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Volume 17, Issue 3, 2018, Pages 439-445Relationship between coping mechanisms to psychosocial stress with blood pressure in young adults: A pilot study (Article) ([Open Access](#))Aung, S.^a, Musa, R.^b, Jamalludin, R.A.^c, Azarisman, S.M.^d, Abdullah, A.^e [✉](#) [👤](#)^aDepartment of Basic Medical Sciences, International Islamic University, Pahang, Malaysia^bDepartment of Psychiatry, International Islamic University, Pahang, Malaysia^cDepartment of Community Medicine, International Islamic University, Pahang, Malaysia[View additional affiliations](#) [v](#)

Abstract

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Background: 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 the blood pressure of young adults. Methods: A comparative cross-sectional pilot study was conducted in 36 young adults aged less than 45 years. The pulse rate, blood pressure and 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 to stress were assessed using validated Malay Version questionnaires: DASS-21 and Brief R-COPE questionnaires. Results: Forty four percent of subjects had normotension and fifty six percent had above-normal blood pressure (prehypertension and mild hypertension). Subjects with above-normal blood pressure were associated with high plasma cortisol levels ($p = 0.032$), and high body mass indexes (BMI) ($p = 0.004$). 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. Conclusion: In conclusion, higher cortisol levels and greater BMIs were associated with above-normal blood pressure in young adults. These findings are useful for future research in this area, and the continuation of this study will hopefully yield a more significant relationship. © 2018, Ibn Sina Trust. All rights reserved.

Author keywords

[Hypertension](#) [Plasma cortisol](#) [Psychosocial stress](#)

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