

LITERATURE REVIEW

A COMPARATIVE STUDY ON MANAGEMENT OF WEEKLY IRON FOLIC ACID (WIFA) SUPPLEMENTATION PROGRAM IN WEST JAVA PROVINCE

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INTRODUCTION

A. Background

One of the efforts in the acceleration of stunting reduction program conducted by the Indonesian government is to carry out integrated stunting reduction intervention. One of the main indicator targets is the prevalence of anemia among pregnant women and adolescent girls, and the intervention given is in the form of iron and folic acid (IFA) supplement for pregnant women and adolescent girls (1).

The WIFA (Weekly Iron-Folic Acid) supplementation program for adolescent school girls is mainly allocated in regencies where they are found as locusts of stunting. Adolescence presents a second window of opportunity for establishing healthy lifelong nutrition. Adolescents are vulnerable to undernutrition because their rapid growth raises their nutritional needs. In 2018, 32% of Indonesian adolescents in Indonesia suffered from anemia (2).

Iron-folic acid (IFA) supplementation is an intervention given to pregnant women and adolescent girls to reduce the prevalence of anemia among pregnant women and adolescent girls. It is one of the efforts to accelerate the alleviation of stunting in Indonesia as an integrated stunting reduction intervention. Increasing stunting awareness among school-going adolescents through optimization of the implementation of WIFA supplementation is the potential way to induce behavioral change in improving lifelong nutrition and health to overcome stunting.

B. Objectives

The objective of the literature review is to provide a comparative study on management of weekly iron-folic acid (WIFA) supplementation program for school adolescents girls in certain selected areas in Indonesia.

METHOD

A comparative study is consisted of two research projects conducted at four districts in West Java Province: Cianjur, Tasikmalaya, Ciamis, and Depok City located at West Java Province in 2019 to 2023.

As the former, a study was conducted in 24 senior high schools (general/vocational/Islamic senior high schools); *i.e.*, 12 schools in Cianjur Regency (high stunting area) which receive WIFA program, and 12 schools in Depok Regency or others (low stunting area) with total 240 subjects. The study begun from September 2019 to February 2020 for the 1st term and continue in October 2022 to March 2023 for the 2nd term. The first study was granted by the Neys-van Hoogstraten Foundation, the Netherlands (3).

The latter study is a situational analysis was conducted in five high schools in Tasikmalaya and five high schools in Ciamis, West Java Province, Indonesia. The selection of high schools was made purposively based on the recommendation from Education and Health Regency Offices. The research was conducted in July-September 2022. The second study was granted by the Nestle Foundation, Switzerland (4).

The study was a collaboration work between a research team from IPB University as the principal investigator with STIKes Mitra Keluarga. A Qualitative data was collected by researchers through in-depth interview with teachers, officers at Public Health Center (*Puskesmas*), and officers at Health Office. Qualitative data includes the information regarding WIFA program management. The study is categorized as:

A. Cianjur – Depok Study

B. Tasikmalaya – Ciamis Study

WIFA MANAGEMENT PROGRAM

A. Cianjur – Depok Study

National and local policy context

In Indonesia Weekly Iron Folic Acid (WIFA) Supplementation Program for young women has a legal basis for implementation that consists of the following (5-7):

1. Law Decree No. 36 of 2009 concerning Health;
2. Presidential Regulation No. 42 of 2013 concerning the National Movement for the Acceleration of Nutrition Improvement, which focuses on saving 1000 first day of life (1000 HPK);
3. Joint Regulation between the Minister of Home Affairs Number 6/X/PB/2014; Number 73 of 2014, Number 41 of 2014; Number 81 of 2014 concerning the Development of School/Madrasah Health Enterprises;
4. Regulation of the Minister of Health No.88 of 2014 concerning Iron Folic Acid Supplementation Program for Women of Reproductive Age and Pregnant Women;
5. Directorate General of Public Health Circular No.HK/03/03/V/0595/2016 concerning Iron Folic Acid Supplementation for Adolescent school girls and Women of Reproductive Age.

Locally in West Java, there is a Governor Regulation by West Java Governor Circular No.440/25/Yanbagsos concerning Policy Support for Iron Folic Acid Supplementation Program for Adolescent school girls and Women of Reproductive Age.

Research Informants

The qualitative data were collected by using an In-depth interview data collection technique with the teachers from ten (10) high schools and equivalent schools of Depok city and teachers from seven (7) high schools and equivalent schools in Cianjur city, West Java Province, Indonesia. Aside from teachers, data has also been collected by conducting In-depth interviews with the health workers from the four (4) Public Health Centers (*Puskesmas*) in Depok and Cianjur. From the interviewed schools that received iron folic acid (IFA) supplement found

detailed one school had received IFA supplement since 2017, four schools had received IFA supplement since 2018, four schools have received IFA supplement since 2019, and three schools had received IFA supplement since 2020, while the rests had not received the IFA supplement program or did not remember exactly when they received the IFA supplement for the first time. Of the seventeen schools that were interviewed, two schools still needed to receive the IFA supplement program, namely the Indonesia Global Vocational School (*SMK Indonesia Global*) and Yappa Vocational School (*SMK Yappa*) in Depok.

WIFA Supplementation Program Management by *Public Health Centers* and *Schools*

The program of administering weekly iron folic acid (WIFA) supplementation tablet to adolescent school girls is one of the many programs to improve the health status of students as mentioned in the 2022 Joint Ministerial Decree (SKB 4 Menteri; consisted of 4 Indonesia ministries: Ministry of Health, Ministry of Home Affairs, Ministry of Religion and Ministry of Education, Culture, Research, and Technology). The implementer of the WIFA program was the Nutrition Administrator (*Tenaga Pelaksana Gizi*) aided by AUSREM, whereas for people in charge of the WIFA program in school were more varied: teacher of student affairs, the school principal or vice principal, administration staff, school's public relation, nursing teacher, and UKS teacher who coordinate the student cadres or Youth Red Cross (*Palang Merah Remaja*) members to distribute IFA tablets. The process of providing iron supplements by the Public Health Center (*Puskesmas*) is shown in Figure 1.

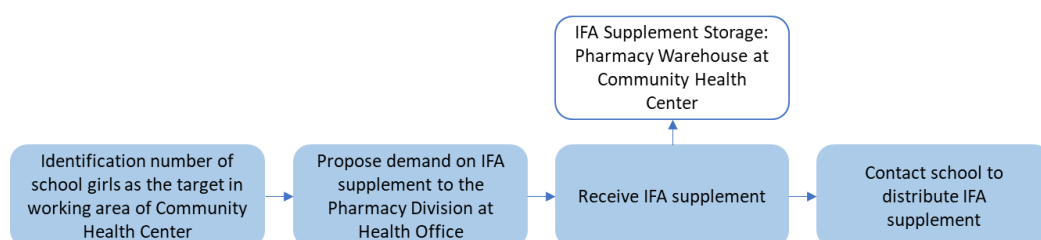


Figure 1 The Procurement of IFA supplement by Public Health Center

The IFA supplement procurement was initialized by analyzing the IFA necessities from the work area of the Public Health Center (Puskesmas) in which the selected schools were counting (recapitulating) the number of their students, so the exact number of IFA tablets needed were obtained, then submitted this information to the Pharmacy Department and reported into the City Health Service (Dinas Kesehatan) together with the data of other medicine requests. Supply of IFA tablets is always sufficient, yet, there was one occasion when almost expired IFA tablets existed, which raised worries among the students who wanted to consume them. Then, there were also IFA tablets that were destroyed because they had expired.

After the request was accepted, then IFA tablets were distributed to schools. There were two ways of IFA distribution from the Public Health Center to schools. Figure 2 is demonstrated how the iron supplements were distributed from the Public Health Center to the related schools. The Public Health Center started the first method, which distributes the IFA tablets directly to the target schools. Some Puskesmas have their schedule for delivering the iron tablets to schools, such as Public Health Center in Cianjur, with a monthly distribution schedule. In contrast, Public Health Center in Depok has a distribution schedule for every three months, six months, or once a year. Furthermore, several health workers said a quite strategic IFA distribution was chosen at the time of academic report distribution at the schools (every six months).

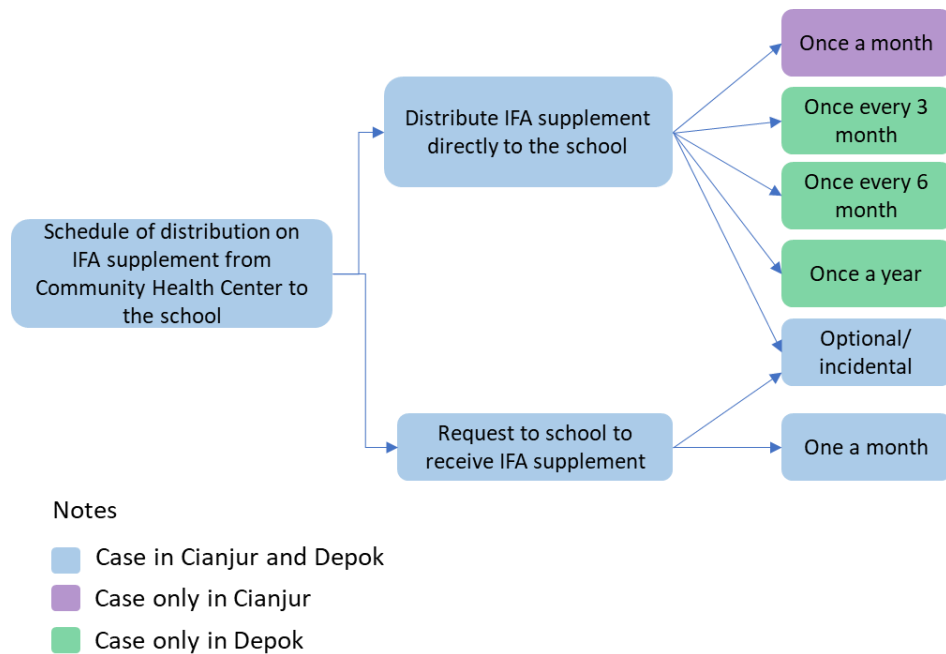


Figure 2. IFA Distribution Procedures from Public Health Center to the School

Time differences in the IFA distribution schedule to target schools will affect the amount of iron supplements given to schools. Public Health Center who has schedule of administering iron supplement tablets of once a year will give 52 iron tablets directly to each student. The second way, there was a policy from Public Health Center for any representatives of the targeted schools to come at the Public Health Center to take the iron supplements. This policy implemented to overcome the inconsistent distribution schedule from the Public Health Center to targeted schools due to the busy activities from the health workers of Public Health Center. Unfortunately, in reality, the distribution process of IFA tablets was not always followed the planned schedule. According to the health workers, the second method (the school took the iron tablets at the Public Health Center) was ineffective and resulted the school not receiving the iron supplements. Finally, Public Health Center itself must sent the iron supplements to the targeted schools. The school also admitted Public Health Center sometimes did not come according to the schedule, but this only happened incidentally.

Moreover, schools also have their own way of giving IFA tablets to students. The first method was to distribute the iron tablets according to the amount provided by the Public Health Center. For instance, as happened in one of the Public Health

Center located in Depok, the health center distributed all IFA tablets only one time for one year, which means there was a school directly given 52 IFA tablets (for 1 year supply) to each student. The second method was to distribute the iron supplements every week although the Puskesmas provide stock for more than 1 week. There was one school in Depok has received IFA stocks for one (1) year, but chose to distribute it every week to their adolescent school girls and keep the rest of IFA at school. The storage area of IFA tablets usually put in the cupboard of UKS room or in the cupboard of teacher room.

The IFA tablets administration to the adolescent school girls also has several mechanisms. From the finding in the study fields, there were several mechanisms emerged as illustrated in Figure 3. At least there were four scenarios of iron supplements administration mechanisms to the adolescent school girls. The first scenario was the health workers directly gave IFA tablets to the adolescent school girls. This scenario is a common way for Public Health Center s which have distribution schedule of 6 months or once a year. The second scenario was the health workers gave IFA supplement firsthand to the appointed teacher (teacher who has the responsibility of this program), then the appointed teacher gave it to the students. The third scenario was the health workers gave IFA tablet to the appointed teacher and then the teacher will hand it over to the Youth Red Cross cadres or the class leaders and they have the responsibility to give it to the adolescent school girls. The last scenario (4th scenario) was the appointed teacher gave it to the homeroom teacher and the homeroom teacher finally gave it to the adolescent school girls. These four scenarios were well-dispersed both in Depok and in Cianjur cities.

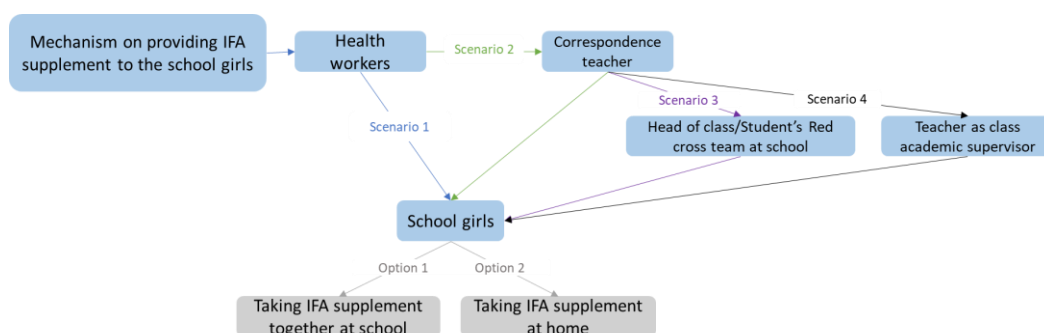


Figure 3 Mechanism on providing IFA supplement to the school girls

After the adolescent school girls receive the IFA tablets, two actions may occur depending on their school policy, whether the IFA supplement is consumed together at school or brought the IFA tablets home by the adolescent school girls. Sukabumi and Cianjur found some schools that have the policy to take the iron tablets together during the women's activity day or another predetermined day, yet, the teachers admitted that taking the iron tablets together was only conducted at the beginning of the IFA distribution. For the next distribution time of IFA, they were no longer taking the tablets together. It complicates the monitoring of IFA compliance (obedience). Another finding of this study was related to giving iron tablets to adolescent school girls absent during the IFA administration day. The school stated that the iron tablets were entrusted to the Youth Red Cross cadres or a friend. However, they did not know whether the IFA was given or received by the absentee or not.

Socialization concerning IFA is crucial to make all parties involved in the program, namely the teachers, school boards, and students, actively participate in the IFA program. Several formats of socialization were found to be held by the Public Health Center. *First*, socialization through the implementation of GEMAZ (*Golden Generation Free of Anemia and Zero New Stunting*) invites the Regent (*Bupati*), teachers (especially the UKS teacher), and the representative of adolescent school girls from the targeted schools. *Second*, socialization of IFA program implementation for schools invites the appointed teacher of the IFA program (commonly the UKS teachers) to the Public Health Center. *Third*, socialization at the first IFA administration to the targeted schools, where the health workers directly came into the school with IFA tablets and explained this program to classes and the teachers. The material explanation was about the time (when), how to take/consume IFA tablets, and the benefit of IFA tablets. *Fourth*, some schools also admit they carry out socialization by giving a reminder to take the iron tablets during the Monday morning ceremony at school. *Fifth*, some schools in Depok said they had not received the IFA socialization from the Public Health Center.

Monitoring and Reporting the WIFA Program

Documents of the WIFA program in the form of monitoring sheets for iron supplement reception and consumption have been provided by the Public Health Center. However, as they stated, only some schools in Depok and Cianjur have monitoring forms. Two Islamic Boarding Schools in Depok were interviewed and said they did not have a monitoring form related to obedience to the consumption of iron tablets. Fortunately, the schools had to monitor the students in many ways regarding providing IFA tablets, illustrated in Figure 4.

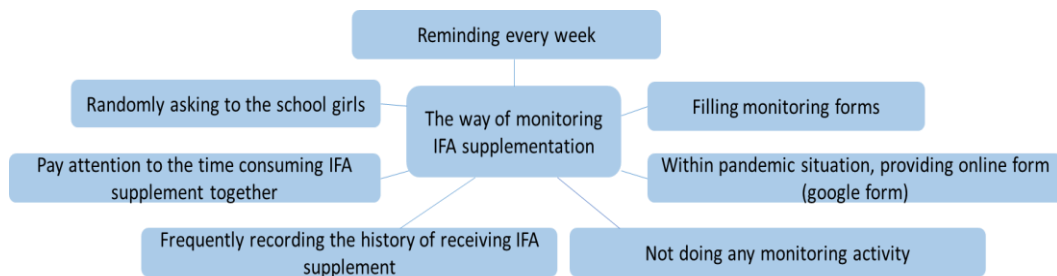


Figure 4. The way of monitoring IFA supplementation at school and Public Health Center

The monitoring method created by the appointed teachers for the IFA program was giving a reminder once a week to students at school, randomly asking students whether they had taken iron tablets or not, and paying attention to students. At the same time, they consumed the iron tablets together. Rare recordings regarding receipts of iron supplements created a google form filled out by students who were already taking the IFA tablets (this method is used during the pandemic time), fill out the monitoring form assisted by the Youth Red Cross (PMR) cadres, which then the report will be submitted to the Public Health Center, and the last method was not doing any monitoring activity.

The method of the IFA program report at the school level was similar to the previous explanation. Several schools still need to carry out monitoring activity of the IFA program, so there was no reporting from them. Some schools also stated during the first-time iron tablets distribution that the Public Health Center already had data on the number of iron tablets given to students, which they assumed was the report of the iron supplementation program. The Public Health Center also stated the report on the WIFA program was very dependent on the recording made

by the appointed teachers and said that monitoring definition and report could not reach data about the number of students who did not consume the iron supplement tablets because it was assumed that for every IFA tablet given, all were consumed by the adolescent school girls.

Constraints and Solutions

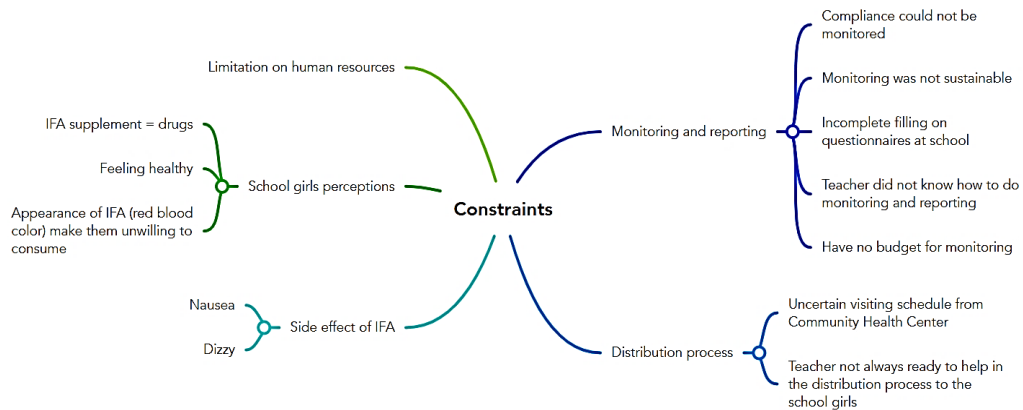


Figure 5. Constraints on implementing WIFA Supplementation Program

The constraints of the WIFA program are presented in Figure 5: the targeted schools and the Public Health Center experience five (5) general problems. The first problem is related to the limited (not enough) human resources. Both implementers (the Public Health Center and schools) felt their work activities were too many, so they could not implement the WIFA program consistently. The second problem is related to the monitoring and reporting of the WIFA program. It said it is difficult to monitor the obedience/compliance in taking the iron supplement tablets as the monitoring cannot be done continuously. The schools an incomplete way, filled its results, so the Public Health Center had difficulty making reports since teachers needed to learn how to do monitoring and reporting, and the Public Health Center felt there was a need for a special budget for monitoring. The third problem concerns the distribution process of iron tablets to schools and adolescent school girls. According to the schools, the schedule for the visit by Public Health Center was often erratic (unscheduled) and sometimes needed to match the teaching and learning activities, for example, the time of exams or other studying activities that cannot suddenly be interrupted by the IFA distribution. Teachers also stated there were times when IFA was not distributed directly to their students since the amount

was not according to the school's needs (too few/not enough iron supplement tablets) to avoid confusion among students, or the schools did not have a mechanism for distributing IFA to adolescent school girls. The fourth problem is related to the side effect of consuming iron tablets, such as feeling nauseous and dizzy after taking the iron tablets. The last problem relates to the student's perception of IFA, which is still troublesome since the students perceive the IFA tablets as medicine. Hence, they felt unnecessary to consume it if they are in good health. In addition, students also do not understand the benefit of IFA tablets.



Figure 6. Proposed solution on implementing WIFA Supplementation

The solutions proposed by the informants related to the WIFA program implementation were grouped according to the roles. First, the role of the appointed teacher of the WIFA program required periodical socialization, especially for briefing about how to monitor and improve the compliance/obedience of adolescent school girls for taking the IFA tablets. Second, the role of schools is assuring or (they) must have rules to ensure compliance can be recorded and be a part of the school accreditation. Apart from that, schools also need to empower the Youth Red Cross (PMR) cadres in assisting in distributing and monitoring iron tablet consumption among adolescent school girls. Finally, the Public Health Center's role in the WIFA program is considered necessary for monitoring any changes in the anemia status regularly, so there is expected to be a follow-up after the iron supplementation program implementation. Public Health Center is also expected to hold socialization involving/inviting parents so that the parents can perform the monitoring process at home (Figure 6).

The protocol and standard operational procedures of WIFA Program are quite clear; this is confirmed by the availability of the completed instrument for the monitoring and reporting at each level (School, Public Health Center, and Health Office). However, some constraints were still related to the implementation in the field, particularly on recording the WIFA consumption. Internalization of the program between teachers at school with health staff from the Public Health Center still needs to be increased. The person who is responsible for the WIFA program at school is varied in terms of their position, for instance, Public Relationship Teachers, Students Affairs Teachers, Physical Education Teachers, School Health Unit Teachers, or even the teacher who has advised students in red cross activities at school. Teachers feel burdened towards the management of the WIFA program; on the other hand, students need to be educated simultaneously to increase their adherence level to taking WIFA supplements without having to wait for the health staff to come to school. Aside of the teachers, the same thing felt by health staffs who have to coordinate, distribute, monitor, and report the WIFA program. Limited number of staff in Public Health Center to correspondence with this program become constraint the WIFA implementation.

B. Tasikmalaya – Ciamis Study

WIFA Supplementation Program Management Personnel

The IFA supplement tablets administration is usually coordinated by Red Cross Youth (PMR/*Palang Merah Remaja*) supervisors, teachers of the School Health Clinic, and/or Physical Education Teachers as the person-in-charge (PiC). The PiC responsibilities to IFA administration are receiving and distributing IFA tablets, monitoring-evaluating, and reporting activities regarding IFA distribution. Another duty is to invite Red Youth Cross cadres to distribute IFA tablets to adolescent school girls and record, monitor, and evaluate results. Several schools have some teachers in charge as School Health Clinic teachers. Meanwhile, there is also school that delegates only one person to be in charge of the IFA administration.

“Since the school is the Red Cross Youth (RCY) program, the supervisor is responsible for it. We have three RCY supervisors

in this school, but PMR cadres distribute the IFA to adolescent school girls. Sometimes, clinic teachers are also involved”.

(Teacher, SMAN 2 Ciamis, Interview)

School officials are equipped with operational and technical guidelines for the IFA supplementation programs for adolescent school girls. However, not all school officials have them. Only the school’s principal, the PiC for the IFA program, and several students as members of Red Cross Youth were invited to distribute the IFA tablets to adolescent school girls who have the guidelines.

The IFA supplementation program at the level of Public Health Centre is managed by Nutrition Counsellor (Tenaga Pelaksana Gizi/TPG), School-aged-children Counsellor, School Health Clinic (UKS) Counsellor, and Health Promotion Counsellor. From organizational structure, the IFA program is supervised or under the responsibility of a Nutrition Counsellor, with its implementation assisted by other counselors. However, during school visits, the in-charge IFA team can be selected from any work section since the IFA tablet administration program is usually accompanied by other health programs at the school.

IFA Availability

In general, at the school level, IFA tablets are always sufficient. Moreover, according to some teachers, IFA stocks had piled up because not all IFA tablets were distributed or taken by the students. The PHC also stated amount of IFA tablets was always sufficient because PHC always pre-calculated data of adolescent school girls in schools to apply the IFA tablets. However, the stocks of IFA tablets for female adolescents are equated with the stock of IFA tablets for pregnant women because the procurement is conducted all at once.

“Since we have a group of school health clinic teachers in the Ciamis Public Health Centre area, when there is a school that has not or has fewer IFA tablets listed within the group, the teachers are all active, so there is no accumulation of IFA tablets.”

(School Health Clinic Staff, Ciamis Public Health Center, Ciamis, Interview)

"Those are from PHC. So far, the availability of tablets has piled up. Could be some problems with the adolescent school girls, if seen from the availability of the tablet has fulfilled the stocks, but not all (tablets) are distributed because there is a chance the tablets not fully consumed"

(Teacher, SMAN 1 Baregbeg, Ciamis, Interview)

IFA Distribution

The IFA distribution to adolescent school girls by the affiliated schools is carried out in several ways: (1) once a week, IFA is distributed on a specific day to be consumed together at schools (weekly flag ceremony, students' events, or during first lesson hour); (2) IFA tablets in some amounts are distributed one time (for example a stock for one month or one semester); and (3) only distributed to students who ask or need it. Ways to give IFA tablets in every school are also different. Some tablets are (1) distributed directly by the PHC when they visit schools, (2) given by PiC (IFA tablets are given when PiC visits every class), and (3) some tablets are given by the Red Cross Youth (RCY) members or the class leader. For schools that invite RCY members to help, they provide attendance schedules for the RCY members as the schedule for IFA distribution to adolescent school girls in the schools.

"The distribution pattern in this school is scheduled to consume IFA tablets together on Wednesday. The Health Office and PHC supply IFA tablets, then IFA tablets are stored at the School Health Clinic, and every week member of Red Cross Youth (PMR) will pack IFA tablets and be given on every Wednesday to adolescent school girls in the school".

(Teacher, SMKN 1 Ciamis, Ciamis. Interview)

"So now, starting from yesterday, at the new academic calendar year, IFA tablets are given once a week every Wednesday, and the responsibility is given to the RCY members that have a coordinator for each class to monitor the consumption process (to be consumed at the class immediately) since there was a problem before when IFA tablets were given to students, they just held the tablets and did nothing, they just accepted it without consuming it."

(Teacher, SMAN 2 Ciamis. Ciamis. Interview)

"IFA tablets were given by Physical Education teacher to every class"

(Teacher, SMKN Rajapolah, Tasikmalaya, Interview)

"Directly from PHC, it has a team who gave IFA tablets to students in here"

(Teacher, SMK Maarif NU. Ciamis. Interview)

Some schools only distribute IFA tablets for students who need them and stated the decision was taken based on health screening results in the new academic year. Thus, IFA is distributed only to those who need it, whereas the rest of the tablets will be kept to be given to those students who ask.

" Actually, everyone should get the tablets. However, some students said, "Sir, I don't need it; I think I am healthy," and they looked healthy too, so we kept the tablets and put them into stocks for those who didn't need the tablets and be distributed for those students who need it. So, when we run out of stock, we can still use the IFA tablets that we've kept from those students who did not want it"

(Teacher, SMK Pelita Cendekia Bangsa, Tasikmalaya. Interview)

At the Public Health Center level, the IFA tablets distribution process was carried out in several ways. Some PHC distribute the IFA tablets every month. Still, there are also PHC that distribute IFA tablets every three or six months, following the schedule agreement of the affiliated schools and the availability time from the PHC, because there are still other health programs or activities which need to be carried out asides from the IFA program. As previously explained, at the school level, some PHC directly gave IFA tablets to students, but there were also some PHC that only gave IFA tablets to the PiC of the IFA program. One problem from this distribution process (of just being handed over to someone) can delay the distribution process of IFA tablets to adolescent school girls, such an experience of one of the PHC who said IFA tablets were entrusted to the security guard of a school and turned out the tablets were not given immediately to the PiC of IFA program.

"The problem might beat the school, sometimes when we deliver IFA tablets and you arrive at the schools, the package must be sent to security post and the packages can be not given directly or won't reach the students"

(Health Promotion Counsellor, Rajapolah Public Health Centre, Tasikmalaya, Interview)

"So, we distribute the IFA tablets to schools for 4 times distribution in one year; once for every three months, and depends on the school request"

(Nutrition Counsellor, Ciamis Public Health Centre, Ciamis, Interview)

Several PHC knew or received reports from the schools through photo documentation that IFA tablets had been distributed to adolescent school girls. However, some PHC also needed to know whether IFA tablets had been distributed to students or whether the IFA tablets were sufficient. The PHC is also aware that not every school is actively reported when their IFA tablet stocks are not sufficient or less in amount.

"We hope when IFA stocks were ran out, the school confirmed to us so we will restock the tablets again in that school, but sometimes there was a miscommunication or communication was not smooth, so they just waited and we were also did not know if the tablets supplies still sufficient or not."

(Nutrition Counsellor, Rajapolah Public Health Centre, Tasikmalaya. Interview)

Several PHC also gave extra amounts of IFA tablets to the schools. Usually, they give 10 % extra tablets of IFA tablet numbers that should be given, so whenever the PHC has delayed or is late in distributing the next IFA tablets, there is a stock that the schools can distribute for their adolescent school girls. Yet, there were PHC that did not give an extra amount of IFA tablets for the schools to ensure the iron supplement stocks for pregnant women in their area are sufficient.

"At distribution time, because of time difference, for example, we must give 54 IFA tablets, at minimum we will drop 30 tablets first, then later; we will evaluate whether the adolescent school girls of that school consume all tablets (30 tablets) to prevent tablets' accumulation or piling up. If we immediately drop the whole amount (54 tablets) we are afraid a short shortage for the pregnant women because procurement of IFA tablets is

only once a year. The usual method is reporting when the IFA stocks at school is empty and we will drop a new IFA supply for them."

*(PHC staff, Tinewati Public Health Centre.
Tasikmalaya.Interview)*

IFA Socialization Program

IFA socialization is carried out according to a variety of schedules. The socialization of IFA administration is taken within other health activities held at schools that are not limited to the IFA context. A routine health activity the Public Health Centre carries out in schools is health screening activities for school students. In this screening activity, several PHC also distribute the IFA tablets to new students at the same time. Some PHC is also looking for adolescent school girls' events for inserting the IFA socialization or Red Cross Youth (RCY) activities by inviting the members to become peer groups as counselors for other adolescent school girls. So, some socialization activities are not always directly targeted to adolescent school girls in general, but the targeted subject can be members of RCY, class leaders, or student board members. In addition, IFA socialization was also carried out when distributing the tablets at schools. The socialization activity is not always performed in a large hall or room but can be conducted through interpersonal communication between the health workers and the adolescent schoolgirls.

"The usual pattern goes to the member of Red Cross Youth first, then, from there, to their friends. It is more comfortable to have counsellor or the tutor from their peers, except, when there are health screening activities or blood donation week or when there is a school orientation event at the beginning of new academic year which they likely to include or insert the IFA socialization."

(Teacher, SMAN 1 Ciamis. Interview)

"The usual schedule is conducted when we have a schedule for distributing IFA tablets at the same time or if there is a school event, counselling, we socialize about IFA program. We do not have a fixed schedule yet"

*(Health Promotion Counsellor, Rajapolah Public Health Centre.
Tasikmalaya. Interview)*

The source from IFA socialization is usually taken from on-duty personnel of PHC, such as the nutrition, school health clinic, or health promotion division. Not all officers prepare special materials for IFA socialization. The Public Health Centre only explains verbally to PiC of the IFA program, teachers, or appointed students. Materials are specific about IFA and are usually accompanied by other health materials on nutrition, healthy lifestyle, etc. Some school clinic teachers also have the initiative to socialize IFA by inviting RCY members to help educate other students.

"There is no specific time, sometimes if I ask the school about their free schedules, it could be difficult, so, by individual, for example, whenever I have free hours, I would go to class after class to give IFA socialization. There are also RCY in here, so I invite them and given a counselling first to them, because they must learn to educate their friends, so they can help out with IFA counselling."

(Teacher, SMAN 1 Singaparna, Tasikmalaya, Interview)

"The socialization is conducted through verbal communication to the students. About how important the program is, for example, consuming IFA will bring good effect in the long term or for your future, what is the effect and others. So, there is no guidance in a form of book yet."

(Teacher, SMAN 2 Ciamis. Interview)

The PHC stated not all schools received socialization about IFA administration, with some reasons underlying it: (1) too many schools are under the supervision of the Public Health Centre while there are still busy agenda of PHC activities, (2) not every school has public/large hall that allows a socialization event being held, and (3) the time availability between school and PHC to do socialization not always compromise.

"The PHC/Public Health Centre of course they have a socialization agenda to every school....maybe now there are only several schools that receive a socialization from PHC because there are 15 Junior High Schools and 16 Senior High Schools in its territory, so only some of the schools are getting a socialization"

(TPG, Ciamis Public Health Center, Interview)

IFA Storage

At the school level, the received IFA from the Public Health Centre/PHC will be stored in School Health Clinic (UKS/*Unit Kesehatan Sekolah*) room in a special cupboard, but other schools keep the tablets in a cool place and not exposed to direct sunlight or some schools use FEFO system (First Expire First Out).

"When the IFA tablets arrive, we look at the expiration date then write it down in a note. If the expiration date is short or soon will be expired, then these tablets will be given first, but, it will be returned to PHC when it already expired."

(Teacher, SMK Pelita Cendekia Bangsa, Tasikmalaya, Interview)

At the PHC level, IFA tablets are stored in the pharmacy division. Whereas for PHC that are not integrated with Pharmacy, the IFA tablets are stored in the supplements warehouse where IFA is stored by using pallets.

Monitoring and Reporting WIFA Program

There are two types of monitoring and evaluation activities in schools. The first type is the school, which has a form to fill out as a reporting form. For schools that receive forms to be filled are assisted by Red Cross Youth members for filling the forms. Several schools that conducted the first type of monitoring and evaluation system are SMAN 1 Singaparna, SMK Pelita Cendekia Bangsa, SMKN 1 Ciamis, and SMKN 2 Ciamis.

"Yes, there is a form that you saw earlier. I held responsible for it. How to fill the form will be assisted by member of Red Cross Youth at the School Health Clinic for filling the attendance list"

(Teacher, SMAN 1 Singaparna, Tasikmalaya, Interview)

"The monitoring activity has a report form. So, for every student who distributes the tablets, for example for class A of Social Science that has 18 adolescent school girls, then the IFA cadre will automatically bring 18 tablets. So, the cadre will monitor one by one of the adolescent school girls in that class and find out who consume the tablet and who doesn't. In fact, there are some students who refuse to consume IFA tablets. The reasons are vary, from they have menstruation period, or another reason such as "M'am, the side effect is I get dizzy", or "M'am, I am not used to consume medicine". So it became difficult to make

every students consume IFA tablets, but, there is already data on students who refuse to consume IFA tablets and students who consume it regularly.

(Teacher, SMAN 2 Ciamis, Interview)

"The system is interview. So, there will be one officer from School Health Clinic or Nutrition Counsellor and later we go there to have an interview about what is happening here, being asked, and usually the school official who will be interviewed is clinic teacher, because clinic teacher is in charge of IFA administration program"

(Teacher, SMKN YPC, Tasikmalaya, Interview)

The monitoring and evaluation (money) activity at the Public Health Centre (PHC) level is more varied than monitoring and evaluation at the school level. Types of monitoring and evaluation at the PHC level are (1) a form provided by the province government; (2) conducted when consuming the iron tablets together at school and be reported personally through Whatsapp; and (3) conducted when there are PHC activity or iron supplement tablets distribution.

It is said that only some schools fill out the type 1 monitoring evaluation forms. According to the Public Health Centre, the existing forms are provided by the provincial government, where the affiliated school can directly fill out the forms, and can be seen by the PHC. The contents of the form are the student's name, school, and whether they have received IFA tablets or not.

"The report is in the hand of Nutrition Counsellor through 'Si Ratu Manis', the program's name is Si Ratu Manis, by evaluation, recording, reporting. So, the process is started from school who given a link by the Health Service, which previously the health service goes to the Public Health Centre first, and later the PHC will give link to the school, after giving the link to the school, later, when the school take the iron tablets, evaluate, monitor, or report can be conducted directly via the provided link".

(The School Health Clinic Counsellor, Ciamis Public Health Centre, Interview)

While the Type 2 monitoring evaluation sees the monitoring process can be carried out by supervising the adolescent school girls while taking the iron tablets together at school. Thus, monitoring can be carried out directly by the PHC officer when they have activity at school or through teachers' reports to the PHC.

"Through documentation as well. So, there is evidence whether the tablets were consumed or not. Such as this morning when there was a WhatsApp call said "M'am, the children are being called (to gather around)" then, there was pictures of them consuming the tablets together"

(School Health Clinic Counsellor, Singaparna Public Health Center, Tasikmalaya. Interview)

"The system is an interview, so there will be 1 officer from school health clinic or Nutrition Counsellor, which later we will go there and having an interview about what is happening in here, being asked, and usually the school official who will be interviewed is UKS teacher because he/she is the one who in charge of IFA program"

(Nutrition Counsellor, Ciamis Public Health Centre, Interview)

Type 3 sees the monitoring and evaluation process can be carried out together with other health programs at school. Monitoring and evaluation were carried out by asking students about their experience consuming the IFA tablets. Type 3 is not based on written data but rather on verbal reporting.

"There is a schedule. So, we will ask, what day does this school administer the tablets, so later, we will monitor on the day of medicine administration, we'll go there first-hand, not only through WhatsApp, to see whether is there female student who did not consume or other?"

(Nutrition Counsellor, Singaparna Public Health Centre, Tasikmalaya, Interview)

Public Health Centre stated that the IFA administration program at school was reported once every three months through EPPGBM (electronic reporting system), where the data could be retrieved by CERIA (*Cegah Anemia Remaja Putri Indonesia* or Prevent Anemia for Indonesian Adolescents School Girls) application. This application has been introduced, but its utilization has been ineffective because

not all students can fill it at school due to school regulations of not accessing smartphones during school activities or some who do not own the device. The PHC also stated that so far, information that could be reported was the amount of IFA supplement tablets distributed and received by adolescent school girls. The compliance data still needs to be created because the students who received IFA tablets were automatically treated as already consumed the iron tablets.

Constraints and Solution

Constraints of the iron supplement provision are presented from the perspectives of students, teachers, and health workers. In adolescent school, girls perceived IFA tablets were not important. It was unpleasant, with a nauseous feeling after taking IFA and a fear of taking the drug. Also, some students felt they were healthy, so they did not require to take IFA tablets.

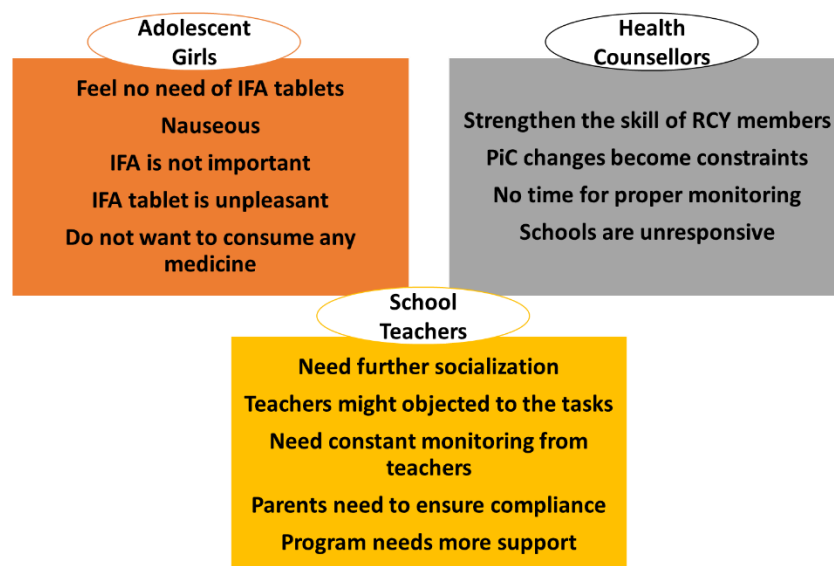


Figure 7. Constraints and solution of IFA program

For the health workers, it is necessary to strengthen the skill of RCY cadres/members, where they can be a peer counselor about IFA administration; difficulties in monitoring and evaluation conduct also reporting due to time trouble related to the busy agenda of PHC activities, also when the school unresponsive especially when it comes to school visit schedules. Apart from those, the health

workers also felt that there were difficulties when the PiC of the IFA administration was changed.

As for teachers, a program for providing iron supplements in schools is a good/beneficial program because it can help students focus better on learning and support their health. However, the teachers felt it needed further socialization and the monitoring activity not only carried out by only one or two teachers. It needs help from many parties, such as teachers like homeroom teachers or anyone in the school community, to remind each other about the importance of consuming the IFA tablets. Moreover, teachers also feel parents can be involved in monitoring IFA compliance. Also, the IFA socialization should not only be limited to PiC of the IFA program and the appointed adolescent school girls but also to many parties at schools.

CONCLUSIONS

The qualitative results including the input-process-output in the implementation of WIFA program have been documented and hence providing several constraints and solutions in order to improve the WIFA program management. The constraints of the WIFA program are involving: (1) the limitation of human resources; (2) the difficulties in monitoring and reporting the WIFA program; (3) the distribution of the IFA supplement which have certain technical problem such as uncertain visiting schedule by staffs of Public Health Center; (4) low adherence due to side effect of IFA (nausea and dizziness); and (5) the student's perception of IFA which is still troublesome since it was perceive as a drug.

Following the constraints, there were several solutions could be proposed including: (1) appointing the role of teacher for a periodical socialization, particularly to increase the understanding on how to monitor and improve the adherence level; (2) considering the process on reporting the adherence as part of potential improvement for the school accreditation; (3) Despite the teacher's role, student's role as the cadres in distribution and monitoring process could be valuable to be involved; and (4) regular monitoring by Public Health Center to increase the implementation of the program.

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