can be concluded that teenage students at senior High School and Vocational School of Muhammadiyah Pringsewu need to be hold activities that can increase understanding regarding early screening for anemia in teenagers. Therefore, the team proposing community service activities is called upon to carry out training and the formation of anemia response youth groups (KRETA) at Vocational School and senior High School of Muhammadiyah Pringsewu.

METHOD

The strategy used in this activity was that after understanding the partners' problems, training was carried out, followed by the formation of an anemia response youth group. The activity process can be described as follows:

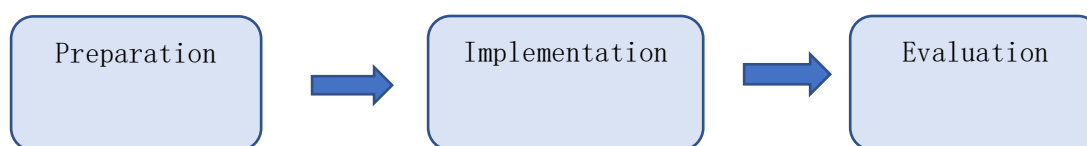


FIGURE 1. Activity implementation stages

1. Preparation

The preparation stage is the initial stage of implementing PKM. Activities that have been carried out in the preparation stage include:

- a) Coordination
After revising the proposal, the team then coordinated with SMA and SMK Muhammadiyah 1 Pringsewu regarding the planned PKM activities.
- b) Location observation
Location observations were carried out during socialization activities. Based on these observation activities, the school had adequate space to carry out service activities at both SMA and Vocational School Muhammadiyah 1 Pringsewu.
- c) Analysis of the problems faced by School Health Enterprise (UKS) officers
Based on the results of interviews with the person in charge of the UKS, information was obtained about the lack of understanding of UKS officers regarding the identification of anemia and the nutritional status of adolescents, especially adolescent girls. Meanwhile, the number of young women who come to the UK with complaints of fainting, dizziness, and nausea is quite large every month.
- d) Analysis of solutions that can be provided for the health problems of adolescent girls faced by SMA and SMK 1 Muhammadiyah Pringsewu
Based on the problems described in the previous point, our PKM Team carried out an analysis and offered a solution, namely that the implementation of PKM at Senior High School of Muhammadiyah Pringsewu and Vocational School of Muhammadiyah 1 Pringsewu will be carried out by conducting training and forming an anemia response youth group (KRETA).

2. Implementation

The first stage of this service activity was carried out at Muhammadiyah Pringsewu Senior High School, and the second stage at Muhammadiyah 1 Pringsewu Vocational School. The core stage of this activity is implementation, which is divided into two stages. The first stage of the training included explanation of materials related to adolescent anaemia, adolescent nutrition, basic assessment, and adolescent nutrition counselling. It began with a pretest, followed by checking haemoglobin (Hb) levels and giving blood supplement tablets (TTD). Then, in the second stage, practising basic assessment of adolescent nutritional status and counselling skills to address anaemia, we conducted a posttest and rechecked Hb. The session ended with the formation of an anaemia responsive youth group (KRETA).

3. Evaluation

The evaluation process occurs at the end of the activity, after the completion of 2nd Phase activities. This phase involves practical training in conducting basic assessments of adolescent nutritional status, as well as counseling on how to overcome anemia. A post-test assessment serves as one of the evaluations of the achievements of PKM activities.



FIGURE 2. Phase I Activities of PKM Activities



FIGURE 3. Phase II Activities of PKM Activities

RESULTS

This activity, which was carried out in two stages, was carried out on May 6 and May 21 2024. The number of participants from Vocational School Muhammadiyah 1 Pringsewu were consist of 6 participants and from SMA Muhammadiyah 1 Pringsewu were 5 participants. So, the total number of participants from both schools were 11 people. The implementation of the first and second stage activities carried out a pre-test and post-test which obtained the following results:

TABLE 1. Data on Knowledge of Young Women in Pre and Post

| Knowledge | Pre Test | | Post Test | |
|------------|----------|------|-----------|------|
| | n | % | n | % |
| Good | 1 | 9.1 | 8 | 72.7 |
| Enough | 3 | 27.3 | 3 | 27.3 |
| Not enough | 7 | 63.4 | - | - |
| Total | 11 | 100 | 11 | 100 |

Based on Table 1, most of the participants' knowledge before the activity was poor (63.4%) and after the 2nd stage of the activity it was found that participants had good knowledge (72.7%). Beside reviewing knowledge data, this activity also conducted hemoglobin (Hb) checks on KRETA participants. After administering TTD at a 2-week interval, the second stage of the Hb examination continues until the following results are obtained:

TABLE 2. Data on Hb Examination of Young Women in Pre and Post Test

| Hemoglobin (Hb) | Pre-Test | | Post Test | |
|-----------------|----------|------|-----------|------|
| | n | % | n | % |
| normal | 2 | 18.1 | 4 | 36.4 |
| light | 4 | 36.4 | 6 | 54.5 |
| currently | 5 | 45.5 | 1 | 9.1 |
| Total | 11 | 100 | 11 | 100 |

Based on Table 2, according to the results of the Hb examination of the participants before the activity, most of them had moderate anemia (45.5%), and after the phase 2 activity, it was found that most of them had mild anemia (54.5%).

Apart from providing material related to anemia and adolescent nutrition, they were also provided with knowledge about basic assessments and adolescent nutritional counseling techniques, which made participants enthusiastic because they practiced counseling among other participants. At the end of the activity, an inauguration was carried out by placing a pin and giving an activity certificate. For monitoring KRETA activities, the participants are invited for joining in the WhatsApp group so that developments in skills and experience can be shared and followed up in the group.

DISCUSSION

Based on the problems of teenagers in the Vocational School and Senior High School of Muhammadiyah Pringsewu partners, a problem-solving solution was carried out with the aim of forming a group of teenagers who would be disseminators of information related to anemia among their peers. So, training activities were carried out and the formation of an anemia response youth group consisting of young women, 6 young people representing SMK 1 Muhammadiyah Pringsewu and 5 young people representing SMA Muhammadiyah Pringsewu.

This activity is based on the understanding that young women are at risk of suffering from anemia because they will menstruate once a month, making their need for iron relatively higher. Young women who have a long period of time and a lot of volume during menstruation will need more iron levels. Low hemoglobin levels in young women are due to the increased need for iron, but they do not consume foods high in iron or supplementation (Intan, 2019)

The pre- and post-test knowledge assessment was carried out according to Table 1, resulting in an increase in knowledge after being given material related to anemia and adolescent nutrition. This is in accordance with the results of Johariah and Mariati's research; the health education given to respondents was able to increase the respondents' knowledge (Johariyah, A., & Mariati, 2018).

Furthermore, during this activity, pre- and post-HB checks were carried out, which showed an increasing in the number of normal teenagers who did not experience anemia. This is because material on adolescent nutrition has been provided, and TTD blood supplement tablets have been provided. Providing blood supplement tablets that are taken regularly and according to the rules is an effort to prevent and overcome anemia. Apart from that, education and efforts related to increasing iron intake through food are also things that can prevent the incidence of anemia in young women (Kemenkes RI, 2020). Apart from iron supplementation, other ways that can be done to prevent anemia are increasing the intake of food sources of iron, a combination of animal and vegetable foods, avoiding foods that inhibit iron absorption (tea, coffee), and increasing foods that facilitate iron absorption (a source of vitamin C)(Putri, 2017).

Research conducted by Ruwayda et al 2023 found that the results of haemoglobin level testing by puncture revealed that 78 students were anaemic (Hb < 12 gr/dL). Based on the results of community service activities, as an evaluation of the programme of giving blood supplement tablets to female students in SMAN 5 Jambi City, there are still adolescents who suffer from anaemia. This is because there are other factors besides iron intake that cause anaemia, namely menstrual examination, infection, underweight nutritional status and socio-economic factor (Ruwayda, 2023).

This activity also provides knowledge about basic assessments and adolescent nutritional counseling techniques that use a peer counseling approach. Peer counseling can be called a confiding session between peer counselors and counselees (peers) with equal standing among peers using peer intermediaries with active listening skills, empathy, and problem-solving skills. (Utama dkk, 2020).

CONCLUSION SUGGESTIONS

Community service by overcoming problems with work partners, in this case Vocational School Muhammadiyah Pringsewu and Senior High School Muhammadiyah Pringsewu, regarding the high incidence of anemia whose symptoms are not recognized by teenagers themselves, so it requires efforts to increase knowledge about anemia, a method of approaching anemia cadres in schools by training and forming anemia-responsive youth groups (KRETA), resulting in the following activity conclusions: there has been an increase in the knowledge of teenagers who are prospective KRETA participants; there has been an improvement in nutritional status through increasing body weight and hemoglobin in KRETA participants; there has been an increasing in the ability to identify anemia problems; and there has been an increasing in the counseling ability to handle anemia in KRETA participants.

It is hoped that there will be similar follow-up activities with a wider range of schools, and for existing ones, follow-up can be carried out regarding the experience of providing information about KRETA participants to their peers.

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