• 計畫中文名稱	規律運動訓練對改善二尖瓣脫垂病患症狀困擾及大腦衍生神經營養因子(BDNF)之研究		
• 計畫英文名稱	Benefinicial Effects of Regular Exercise Training on Symptom and Brain-Derived Neurotrophic Factor (BDNF) in Patients with Mitral Valve Propase		
• 系統編號	PC9706-0930	• 研究性質	應用研究
• 計畫編號	NSC96-2314-B038-035-MY2	• 研究方式	學術補助
• 主管機關	行政院國家科學委員會	• 研究期間	9708 ~ 9807
• 執行機構	臺北醫學大學護理學系		
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• 研究領域	護理學		
• 研究人員	蔡仁貞,鄭綺		
• 中文關鍵字	二尖瓣脫垂症候群；運動訓練；身體功能；大腦衍生神經營養因子；情緒狀態		
• 英文關鍵字	Mitral valve prolapse syndrome； exercise training； functional capacity,brain-derived neurotrophic factor； mood states.		
• 中文摘要	二尖瓣脫垂(mitral valve prolapse, MVP)爲心臟瓣膜疾病最常見的一種異常 現象，一般成人之盛行率約 5%至 22%。病患往往會經歷一些擾人的二尖瓣脫垂 症候群(mitral valve prolapse syndrome, MVPS)，例如：疲倦、心悸、頭暈、胸悶、 氣促，有些病患因擔心症狀惡化不敢任意進行身體活動，導致身體功能下降，甚 至影響日常生活，這些症狀的發生通常與病患之生理及神經精神(neuropsychiatric) 功能失調等有關。近年來，有研究結果指出規律運動訓練可提昇個體血清大腦衍 生神經營養因子(brain-derived neurotrophic factor, BDNF)濃度，藉此可改善個體 情緒症狀。因此，本計劃擬採兩年之研究設計，主要目的是在發展適合 MVP 病 患之運動訓練計畫，並評估規律運動訓練計畫對患者 MVPS、情緒狀態、血清 BDNF 濃度及身體功能之成效，並分析運動訓練前後病患 MVPS 及情緒的改善 是否透過血清 BDNF 濃度增加的機轉。 本研究採實驗性研究設計，以隨機方式將個案分配至藥物治療組、運動組、 及藥物治療合併運動訓練組。所有個案由研究者安排其接受走步機運動測試，以 評估其身體功能，並開立運動組個案之運動處方。此外，資料收集之工具包括： 病患基本資料表、靜態血壓和身體質量指標之測量，情緒狀態量表(Profile of Mood States; POMS)，MVPS 症狀量表、及血清 BDNF 濃度之測量。運動訓練參 與者進行每週 3 次，每次 30 分鐘之走步機運動訓練計畫共持續 12 週，非運動訓 練個案則維持原有生活型態，本研究於計畫進行前及計畫第 12 週進行資料收集。 研究資料以變異數分析法(analysis of variance; ANOVA)進行統計分析，比較 計劃前後三組病患症狀困擾(MVPS)、情緒狀態、血清 BDNF 濃度及身體活動功 能之變化。此外，本研究擬以 multiple regressions 分析血清 BDNF 濃度與病患症 狀及情緒困擾之相關性，以探索藉由運動訓練提昇血清 BDNF 濃度對改善病患症狀及情緒困擾的可能機轉。本研究之結果將可提供健康照護人員發展 MVP 病 患運動訓練計畫之參考，進而協助病患改善症狀，並提升身體活動功能。		

• 英文摘要	Mitral valve prolapse (MVP) is a well-recognized clinical entity with a reported prevalence that varies from 5% to more than 22%. MVP syndrome (MVPS) is frequently associated with a constellation of symptoms including physical and neuropsychiatric disorders. Until recently, it has been proposed that exercise may increase serum brain-derived neurotrophic factor (BDNF) levels, which can improve individuals』 mood states. Whether this effect can be observed in patients with MVPS in not known. The purposes of this study are to analyze the beneficial effects of regular exercise training on MVPS, mood states, serum BDNF levels, and functional capacity in symptomatic patients. This study will be conducted in two years. We will test the hypotheses that increase physical activity (structured exercise training) may lead to enhanced BDNF levels, which will have better effects on MVPS management in comparison to that with pharmacological therapy alone. Subjects will be randomly assigned into a pharmacological therapeutic group, an exercise training group, and the combination of pharmacological therapy and exercise training group. Exercise participants will complete a 12-week (3 times per week, 30 minutes each time) treadmill exercise training program. The exercise intensity will be 60 to 80 % of maximum or 「somewhat hard」on the rating of perceived exertion. Nonexercisers will remain their previous life styles. Each subject will undergo symptom limited treadmill exercise test. Measurements of serum BDNF values will be obtained. In addition, they will complete the Profile of Mood States questionnaire and the Symptom Scale for MVP. Data will be collected at baseline and the end of the study. In this study, independent t-tests and the Mann-Whitney U tests will be performed to analyze the differences in mood states, levels of serum BDNF, and functional capacity between symptomatic and asymptomatic patients. Pre-training versus post-training and group mean differences in mood states, levels of serum BDNF concentration, and functional capacity at baseline and 12-week will be analyzed using repeated-measures analysis of variance (ANOVA) with post hoc tests. Multiple regression analyses will be used to calculate the correlations between MVPS and serum BDNF levels and mood state. Results of this study may provide evidence for interventions of symptom management and improving functional capacity in patients with MVP.