

UNIVERSITI TEKNOLOGI MARA

**THE ASSOCIATION BETWEEN PRENATAL FACTORS AND DIETARY
CHARACTERISTICS ON MENTAL HEALTH OF PREGNANT WOMEN
IN SELECTED COMMUNITY CLINICS IN SELANGOR**

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ABSTRACT

Research problem: The global statistics have noted an alarmingly high prevalence of depression (29%), which is in line with local statistics of 20.2% depression and 22.5% anxiety in Malaysia. **Aims of research:** Thus, this study aimed to determine the association between prenatal factors and dietary characteristics on the mental health status of pregnant women in the selected community clinics in Selangor. **Methodologies used:** A cross-sectional study was conducted in the community chosen clinics, specifically in Kuala Selangor. Secondary data was obtained, involving the target participants of 200 pregnant women recruited by purposive sampling techniques. In this study, FFQ was used to gain information on the maternal dietary intake, while DASS-21 was used to evaluate their mental health status. **Key findings:** Based on the multivariate analysis, logistic regression found that prenatal factors such as gestational age were associated with the induced stress level, especially during the second trimester (OR 0.338; 95% CI 0.139, 0.825; $p = 0.017$) and third trimester of pregnancy ($p = 0.048$). As for the dietary characteristics, low protein intake was associated with depression (OR 2.823; 95% CI 1.030, 7.740; $p = 0.044$), low carbohydrate intake was associated with anxiety (OR 2.182; 95% CI 1.023, 4.654; $p = 0.043$) and high energy intake was associated with increased antenatal stress (OR 6.406; 95% CI 1.145, 35.830; $p = 0.034$). **Implications of study:** This study served as a baseline in addressing the possible contributing factors during the prenatal phase, which could enhance the risk of mental health issues among pregnant women, specifically in Malaysia.

Keywords: *Prenatal factors, dietary characteristics, mental health status, depression, anxiety, stress.*

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CHAPTER 1: INTRODUCTION

This chapter will cover the background of the study on the association of maternal prenatal factors and dietary characteristics with the mental health of pregnant women in selected community clinics in Selangor. It will also cover subtopics such as problem statement, significance of the study, research questions, objectives, and hypothesis. The study is designed to assess the possible contributing factors to their mental health status, such as prenatal Body Mass Index (BMI) status, maternal weight gain, medical condition, and dietary intake of the targeted pregnant women. Ultimately, this is important to determine whether maternal prenatal factors and dietary characteristics influence the maternal mental well-being, which subsequently can affect the nutritional status and mental health of the children in later life.

1.0 Background of the study

The comorbidity and mortality of infants have always been people's fields of interest to explore, as they mirror the predictability of the future generation's general health status. The Developmental Origins of Health and Diseases (DOHaD) affirms that maternal prenatal factors, such as maternal weight gain (Jan Mohamed et al., 2021) and maternal diet (Yang et al., 2023) during pregnancy, can determine the health trajectory of infants in the later phase of life (Chen et al., 2021). Likewise, pregnancy is described as a critical period in a woman's life, especially when contributing factors such as psychological stress, which consequently can affect both her health and the long-term health of her unborn baby (Rakers et al., 2020). Maternal stress during pregnancy is also associated with adverse birth outcomes, which indirectly may increase the child's risk of developing mental health, heart, and metabolic problems later in life (Rakers et al., 2020).

Poor nutritional intake during pregnancy can lead to undernutrition and inadequate infant development (Institute for Public Health (IPH), 2023). Malnourished infants have a higher risk of infections and are susceptible to diseases and illnesses (IPH, 2023). Furthermore, their recovery process would be interrupted due to the