



Internal and External Factor Evaluation of Implementation Iron Supplementation Program in Tasikmalaya District

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Abstract

Prevalence of anemia among pregnant women in Indonesia is still relatively high due to implementation of iron supplementation program in pregnant women. This study aims to analyzed the internal and external factors that affecting iron supplementation program. The method used cross sectional study, with indepth interviews to IFA's stakeholders in Tasikmalaya district. Analysis of Internal Factor Evaluation (IFE) and External Factor Evaluation (EFE) used to identified the program positions internally and externally. The results showed that total score of IFE is 2.14, indicated that internally, the program doesn't optimize strengths and doesn't avoid weaknesses. EFE scores is 2.10 showed that program doesn't optimize the opportunities and doesn't avoid threats.

Keywords: Anemia; EFE; IFE; Iron Supplementation.

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1. Introduction

Maternal Mortality Rate (MMR) is one indicator to see the degree of women's health. MMR is also one of the global targets set in the Millennium Development Goal, that is to improving maternal health with a target to be achieved until 2015 is reducing $\frac{3}{4}$ risk of maternal mortality [1]. Indonesia committed to reducing MMR into 102 over 100,000 live births by 2015, but Indonesia failed to achieve the target [2]. MMR in Indonesia is still remains high, at the point of 359 over 100,000 live births [3].

The high rate of maternal mortality is closely related to the occurrence of bleeding during childbirth [4,5]. The causes of bleeding are strongly correlated with anemia in pregnancy. Several case-control, longitudinal and cross-sectional studies conducted in pregnant women showed a relative risk of maternal mortality due to anaemia (OR = 3.5; 95% CI: 2.0-6.0) [6]. According to WHO the prevalence of maternal anemia in the world today is 38.2 %. Based on the results of Basic Health Research in Indonesia, the prevalence of anemia in pregnant women in Indonesia is 37.1% [3]. The prevalence of anemia remains high even though the iron supplementation program has been implemented on a large scale [7].

The prevalence of anemia in pregnant women is significantly correlated with the consumption of Iron Folate (IFA) Supplement [7,8,9]. The coverage of IFA's supplement in Indonesia is 85.1% by 2014, the government failed to achieve the target coverage by 2014 that is 95% [2]. The government has conducted anemia prevention program since 1970 by giving at least 90 IFA's tablet in pregnant women, but the compliance of pregnant women to consume IFA's tablet still low, ie 33.3% [3].

Based on Routine Report of Maternal Health Program 2013, West Java was ranked highest in the number of MMR in Java Province, Indonesia. Tasikmalaya is a region in West Java Province with high MMR rate of 168 over 100,000 live births by 2012 [3]. Tasikmalaya district had IFA's tablet compliance is 33% [10], coverage IFA's tablet 90%, with anaemia prevalence higher than national level at the point of 49.06% and is categorized as public health problem according to WHO [11,12,13]. This can be an indication of unsuccessful iron supplementation program in Tasikmalaya district.

Based on the achievement of iron supplementation programs, the purpose of this study is to identify internal and external factors that affect the implementation of iron supplementation programs and to identify the position internally and externally of iron supplementation programs.

2. Materials and Methods

This research is semi quantitative qualitative research, using cross sectional study design. The research was conducted in Tasikmalaya District, West Java Province in September - December 2016. The respondents were local officials related to the implementation of iron supplementation program with sampling technique using purposive sampling. Respondents who are involved in the research, are the head of iron supplementation program in public health office, Head of Nutrition Section, Head of Maternal and Childr Section, Head of Pharmacy Section, Head of Drug Warehouse, Head of Midwife Indonesia, Head of Health Center in Tasikmalaya and Head of Ministry of Religious in Tasikmalaya. The selection of respondents is based on the

involvement, knowledge, competence and cooperation undertaken for the iron supplementation program.

The data were collected by using indepth interview. The types of data collected in this study are primary data, in the form of questionnaires and interviews related to infrastructure facilities, distribution mechanism, reporting on the use of IFA's tablet, quantity and quality of health worker, socialization and counseling to pregnant women, action programs, budgets, policies and stakeholder roles internal and external in the implementation and application program. Variables collected based on Factors affecting the successfulness of the Iron Supplementation Program according to Guideline Iron Supplementation [14].

Determination of internal and external factors that affect the TTD program is done by interviewing local officials qualitatively. The validity data is using triangulation validation ie matching the respondent's statement, secondary data support and field observation. Analysis method to know the position of the program in response to internal and external factors using Internal Factor Evaluation (IFE) and External Factor Evaluation (EFE) (Rangkuti 2015). There are 3 stages to assess the internal and external positions of the program. The first stage is to determine the rating based on Likert scale 1-4 which indicates the value of 1 response is very weak, the value of 2 response is weak, the value of 3 is good response and the value of 4 is very good response. The second stage is to determine the weights done by doing paired comparisons on all factors that affect the implementation of the program, and the third stage is to determine the scores by multiplying the rating and weight. If the internal score obtained is <2.5 then it can be summarized that internally the implementation of the program has not utilized the strength and does not reduce the weakness. If the score ≥ 2.5 then internally, the implementation of the program has utilized the power well and reduce its weaknesses. If the external score obtained is <2.5 then it can be concluded externally the execution of the program has not taken advantage of opportunities and does not avoid threats. If the score is ≥ 2.5 then externally, the implementation of the program has taken advantage of opportunities well and avoided any threats. This research has got etical aproval from Faculty of Medicine University of Indonesia 1021 / UN.F1 / ETIK / XI / 2016.

3. Results and Discussion

Based on the interview result obtained some strategic factors that influence the implementation iron supplementation program in Tasikmalaya Regency. These strategic factors consist of internal factors including strengths and weaknesses (Table 1), as well as external factors including opportunities and threats (Table 2).

Some of the internal factors affecting implementation iron supplentation program in Tasikmalaya District consist of strengths and weaknesses [17]. Strength factors include: (1) Good collaboration across the section in Health Office to implementing the iron supplementation program. Cooperation between nutrition sections, maternal and child section, pharmacy section, medicine warehouse ssection and field officer is good. Nutrition sections are tasked to plan the needs of IFA's tablet using the projection formula ie (number of pregnant women by 2016 x 150 tablets) + 10%. Pharmaceutical Section is responsible for ordering IFA's tablet to the producer. The Head of the Drug Warehouse is responsible for ensuring the IFA's tablet arrives according to the number and specification of the order, as well as ensuring safe storage. Maternal and child section as the coordinator responsible for the ongoing process of giving IFA's tablet to pregnant women.

(2) The distribution mechanism of IFA's tablet in Tasikmalaya district is very good. Tasikmalaya district has a system that regulates the distribution of IFA's tablet from planning to pregnant women. Distribution system owned by Tasikmalaya Health Office in the form of producers will prepare IFA's according to requirement which have been ordered by West Java Provincial Health Office, then will be distributed to drug warehouse of Tasikmalaya Health Office and after that, will be distributed to all public health in Tasikmalaya district. Public health in Tasikmalaya district will then distribute to the village midwife and integrated service post.

(3) There is an evaluation system to know the effectiveness of iron supplementation program, in the form of hemoglobin examination in pregnant mother once every 3 years to monitor the success of the program. The evaluation was conducted through a quick survey in 30 sampling clusters.

(4) There is a tool to monitor compliance of IFA's consumption, in the form of compliance card that has been disseminated since 2016. According to Briawan research, one of the factors of mother not consuming IFA's tablet is because forgot so that they needed tool to help remind to consume IFA's tablet, one of them is with compliance card [10].

(5) The quantity and quality of midwives is sufficient to serve pregnant women. Currently there are 369 midwives assigned in 315 villages in Tasikmalaya district. Midwives' knowledge of TTD supplementation in Tasikmalaya is distributed to 50% with good knowledge, 23% moderate and 27% low [10]. Education on iron supplementation submitted by midwives to pregnant women is an important part of prevention program of iron deficiency anemia in pregnant women [18].

The weakness factors include: (1) insufficient infrastructure, including hemoglobin test equipment, counseling aids and the availability of IFA's tablet which is a factor affecting the success of iron supplementation program [19]. The result of analysis shows that 100% local official stated the lack of test equipment to perform hemoglobin examination. There is only 1 of community health center had Hemocue. Only half of the 639 midwives members have Sahli hemoglobin examination, so not all pregnant women are checked for hemoglobin at the time of pregnancy. Early detection associated with anemia in pregnant women affect the management of IFA's tablet given. Pregnant women with anemic conditions, it is advisable to consume more IFA's tablet according to the level of anemia during pregnancy and get hemoglobin examination when return visit during Antenatal Care Process (ANC) [2]. The results of the analysis on the perceptions of local officials stated that the lack of counseling material tools such as leaflets, booklets, posters And flipcharts used in the counseling process. Based on observations in the field, most midwives in the work area community Health centers Tasikmalaya District provide advice by writing to the Maternal and Child book to read pages 1-9. The more complete the tool or media aids counseling the better pregnant mother captures the information given [13].

(2) The system of recording and reporting the use of IFA's tablet is not maximal because not 100% Community Public Health are obedient to Standard Operasional Procedur regarding the collection of IFA's tablet usage report conducted every month. All community public health are required to report the use and the remaining stock of IFA's tablet, but as many as 25% of community public health do not obey the rules so that the use and stock of IFA's tablet is not well monitored.

(3) Efforts to socialize TTD in pregnant women is less due to limited budgeted funds so that socialization efforts are not able to reach all pregnant women. Socialization to pregnant women is needed so that pregnant women know, willing and obedient to take IFA's tablet as recommended. Compliance of pregnant women is determined by the information giver, the quality of the information provided and the exact duration [10,18].

(4) The process capacity building of health worker about management iron supplementation is less. Capacity building of health worker is very important with the intention of refreshing, giving motivation and gathering to increase the productivity of midwife. Guidance and supervision from the Health Office as well as from the Head of Health Office and Head of community public health is needed to improve officer performance [14].

(5) Action programs on iron supplementation are still minimal. The action program is an activity promoting the benefits of IFA's tablet for pregnant women. Action programs in the form of campaigns, advertisements using influential figures and dissemination of information through various media to promote IFA's can not be implemented optimally in Tasikmalaya District because of limited budget.

Table 1: Internal Factor Evaluation

<i>Strength</i>	Weight	Rating	Score
a. Good cooperation between section in healt departement in Tasikmalaya District	0.110	4	0.422
b. The mechanism of IFA's tablet distribution is very clear	0.070	3	0.203
c. There is a 3 year evaluation system to know the effectiveness of iron supplementation program	0.050	2	0.100
d. There are tools to monitor compliance of IFA's tablet consumption	0.030	3	0.117
e. Quantity and quality of midwives are sufficient to serve pregnant women	0.130	2	0.253
Weakness			
a. Infrastructure facilities such as Hemoglobin test kits and counseling equipment are inadequate	0.090	2	0.187
b. Monitoring in the form of recording and reporting the use of IFA's tablet is not optimal	0.010	2	0.038
c. Efforts to socialize iron IFA's program in pregnant women is less	0.170	2	0.344
d. The process of capacity building of healt worker about management iron supplementation program is very less	0.150	2	0.300
e. Action programs on iron supplementation program are still minimal	0.190	1	0.177
Total Score	1		2.141

Based on internal factors, the highest response of strength is in the good cooperation between the section of health services in Tasikmalaya District Health with a score of 0.422 (Table 1). This becomes the greatest strength because the communication and cooperation done by the part responsible for the iron supplementation program has been running very smoothly. The biggest response of weakness was found in socialization and promotion factor of IFA's program in pregnant women with score 0,344 (Table 1). This is because the

socialization budget is not available. The total score generated from Internal Factor Evaluation in Table 1 is 2.141 (<2.5), indicating that the TTD program is weak internally, has not utilized its maximum strength and does not reduce the weaknesses in the internal program [17].

Based on the interview result obtained some strategic factors that influence the implementation of iron supplementation program in Tasikmalaya Regency. These strategic factors consist external factors including opportunities and threats (Table 2).

Table 2: External Factor Evaluation

Opportunity	Weight	Rating	Score
a. There are regulation of health minister who recommend taking iron supplements for pregnant women	0.122	3	0.367
b. There is a support budget for iron supplementation program	0.143	2	0.281
c. Good commitment from the distict head and head of development planning agency at sub-national level on the implementation of the iron supplementation program	0.265	3	0.761
d. There is concern from researchers and NGOs to deal with anemia	0.224	1	0.217
Threats			
a. Time management unplanned to booking IFA's tablet.	0.042	1	0.053
b. Communication and coordination is lacking between stakeholders	0.122	2	0.254
c. Produsen does not undertake commitment to provide IFA's tablet as needed	0.082	2	0.173
Total Score	1		2.106

Opportunity factors include: (1) There is a Regulation of the Minister of Health No. 97 of 2014 which states that every pregnant mother must be given at least 90 IFA's tablet during pregnancy until the puerperium. Permenkes regulate the management of IFA's tablet for anemia and normal pregnant women. (2) There is a support budget for TTD in the form of the availability of village health funds and community health center that can be used to support the IFA's program. The budget is one of the key factors in the success of the iron supplementation program. Funds for improving human resources as part of village funds can be used to improve public health status, for example for the provision of maternal classes, volunteer woman incentives and action programs to introduce IFA's to village communities. (3) There is a commitment of distict head and head of development planning agency at sub-national level regarding the implementation of iron supplemetation program. Commitment becomes the basis of success of the program as stated in Guideline Iron Supplementation [14] The head of district and head of development planning agency at sub-national level have realized that pregnant women's anemia is one of the causes of maternal deaths as an indicator of the success of a region.

(4) There is concern from researchers and Non Government Organization (NGO) to deal with anemia. Some researchers / universities and NGOs who helped overcome the problem of anemia in pregnant women include

Seameo, Stikes Aisyiah, University of Muhammadiyah Tasikmalaya, Bogor Agricultural University and Micronutrient Initiative Indonesia.

The threat factors include: (1) Time management unplanned to booking IFA's (2) Commitment of IFA's produsen is less to provide IFA's tablet because the Ministry of Health have a new IFA's tablet specification that is Ferrous fumarate equivalent to 60 mg Elemental iron and folic acid 0.4 mg [2]. The produsen not able to provide IFA's tablet in accordance with the order request by Tasikmalaya District Health Office. According to Galloway, to maintain supplies at the local level, controls should be undertaken at the facility level such as community health center and village midwives [20]. Tablets should be stored properly and monitored regularly to ensure timely restocking. Nicaragua implements a management to overcome the IFA's tablet supply problem by universally managing stocks by ensuring distribution path through multiple channels [21].

(3) Improper communication between stakeholders, marked by several related stakeholders have less attention to health issues related to IFA's program related anaemia.

Based on external factors, the opportunity that has the highest response is the commitment of district head and development planning agency at sub-national level about the implementation of iron supplementation program with score 0,761. This is because the stakeholders have known and agreed that iron supplementation program related to anemia became one of the factors of MMR in Tasikmalaya Regency based on Regulation Tasikmalaya district No. 9/2009. MMR is used as indicator of successfullnes area. Therefore, there is agreement that the cause of MMR must be overcome. Threats that have the highest response is the lack of communication between stakeholders with a score of 0.254. It is characterized by stakeholders outside the Health Office not knowing the information, needs, and what they should do to help optimize the program. The total score generated from External Factor Evaluation is 2,106. The total score of 2.106 is less than the set average value of 2.5. The total score indicates that externally, the implementation of the iron supplementation program has not responded very well to the opportunities and does not avoid external threats. The iron supplementation program in Tasikmalaya district has not effectively taken advantage and has not avoided any external threats [17].

4. Conclusion

Assessment results on the IFE matrix indicate that the iron supplementation program has an insufficient internal position with a value of 2.14 (<2.5). The EFE matrix with a value of 2.10 (<2.5) indicates that the implementation of iron supplementation program has not been able to respond effectively to the external environment.

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