

# THE MODEL OF EMPOWERING POLICY IN MANAGING PREGNANT WOMEN AT RISK OF ANEMIA BY APPLYING THE SOCIO-CULTURAL APPROACH IN COASTAL AREA

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**ABSTRACT:** Anemia is a condition in which the blood does not have enough healthy red blood cells (lack of iron in a human body). When this condition occurs in pregnant woman, the haulage capacity of oxygen needed by vital organs of the woman and her fetus is reduced. Lack of iron in our body can have serious effects, and maternal mortality during childbirth are often caused by anemia. Data show that the percentage of anemia-related deaths is 75% worldwide, 73% in Asia, and 40% in developing countries. Iron deficiency in pregnant women can cause antepartum bleeding, making them highly vulnerable to infection. To the fetus and new-born babies, anemia can cause premature birth, low intelligence quotient (IQ), congenital abnormalities, and even death. This paper reports on a study of the socio-cultural factors and policy related to the conditions, facts, venue, and time associated to pregnant women at risk of anemia. The study employed a quantitative method and designed as the cross-sectional study. Samples were taken from the whole population, i.e., pregnant woman, in the coastal area of Abeli in Kendari, Southeast Sulawesi, in 2015. Findings of the study revealed a correlation between socio-cultural variables (knowledge, attitude, action, dietary habit, patterns of care, pattern of service, and family roles) and pregnant women who were at risk of anemia. However, there was no correlation between two variables, i.e. sources of information and aspiration, and anemic-prone pregnant women. The results of this study are expected to be taken into account in the policy-making and education to the community, as an effort to help pregnant women prevent anemia.

**Keywords:** Anemia; Pregnant Women; Socio-Culture.

## 1. INTRODUCTION

Health is one of humans' basic needs and investments in ensuring their life continuity. One of many threats to health is anemia, a condition in which the blood is lack of healthy red blood cells or an increase in hemoglobin. When this happens, the haulage capacity of oxygen needed by vital organs of pregnant woman and her fetus is reduced. Anemia can be caused by lack of body intakes of iron through food consumption, absorption problems, or because the body loses too much iron. World Health Organization (WHO) [1] reported that the prevalence of pregnant women with anemia all over the world is 41.8%. This prevalence varies, from 31% in South America to 64% in southern Asia. It is estimated that 72.6% of mortality in Asia is caused by anemia. A report by WHO further revealed that 40% of maternal mortality in developing countries is associated with during-pregnancy anemia [2]. According to Aaltjeh [3], 75% of maternal deaths during labor and delivery is closely related to anemia, usually because of heavy bleeding suffered by pregnant women, a long process of labor and delivery, and increased infection as a result of decreased body immunity. Anemia-related complaints often raised by people are those feelings of lethargic, weak, tired, fatigue, and numb in the body. In addition, people with iron deficiency will suffer from a decrease in their body immunity, making them vulnerable to infections [10]. Furthermore, Liewelm Jones [20] states that babies delivered by mothers suffering from severe anemia (with Hb level less than 6.5 gr%) are three times more vulnerable to prematurity than those born to non-anemic mothers.

Babies who are born to anemic mothers are also at a high risk of morbidity, and their mortality is higher than those born to

non-anemic mothers. A study by WHO [30] on the impact of anemia on pregnant women reported that: (1) Trimester I: anemia can cause abortus, missed abortus (death of fetus), and congenital abnormal (heart, lungs, form of red blood cells), (2) Trimester II: it causes premature childbirth, antepartum bleeding, impaired fetal growth in the womb, asphyxia intrauterine (respiratory disorders in utero) to death, low birthweight, gestosis and prone to infection, low IQ, and even death, and (3) Trimester III: at the time of inpartu, anemia can cause interference, either primarily (lack of initial reaction) or secondarily (other causes exist), babies are born carrying anemia and operative delivery due to mother's exhaustive condition, and during the postpartum anemia can cause atoni uterio, tension placenta (cumulated or undeliverable), vulnerability to febris puerpuralis (postnatal fever), and problems with involusio uteri.

This paper reports on a study on socio-cultural aspects and policy pertinent to conditions, facts, venues, and time related to the management of pregnant women who are at risk for anemia. The study focused on determining the relationship and model of policy on the empowerment and management of anemic-prone pregnant women through the application of a socio-cultural approach in the coastal areas of Abeli in Kendari, the capital city of Southeast Sulawesi.

## 2. METHOD

The present study employed a quantitative method and was designed as a cross sectional study. Population of the study was all pregnant women in the coastal areas of Abeli in Kendari, of Southeast Sulawesi, in 2014, amounting a total sampling of 119 pregnant women. The independent variable of the study was socio-cultural aspects (including knowledge,

attitude, action, dietary habits, sources of information, aspiration, pattern of treatment, pattern of service, and roles of family). The dependent variable was pregnant women who were at risk for anemia.

A uni-variable analysis was firstly conducted to obtain a description of each variable so that hypotheses testing by using the *chi-square* ( $X^2$ ) could be performed. This was followed by Focus Discussion Group (FGD).

### 3. RESULT

#### 3.1 RESPONDENTS' CHARACTERISTICS BASED ON THE VARIABLES OF THE STUDY

Results of the study revealed that the majority of the respondents (43 women or 35.3%) was in the 20-24 age segment, 36 respondents (30.3%) were on their second pregnancy, 105 respondents (88.2%) were housewives, 38 respondents (31.9%) possessed poor knowledge, 77 respondents (64.7%) had poor attitudes, 41 respondents (34.5%) took poor actions, 71 respondents (59.7%) adopted

poor dietary habits, 48 respondents (40.3%) came from families with poor roles, 45 respondents (37.8%) had a poor pattern of treatment, 41 respondents (34.5%) had a poor pattern of service, and 79 respondents (66.4%) were pregnant women who were at risk for anemia.

#### 3.2 ANALYSIS OF THE CORRELATION BETWEEN SOCIO-CULTURE AND THE INCIDENCES OF PREGNANT WOMEN AT RISK FOR ANEMIA

Results of statistical analysis using the *chi-square* at 95% level of significance ( $\alpha = 0.05$ ) and  $dk = 1$  came up with the following values of each variable: knowledge  $\rho = 0.047$ , attitude  $\rho = 0.000$ , action  $\rho = 0.018$ , dietary habits  $\rho = 0.000$ , pattern of treatment  $\rho = 0.004$ , pattern of service  $\rho = 0.006$ , family roles  $\rho = 0.015$ . These results indicated a correlation between those variables and pregnant women at risk for anemia. Different values, however, were gained by the other two variables, i.e. aspiration  $\rho = 0.205$  and sources of information  $\rho = 0.252$ . All these results are summarized on Table 1.

**Table 1. Results of bivariable analysis of socio-culture and pregnant women at risk of anemia**

Research Variables	Category	Status of Pregnant Women					$\rho$
		At risk		Not at risk			
		n	%	n	%	score	
Knowledge	poor	30	25.2	8	6.7	38	0.0047
	moderate	49	41.2	32	26.9	81	
Attitude	poor	65	54.6	12	10.1	77	0.000
	good	14	11.8	28	23.5	42	
Action	poor	33	27.7	8	6.7	41	0.018
	good	46	38.7	32	26.9	78	
Dietary Habit	poor	57	47.9	14	11.8	71	0.000
	good	22	18.5	26	21.8	48	
Aspiration	poor	9	7.6	8	6.7	17	0.205
	good	70	58.8	32	26.9	102	
Pattern of Treatment	inadequate	37	31.1	8	6.7	45	0.004
	moderate	42	35.3	32	26.9	74	
Pattern of Service	poor	34	28.6	7	5.9	41	0.006
	good	45	37.8	33	22.7	78	
Sources of information	poor	8	6.7	7	5.9	15	0.252
	good	71	59.7	33	27.7	104	
Family roles	poor	38	31.9	10	8.4	48	0.015
	good	41	34.5	30	25.2	71	

### 4. DISCUSSION

#### 4.1 KNOWLEDGE AND PREGNANT WOMEN AT RISK FOR ANEMIA

In terms of knowledge, findings of this study revealed that the majority of respondents (25%) had limited knowledge, that is, they had no adequate understanding of the fact that pregnant women are at risk for anemia. Indicative of this was the fact that the respondents were unfamiliar with the term anemia and the causes of anemia, nor did they have themselves checked at first trimester. They also appeared to be unaware of the benefits of consuming iron tablet that were provided by healthcare workers.

An important knowledge that the respondents are supposed to possess before they give birth is that pregnant women are at risk of anemia, which means that they need much more iron, particularly in the second trimester of their pregnancy. In this trimester, fetus is already formed along with the formation of bones and brain tissues, and iron is vitally needed in this

period. Likewise, pregnant mothers are in great need of iron to maintain the strength of their bones and teeth, as well as to alleviate fatigues. During this period, consumption of iron-rich foods, such as vegetables, meat, fish, and eggs, should be maintained.

This study further discovered that the prevalence of anemia on pregnant women reached 61.3%, a figure much greater than the threshold of anemic prevalence (i.e. 20%) [23]. Also found was a significant correlation between consumption of iron and Hb level of pregnant women in trimester II and III.

#### 4.2 ATTITUDE AND PREGNANT WOMEN AT RISK FOR ANEMIA

Attitude is one's implicit reaction or response to an entity. A manifestation of attitude is not immediately observable rather it can only be interpreted from implicit behaviors. According to Notoatmodjo [4], an attitude is not automatically shown in an action. To transform an attitude in real actions, supporting

factors or conditions that make it possible, such as facilities, are needed. Besides facilities, encouragement from significant others including parents, siblings, and husband, are also of great importance. Furthermore, Allport in [5] maintains that our ideas and concept about an entity are correlated to our emotional life to the entity, as well as our tendency to behave. These components altogether create an intact attitude, during which process knowledge, cognitive ability, belief, and emotion play pivotal roles.

In the field of social psychology, attitude refers to readiness or willingness to act, although it is not necessarily a fixed motive. Since an attitude is not always immediately manifested into action or behavior, it constitutes a predisposition of behavior. Attitudes can therefore be assessed directly or indirectly. A direct assessment on attitude is conducted by asking for respondent's opinion or by questioning them about an entity of interest, whereas an indirect assessment is performed by asking hypothetical questions, and respondents' opinion can be unveiled through their answers to the questions.

#### 4.3 TREATMENT AND PREGNANT WOMEN AT RISK FOR ANEMIA

On the cross tabulation (Table 1) between treatment and pregnant mothers at risk for anemia, 27.7% was found to receive poor treatment, with 6.7% at the risk for anemia. There was 38.7% of the respondents receiving good treatment, and 26.9% were not prone to anemia. Based on the results of statistical test by using the *chi-square*, it is conclusive to maintain that a correlation occurred between treatment received by pregnant women and their state of being at the risk for anemia.

For these reasons, it becomes important to consider health policy which relates to treatment of pregnant women, or to decisions made by the government, individuals, or communities.

Treatments to anemic-prone pregnant women are usually in the forms of, among others, antenatal care, consumption of nutritious food, reduce of activities, and taking account of relatives' advices on what should be and what should not be consumed during pregnancy. A large number of respondents refused to consume iron tablets on the grounds that the tablets had unpleasant aroma that caused nausea. The present study confirmed this phenomenon, that is, a main reason why pregnant women did not take iron tablets was because they experience some side effects of consuming the tablets, such as nausea, unwell feeling, pain, tension in the head, and vomiting.

Most respondents did not have their pregnancy taken care by doctor or healthcare professionals, but by midwife. This particular finding is in line with what was found by a previous study conducted in Abeli [5]. Given this condition, it is urgent that more intensive health educational programs be carried out to raise people's awareness of the issue. This is particularly important given the fact that 56.3% of the respondents of this study received their formal education only at elementary or junior secondary level. Also contributing to this condition is a socio-cultural factor, i.e. it is hard to change old habits that have been inherited from generation to generation.

#### 4.4 DIETARY HABITS AND PREGNANT WOMEN AT RISK FOR ANEMIA

Dietary habits among pregnant women are commonly characterized by low-iron bioavailability since their typical diets are commonly comprised of only rice or tubers with some nuts and a little meat, chicken, fish, and other foods containing vitamin C. There was 47.9% of respondents adopted poor dietary habit and were at risk for anemia, whereas 11.8% were not. Among the respondents who took healthy dietary habits, 18.5% were at the risk for anemia, whereas 21.8% were not.

Using the *chi-square* to conduct a statistical test, the study found that there was a correlation between dietary habits of pregnant women in coastal regions and their state of being at risk for anemia. This finding was corroborated with that of previous study, which discovered that lower bioavailability of iron in food we consume may result in our need for iron being insufficiently fulfilled [20]. It has been demonstrated that, in general, dietary habits are correlated to many incidences of anemia amongst teenage girls.

Pregnant women tend to adopt a habit of consuming a variety of foods containing substances, such as calcium phosphates, brans, phytic acid, and polyphenols, which can reduce the absorption of iron by our body. Phytic acid is abundant in cereals and nuts, and it is a substance that directly contributes to the poor availability of iron those foods. While dietary fiber does not inhibit the absorption of iron, the inhibitory effect in brans is caused by phytic acid. Polyphenols (phenolic acids, flavonoids, and polymerization products) are present in tea, coffee, and wine. Tannins contained in tea and coffee can decrease the absorption of iron down to 40% and 85% respectively. Therefore, it is important that pregnant mothers carefully manage their schedule for consuming tea or coffee [6, 21].

A study reported that 55.7% of pregnant women were suffering from anemia, and 43.5% of them dropping out consuming iron. To improve pregnant women's eating habits and intakes of iron tablets, it seems crucial that a policy is implemented in the forms of health education and empowerment programs aimed at encouraging pregnant women to adopt healthier dietary habits. Of equal importance is making iron tablets more appealing to the women so that they will be willing to consume them like snacks. Such empowerment policy is realized through "*Keluarga Sehat Cegah Anemia*" (KECE), a program designed to equip pregnant women with knowledge, attitude, and action that can help them prevent anemia.

#### 4.5 ASPIRATION AND PREGNANT WOMEN AT RISK FOR ANEMIA

A most common type of anemia amongst pregnant women is one that is caused by iron deficiency. Iron deficiency is surely unfavorable for pregnant women and infants because pregnant women with anemia are at higher risk of death than those who are non-anemic. At some points, a very high rate of maternal mortality in Indonesia has caused this disease to become a top-priority health problem in the country, since this condition is a reflection of not only how much healthy but also how much wealthy Indonesian people are, as well as how well quality health services have been provided. Direct causes of maternal deaths include complications of

pregnancy, delivery, and postnatal period, and any incorrect interventions or treatments for the complications. Therefore, people's aspirations, particularly those expressed by pregnant mothers, need to be given considerable attention since a lot of things can be learnt from them, including their existing conditions, time, facts, and places. Information about these factors are very helpful to enable adaptation to the local socio-cultural conditions, particularly those related to some medical and non-medical aspects in the society. Among the most important non-medical aspects are economic status of the family, mother's level of education, surrounding environment, behaviors, etc. [7]. The present study found that 17 respondents had poor aspiration, 9 of them (7.6%) were at risk of anemia and 8 (6.7%) were not. Out of 102 respondents with good aspirations, 70 (58.8%) were anemia-prone and 32 (26.9%) were not.

With regard to the aspirations of pregnant mothers, a lot of things need to be given serious attention. During pregnancy, women should be approached in multiple ways both by their close relatives and healthcare workers, in order to ensure that they are emotionally stable. Although test result of this study indicated no correlation between pregnant women's aspirations and their anemic-prone conditions, the respondents of the study expressed their needs for assistance that could help to keep their pregnancy in good conditions. For this reason, it appears urgent to implement an effective model of health policy, particularly one that concerns with pregnant women and how they can avoid the risk of anemia. In this model, each pregnant woman is supposedly assisted by a student from a health educational institution, who is tasked to keep on monitoring the woman until her delivery and informs her with some concepts of healthy lifestyle that must be observed during pregnancy.

People's, and especially pregnant women's, unawareness of the risk of anemia during pregnancy needs to be addressed by intensifying promotional and preventive efforts in the forms of publicizing, advocates, and education to various elements in the society. It must be admitted that without authority's intervention it will be difficult to raise people's awareness of the fatal impact of anemia on pregnant women. People's aspiration can serve as a source of information, on the basis of which considerations can be taken regarding with regular consumption of iron, dietary habits, and behaviors. This is in line with a result of the present study, which indicates that interventions through nutrition education to pregnant women can improve the knowledge, attitudes, and nutritional practices of the women. During the treatment in the study, the women were also asked to consume iron tablets once a week. This study showed that this approach could promote the women's observance on their consumption of iron tablets (83.3%), as well as increase hemoglobin level up to 3.28% gr/dl [8].

The respondents of this study also aspired their needs for training, enlightenment, and education during their pregnancy. This aspiration needs to be taken into serious attention in order to prevent anemia at its early stage. The main focus is on making efforts to increase knowledge, attitudes, and treatment for pregnant women. Furthermore, it is necessary to develop a model/design of planned behavioral changes with a view to increasing pregnant women's ability

and knowledge of handling anemia during their pregnancy. KECE model is offered as an alternative program to pregnant women, in which on a regular basis they receive health education specifically designed to teach them adequate knowledge, correct attitudes, and proper actions to be taken in treating anemia.

#### **4.6 SOURCES OF INFORMATION AND PREGNANT WOMEN AT RISK FOR ANEMIA**

Sources of information refer to ways that are designed to motivate people to change their behaviors (that have no advantages to themselves, their community, and their environment) for a better life by optimally utilizing sources of information as great medium of learning in ways that are not only more effective and efficient, but also more suitable to the conditions, time, facts, and venue of the coastal communities where the pregnant women live.

Results of the present study show that out of 15 respondents who had poor sources of information, 8 of them (6.7%) were at the risk of anemia, whereas 7 (5.9%) were not. Among 104 respondents who possessed good sources of information, 71 respondents (59.7%) were susceptible to anemia whereas 33 (27.7%) were not. Family has a number of supporting functions, including informational supports, assessment supports, instrumental supports, and emotional supports. In terms of informational supports, family functions to disseminate or spread any available information, as well as to seek information regarding anemia, consult about it, and gain more information from printed media and other available sources. Family also lend supports through verbal information, targets, and real assistance or action provided by those that are close to pregnant women, who can gain emotional as well as behavioral benefits from others' presence [9].

This is important because information provided by family can serve as a model that can motivate pregnant women to minimize the risk of anemia.

#### **4.7 PATTERN OF SERVICE AND PREGNANT WOMEN AT RISK FOR ANEMIA**

The relationship between resource and behavior can be positive or negative. For example, services provided at a healthcare center can affect ways in which the center is utilized by people. According to [10], every effort can be made, either individually or collectively in an organization, to maintain and improve health, prevent and cure diseases, and help individuals, family members, groups, or community to regain their health. A regulation is needed to impose sustainable and focused controls over providers of public service, including healthcare centers, as an endeavor to exert positive influences, either directly or indirectly, to the behaviors and functions of both public and private healthcare centers [18]. A main requirement is the availability of decent healthcare facilities, well-trained workers, technology, and enough medicines. However, what makes services inextricably related to pattern of service is because human's behaviors are the results of experience and interaction with its environment, which are then manifested in the forms of knowledge, attitudes, and actions. One's behavior is his/her response to a stimulus originated from either his/her internal or external world, so that the quality and quantity of access to healthcare services can affect maternal mortality rate.

According to McCarthy's model in [11], access to healthcare services is influenced by geographical location and condition, type of available services, quality of services, transportation, and access to information. How much efforts are made by people to seek for health-related information reflects their pattern of behaviors in the utilization of healthcare services, and in a broader sense this indicates the level of knowledge and trust people have on the healthcare services. The utilization of healthcare facilities in a community health center can be detected by using several indicators, including the number of visit per office hour and the frequency of visits to the center [12].

The present study found that out of 41 respondents with poor pattern of service, 34 respondents (28.6%) were at the risk of anemia, whereas 7 respondents (5.9%) were not. There were 78 respondents with good pattern of service, 45 of them (37.8%) were vulnerable to anemia and 33 (22.7%) were not. The utilization of healthcare services can be influenced by such factors as time, distance, cost, facility, doctor's rapport with client, quality of service, and the concept of sickness held by the community [13]. One type of services is administration of vitamins to ensure that our body has sufficient intakes of ferric acid and folic. It is important to make sure that at least 27 mg of iron is consumed every day. Thus, a type of service that pregnant women with anemia can receive is the administration of iron supplements by healthcare workers. This study revealed through statistical test using the *chi-square* ( $X^2$ ) that pattern of service is correlated to pregnant women at the risk for anemia. Following a concept offered by Anderson (1968) in [19], three factors leading to the utilization of antenatal care are *predisposing* component (one's predisposition to seek for services), *enabling* component (one's ability to seek for services), and *need* component (one's need for healthcare services). Anderson's model is then developed to see the relationship between these factors and pregnant women. A model of the utilization of antenatal services is linked to the *predisposing* factors, which include family structure, social structure and trust, health condition, mother's age, parity, birth spacing, education, knowledge, and attitudes. Included in the *enabling* factors are family sources and community sources, such as support from husband, family economic condition, payment, cost, time, availability of services, and distance. *Need* factor is related to sickness or illness, including medical history, complaints, and perception of healthy, mother's condition, medication plan, and hemoglobin (Hb). According to [9], instrumental supports are gained from family as a source of practical assistance and contact needed to solve problems.

#### **4.8 PATTERN OF TREATMENT AND PREGNANT WOMEN AT RISK FOR ANEMIA**

Behavioral changes are obviously needed if we aspire to achieve a higher level of health in the future, one which is oriented to the optimization of health potentials. Result of the present study, which was obtained by conducting a cross tabulation test, shows that 45 respondents had poor pattern of services, 37 of them (31.1%) were at the risk for anemia and 8 (6.7%) were not. Out of 74 respondents that had good pattern of services, 42 (35.3%) were at the risk of developing anemia, whereas 32 (26.9%) were not.

It is highly important that pregnant women receive decent treatment during their pregnancy, particularly to determine whether or not their pregnancy is at the risk of anemia, so as soon as they know that they are pregnant they have to begin receiving antenatal cares from midwife or doctor. They should be aware of the importance of receiving care during their pregnancy, not only to have their physical conditions and pregnancy regularly checked up to detect any problems or complications, but also to optimize their physical and mental well-being. If they can receive all these cares and treatments, they will be psychologically more prepared to face any possibilities related to the progress of their pregnancy, fetus condition in their womb, childbirth preparation, breastfeeding, and the return of their reproductive health to a normal condition.

Treatment in form of ANC visit refers to a contact between pregnant women and a healthcare worker where they talk about and share information about babies' health and well-being [24]. A model of approach that can be taken by healthcare workers is a nursing intervention aimed at helping client reduce health-risk behaviors. This model of treatment has been successfully applied to pregnant women, as well as to their families and communities.

#### **4.9 FAMILY ROLES AND PREGNANT WOMEN AT RISK FOR ANEMIA**

Women who function as housewives usually play double roles in their family, all the more if they have out-of-house occupational or social activities. It is often the case with wives who also work out-of-house job that, in preparing food for their family, they tend to attend more to the quantity, rather than the nutritional quality, of the food. Nutrition plays a vital role in the physical and mental development of our body. According to [14], family roles or supports refer to efforts, in the forms of moral and/or materials supports, exerted to others, as a way of promoting motivation to carry out their activities. If a husband shows his support by accompanying his wife to an integrated healthcare center for mothers and babies (posyandu), then the pregnant wife can feel more motivated to visit and receive services from the center. Support from husbands greatly affect their wives' willingness to utilize services provided by an integrated healthcare center for mothers and babies (posyandu), since it is commonly held by local communities that husbands are the leader of their family and all their decisions must therefore be respected. This means that the greater a husband's role in his family, the more likely it is that his wife be willing to receive services provided by an integrated healthcare center (posyandu).

Furthermore, gaining social supports from families is a process that occurs in our entire life, albeit they differ in terms of the types and natures of the supports in each life cycle. Nevertheless, family supports can enable all members of the family to perform their different functions by utilizing their minds and senses, which in turn can improve the health level and adaptation of the family [15]. One factor that affects a nutritional status is intakes of nutrition. For this particular reason, family plays important roles in ensuring the availability of nutritional foods, such as energy and protein, which are vitally needed by pregnant women and her fetus. The energy can be obtained from foods containing

carbohydrates, fats, and proteins. The energy can then be used to fulfill our needs, supports our growth process, and enable us to do our day-to-day activities.

A lack of protein in our body can degrade our nutritional status down to malnutrition, in turn causing anemia. Pregnant women need a lot of protein not only for their own body but also for her fetus. Protein functions to develop, grow, and maintain body tissues, as well as to run our body's self-defending mechanism and regulate our body metabolism. In this case, the roles of husbands and families are of great importance. They need to have adequate knowledge and understanding of the need to give considerable attention to their wives, always standing by their sides to fulfill their wives' needs and answer to their requests. Besides, some families may have some useful experiences that they can share to pregnant women, such as abstinence and suggestions concerning what should/must be and what shouldn't/mustn't be done by a pregnant woman.

## 5. CONCLUSION

This study attempted to look into the behaviors of anemic-prone pregnant women, who live in coastal areas of Abeli in Kendari of Southeast Sulawesi, and their correlation to the socio-cultural aspects of the local community. The study concludes that the variables of knowledge, attitudes, actions, dietary habits, pattern of treatment, pattern of services, and family roles are correlated to the pregnant mother who are at risk of anemia, whereas aspiration and sources of information were found to have no association to the respondents.

It is suggested that a cross-sectorial cooperation between the Regional Office of Health and related institutions is fostered so that the conditions of those living in the coastal areas can receive more serious attention from the local government. Community healthcare centers are suggested to run health education programs, in the forms of counseling, workshop, and training, for healthcare workers and traditional midwives.

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