



## The Correlation Between Self-Efficacy and Iron Tablets Consuming of Pregnant Women in Garut District

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### Article Info

#### Article History:

Submitted December 2018

Accepted June 2019

Published July 2019

#### Keywords:

self-efficacy, iron tablet  
consuming, pregnant woman

### Abstract

*Pregnancy of Maternal health is important the mothers and the infant. Anemia status is a condition that may cause a death against pregnant women. Consuming iron tablet lead pregnant women to prevent anemia. The purpose of this study was to identify the relationship between self-efficacy and consuming iron tablet during pregnancy. This study was a secondary analysis from previous study which included 262 pregnant women in the analysis. The pregnant women were in 5 Public Health Centers area in Garut District. The Data were collected using self-administered questionnaire. The result revealed that more than 50 % participant were confident and highly confident of taking iron tablets. Amount 22% of them were always consumed the iron tablet as they daily supplement. There was moderate correlation between self-efficacy and iron tablet consuming of pregnancy women in Garut District ( $r = 0,381$ ,  $\alpha < 0,01$ ). Health care providers are recommended to enhance pregnant women iron tablet consuming by improve their self-efficacy. It also can include their family as their motivator of improving self-efficacy to consume iron tablets.*

### INTRODUCTION

Hemorrhage is a direct cause of pregnant women deaths relate to obstetric postpartum complication (WHO, 2018). Say et al. (2015), explain that haemorrhage accounted for 27.1% as a direct cause of maternal death between 2003 and 2009 in 115 countries around the world. The haemorrhage condition can be worst if the women are in anemia status.

Ordinarily, anemia status impact not only to the fetus health but also to the pregnant women (Koblinsky, Chowdhury, Moran & Ronsmans,

2012). The pregnant women who anemia are include to maternal morbidity that impact to their quality of life (Koblinsky, Chowdhury, Moran & Ronsmans, 2012). Anemia occurs when the body are not sufficient of red blood cell in the body. The red blood cells are very important since the haemoglobin in the red blood cell chain the oxygen to all the body (Abu-Ouf, & Jan, 2015). The haemoglobin is produced by the body using iron as the main material. Moreover, Sanghvi, Harvey & Wainwright (2010) found that iron-deficiency anemia had caused maternal death more than

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pISSN 2252-6781

eISSN 2584-7604

Table 1. Iron Tablet Consuming of Pregnant Women

Consuming iron tablets	Always	Often	Sometimes	Rarely	Never
	21.7 %	46.4 %	26.6 %	4.2 %	1.1 %

100.000 maternal death per years caused by iron-deficiency anemia.

The world health organization (WHO) policy has 2 decades to guide the iron supplement to pregnant women to treat anemia around the worlds in primary health care setting (Rebecca, Stoltzfus & Dreyfuss, n.d). But it has been a problem for Garut District Indonesia to reach the target. The health department of garut district data showed that iron tablet coverage only 79.28% in 2012 (Health Office [HO] of Garut, 2013). This coverage remains the same value for 2013 (BPS Garut Regency, 2017). And, it was 93% for national target iron tablet target distribution (Indonesian Ministry of Health, 2015). It can be concluded that the iron tablet coverage of Garut district was 13.72% under national standard.

The data from health office of Garut District (2013) showed that anemia during pregnancies was amount 45% of 53.000 pregnant women. Compared to national rate, this number was 20% higher above of national rate (Kemenkes, 2013). To solve this problem, oral iron as therapy is suggested to prevent iron deficiency anemia (IDA) in the 1st and 3rd trimester of pregnancy even in the post partum period as well (Api et al., 2015).

Many studies showed that not only related to health action, self-efficacy also be a predictor of specific health behavior. Gacek (2016) explained that American football players whose higher level of self-efficacy had lower level of multivitamin supplements traits to use. McAuckley et al (2013) found that self-efficacy affect the physical performance of older adults. Another study by Faghri et al (2016), self-efficacy of the employees from 4 nursing homes in Northeast U.S was predict their healthy eating and physical activity. The higher of healthy eating scores and physical activity predicted the higher of self-efficacy of both. Previous study by Puspita et al (2015) showed that self-efficacy was a main factor that predict self-care behaviors of pregnant women during pregnancy in Garut District. However, it was needed to find whether self-efficacy related to iron supplement on pregnnat women in Garut District.

## METHODS

The secondary data used to explain the

question of the researcher. The analysis were included 262 pregnant women in all trimester who registered with public health centers (PHCs) in the Garut District, West Java, Indonesia. Those amount were randomly selected from five PHC's which are lie into north, central and south district.

The previous study was reviewed by The Ethical Review Board (ERB) committee of Boromarajonani Collage of Nursing Nopparat Vajira (BCNNV)-Bangkok Thailand with the approval number (ERB) No 48/2014. The data were analyzed using SPSS version 17. The data were analyzed using frequencies for univariate and uji korelasi Kendall's tau-b.

The questionare of iron tablets consuming and self-efficacy on consuming iron tablets supplement were classified to be likert scale: always, often, sometimes, rarely and never. The question of consuming iron tablets behavior were implied never done categoriez as never, did but less than sometimes or 1-2 times/week categoriez as rarely, did occasionally or 3-4 times/week categoriez as sometimes, did almost every time or 5-6 times / week categoriez as often and did regularly or 7 times /week categoriez as always. For self-efficacy of iron tablet consuming were explain that whether the participants were able to perform and confident in performing iron tablets consuming practices within the context of their lifestyle and any disabilities they might had.

## RESULT AND DISCUSSION

Less than a quarter (18.1%) of participant in this study were anemia. The participants were between 16 and 47 years old (Mean  $\pm$  S.D = 27.7  $\pm$  6.37). Most of them were between 20 and 35 years old and were 2nd and 3rd trimester (79.1%, 80,6% respectively; data not shown). The univariate analysis showed that a number of 21.7 % of pregnant women participant always consume iron tablets on they daily diet. Another majority of the participant were often, sometimes, rarely and never consume iron tablets (46.4%, 26.6%, 4.2 % and 1.1% respectively) (see Table 1). Table 2 shows that more than 50% of pregnant women were in always and often category to consume iron tablets supplement. Rest were sometimes, rarely, and never category to consume iron tablets

Table 2. Pregnant Women Self-Efficacy on Consuming Iron Tablet Supplement

Self-efficacy of consuming iron tablets	Always	Often	Sometimes	Rarely	Never
	24.1 %	28.2 %	43.9 %	2.7 %	1.1 %

Table 3. The Kendall's tau-b correlation coefficient variables

		Self-efficacy of consuming iron tablets	Consuming iron tablets
Self-efficacy of consuming iron tablets	Correlation Coefficient	1	.381**
	Sig. (2-tailed)		.000
	N	262	262
Consuming iron tablets	Correlation Coefficient	.381**	1
	Sig. (2-tailed)	.000	
	N	262	262

\*\* . Correlation is significant at the 0.01 level (2-tailed).

(43.9%, 2.7% and 1.1%, respectively). The univariate analysis showed below.

Table 3 shows the bivariate analysis between self-efficacy and consuming iron tablet of pregnant women. There was moderate correlation between self-efficacy and iron tablet consuming of pregnant women in Garut District ( $r = 0.381$ ,  $\alpha < 0.01$ ).

Regarding study data, garut district had common micronutrient health problem during pregnancy namely anemia. The prevalence was 18.6%. This common problem occurred around the world. As explained by Sharma & Shankar (2010) and McMahon (2010), anemia during pregnancy were common. This happen is caused by deficit of iron consuming in the developed or developing countries.

The analysis shows that almost 80% of the participants were aged between 20 and 35 years old. Accordingly, Singh, Khan & Mittal (2013), this age are more likely to get anemia during pregnancy. This study was inconsistent with the finding of Al-Mehaisen et al. (2011). In which age were not significantly associated with anemia status of pregnant women. Further, Al-Mehaisen et al. (2011) explained that pregnant women are more likely to being anemia in the second and third trimester. It was in line with this study where most of the participant (80.6%) were in second and third trimester of pregnancy. Pregnant women need to increase their micro nutrient to support pregnant women and fetus health in last trimester.

Regarding the table above, there were 1.1% of pregnant women never consume iron tablets during their pregnancy and those amount number were not have any self-efficacy to consume iron tablets. Since self-efficacy in specific behaviors control of individual against a disease (MacMullen et al., 2013). This study explained that pregnant women who did not have self-efficacy to consume iron tablets, they never consume the iron tablet as well. As explained by Baharzadeh et al (2017) self-efficacy is a strong factors con-

rolled behavior to avoid drinking tea immediately after meal and consume iron supplement on pregnant women in South Iran.

The result of this study revealed that there was moderate correlation between self-efficacy and consuming of iron tablet during pregnancy ( $r = 0.407$ ,  $\alpha < 0.01$ ). The correlation was positive which means that the higher pregnant women self-efficacy the higher of pregnant women' iron tablet consuming in Garut District. This study was in line with some studies whereas self-efficacy as the variabel. The study not only on women but also men, many health behaviors and different age.

Lewis et al. (2016) stated that self-efficacy at sixth month intervention was correlated with Physical activity (PA) behavior low active women and men ( $r = 0.403$ ,  $p < 0.001$ ). Next, Shakibazadeh et. al. (2015) found that self-efficacy and self-care behaviors had positive correlation ( $r = 0.22$ ;  $P < 0.01$ ) of type two diabetic patients in Tehran, Iran. Besides that, Jamieson et al. (2014) also explained that pregnant women who have low self-efficacy were indicated to poor self-rated oral health in aboriginal Australian Women. Last, McAuley et. al. (2011) explained that self-efficacy is a determinant to the physical activity maintenance whether in adults or older adults.

Regarding Artino (2012), pregnant women who have self-efficacy about a behavior, they would more likely to participate in this behavior. Therefore, pregnant women who have self efficacy consuming iron tablets more likely to consume it in they daily diet or as prescribe from their health care provider. This study result confirmed that self-efficacy is one of factors likelihood of health promoting behaviors as explained in the health believe model (HBM).

Another model, Health promotion model (HPM) placed self efficacy as a factor that effect to commit on a behavior. The greater self efficacy of an individual will minimize the perceived obstacles to do something (Pander, et al., 2011). It was proofed by a study from Khodaveisi et al.,

(2016), the mean score of nutritional behaviors of overweight and obese women on self-efficacy were increased after treated by HPM-based training.

## CONCLUSION

It can be conclude that health care provider should improve grade level of pregnant women iron consuming during pregnancy to prevent anemia among them. Gaining self-efficacy to consume iron tablets of pregnant women might be a simple solution to decrease pregnant women morbidity and mortality caused by iron deficiency in Garut district.

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