ORIGINAL RESEARCH

RELATIONSHIP HUSBAND SUPPORT OF ANEMIA MANAGEMENT WITH INCIDENCE ANEMIA IN PREGNANCY

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ABSTRACT	Keywords
Anemia during pregnancy caused death in the mother and fetus. Husband's support for reduction the risk of anemia during pregnancy was important. The purpose study was to determine relationship husband's support of anemia management with the incidence anemia in pregnant. Design research used analytic correlation with a cross-sectional. The population were third trimesters pregnantcy in Mojokerto City. Sample size were 54 pregnant women with purposive sampling. Independent variabel was husband support. Dependent variabel was anemia in pregnant. Instrument used a questionnaire and Analyse data with spearman rank test. Results showed the majority had positive support and not anemia, namely 24 respondents (44.4%) while mild support and mild anemia were 15 respondents (25.9%). Spearman rank test $p = 0.0002$ and correlation coefficient 0.838. It's means the relationship between two variables is significant. The correlation between the relationship of husband support with anemic events in pregnant women and the nature of one-way relationships. There is a significant and very strong relationship. Husbands who are able to provide positive support to pregnant women can reduce the risk of anemia during pregnancy. The husband must provide support to wife including giving attention, empathetic, advice, knowledge so that the risk of anemia in pregnancy decreases.	**Husband Support, Anemia Management Anemia, Pregnancy**

INTRODUCTION

Pregnancy was a happy event for a woman but in pregnancy this will result in major changes especially in the physical, the mother will experience blood dilution or commonly called hemodilution which will result in the occurrence of anemia which was considered physiological in pregnancy (Costantine, M., 2014). But this physiological anemia, if there was no preventive effort, will lead to pathological anemia which was considered one of the most common causes of mortality and morbidity in the mother and baby, problems that can arise due to anemia during pregnancy are miscarriage (abortion), preterm birth, labor long due to fatigue of the uterine muscles in contracting, etc (Asrinah et.al. , 2010).

Pathological anemia can be prevented, one of which was with the husband's support because the husband was the closest person and who understands the condition of the mother's pregnancy so that she can provide encouragement or support to his wife during pregnancy. Support provided

by the husband to his wife includes instrumental support, informational support, emotional support, assessment support (Setiadi, 2013).

The incidence of anemia in pregnancy was still very high and occurs in almost all countries. The prevalence of anemia in pregnancy women was based on WHO 2016 data in African Countries 46.2%, America 25.5%, and in Indonesia 42.0%. And the prevalence of anemia in pregnancy women in the world reaches 40.1% (Bekele, Tilahun, & Mekuria, 2016). The prevalence of anemia in pregnancy women in Indonesia in 2013 was 37.1% and in 2018 it was 48.9% (Riskesdas, 2018). The prevalence of anemia in pregnancy women in 2015 in East Java Province has regencies/cities, showing prevalence above 10%, namely Situbondo Regency at 10.69%, Mojokerto City at 11.23%. The average anemia prevalence in East Java Province was 5.8%, the average number was still below the national target of 28% (2015-2019 RPJMN) in journals (Natalia, S., Sumarmi, S., & Nadhiroh, S. R., 2016).

Based on a preliminary study on January 14, 2019, in Community Health Center in the city of Mojokerto, pregnancy women who carried out antenatal care in October-December 2018 as many as 104 pregnancy women and the highest number of pregnancy women were in Balongsari Village, Mojokerto City. From the data, visits were made to 6 pregnancy and Hb levels were checked, from 6 pregnancy sthere were 3 pregnancy not anemic with levels (Hb> 11gr / dL) and 3 anemia with levels (Hb ± 8 gr / dL). Women with anemia said they often felt tired and sometimes feel dizzy. In addition to examining Hb levels, interviews were also conducted including the husband's support during pregnancy, from interviews conducted which showed that the husband's support was still lacking.

Anemia was more common in pregnancy, this was because during pregnancy the need for food substances increases and changes in the blood and bone marrow occur. In pregnancy, the need for oxygen increases so as to trigger an increase in erythropoietin production. As a result, plasma volume increases and red blood cells increase. However, an increase in plasma volume occurs in a greater proportion compared to an increase in red blood cells resulting in a decrease in hemoglobin (Hb) concentration which results in anemia (Jwa, S. C. et al., 2015). Factors affecting anemia include malnutrition, lack of iron in the diet, malabsorption, pregnancy, etc. (Heydarpour, F. et al., 2019). Anemia in pregnancy has an impact, such as abortion, premature labor, prolonged labor due to uterine inertia, postpartum hemorrhage due to uterine atony, shock, infection, etc.

Reduce the number of occurrences of anemia in pregnancy women by giving Fe tablets, it was also recommended to eat more protein and vegetables that contain lots of minerals and vitamins (Jwa, S. C. et al., 2015). Husband's support was very necessary for preventing anemia in pregnancy, the role of the husband was an important basic factor that surrounds pregnancy (Ariyani, R., 2016).

Based on the above problems, the purpose of this research is determine the relationship of husband's support in the management of anemia with the incidence of anemia in pregnancy women in Mojokerto City.

METHOD

Design study used *analytic correlation* with a *cross-sectional* approach. The research population is all end-third trimesters pregnancy in Mojokerto City. Time research on January until March 2019. Sample size were 54 pregnancy women. Sampling technique used purposive sampling. Independent variabel was husband support.

Dependent variabel was anemia in pregnancy. Instrument research used a questionnaire with a likert scale with a negative-positive statement. Analyse data used spearman rank test.

RESULTS

1. General Data

Characteristics of respondents based on maternal age, occupation, education, gestational age, ANC frequency, parity, adherence to Fe consumption, history of anemias, monthly income.

Table 1 Characteristic Distribution of Respondents

No	Type	F	(%)
1	**Mother's Age**		
	<20 years	2	3.7
	20-35 years	48	88.9
	>35 years	4	7.4
	Total	**54**	**100**
2	**Work**		
	Not work	26	48.1
	Work	28	51.9
	Total	**54**	**100**
3	**Education**		
	Not graduating	0	0
	from elementary	0	0
	school	9	16.7
	Elementary school	36	66.7
	Junior high school	9	16.7
	High school		
	College		
	Total	**54**	**100**
4	**Age of Pregnancy**		
	Second Trimesters	36	66.7
	Third Trimesters	18	33.3
	Total	**54**	**100**
5	**ANC Frequency**		
	Irregular	5	9.3
	Regular	49	**90.7**
	Total	**54**	**100**
6	**Parity**		
	first (1)	29	53.7
	sequence (2-4)	25	46.3
	Total	**54**	**100**
7	**Compliance with Fe Consumption**	0	0
	Never	28	51.9
	Rarely	26	48.1
	Routine		
	Total	**54**	**100**
8	**Anemia history**	37	68.5
	There was no	17	31.5
	There was		
	Total	**54**	**100**
9	**Monthly Income**	15	27.8
	<500.000	20	37
	500.000-1.500.000	19	35.5
	>1.500.000		
	Total	**54**	**100**

Based on Table 1 shows that almost all respondents aged 20-35 years were as many as 48 respondents (88.9%). Most of the respondents worked, namely as many as 28 respondents (51.9%). Most of the respondents' last education was high school as many as 36 people (66.7%). Most respondents in the second trimesters were 36 respondents (66.7%). Almost all respondents are regular in conducting ANC as many as 49 respondents (90.7%). Most of the parity first were 29 respondents (53.7%). Most respondents rarely consumed Fe tablets as many as 28 respondents (51.9%). Most respondents had no history of anemia as many as 37 respondents (68.5%). Most of the monthly income of respondents was 500.000-1.500.000 as many as 20 people (37%).

2. Special Data
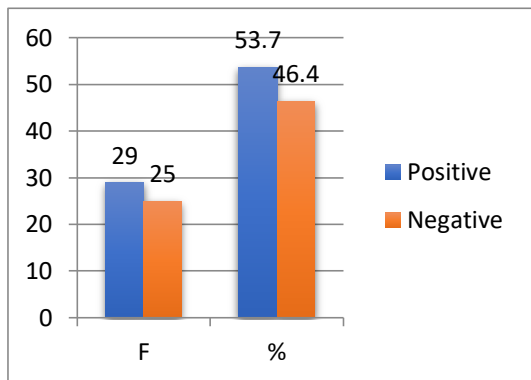a. Husband's support anemia management

Diagram 2 Husband's Support Anemia Management

Based on Diagram 2 shows that most respondents gave positive husband support as many as 29 people (53.7%). It means that the husband's support is very good in managing anemia. While negative support was 25 people (46.3%).
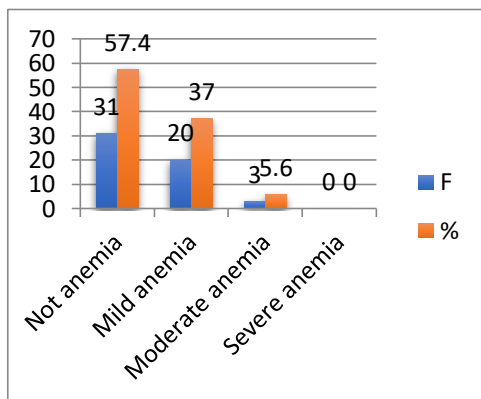
b. Anemia.

Diagram 3 Distribution of Respondents based on Anemia

Based on Diagram 3, the results of the study showed that most respondents were not anemic, namely, 31 respondents (57.4%), while a small proportion was moderate was 3 respondents (5.6%).
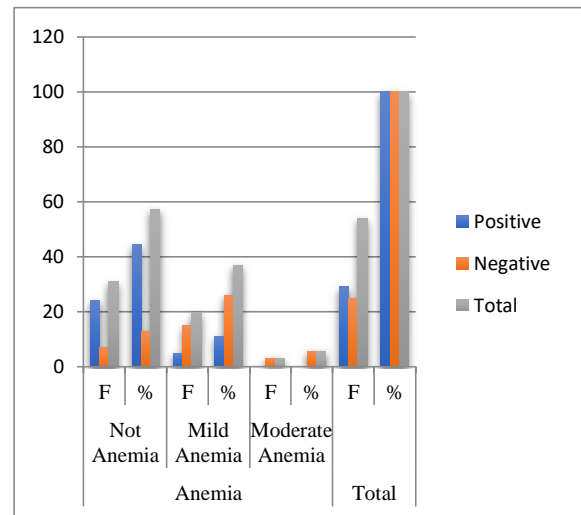
c. Relationship Between Husband's Support and Anemia

Diagram 4 Cross Tabulation Relationship between Husband's Support and Anemia

Based on Diagram 4 the results of the study showed that from a total of 54 respondents, respondents obtained positive support of 29 respondents (53.7%) and as many as 5 respondents (11.1%) had mild anemia, while 25 respondents (46.3%) received negative support. And as many as 15 respondents (25.9%) had mild anemia and 3 respondents (5.6%) had moderate anemia. Spearman rank test output obtained correlation coefficient number of 0.838. This means that the correlation between the relationship of husband support with anemic events in pregnancy and the nature of one-way relationships. A significant value of 0.002 means the relationship between the two variables is significant. There is a significant and very strong relationship between husband's support and the incidence of anemia in pregnancy. Husbands who are able to provide positive support to pregnancy can reduce the risk of anemia during pregnancy.

DISCUSSION

1. Husband's support

The results showed that most respondents supported her husband positively in the management of anemia as many as 29 respondents (53.7%). Positive support provided by the husband includes instrumental, emotional, assessment, and information support. Husband support was one of the most important for pregnancy. The husband was the first and foremost person in giving encouragement to his wife before the other party gives encouragement. During pregnancy, it was expected that husbands tend to react positively, and provide encouragement or support for their wives (Melati, R., & Raudatussalamah. 2012).

The role of the husband was to provide support. Husband can provide support by understanding and understanding every change that occurs to his wife, giving attention to love and trying to ease the workload of the wife (Ariyani, R., 2016). Based on emotional support, the respondent's husband provided support in the form of always paying attention to his wife so that his wife was always motivated to carry out a pregnancy check so that it could reduce the risk of anemia. However, there are still husbands who still lack support for their wives in conducting prenatal care because they are too busy at work and have no time to accompany their wives to have a pregnancy check-up.

Based on the assessment or award support, the respondent's husband provided support in the form of encouraging each wife to complain about her condition during pregnancy and was able to appreciate the effort her wife made in maintaining the condition of her pregnancy and reminded her to rest after doing the activities. However, many husbands are less supportive of their wives or have never tried to give encouragement when his wife feels lazy to consume Fe tablets, and some husbands pay less attention to his wife's resting time (Brannon, P. M. and Taylor, C. L., 2017).

Informational support on the respondent's husband provided support in the form of trying to find information through books and the internet media about how to prevent anemia in pregnancy, and the husband always tried to explain when his wife asked about the condition of the pregnancy (Bhutta, Z. A. et al., 2017). But there are still husbands of respondents who have never sought information on how to prevent anemia and there are still husbands of respondents who are not able to give understanding or explain when their wife asks because they do not know much about pregnancy.

Instrumental support, the respondent's husband provided support in the form of providing facilities and funds to support pregnancy checks and needs during pregnancy and the husband always tried to make time to accompany his wife for a pregnancy check-up. However, some husbands lacked facilities and funds to support their needs during pregnancy due to economic factors, and some husbands were busy with their jobs so that there was never time to accompany his wife for a pregnancy check-up.

Results of this study in accordance with the facts and theories that have been described that a husband's support was very important and needed by the wife during pregnancy. However, not all husbands have positive support, in this study the support provided by husbands was more dominant in instrumental support, namely support in the form of providing facilities, funds to support pregnancy examinations and needs during pregnancy.

2. Anemia

The results showed that the majority of respondents were not anemic (Hb Level > 11gr / dL) which was 31 respondents (57.4%), while a small percentage were moderate (Hb Level 7-8 gr/dL) which was 3 respondents (5.6%)

Anemia was a medical condition in which the number of red blood cells or hemoglobin was less than normal (Proverawati, 2011). Anemia in pregnancy was the condition of the first-trimester pregnancy women with hemoglobin levels below 11 g / dL or the hematocrit level drops to below 37%. And having anemia in the second trimester when the hemoglobin level was 10.5 g / dL or the hematocrit level drops to below 35%. While in the third trimesters when hemoglobin levels are less than 11 gr / dL or hematocrit levels are less than 33% (Bobak, Lowdermilk, & Jense, 2012). Pregnancy women said not to have anemia if Hb levels are > 11 gr / dL, mild anemia if 9-10 gr / dL, moderate anemia if 7-8 gr / dL, and severe anemia if < 8gr / dL.

Data through cross-tabulation between age and anemia incidence, it was found that the majority of respondents aged 20-35 years were 48 respondents (88.9%) and those who had anemia as many as 19 respondents (35.2%), anemia were 4 respondents (7,4%,). The ideal maternal age in pregnancy was in the age group of 20-35 at that age the risk of complications in pregnancy was smaller and has a healthy reproduction. <20 years old are at risk of anemia because biologic development, namely reproduction, was not optimal. Age above 35 years was a high-risk pregnancy, pregnancy women over the age of 35 years will also be susceptible to anemia (Ariyani, 2016). This was not in accordance with the theory which explains that the good age for pregnancy was 20-35 years. Although at that age the risk of complications was considered smaller but did not rule out the possibility of

pregnancy women experiencing anemia due to other factors.

Research data through cross-tabulation between gestational age and anemia incidence, most of the second trimester were 36 respondents (66.7%) with mild anemia status as many as 11 respondents (20.4%) and 3 respondents (5.6%) having moderate anemia. Pregnancy age affects the occurrence of anemia this was because they need for nutrients (iron) in pregnancy women will continue to increase in addition during pregnancy also occur remodels. This was in accordance with the theory that at the end of the second trimester of pregnancy the risk of anemia in pregnancy women will be higher due to increased nutrient requirements and remodels.

Cross-tabulation research data between adherence to Fe tablet consumption and the incidence of anemia, it was found that most respondents rarely consumed Fe tablets, namely 28 respondents (51.9%) with mild anemia status as many as 13 respondents (24.1%) and anemia while 2 respondents (2.7%). Compliance with consumption of Fe tablets affects the occurrence of anemia because during pregnancy iron derived from food cannot meet the needs during pregnancy so it was necessary to supplement the administration of Fe tablets (Ratnasari, 2017). This was in accordance with the theory and facts which shows that there was a tendency that mothers who regularly consume Fe tablets are less at risk of anemia.

Based on cross-tabulation research data between anemia history and anemia incidence, it was found that most respondents had no history of anemia, 37 respondents (68.5%) were anemic status 10 respondents (18.5%). History of anemia affects the occurrence of anemia in pregnancy because, during pregnancy, pregnancy women experience remodels and

increased iron requirements (Prawirohardjo, 2009). This was in accordance with the theory and fact where respondents who previously had a history of anemia during pregnancy also experience anemia.

Based on the results of this study in accordance with the facts and theories that anemia exists during pregnancy was influenced by several factors including compliance with consumption of Fe tablets, parity, gestational age, and history of anemia. However, there are some theories that are not right with the results of this study, including maternal age, and the frequency of ANC that does not indicate that these factors also influence the occurrence of anemia during pregnancy.

3. Relationship between husband's support in management anemia and the incidence of anemia in pregnancy

In accordance with the results of the study, it was obtained by cross-tabulation of a total of 54 research respondents obtained 24 respondents (44.4%) were not anemic with positive husband support and 7 respondents (13%) were not anemic with negative husband support. Spearman rank test output obtained correlation coefficient number of 0.838. This means that the correlation between the relationship of husband support with anemic events in pregnancy women and the nature of one-way relationships. A significant value of 0.002 means the relationship between the two variables is significant. There is a significant and very strong relationship between husband's support and the incidence of anemia in pregnancy.

Husband support was very necessary for an effort to prevent anemia during pregnancy. Husbands can help in the prevention of anemia, namely reminding his wife to routinely take Fe tablets, increase the consumption of nutrients from food, help his wife in homework, accompany and remind

her to regularly check her pregnancy (Ariyani, 2016). The form of the husband's support that a husband can give to his wife includes instrumental support, informational support, emotional support and assessment support (Manuaba, 2012).

Anemia in pregnancy was the condition of the first trimester pregnancy women with hemoglobin levels below 11 g / dL or the hematocrit level drops to below 37%. And having anemia in the second trimester when the hemoglobin level was 10.5 g / dL or the hematocrit level drops to below 35%. While in the third trimester when hemoglobin levels are less than 11 gr / dL or hematocrit levels are less than 33% (Bobak et al., 2012).

Compliance with the consumption of Fe tablets can be a cause of anemia during pregnancy so that pregnancy women are encouraged to consume at least 90 iron supplement tablets during pregnancy. If pregnancy women during pregnancy adhere to consuming Fe tablets, the risk of anemia was getting smaller (Indriyani & Asmuji, 2014).

History of anemia in gestational mother is able to worsen this disease according to the facts that in gestational mother, hemodilution occurs and iron requirement increased. If disease is not treated properly, this condition later would manifest in severing of anemia, which will give some adverse effects either on the mother or her fetus McArdle, H. J., Gambling, L., & Kennedy, C. (2014).

The age of the mother was known to be the cause of anemia during pregnancy. The ideal maternal age in pregnancy was in the age group of 20-35 at that age the risk of complications in pregnancy was smaller and has a healthy reproduction. <20 years old are at risk of anemia because biologic development, namely reproduction, was not optimal. Age above 35 years was a high-risk pregnancy, pregnancy women over the age

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of 35 years will also be susceptible to anemia (Ariyani, 2016).

Based on the facts from the results of the above studies in accordance with the theory, that the majority of respondents who received positive husband support were not anemic. This means that a husband who was able to provide positive support will reduce the risk of anemia in pregnancy. Therefore, the husband must try to provide support to the wife during pregnancy. Support can be given, namely support for energy, material, information, and attention, love. However, in this study there were several respondents who were not in accordance with the theory there were 5 respondents with positive husband support still experiencing mild anemia and there were 7 respondents with negative husband support who did not experience anemia. After reviewing the data, it was found that side from the husband's support there were other factors that influence the occurrence of anemia. In addition to positive support from husbands, adherence to Fe tablet consumption and history of anemia are also factors that can lead to anemia during pregnancy. Husbands who are able to provide positive support to pregnancy women can reduce the risk of anemia during pregnancy, the husband must provide support to wife including giving attention, being empathetic, giving advice, providing knowledge so that the risk of anemia in pregnancy decreases. Novelty in this research is Pregnancy women who are cared for and loved by their husbands during pregnancy will show fewer emotional and physical symptoms and fewer complications due to hemodellution.

CONCLUSIONS

Relationship between husband support and incidence anemia pregnacy is significant and very strong relationship. Husbands who are able to provide positive support to pregnancy can reduce the risk of anemia during pregnancy. Husband support better able to increase the readiness of the wife was facing the pregnancy process. The support that can be given by the husband includes emotional support, assessment, informational, and instrumental.

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