

運用生理回饋及量表分析之線上心理疾病治療系統：以恐慌症治療為例

曾新穆^{a, b*}、張鳳麟^c、謝百恩^a、劉聖宏^a、蔡佩昕^a、楊智翔^d、楊淇祿^d

^a 成功大學資訊工程系

^b 成功大學醫學資訊研究所

^c 奇美醫學中心精神科

^d 財團法人資訊工業策進會網路多媒體研究所

通訊作者 E-mail：曾新穆，tsengsm@mail.ncku.edu.tw

摘要

近年來心理疾病治療已成為相當熱門的研究發展項目。在心理疾病治療的方法中，生理回饋治療法是生理回饋技術與自我調整法相結合的產物，此方法已被愈來愈多的人重視。隨著通訊技術的發達，網際網路在許多健康照護上扮演著重要的角色，且在心理保健的介入性治療上，近幾年亦有相當多的研究發表。利用網際網路來實施治療療程，不但可減少治療者所花費之時間，更可達到治療目的及降低醫療成本。有鑑於此，本研究針對生理回饋治療結合網際網路建構一線上治療系統，此系統提供心理疾病患者做為與醫院聯繫之便利管道。病患可經由網路查詢或下載院方所提供之治療相關資訊；病患可利用網路配合生理訊號量測設備將情緒反應所造成之相關生理數據及定期須填寫之自評量表等資訊傳回院方之資料庫。此外治療師可藉由此系統直接管理病人；醫院總管亦可藉此系統便利地管理各治療師等。本研究結果預期將可於未來實際應用於健康照護及相關產業上，並可提升相關技術及應用層次。

關鍵字：生理回饋分析、線上心理治療系統、情緒指環、資料探勘

Abstract

In recent years, the treatments of mental disorders have become an important research issue in the medical science field. Among the treatment methods of mental disorders, biofeedback therapy is an important topic. In recent developments, the patients with mental disorders observed their own physiological status through the biofeedback and corrected or controlled some physiological activities. The biofeedback therapy can be regarded as the combination method of the biofeedback and self-help programs. In addition, with the development of the communication technology, internet plays a more and more important role in many applications of healthcare. Many researches on the integrations of Internet and mental health care have been proposed in recent years. The advantages of processing the cognitive behavioral therapy via the internet are as follows: First, the patients may save much time in the treatments while achieving the goal; second, the medical costs can be highly reduced. This research aims at development of an online treatment system for panic patients by combining the biofeedback therapy and the web technologies. The system provides more convenient communications between patients and medical personnel. The related information and some essential treatments provided by the medical personnel can be queried or downloaded online via Web-based interface by the patients. On the other hand, the information such as physiological data and self-rating scale can also be uploaded to the databases of hospitals by the patients. Moreover, the therapists can manage patients via this system, and the managers of the hospitals can also manage the therapists, and so on. The results of this research are expected to bring high impact on the health care industries with enhanced technologies and service levels.