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• 計畫中文名稱	接受手術病人麻醉前音樂治療之心率變異性與腦波研究初探		
• 計畫英文名稱	Heart Rate Variability and EEG Analyses of Patients Using Music Therapy to Support Anesthesia Before Operation-A Pilot Study		
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• 中文關鍵字	體外震波碎石術; 術前焦慮; 音樂治療; 心率變異性		
• 英文關鍵字	Preoperative anxiety; Music therapy; Heart rate variability (HRV); Extracorporeal shock wave lithotripsy (ESWL)		
• 中文摘要	對於要接受體外震波碎石術的病人，術前焦慮是可預期的反應，許多研究發現這些恐懼、焦慮的情緒，會造成生理上暈眩、嘔吐、心跳加速、體溫升高、發汗等症狀，這樣的生理反應，源自於交感 /副交感神經的平衡改變，嚴重的話，甚至會使原本就有冠狀動脈疾病的病患猝死。音樂治療被認為有減緩病人焦慮的功效，但其中的機轉尚待研究。台灣從事音樂治療研究的工作仍處於起步階段，而在有限的人力物力資源下，以生理信號量測應用於音樂治療的分析，是一種值得發展的研究模式。本研究以進行體外震波碎石的病人為研究對象，於術前播放大自然音樂，利用血壓、心率及心率變異性為生理反應測量工具來量測病人的生理反應數值，並輔以焦慮量表來評估病人的心理狀態，最後以生理信號分析及行為觀察來評估音樂治療的效果。結果顯示：音樂組的病患在收縮壓、平均血壓、心率、心率變異性的改變較對照組達顯著差異 (p<.05)，而曾有碎石經驗的病人，雖然焦慮分數與初診病患沒有差異，但生理上的表現不同。		
• 英文摘要	Music therapy has been considered to reduce the anxiety of patients, but the mechanism of music therapy remains to be investigated. Psychophysiological researchers have revealed that the autonomic activities relate to the anxiety. Heart rate variability (HRV) analysis has been used to assess the autonomic activities hence it may be a useful tool for evaluate the effects of music therapy on anxiety reduction of patients. In this study, we attempted using HRV analysis to display the effect of music therapy on autonomic balance. 68 patients attending extracorporeal shock wave lithotripsy (ESWL) were included, among them 34 patients (music therapy group) were randomly selected to undergo a music therapy (listening to a natural music) to reduce their anxiety for upcoming operation, the rest patients were be the control group. The short-term (5 minutes) HRV parameters of all patients before and undergoing music therapy were computed. The results revealed that the standard deviation of RR intervals (SDRR) and high frequency spectral power (HF power) of HRV		

significantly increased in the music therapy group while they did not change in the control group. Since SDRR and HF power of HRV are considered as markers for vagal activities music therapy seems to increase the vagal activity of patients. This study demonstrated that listening to the music has the influences on autonomic control. Using HRV analysis can help evaluating the effects of music therapy..