

Basic Health Sciences

Poster

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## Role of coping mechanisms to psychosocial stress in early development of hypertension in young adults: a pilot study

Sithu Aung<sup>a</sup> | Musa Ramli<sup>b</sup> | Rahman A Jamalludin<sup>c</sup> | Shah M Azarisman<sup>d</sup> | Abdullah Aszrin<sup>a</sup><sup>a</sup>*Department of Basic Medical Sciences, Kulliyah of Medicine, International Islamic University Malaysia*<sup>b</sup>*Department of Psychiatry, Kulliyah of Medicine, International Islamic University Malaysia*<sup>c</sup>*Department of Community Medicine, Kulliyah of Medicine, International Islamic University Malaysia*<sup>d</sup>*Department of Internal Medicine, Kulliyah of Medicine, International Islamic University Malaysia.*

**Introduction:** Hypertension is a major risk factor for cardiovascular diseases, one of the leading causes of death worldwide. Prehypertension is a precursor of hypertension, with high prevalence in young adults. Psychosocial stress can be one of the modifiable risk factors for hypertension. The objective of the study is to assess the relationship between coping mechanism to psychosocial stress and early hypertension in young prehypertensive, mild essential hypertensive and normotensive subjects. **Methods:** A comparative cross-sectional pilot study was conducted in 36 young adults aged less than 45 years. The pulse rate, the blood pressure, and the body mass index of the respondents were recorded. Psychosocial stress was measured by plasma cortisol following an acute mental stress test; and the level of stress and the coping strategies were assessed by using validated stress questionnaires. **Results:** Approximately forty four percent of subjects had normotension and 55.56% had prehypertension and mild hypertension. Prehypertension and mild hypertension were associated with high plasma cortisol level ( $p=0.032$ ), and a high body mass index ( $p=0.004$ ). Maladaptive coping strategy was found to be associated with high stress scores ( $p=0.019$ ). The relationship between stress and cortisol was not significant, though a higher cortisol level was noted in the high blood pressure group. **Conclusions:** Higher cortisol levels and greater BMIs were associated with prehypertension and mild hypertension in young adults. These findings are useful for future research in this area, and the continuation of the study is important in the hope to yield a more significant picture.

**KEYWORDS:** Psychosocial stress, hypertension, young adults, coping