

***THE EFFECT OF SOY MILK AND RED BEAN MILK
SUPPLEMENTATION ON THE HAEMOGLOBIN LEVEL OF ANEMIC
ADOLESCENT GIRLS***

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Abstract

Background: The prevalence of anemia in adolescent females in Indonesia is still high, namely 22.7%. Anemia is caused by nutritional and non-nutritional factors. The utilization of plant-based ingredients that are high in protein and iron such as soybeans and red beans is one attempt to meet the needs of protein and iron for patients with anemia.

Objective: This study aims to determine the effect of soy milk and red bean milk administration to the haemoglobin level of anemic adolescent females.

Method: This study is a quasi-experimental research using pre-post test without control design. In this study, the initial and final haemoglobin levels were measured. The number of respondents was 72 female junior high school students. This research was divided into two treatment groups: group 1 was administered the intervention of 250 ml soy milk containing 13.5 grams of protein and 4.125 mg of iron, and group 2 was administered the intervention of 250 ml red bean milk containing 13.75 grams of protein and 4.1 mg of iron. The intervention was done everyday for 14 days in a row.

Results: As a result, there was an increase in respondents' haemoglobin level with a mean of 0.39 g/dl in the soy milk group and 0.33 g/dl in the red bean milk group. Although the test results showed significant increase between the initial and final Hb levels at both groups of soy milk and red bean milk ($p = 0.000$), the increase of haemoglobin levels did not differ between the two treatment groups ($p = 0.360$). Presentation of anemia before intervention was 100% in both soy milk group and red bean milk group. After the intervention, the prevalence of anemia decreased by 25% in the soy milk group and 63.9% in the red bean milk group.

Conclusion: Consumption of both 250 ml soy milk and 250 ml of red bean milk for 14 days in a row can increase haemoglobin level of anemic adolescent females.

Keywords: Haemoglobin, soy milk, red bean milk, adolescent females, anemia

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