

UNIVERSITI TEKNOLOGI MARA (UiTM)

**DIETARY HABITS LINKED TO ANEMIA IN PREGNANT WOMEN
RECEIVING ANTENATAL CARE IN KUALA SELANGOR**

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ABSTRACT

Anemia during pregnancy is common with prevalence is 19.3 to 57.4%, in Malaysia. Inappropriate dietary habits could lead to iron deficiencies including the frequency of meals, the intake of fruits and vegetables, the consumption of tea or coffee during mealtimes, dietary variety, pica, and food aversion. Therefore, this cross-sectional study will be focusing on exploring the connection between dietary habits and anemia and further, to identify the determinants of anemia in relation to dietary habits in pregnant women receiving antenatal care services in Kuala Selangor. About 145 pregnant women aged between 18-45 years old attending antenatal care services were recruited. Hemoglobin level was obtained from the health record book. Sociodemographic data and dietary habits were collected using a structured questionnaire. A multivariate logistic regression analysis was conducted to identify the predictors of anemia in pregnant women. The overall prevalence of anemia is 27.1%. Of these 4.0% had mild anemia and 23.3% had moderate anemia. Based on this study, anemia was not significantly associated with dietary diversity (AOR: 0.898; 95% CI=0.392-2.055; $P > 0.005$), drinking tea or coffee with a meal (AOR: 1.471 95% CI=0.715-3.026; $P > 0.005$) and consuming ≥ 3 meals/d (AOR:1.049; 95% CI: 0.510-2.158; $P > 0.005$). Thus, it is recommended to develop comprehensive nutritional education programs for pregnant women, emphasizing the importance of a balanced diet rich in iron and other essential nutrients to prevent anemia, rather than focusing solely on early diagnosis and treatment during pregnancy.

Keywords: dietary habits, pregnancy, anemia, dietary diversity, dietary factors

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CHAPTER 1: INTRODUCTION

1.1 Research background

According to the World Health Organization's definition, anemia is a disease marked by a lesser quantity of red blood cells or a lower-than-normal concentration of hemoglobin within these cells (WHO, 2023). The hemoglobin levels for different categories of anemia during pregnancy are as follows: 10.0–10.9 g/dl (mild), 7–9.9 g/dl (moderate), and <7 g/dl (severe) (Argaw et al., 2020). Anemia impacts over 2 billion individuals worldwide, encompassing roughly 30% of the global population. The estimated prevalence of anemia is approximately 43% in developing countries and 9% in developed nations (Argaw et al., 2020). During pregnancy, anemia can result in reduced birth weight, premature delivery, and increased risks of perinatal, neonatal, and maternal mortality (M. Rahman et al., 2016). Beyond its health-related implications, anemia can exert significant economic burdens on individuals, families, communities and entire nations. As claimed by the World Health Organization (WHO), the latest figures released, the current data suggests that 41.8% of pregnant women are affected by anemia, with the most significant prevalence observed in Africa (61.3%) and Southeast Asia (52.5%) (Argaw et al., 2020).

Inadequate dietary intake during pregnancy stands as a prominent factor that can lead to the diagnosis of anemia in expectant mothers. Pregnancy triggers substantial physiological changes within your body, including a 20% to 30% increase in blood volume. This increase in blood volume necessitates a greater supply of iron and essential vitamins to facilitate hemoglobin production. Unfortunately, many women do not meet the required iron intake during the second and third trimesters of pregnancy. When the body's demand for iron surpasses its available supply, anemia can develop. Mild anemia is considered a normal occurrence during pregnancy due to the expanded blood volume. However, more severe anemia poses an elevated risk to both the fetus and the mother's health. Severe anemia in expectant mothers can predispose their babies to anemia in early