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Level of Knowledge in Reproductive-Age-Women about Iron-Deficiency Anemia and Its Relationship between Age, Education and Occupation at Teladan Health Care Centre Medan

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Abstract : Background. Iron-deficiency anemia is one of the most important issue for reproductive age women in developing countries. It caused reduced work capacity in adults, impact motor and mental development in children and adolescents. Pregnant women with anemia will give low birth weight infants and hence increased infant mortality rate. In children, iron deficiency anemia has been reported to decrease cognitive performance and to delay mental and motor development. Considering all the complications of iron deficiency anemia, knowledge of iron deficiency anemia play an important role to prevent it.
Aim. To obtain the level of knowledge about iron-deficiency anemia in women in reproductive age and Its Relationship between Age, Education and Occupation at Teladan Health Care Centre Medan.
Method. This is a cross-sectional study, samples were collected with consecutive method by using questionnaires.
Results. This study showed that women in reproductive age in Teladan Health Care Center who have fair level of knowledge (52.1%), good level of knowledge (43.7%), only 4.2% with poor level of knowledge about iron-deficiency anemia. There were significant relationship between education towards level of knowledge. While, there is no significant relationship between age and occupation towards level of knowledge about iron-deficiency anemia.

Introduction

Iron deficiency anemia is considered as one of the most important global nutritional health problems and common medical conditions affects more than 2 billion people world wide, that can affect the lives of young children and premenopausal women in both low income and developed countries.[1-3] Iron play a big part in biologic functions, including respiration, energy production, DNA synthesis, and cell proliferation.[4,] It was conserved in several ways such as recycling the iron after breakdown of red blood cells and retention of iron in the absence of an excretion mechanism,[5] and this is controlled by hepcidin-based homeostatic controls.[6] which maintains total-body iron within normal ranges.[7] Iron deficiencies developed when intake fails to meet physiologic needs or when stores become depleted. Premenopausal women, young children, elderly hospitalized patients and individuals with gastro intestinal blood losses, malabsorption states, gastric cancer,[8-13] and pregnant women were at greatest risk.[14]

According to WHO, prevalence of iron deficiency anaemia in pregnancy range from an average of 14% of pregnant women in industrialized countries to an average of 56% (range 35–75%) in developing countries.[14,]

survey conducted by Faculty of Medicine of several universities in Indonesia on 2012 found 50-63% of pregnant women and 40% of reproductive-age women were anemic.

Iron deficiency anemia was categories into two groups: those involving reduced intake, and those involving increased losses.[5] Iron deficiency refers to decreasing in iron stores that precedes overt iron-deficiency anemia or persists without progression.[7] Individuals with iron-deficiency anemia have inadequate intake, impaired absorption or transport, physiologic losses associated with chronological or reproductive age, or chronic blood loss secondary to disease.[16] Furthermore, some physiological situations can increase the body's iron requirements, promoting its deficiency, for example, periods of rapid growth, pregnancy, and reproductive age in women (menstrual losses).[5] Low socioeconomic status is not a risk factor for iron-deficiency in women who never get pregnant, but it is a risk factor with the increased of iron demands imposed by pregnancy.[6]

Iron-deficiency anemia is frequently asymptomatic, chronic and often undiagnosed. One of the most important clincal finding is chronic fatigue. Difficulty in concentrating, and poor work productivity are nonspecific symptoms ascribed to low delivery of oxygen to body tissues and decreased activity of iron-containing enzymes. In children, iron deficiency decrease cognitive performance and delay mental and motor development. In pregnancy severe iron-deficiency anemia is associated with an increased risk of preterm labor, low neonatal weight, and increased newborn and maternal mortality.[7] Considering all the complications of iron deficiency anemia, knowledge of iron deficiency anemia play an important role to prevent it.

The purpose of this study is to describe the level of knowledge of women in reproductive age about iron-deficiency anemia.

Methods

This is a cross-sectional study conducted in Teladan Health Care Centre, Medan Indonesia from August to October 2016. Ninety six samples who fulfilled the inclusion and exclusion criteria were collected with consecutive method. Datas were collected by using questionnaires (supplement A). Questionnaires were tested for validity and realibility using correlate technique "product moment" and Cronbach test (cronbach alpha). and were analyzed using SPSS 23.

Results

Table 1. Table frequency of respondents' level of knowledge

Variable	Category	Frequency (people)	Percentage (%)
Level of knowledge	Good	42	43.8
	Fair	50	52.1
	Bad	4	4.2
Total		96	100

Table 1 showed that the majority of the respondents have fair knowledge about iron-deficiency anemia (52.1%).

Table 2. Table Frequency of respondents' level of knowledge by age

Age	Level of Knowledge								P value
	Good		Fair		Bad		Total	%	
	n	%	n	%	n	%			
15-24 y.o	8	19	13	26,0	1	25,0	22	22,9	0.552
25-34 y.o	16	38,1	18	36,0	0	0	34	35,4	
35-49 y.o	18	42,9	19	38,0	3	75,0	40	22,9	
Total	42	100	50	100	4	100	96	100	

Table 2 showed majority of the respondents with age 35-49 years old (reproductive ages) have fair knowledge about iron-deficiency anemia (38 %), and there was no statistical significant (p=0.552) to compare with another group.

Table 3. Table Frequency table of respondents' level of knowledge by education

Education	Level of Knowledge								P value
	Good		Fair		Bad		Total	%	0.021
	n	%	n	%	n	%			
School	22	52,4	39	78,0	4	100	65	67,7	
College	20	47,6	11	22,0	0	0	31	32,3	
Total	42	100	50	100	4	100	96	100	

Majority of the respondents (78%) with fair knowledge were from high school.

Table 4. Table Frequency of respondents' level of knowledge by occupation

Occupation	Level of Knowledge								P value
	Good		Fair		Bad		Total	%	
	n	%	n	%	n	%			
Civil servant	1	2,4	1	2,0	0	0	2	2,1	0.052
Private	2	4,8	0	0	0	0	2	2,1	
Employee	6	14,3	6	12,0	0	0	12	12,5	
Student	5	11,9	9	18,0	0	0	14	14,6	
Entrepreneur	9	21,4	2	4,0	0	0	11	11,5	
Salesman	2	4,8	1	2,0	1	25,0	4	4,2	
Housewife	17	40,5	31	62,0	3	75,0	51	53,1	
Total	42	100	50	100	4	100	96	100	

Sixty two percent of the respondents who have fair knowledge about iron-deficiency anemia were housewife (p = 0.052)

Discussion

In this study, we got the datas that education play an important role towards level of knowledge about iron-deficiency anemia, majority of the respondents with fair knowledge were from high school, house wife and reproductive ages, while, there is no significant relationship between age and occupation towards level of knowledge about iron-deficiency anemia. There for knowledge about iron deficiency anemia should be encouraged in school also health education about iron deficiency anemia should be propaganted in women society, thus iron deficiency anemia together with its complication can be prevented.

Conclusion

Women in reproductive-age in Teladan Health care Centre have a fair knowledge about iron-deficiency anemia.

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