

UNIVERSITI TEKNOLOGI MARA

**FACTORS ASSOCIATED WITH
HIGH OBSTRUCTIVE SLEEP
APNEA RISK AMONG ADULT
PATIENTS ATTENDING UITM
PRIMARY CARE CLINIC**

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Dissertation submitted in partial fulfillment
of the requirements for the degree of
**Master of Medicine
(Family Medicine)**

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AUTHOR'S DECLARATION

I declare that the work in this thesis was carried out in accordance with the regulations of Universiti Teknologi MARA. It is original and is the results of my own work, unless otherwise indicated or acknowledged as referenced work. This thesis has not been submitted to any other academic institution or non-academic institution for any degree or qualification.

I, hereby, acknowledge that I have been supplied with the Academic Rules and Regulations for Post Graduate, Universiti Teknologi MARA, regulating the conduct of my study and research.

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ABSTRACT

Obstructive sleep apnea (OSA) increases risk of cardiovascular diseases (CVD), yet underdiagnosed. Presence of OSA and metabolic syndrome (MetS) synergistically increase CVD morbidity and mortality. At present, data is scarce on prevalence and factors associated with high OSA risk including MetS. Hence, this study aimed to determine the prevalence and factors associated with high OSA risk including MetS using a validated Malay version of Berlin Questionnaire (BQ-M) among patients attending primary care clinics. MetS will be defined by the latest Joint Interim Statement (JIS) criteria. A cross-sectional study was conducted at UiTM Primary Care Clinics between June 2018-August 2018. Adults aged ≥ 18 years old who fulfilled the inclusion and exclusion criteria were recruited using systematic random sampling. Socio-demographic, clinical parameters, fasting lipid profile and fasting blood glucose data were obtained. BQ-M was self-administered. A total of 408 participants with a response rate of 93.8% participated in the study. The mean age was 56.04 ± 13.00 years, with more males ($n = 209, 51.2\%$), Malays ($n = 346, 84.8\%$) and non-smokers ($n = 283, 69.4\%$). The overall prevalence of high OSA risk was 39.7% (95% CI: 34.94%, 44.47%). There were high proportion of MetS in the overall study population (60%, $n = 245$) and among high OSA risk group (75.3%, $n = 122$). Being male [OR 2.16, (CI: 1.41, 3.31)], having visceral obesity [OR 2.07, (CI: 1.12, 3.84)] and clinically diagnosed with MetS [OR 2.06, CI: (1.24, 3.43)] were more likely to have high OSA risk. As a conclusion, patients attending sub-urban primary care clinics are at risk of having high OSA risk. Thus, it is imperative to screen for OSA particularly among high risk groups attending the primary care clinics especially male, individuals with visceral obesity and MetS.

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