

## ABSTRACT

Anemia is one of nutrition problem, which needs to be highly concerned. Anemia remains a nutritional problem in the world, especially in developing countries, including Indonesia. Anemia is a condition in which the levels of hemoglobin someone in the blood is lower than normal. The groups at risk of suffering from anemia is adolescent girls. Some research in several areas in Indonesia showed the high prevalence of anemia in adolescent girls. Anemia can be caused by lack of nutrients intake and blood loss (menstruation). This study aims to know the correlation between level adequacy of nutrition and menstruation pattern with anemia in adolescent girls in Senior High School 3 Surabaya.

This study was an analytic observational research using cross sectional design. The sample studied was 78 subject selected by using proportional random sampling of all female students grade X and XI. The level adequacy of nutrition data were obtained by Semi Quantitative Food Frequency Questionnaires (SQ-FFQ) and compared to Recommended Dietary Allowances (RDA). The data of menstruation pattern were gained by a structured questionnaires. Data of anemia were gained by hemoglobin concentration were measured by digital hemoglobinometer (easy touch). The data were analyzed by chi-square test.

The result showed there were correlation between level adequacy of protein ( $p=0.031$ ) and vitamin C ( $p=0.020$ ) with anemia. There were no correlation between level adequacy of energy ( $p=0.518$ ), iron ( $p=0.416$ ), zinc ( $p=0.392$ ), calcium ( $p=0.568$ ), cycle of menstruation ( $p=0.731$ ), and duration of menstruation ( $p=0.220$ ) with anemia.

The conclusion of this study is respondents who had adequate intake of protein and vitamin C will reduce the risk of anemia. Therefore, respondents are encouraged to maintain intake of protein and vitamin C to prevent anemia.

**Keywords:** Anemia, level adequacy of nutrition, menstruation pattern, adolescent girls.

## ABSTRAK

Anemia merupakan salah satu masalah gizi yang perlu mendapat perhatian khusus. Anemia masih merupakan masalah gizi di dunia, terutama di negara berkembang termasuk Indonesia. Anemia merupakan suatu keadaan dimana kadar hemoglobin seseorang dalam darah lebih rendah dari normal. Salah satu kelompok yang berisiko menderita anemia adalah remaja putri. Beberapa hasil penelitian di beberapa daerah di Indonesia menunjukkan masih tingginya prevalensi anemia pada remaja putri. Anemia dapat disebabkan oleh asupan zat gizi yang kurang dan kehilangan darah (menstruasi). Penelitian ini bertujuan untuk mengetahui hubungan tingkat kecukupan zat gizi dan pola menstruasi dengan kejadian anemia pada remaja putri di SMAN 3 Surabaya.

Penelitian ini merupakan penelitian observasional analitik dengan desain penelitian *cross sectional*. Jumlah sampel sebanyak 78 orang dipilih secara *proportional random sampling* dari seluruh kelas X dan XI. Data tingkat kecukupan zat gizi didapatkan melalui kuesioner SQ-FFQ lalu dibandingkan dengan Angka Kecukupan Gizi (AKG). Kuesioner pola menstruasi didapatkan melalui kuesioner terstruktur. Data anemia didapatkan dari pemeriksaan kadar hemoglobin dengan menggunakan alat hemoglobinometer digital (*easy touch*). Data dianalisis dengan korelasi *chi-square*.

Hasil penelitian menunjukkan bahwa ada hubungan antara tingkat kecukupan protein ( $p=0,031$ ) dan vitamin C ( $p=0,020$ ) dengan kejadian anemia. Tidak ada hubungan antara tigkat kecukupan energi ( $p=0,518$ ), zat besi ( $p=0,416$ ), seng ( $p=0,392$ ), kalsium ( $p=0,568$ ), siklus menstruasi ( $p=0,731$ ), dan lama menstruasi ( $p=0,220$ ) dengan kejadian anemia.

Berdasarkan hasil penelitian dapat disimpulkan bahwa responden yang memiliki tingkat kecukupan protein dan vitamin C cukup akan menurunkan risiko terkena anemia. Oleh karena itu, responden dianjurkan untuk mempertahankan asupan protein dan vitamin C untuk mencegah kejadian anemia.

**Kata kunci:** Anemia, tingkat kecukupan zat gizi, pola menstruasi, remaja putri.