The validity of an Internet-based Self-assessment Program for Depression

Chao-Cheng Lin, M.D.[1,2], Yu-Chuan Li, M.D., Ph.D.[1], Ya-Mei Bai, M.D.[2], Shih-Jen Tsai, M.D.[3] Mei-Chun Hsiao, M.D[4], Chia-Hsuan Wu, M.D.[5], Chia-Yih Liu, M.D.[3], Jen-Yeu Chen, M.D.[2]

[1]Graduate Institute of Medical Informatics, Taipei Medical University, Taiwan, [2]Department of Psychiatry, Yu-Li Veterans Hospital, Hua-Lien,Taiwan, [3]Department of Psychiatry, Veterans General Hospital-Taipei, Taiwan, [4]Department of Psychiatry, Chang Gung Memorial Hospital, Linkou, Taiwan, [5]Department of Psychiatry, National Taiwan University Hospital, Taipei,Taiwan

ABSTRACT

The Internet-based Self-assessment Program for Depression (ISPD) has been found to have good test-retest reliability for major depressive disorder (MDD). The purpose of this study was to further examine the validity of the ISPD for MDD. We found sensitivity and specificity of MDD by ISPD to be 81.8% and 72.7% respectively. Internet may play an important role for patients to self-assess their possibility of getting MDD.

BACKGROUND

The Internet is a new communication medium that permits investigators to contact patients in nonmedical settings and study diseases through self-administered questionnaires[1]. Lin et al developed ISPD for subjects to conduct self-administered interviews through the Internet. Our previous result found the test-retest reliability of ISPD was good for major depressive disorder (?=0.75). However, the validity of ISPD was unknown. The purpose of this study was to examine the validity of ISPD for major depressive disorder.

METHODS

The interactive program was developed with Active Server Page 3.0 and HTML 3.0 and ran on Microsoft Internet Information Service 5.0. The assessment algorithm was based on DSM-IV diagnostic logic. The diagnostic criteria was established in DSM-IV. Each symptom was checked using one to three questions. The ISPD contains a potential maximum of 24 questions for the complete assessment.

Subjects were volunteers, recruited from the Internet, who were aged older than 18 years. Subjects were excluded if they did not complete the entire study protocol. Each subject needs to receive both Internet interview by ISPD and face-to-face interview by a psychiatrist. After signing an informed consent, a subject was asked to fill out his/her demographic data, and past psychiatric history. Then questions were asked to check on symptoms, followed by those on functional impairment, and differential questions to rule out drug abuse, bereavement, psychotic disorders, and bipolar disorder. Subjects could make an appointment with a psychiatrist after Internet interview. After the face-to-face interview, each subject was encourage to fill an online form for degree of satisfaction.

RESULTS

There were 55 subjects who completed the study. The mean age was 29.7±7.5 years (18 - 49). Most of them were female (76.4%), single (76.4%), highly educated (61.8% higher than undergraduate). Fifty-one percent of them had a previous visit to mental health professionals. The diagnosis of face-to-face interview by a certified psychiatrist was regarded as the gold standard. The sensitivity and specificity of MDD by ISPD was found to be 81.8% and 72.7% respectively. The positive predictive value and negative predictive value were 66.7% and 85.7% respectively.

CONCLUSION

The preliminary result showed that ISPD had good validity for major depressive disorder. However, the case number is still limited. More subjects are needed to further prove the Internet as a good tool to diagnose MDD by one selves.

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