大學生憂鬱程度與亞臨床心血管指標之關係

Relationship between depressive level and subclinical cardiovascular indicators in college students

中文摘要

過去已有許多研究探討憂鬱症與心血管疾病的相關性，但之間的調控機轉至今仍未完全了解。研究顯示血壓應激反應、自主神經系統調控異常及主動脈順應性可用來解釋憂鬱症與心血管疾病之間的關係，然而，過去的研究結果並不一致。憂鬱症與心血管疾病罹病的年齡層有逐漸下降的趨勢，且男女性對壓力事件的不同生心理反應，顯示年輕的憂鬱族群及憂鬱情緒與心血管疾病的相關之性別差異是值得深入探討的議題。本研究藉由探討大學生憂鬱程度與亞臨床心血管指標的關係有助於了解憂鬱症導致心血管疾病的機轉。

本研究爲橫斷性、相關性研究設計，藉由非侵入性儀器(包含：心跳訊號擷取分析儀、連續性血壓測量儀、動脈波形測量儀及動態血壓測量儀)測量受試者的血壓應激反應數值、心率變異量及主動脈硬化程度。

研究樣本爲 100 位大學生，個案平均年齡爲 20.1 歲。憂鬱程度與血壓應激反應值之相關不具統計上的意義($p > .05$)，憂鬱程度越高其休息狀態下之心率變異性總功率值越高($r = .21$, $p = .04$)，憂鬱程度與主動脈波形反彈波擴大指數之相關不具統計上的意義($p > .05$)，憂鬱程度與動脈波形傳導速率之相關不具統計上的意義($p > .05$)。在男性樣本中，憂鬱程度越高其收縮壓應激反應越低($r = -.46$, $p = .04$)，憂鬱程度越高其主動脈波形反彈波擴大指數越高($r = .44$, $p = .04$)；在女性樣本中，憂鬱程度越高其心率變異性之總功率越高($r = .25$, $p = .03$)，而憂鬱程度與血壓應激反應及主動脈硬化指數之相關不具統計上的意義($p > .05$)。

本研究發現不同性別憂鬱程度與亞臨床心血管指標之間的關係是不同的。男性與女性分別分析後，發現男大學生憂鬱程度越高其收縮壓應激反應越低且憂鬱程度越高其主動脈波形反彈波擴大指數越高，而女大學生之憂鬱程度與血壓應激反應及主動脈硬化程度無關，無論是整體樣本或是女性憂鬱程度越高其休息狀態下心率變異性之總功率越高，而在男性則無顯著相關，且憂鬱程度對男性之心血管功能影響較大。

英文摘要

Title of Thesis: Relationship Between Depressive Level and Subclinical Cardiovascular Indicators in College Students

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There had been many studies investigated the relationship between depression and

cardiovascular disease, but the underlying mechanism for this relationship is still unknown. Some studies have shown that blood pressure (BP) reactivity, autonomic dysfunction, and aortic compliance may explain the relationship between depression and cardiovascular disease. However, the results were inconsistent. The prevalence of depression and cardiovascular disease had increased in younger populations in recent years. Gender differences in stress response in young depressives deserve further investigation. This study, therefore, aimed to investigate the relationship between depressive level and subclinical cardiovascular indicators among college students.
This study used a cross-sectional and correlational design. The SpaceLabs ambulatory BP monitor, SphygmoCor pulse wave analysis system, BioPac power spectral analysis, and Finometer were used to measure office BP, heart rate (HR), aortic pulse wave velocity (PWV) and augmentation index (AI), heart rate variability (HRV), and BP reactivity among 100 college students.
A total of 100 participants enrolled in the study. There was no significant correlation between depressive level and BP reactivity ($p > .05$). Depressive level significantly correlated to HRV total power ($r = .21$, $p = .04$). There was no significant correlation between depressive level and AI ($p > .05$). There was no significant correlation between depressive level and PWV ($p > .05$). In male college students, depressive level negatively correlated to BP reactivity ($r = - .46$, $p = .04$).
Depressive level positively correlated to AI ($r = .44$, $p = .05$). In female college students, depressive level positively correlated to HRV total power ($r = .25$, $p = .03$), but there was no significant correlation to BP reactivity, AI or PWV.
This study showed that there are gender differences in the relationship between depressive level and subclinical cardiovascular indicators. In male college students, the higher the depressive level, the lower the systolic BP reactivity; the higher the depressive level, the higher the AI. In female college students, there was no relationship between depressive level and BP reactivity. Moreover, there was no relationship between depressive level and AI. In the whole sample and in female college students, the higher the depressive level the higher the HRV total power. Depressive level has greater impact in male college students.