

AN ACTION RESEARCH TO CONTROL AND PREVENT IRON DEFICIENCY  
ANEMIA IN WOMEN OF REPRODUCTIVE AGE IN A FACTORY  
IN CHACHOENGSAO PROVINCE



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## Abstract

This is an action research study to supplement weekly iron tablet and improve nutrition education to prevent iron deficiency (ID) and iron deficiency anemia (IDA) in a factory in Chachengsao Province. The 118 participants were women of reproductive age between 18-43 years of age. The majority of them were direct laborers working in different lines of keyboard production. Quantitative data of demographic profile, history of health, food frequency consumption and K&P on iron deficiency anemia were collected as baseline data. Hemoglobin (Hb), Serum Ferritin (SF) and red blood cell (rbc) morphology were indicators for assessing iron status of the participants.

For baseline data, it was found that means of Hb1 was  $12.2 \pm 1.1$  g/L, SF1 was  $80.7 \pm 66.3$  mcg/L. The prevalence of anemia (Hb1 < 12.0 g/dL) was 31.4%, iron deficiency (SF2 < 30 mcg/L) was 13.6%. The prevalence of Hb1 < 12.0 g/dL was 31.4%, SF1 < 30 mcg/L was 13.6% and SF1 < 60 mcg/L was 68.7%. The prevalence of ID1 (SF1 < 30 mcg/L), IDA1 (Hb1 < 12 g/dL + SF1 < 30 mcg/L) and anemia from other causes (OA1 = Hb1 < 12 g/dL + SF1  $\geq$  30 mcg/L) were 5.1, 8.5 and 22.9% respectively. The prevalence of ID1 (SF1 < 60 mcg/L), IDA1 (Hb1 < 12 g/dL + SF1 < 60 mcg/L) and anemia from other causes (OA1 = Hb1 < 12 g/dL + SF1  $\geq$  60 mcg/L) were 28.0, 40.7 and 11.9% respectively. After 20 weeks of the intervention, it was found that mean of Hb2 was  $12.2 \pm 1.0$  g/L, SF2 was  $110.0 \pm 92.4$  mcg/L. The prevalence of Hb2 < 12.0 g/dL was 32.2%, SF2 < 30 mcg/L was 3.4% and SF2 < 60 mcg/L was 28.0%. The prevalence of ID2 (SF2 < 30 mcg/L), IDA2 (Hb2 < 12 g/dL + SF2 < 30 mcg/L) and anemia from other causes (OA2 = Hb2 < 12 g/dL + SF2  $\geq$  30 mcg/L) were 0, 3.4 and 28.8% respectively. The prevalence of ID2 (SF2 < 60 mcg/L), IDA2 (Hb2 < 12 g/dL + SF2 < 60 mcg/L) and anemia from

other causes (OA2=Hb2<12g/dL+ SF2 >=60mcg/L) were 13.6  
14.4, and 17.8% respectively. IEC was another key  
element to combat iron deficiency among the participants.  
It was found that the scores of knowledge on IDA was  
statistical significant difference ( $p<0.01$ ) and scores of  
knowledge on iron-rich food was statistical significant  
difference ( $p<0.001$ ) but scores of practice on frequency  
of iron-rich food consumption did not statistical  
significant difference compared between the pre and post  
tests. After 10 month intervention, focus group  
discussion, in-depth interview were employed to evaluate  
the compliance of weekly iron supplementation. It was  
found that most of the participants took weekly iron  
tablet regularly in 89.8% because it was closely  
supervised. Another important reason was that the  
participants themselves felt the benefits of iron tablet  
intake.

In conclusion, weekly iron tablet intake proved  
to give positive result for the control and prevention of  
iron deficiency even though the participants were in good  
conditions of socio-economic and food security. As  
revealed in this study advocacy among high level persons  
in factories should be considered. Also IEC materials  
should be developed from a woman's perspectives and  
designed by professional developers.

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