線上憂鬱症自我檢測系統之建立與評估

The Establishment and Evaluation of Internet-based Self-assessment Program for Depression (ISP-D)

中文摘要

網際網路是一種新的通訊媒介，可以讓研究者接觸到不在醫院的病人而利用自填問卷進行疾病的研究；世界衛生組織的研究報告預測在公元 2020 年時憂鬱症將成爲造成全世界第二大負擔的疾病，憂鬱症在台灣及世界其它國家都是盛行率很高的疾病，可是憂鬱症在基層醫療中仍被忽略、低估，很多病人未受治療。因此我們一直構思如何運用資訊科技來提高憂鬱症的偵測，所幸隨著資訊科技的快速發展，建構這樣的資訊系統並不困難，然而運用網際網路建構的(精神)醫學自我評估工具是否可信呢？在醫學資訊領域中拌演的角色爲何呢？網際網路是否可同時提供便利性又兼顧專業性呢？ 亦即如果這工具在網路上是可靠的，是否也具有如專業人員般的效度呢？網友進行線上評估的感受如何呢？

本研究共有四個部份：第一，建構線上憂鬱症自我評估系統 (ISP-D). 此系統結合 Web server, interactive ASP/HTML files, 及 Web-accessible database 等技術. 第二, 經由網路徵求網友參與此研究計劃，進行線上自我評估，進行測試-再測試信度研究；第三，進行小規模效度研究以初步了解 ISP-D 之效度；第四， 滿意度調查，並比較電腦會談及精神科醫師會談之差異。

研究結果顯示 ISP-D 系統可以成功地在 Web 伺服器上利用 512/512 Kbps ADSL 線路建立起來並有效地執行。ISP-D 對重鬱症及亞型憂鬱症侯之二星期內信度很好(good)，對較長的時間間隔也也有不錯(fair)的信度，但對輕型憂鬱症候之信度差(poor)； ISP-D 對重鬱症之效度研究顯示其 sensitivity 爲 81.8%, specificity 爲 72.7%, Positive Predictive Value 爲 66.7%, Negative Predictive Value 爲 85.7%, 整體精確度(accuracy)爲 76.4%. 滿意度調查顯示，受試者覺得電腦會談較不會害羞、較不會緊張、較簡單方便、且較有隱私，可是大多數的受試者仍較偏好與精神科醫師會談。

本研究結果顯示運用網際網路建立自我評估工具是可行的，具有不錯的信效度，ISP-D 提供了一個可讓全世界各地的民眾隨時可得、便宜、易維護的系統，特別適用於大於 18 歲、小於 50 歲的華人，很多未曾接受治療的憂鬱症病人可被此系統辨別出來；因此，網際網路可以對憂鬱症的第一級及第二級預防拌演重要的角色，也可能對其它精神疾病拌演同樣的重要角色。

英文摘要

The Internet is a new communication medium that permits investigators to contact patients in nonmedical settings and study diseases through self-administered questionnaires. Clinical depression will be the second most burdensome illness in

the world by the year 2020 (Murray & Lopez, 1997). It has high prevalence rate in Taiwan and other countries. However, depression is underdiagnosed and undertreated. Therefore we were thinking of combining Internet technology with depression detection. Following the rapid development of the Internet technology, it was expected to construct such a program smoothly. However, are self-assessment tools for psychiatric or medical issues reliable on the Internet? What kind of role can the Internet play on Medical Informatics? Can the Internet play the role of combining the advantages of consumer's convenience and professional expertise? That is, if the Internet can be reliable, can it be as valid as a mental health professional's evaluation? How do people feel when they use this online program? This study consisted of four parts. First, we constructed an Internet-based Self-assessment Program for Depression (ISP-D). The program combined the technologies of the Web server, interactive ASP/HTML files, and the Web-accessible database. Second, after the construction was completed, the Internet users were recruited to participate the study program through the Internet and conducted self-administered interviews on the website. The test-retest reliability study was performed to evaluate the reliability of ISP-D. Third, the validity of ISP-D was conducted in limited cases to have initial evaluation of ISP-D validity. Forth, participants' degree of satisfaction was surveyed to understand the viewpoint of users toward the Internet interview and the face-to-face interview.

The result showed that ISP-D could be established and well performed on an inexpensive server with 512/512 Kbps ADSL line. The test-retest reliability of ISP-D was good within 2-week interval and was fair for all time intervals for major depressive disorder and subsyndromal depressive symptoms, but poor for minor depressive disorder. The validity of ISP-D for major depressive disorder showed its sensitivity 81.8%, specificity 72.7%, Positive Predictive Value 66.7%, Negative Predictive Value 85.7%, and overall accuracy 76.4%. Participants felt less shamed and nervous, simpler, more convenient, and private on computer interview. However, most of them preferred a psychiatrist''s face-to-face interview.

In conclusion, self-assessment program for depression can be successfully established on the Internet. Most of the depressive disorders had high reliability and validity. The ISP-D provides a continuously available, inexpensive, easily maintained to a large number of individuals from a broad geographic area. It is highly applicable to people with age equal to or older than 18 years and under 50 years in Chinese society. Many patients who had never received treatment could be identified. Thus, the Internet can play an important role in primary and secondary prevention, not only for depressive disorders, but also possibly for other mental illnesses.