

## The Relationship between Human Resources and Supervision and the Supplementary Feeding For Pregnant Women with Chronic Energy Deficiency

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**Abstract :** The purpose of this study is to analyze the relationship between human resources and supervision and the supplementary feeding for pregnant women with chronic energy deficiency in the area of South Konawe District. The study was a quantitative observational study using a cross-sectional study design. The populations in this study were all health workers. The population in this study consisted of all health care centers in Konawe Selatan District, totaling 24 units. The numbers of samples in this study were 22 nutrition coordinators representing the health care centers. The samples were determined using simple random sampling technique. Data were analyzed using the chi-square test. Based on the results of the chi-square test, the value of the variable human resources on supplementary feeding for pregnant women is obtained. This study found that there is a relationship between human resources and supplementary feeding for pregnant women. It is also found that there is a relationship between supervision and supplementary feeding for pregnant women with chronic energy deficiency in the Konawe Selatan District. To further enhance the success of the program, technical guidance and routine supervision of nutrition workers in 22 health care centers is required so that obstacles can be overcome quickly and appropriately

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### I. Introduction

The gestation period of a fetus depends entirely on its mother to obtain nutrients from a protective environment. Some factors that create this environment are controlled by genetics, but others depend on the behavior and food of the mother [1]. However, some nutritional problems are often experienced by pregnant women. They are chronic energy deficiency, iodine deficiency disorders, vitamin a deficiency, and iron nutrition anemia. One of the nutrition-prone groups targeted by the program is adolescents and pregnant women. Problems that often occur in adolescents and pregnant women are anemia, iron deficiency, and excess and underweight [2].

Nutrition problem is still a significant public health problem in developing countries, including Indonesia. This problem is an indirect cause of maternal and child mortality, which can still be prevented. Pregnant women with poor nutritional status or experiencing chronic energy deficiency tend to produce low birth weight babies and are faced with a higher risk of death compared to babies born to mothers of average weight [3].

According to the World Health Organization (WHO) the incidence of anaemia and chronic energy deficiency occurs very high in the third trimester when compared to the second trimester and first trimester of global data which is 37-75% [4]. WHO also noted 40% of maternal deaths in developing countries are related to anaemia and chronic energy deficiency with the highest prevalence of these cases because mothers with chronic energy deficiency can cause reduced nutritional status [4].

Maternal mortality rate (MMR) can be known within six weeks to 1 year after giving birth. The World Health Organization (WHO) estimates that there are 216 maternal deaths per 100,000 live births with a total number of maternal deaths reaching 303,000 worldwide due to pregnancy and childbirth complications, 99%. Maternal deaths occur in developing countries, reaching 239 per 100,000 live births. It is 20 times higher than in developed countries. Indonesia is one of the developing countries with high MMR. The World Health Organization (WHO) estimates that in Indonesia, there are 126 maternal deaths per 100,000 live births in which a total number of maternal deaths are 6,400. Besides, this figure is the highest number in ASEAN countries when compared to the MMR in Malaysia that is 40 per 100,000 KH, Thailand that is 20 per 100,000 and Singapore that is 10 per 100,000 KH [5].

The high MMR in Indonesia is a picture that women's health status still requires serious attention. Based on data from the Indonesian demographic health survey in 2007, 228 women were dying in every

100,000 births. This number increased to 359 per 100.00 live births, then MMR fell slowly to 305 per 100,000 births in 2015 [6].

Chronic energy deficiency is a health disorder in pregnant women as a result of a prolonged or chronic shortage of food. Pregnant women are known to suffer from chronic energy deficiency seen from LILA measurements of pregnant women with the risk of chronic energy deficiency is less than 23.5 cm [7]. It means that the mother has been suffering from malnutrition for a long time. If it happens, the nutritional needs for the process of fetal growth and development become late, consequently giving birth to low baby weight [8].

The proportion of women of childbearing age with the risk of chronic energy deficiency aged 15-19 years who are pregnant is 38.5% and those who are not pregnant as much as 46.6%. Meanwhile, the proportion of chronic energy deficiency risk for pregnant women to the age of 20-24 years is 30.1%, and the proportion of chronic energy deficiency risk for non-pregnant women is 30.6%. Then, at the age of 30-34 years, the number of a pregnant woman who experienced chronic energy deficiency is 21.4% and 13.6% who were not pregnant. It shows that the proportion of fertile age women and chronic energy deficiency risk has increased in 7 years [8].

Based on data on pregnant women in 2018 in terms of supplementary feeding, it is known that pregnant women who get supplementary feeding are 25.2%. Meanwhile, pregnant women who did not get supplementary feeding are 74.7% [8].

Data from South Konawe Regency explains those pregnant women who experienced chronic energy deficiency in 2017 are 1,360 pregnant women, and those who received supplementary feeding were 996 pregnant women. Meanwhile, in 2018 the number of mothers experiencing chronic energy deficiency in 2018 is 1,670 out of 1,100 pregnant women who received supplementary feeding. These data were based on the Health Office Counseling in 2018.

Pregnant women who do not experience chronic energy deficiency have a lower risk of illness when compared to pregnant women who experience chronic energy deficiency. It will have a higher risk, especially during the third trimester of pregnancy. Some risks can occur if the mother during the pregnancy experience chronic energy deficiency. First, during birth, the mother gives birth to a baby with low baby weight. Second, the mother experiences postpartum hemorrhage. Third, the mother experiences weakness and health problems that will very quickly occur. Moreover, babies born with low weight will be less able to adapt to new environments. Therefore, it will indirectly lead to growth and development disorders and threaten the lives of these babies [9].

Preliminary studies conducted note that the target supplementary feeding is given to pregnant women with the risk of chronic energy deficiency which based on the measurement of LILA, which has <23.5 cm. However, not all pregnant women with chronic energy deficiency themselves receive supplementary food that should be given. It is proven by the fact that there are still many health care centers that have not reached the target. The pregnant women also admit that they only get supplementary feeding for one month (30 days) because of the limited supplementary food packages received from the health care centers. Meanwhile, according to the implementation guidelines, supplementary feeding given to pregnant women with chronic energy deficiency should be given every day for 90 days.

Furthermore, during the implementation of supplementary feeding, there was no format or no personal record for monitoring of supplementary food for pregnant women with chronic energy deficiency. Monitoring is also not conducted once a week. It is done once a month or when the mother comes back to check her pregnancy.

The purpose of this study is to analyze the relationship between human resources and supervision and the supplementary feeding for pregnant women with chronic energy deficiency in the area of South Konawe District.

## **II. Materials and Methods**

This research used quantitative research with a cross-sectional study design. This research has been carried out from 5 May to 5 July 2019. The population in this study consisted of all health care centres in Konawe Selatan District, totaling 24 units. The sample sizes in this study were 22 nutrition coordinators representing each health care centres determined using simple random sampling.

### III. Results

#### Descriptive Analysis

**Table 1.** The distribution of human resources and supervision and supplementary feeding for pregnant women chronic energy deficiency in the southern Konawe district

Variables	Supplementary Feeding				Total	
	N	%	n	%	n	%
<b>Human Resources</b>						
Good	8	72.7	3	27.3	11	100.0
Low	2	18.2	9	81.8	11	100.0
<b>Supervision</b>						
Good	8	88.9	1	11.1	9	100.0
Low	2	15.4	11	84.6	13	100.0

Table 1 shows that good human resources were found more in health care centers with appropriate supplementary feeding practices (72.7%) compared to the health care center with inappropriate supplementary feeding practices (27.3%). In addition, less human resources were found in health care center with inappropriate supplementary feeding practices (81.8%) compared to health care center with appropriate supplementary feeding practices (18.2%). Supervision of the good category is more common in health care centers with appropriate supplementary feeding practices (88.9%) compared to health care centers with inappropriate supplementary feeding practices (11.1%). Meanwhile, less supervision tends to find in health care centers with inappropriate supplementary feeding practices (84.6%) compared to health care centers with appropriate supplementary feeding practices (15.4%).

#### Inferential Analysis

**Table 2.** The analysis of the relationship between human resources and supervision and supplementary feeding for pregnant women in the southern Konawe district

Variables	P value	Φ
Human Resources	0.032	0.48
Supervision	0.001	0.58

Table 2 shows that based on the chi square test it is obtained p value=0,032φ=0.48. It shows that there is a relationship between human resources and supplementary feeding for pregnant women with chronic energy deficiency in the area of South Konawe Regency. For supervision, p value = 0.001% φ = 0.58. It shows that there is a relationship between human resources and supplementary feeding for pregnant women with chronic energy deficiency in the area of South Konawe Regency

### IV. Discussion

#### The Relationship between Human Resources and Supplementary Feeding Practices

Human resources are one of the most critical organizational elements. Therefore, it must be ensured that human resource management is carried out as well as possible in order to be able to contribute optimally in the efforts to achieve organizational goals. The quality of human resources is the design of formal systems in an organization to ensure the effective and efficient use of human talent to achieve organizational goals [10]. The quality of human resources is an integrated capability of individual thought and physical power [11].

The results showed that there were three people (27.3%) with a good assessment of human resources, but the supplementary feeding practices in the health care centers are found to be inappropriate. It happens because the scope of work of each nutrition worker in the health care center is comprehensive with each geographical challenge in each health care centre. The facilities and infrastructure in the form of official vehicles do not really support the implementation in the field. Furthermore, it is known that the budget is sometimes late in disbursement so that the implementation of activities will also be hampered.

Furthermore, it was known that there were two people (18.2%) with insufficient human resources, but the supplementary feeding practices in the health care centers was known to be appropriate. Although in terms of human resources are lacking, aspects of funds support it. These funds are quickly budgeted for the needs of

the program. There is also close supervision of the leadership. Therefore, the implementation of activities is relatively in accordance with the specified scope.

The results showed that there is a relationship between human resources and supplementary feeding for pregnant women with chronic energy deficiency in the Konawe District. Furthermore, based on the results of the closeness of the relationship test, it is obtained that the value is 0.48, and it indicates a moderate relationship. It shows that the quality of human resources has a significant positive effect on financial performance. Human resources that have a high quality such as educational background and experience can improve financial performance because they are always driven to work effectively, efficiently and productively.

The quality of work refers to the quality of human resources and the quality of human resources refers to three essential things. First, knowledge is the ability of employees, which is more oriented to intelligence and power of the mind as well as the broad mastery of knowledge possessed by employees. Second, skills are the abilities and operational, technical mastery in specific fields owned by employees. Third, abilities are the abilities that are formed from several competencies possessed by an employee, including loyalty, discipline, cooperation and responsibility.

Apart from the number of terms, employee competence in carrying out tasks is also an important variable that must be analyzed to determine whether a program can run well or not. A mismatch between competencies possessed by employees and competencies needed in the position to carry out tasks can affect the low level of success of the task. Much competence is needed in managing supplementary feeding practices. Therefore, much training is required. Budget constraints result in the allocation of training participants not in accordance with the number of members who need competency improvement. From the aspect of human resources, the problem found in South Konawe District is that the distribution of nutrition workers in the health care centre has not been implemented according to the Ministry of Health 75 of 2016 on Job Analysis. It can be seen that there was a nutrition coordinator with an educational background, namely the midwifery diploma program.

Moreover, there is also a nutrition coordinator who is graduated from Public Health (Bachelor Degree) and is not a graduate in the field of nutrition. Although it is known that primary education is a diploma in the field of nutrition, it is deplorable because between nutrition and public health have different competencies. Likewise, midwifery and nutrition have different competencies so that in its implementation, there will be found problems that are indeed caused by a lack of the role of the resource itself.

#### *Relationship between Supervision and Supplementary Feeding Coverage*

Coaching and supervision are a process of monitoring employee performance based on work standards to measure performance, ensuring the quality of performance appraisal and information retrieval [10]. It can be used as feedback on the achievement of results communicated to employees.

The results showed that there was 1 (11.1%) nutrition coordinator with a good assessment of supervision. However, the health care centre is known to be incompatible with supplementary feeding practices. It can happen if the leadership in carrying out its supervisory function and leadership model uses an authoritarian system and does not listen to input from subordinates. Therefore, the implementation is not supported by the willingness of officers to carry out their duties and leadership.

Furthermore, there were 2 (15.4%) nutrition coordinators with a lack of supervision assessment. However, the health care centre was considered appropriate in supplementary feeding practices for pregnant women with chronic energy deficiency. It can happen if it is supported by human resources, who have adequate experience. Furthermore, the human resources must have a strong will and motivation so that even without active supervision, the officers are still able to carry out their duties in achieving the targets set.

The results showed that there is a relationship between supervision and supplementary feeding for pregnant women with chronic energy deficiency in the South Konawe District. Furthermore, it shows a healthy relationship. The results of the study show that the supervision conducted by the Manager of the Health Office of the Midwife Coordinator and Manager at the health care centre was carried out in two stages. First, supervision was carried out by gathering all midwives coordinators at the beginning of the year once to discuss the scope of the Maternal and Child Health (MCH) program in the previous year as well as the MCH coverage target in the current year. Second, the development of the MCH program is carried out by going directly to the health care centre with facilitative supervision as a form of monitoring and evaluation of the training and training that has been carried out previously.

Guidance and supervision carried out by the head of the health care centre, and program managers must be carried out routinely and adequately according to schedule to all program. Moreover, the program holder does not open with the head of the health care centre regarding the problem at hand. Therefore, the head of the health care centre considers that the activity is going well and smoothly. Supposedly, the head of the health care centre, which is the highest leader in the working area, should have a good managerial skill. One of them is

being able to maximize the potential of human resources in the health centre environment by embracing more health workers in it to be able to work effectively and efficiently.

## V. Conclusion

Human resources are significantly related to the supplementary feeding for pregnant women with chronic energy deficiency in the area of South Konawe District. Supervision is significantly related to the supplementary feeding for pregnant women with chronic energy deficiency in the area of South Konawe District.

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