Arabic version of the Global Mental Health Assessment Tool—Primary Care version (GMHAT/PC): a validity and feasibility study

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النسخة العربية من الأداة العالمية لتقييم الصحة النفسية – نسخة الرعاية الأولية: دراسة حول صحتها وإمكانية استخدامها

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الخلاصة: يشوب النقص خدمات الصحة النفسية في إقليم شرق المتوسط. ولما كانت الأداة العالمية لتقييم الصحة النفسية – نسخة الرعاية الأولية هي أداة محوسبة ومهيكلة جزئياً للتقييم السريري، أعدت كي تساعد العاملين الصحيين على إجراء تقييمات سريعة وملائمة وشاملة ومعيارية؛ فقد أجرى الباحثون هذه الدراسة في الإمارات العربية المتحدة لتقييم جدوى وإمكانية استخدام النسخة العربية لهذه الأداة. وقد طبّقت ممرضات الصحة النفسية هذه الاستمارة على خمسين مريضاً في مواقع الصحة النفسية والتأهيل النفسي؛ ثم قارن الباحثون التشخيص لديهم بالتشخيص السريري في الطب النفسي المستقل الذي يستند على الطبعة العاشرة من التصنيف الدولي للأمراض للمرضى ذاتهم. ووجدت الممرضات أن الأداة أكثر سهولة في التطبيق، وتستغرق 16 دقيقة، وكان هناك توافق جيّد بين التشخيص المستند على الأداة وبين تشخيص الأطباء النفسيين (كابا = 0.91)، وكانت الحساسية مرتفعة (97٪)، والنوعية مرتفعة (94٪).

ABSTRACT Mental health services are far from satisfactory in the Eastern Mediterranean Region. The Global Mental Health Assessment Tool—Primary Care version (GMHAT/PC) is a semi-structured, computerized clinical assessment tool that was developed to assist health workers in making quick, convenient and comprehensive standardized mental health assessments. A study was carried out in the United Arab Emirates to evaluate the validity and feasibility of the Arabic version of the GMHAT/PC. Mental health nurses administered the GMHAT/PC Arabic version to 50 patients in mental health and rehabilitation settings and their GMHAT/PC diagnosis was compared with the psychiatrist's independent *ICD-10* based clinical diagnosis on the same patients. The nurses found GMHAT/PC easy to administer in an average of 16 minutes. The GMHAT/PC-based diagnosis had a good agreement with the psychiatrist's diagnosis (kappa = 0.91) and a high sensitivity (97%) and specificity (94%).

Version en langue arabe de l'outil d'évaluation mondial de la santé mentale dans le monde – soins primaires : étude de validité et de faisabilité

RÉSUMÉ Les services de santé mentale sont loin d'être satisfaisants dans la Région de la Méditerranée orientale. L'outil d'évaluation mondial de la santé mentale – version pour les soins primaires – est un instrument d'évaluation clinique semi-structuré assisté par ordinateur qui a été élaboré pour permettre aux agents de santé d'établir rapidement et facilement des évaluations de santé mentale standardisées et exhaustives. Une étude a été menée aux Émirats arabes unis afin d'évaluer la validité et la faisabilité de la version en langue arabe de cet outil d'évaluation. Des infirmières en santé mentale ont utilisé la version en langue arabe de cet outil d'évaluation sur 50 patients en milieu de psychiatrie et de réadaptation. Les diagnostics issus de l'évaluation ont été comparés aux diagnostics cliniques établis à l'aide de la CIM-10 par des psychiatres indépendants pour les mêmes patients. Les infirmières ont trouvé que l'outil d'évaluation mondiale de la santé mentale – version pour les soins primaires – était facile à administrer ; la tâche prenait 16 minutes en moyenne. Le diagnostic établi à l'aide de cet outil d'évaluation avait un degré de concordance satisfaisant avec le diagnostic du psychiatre (kappa = 0,91) et avait une sensibilité (97 %) et une spécificité (94 %) élevées.

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Received: 04/07/12; accepted: 24/09/12

Introduction

Mental health services are far from satisfactory in the Eastern Mediterranean Region (EMR). The World Health Organization's (WHO) recent report [1] highlighted limited resources available for the care of people with mental illness, poor utilization of these resources and as a consequence a significant treatment gap of up to 85%. The report concluded that mental health resources were scarce, inequitably distributed and inefficiently used; community-based mental health services were underdeveloped; and collaboration between the mental health system and other health and non-health sectors was generally weak in the Region.

Similar to more developed countries, between 20% and 34% of consultations with primary health care facilities in the EMR are due to mental health problems [2]. Health officials need to understand and appreciate the harmful effects of mental illness and give attention to prevention, treatment and rehabilitation of mental disorders at the primary care level as well as other levels of care [3]. It is high time to reduce the gap between the needs and the services offered. To address the issue of low detection rates of psychiatric disorders in Arab cultures, screening instruments have been translated and validated into Arabic language: the General Health Questionnaire and the Self-Reporting Questionnaire [4] and new screening instruments have been developed [5] including a culture-oriented screening scale for anxiety and depression [6].

One pragmatic way to reduce the treatment gap for mental illness in the EMR and other parts of the world is by providing front-line workers with the skills to recognize and manage common mental illness and to identify patients with severe illness at their earlier stage so that they can be helped through specialist services. Based on their extensive clinical and research experience Sharma, Copeland and others have spent over 15 years developing the Global Mental Health Assessment Tool—Primary Care version (GMHAT/PC), a computer-assisted clinical tool to assess and diagnose and treat mental illness in primary and general health care settings. This has been further refined by trials in routine clinical practice in different settings, with input from general practitioners, patients and carers. GMHAT/PC was subjected to reliability and validity studies in primary care as well as in medical settings including among older people [7–11]. The aim of the present study was to validate the Arabic version of the GMHAT/PC and to examine its feasibility and acceptability in an Arab population.

Methods

Description of the GMHAT/PC

The GMHAT/PC is a semi-structured, computerized clinical assessment tool that is developed to assist health workers in making quick, convenient and comprehensive standardized mental health assessments in both primary and general health care.

The program starts with basic instructions giving details of how to use the assessment tool and rate the symptoms. The first 2 screens help in getting brief background details including present, past, personal and social history including history of trauma, epilepsy and learning disorders. The following screens consist of a series of questions leading to a comprehensive yet quick mental state assessment. They start with 2 screening questions about every major symptom complex followed by additional questions only if the screening questions are positive. The questions cover the following symptom areas: worries, anxiety and panic attacks, concentration, depressed mood, including suicidal risk, sleep, appetite, eating disorders, hypochondriasis, obsessions and compulsions, phobia, mania, psychotic symptoms, disorientation, memory impairment, alcohol misuse, illegal drug misuse, personality problems and stressors. The questions proceed in a clinical order along a tree-branch structure. Many of the GMHAT/PC items have been adapted for the full adult range from the Geriatric Mental State (GMS/AGECAT) schedule [12], which is extensively used worldwide in numerous epidemiological studies. Ratings are made by the interviewer using his or her clinical skills to judge the severity of each symptom, thus making the GMHAT/PC a semi-structured interview.

The computer-assisted diagnostic algorithm takes account of clinical diagnostic practices based on presence of symptoms. The printable output summary report includes background descriptive details, a list of symptoms with their severity as well as their scores, risk of self-harm, the GMHAT/PC main diagnosis and additional diagnoses. The additional diagnoses or comorbid states, are based on the presence of other mental illness symptoms and disorders. Clinicians who used GMHAT/PC found the list of all possible mental health diagnoses very useful, as it helped them in their overall understanding of the patients' mental health issues and for planning their treatments.

The program contains evidence-based management guidelines for most disorders, and for most psychotic disorders recommends referral to mental health services. If interviews are repeated over time on a patient, the program also produces a summary table of symptom ratings of all interviews, providing a clear indication of progress between interviews

Study design

The Arabic version of GMHAT/PC was developed using the standard method used in the translation of GMHAT/PC into other languages. The GMHAT/

PC questions were translated into standard Arabic language by a clinician with a sound knowledge of Arabic. An independent translator translated back from Arabic to English. The English back translation was compared with the original GMHAT/PC questions by the GMHAT/PC steering group. The Arabic version was used in this study for interviews. We also assessed whether the tool was acceptable in this culture.

Data collection

The study was carried out in 2 settings in Abu Dhabi, as follows.

Mental health setting

One trained psychiatric nurse used GMHAT/PC for assessment of all patients attending the outpatient clinic in the Behaviour Science Pavilion, Abu Dhabi, United Arab Emirates. Patients were informed and included after obtaining their consent to take part in the study. One qualified psychiatrist made clinical assessment independently and arrived at clinical diagnosis based on the *International Statistical Classification of Diseases and Related Health Problems*, 10th revision (*ICD-10*). The psychiatrist was unaware of the computer (GMHAT/PC) diagnosis and of any previous mental health problems. Patients were referred to this clinic by general practitioners, liaison psychiatry teams or other health teams, and had varying degrees of mental illness.

Rehabilitation setting

In the rehabilitation unit another community nurse used GMHAT/PC and the psychiatrist attached to the unit made an independent clinical assessment, as described above. Most of the patients included had a history of mental health problems. The rehabilitation setting included a day centre and community care mental health team. Patients were referred to this service from outpatients, inpatients to help early discharge and home care teams.

Results

A total of 50 patients were interviewed (23 men and 27 women). The age range was 19–69 years, with a mean age of 37 years. The mean time taken for the interviews was 16 minutes. None of the patients declined to be interviewed.

A total of 17 patients were identified by the psychiatrist has having no mental health illness, while 33 patients were identified has having mental health illness. There were no significant differences in ages between the 2 groups: mean ages were 38.4 and 36.2 years respectively. Similarly there was also no significant difference in the sex distribution between the 2 groups.

Of 33 patients diagnosed as having mental illnesses by the psychiatrist 32 were also diagnostic cases of mental illness according to nurses administering the GMHAT/PC. Of the 17 cases without mental illness diagnosis by the psychiatrist, 16 were correctly diagnosed as having no illness by GMHAT/PC, thus giving a kappa value for diagnostic agreement of 0.91 (95% CI: 0.79–1.00) with sensitivity of 97% (95% CI: 91%–100%) and specificity of 94% (95% CI: 83%–100%).

For anxiety and depression the kappa value for diagnostic agreement was 0.75 (95% CI: 0.56–0.96), with a sensitivity of 86% (12/14) (95% CI: 67%–100%) and a specificity of 92% (33/36) (95% CI: 83%–100%). For psychosis, the diagnostic agreement kappa value was 0.76 (95% CI: 0.52–0.96), with a sensitivity of 71% (10/14) (95% CI: 47%–95%) and specificity of 97% (35/36) (95% CI: 91%–100%)

The cross-tabulation of psychiatrist's *ICD-10* based clinical diagnoses and GMHAT/PC diagnoses is given in Table 1.

Finally, basic feedback was also obtained from the patients and interviewers. All patients were asked how they felt about the interview and whether they understood the questions. The nurses who administered GMHAT/PC were asked about their feedback on using the tool. The patients easily understood the questions and readily accepted the interview. The feedback from the nurses' interviews was generally very positive,

Table 1 Cross-tabulation of the number of patients diagnosed by the psychiatrist based on clinical judgement and by the nurse using the Global Mental Health Assessment Tool–Primary Care version (GMHAT/PC)

Psychiatrist clinical diagnosis	Nurse GMHAT/PC diagnosis						
	No mental illness	Organic mental disorder	Psychosis	Depression	Anxiety/ neurosis	Eating disorder	Total
No mental illness	16	0	0	0	0	1	17
Organic mental disorder	0	1	0	0	0	0	1
Psychosis	0	3	10	1	0		14
Depression	0	0		9	0	1	10
Anxiety/ neurosis	1	0	1	1	3	1	7
Eating disorder	0	0	0	1	0	0	1
Total	17	4	11	12	3	3	50

except that they wished that they had more training in using the GMHAT/PC-based interview.

Discussion

The findings were very encouraging as the nurses could easily administer the GMHAT/PC interview in the Arabic population in a reasonable time frame of approximately 16 minutes. The patients easily understood the questions and readily accepted the interview. The feedback from the nurses' interviews was generally very positive, except that they wished that they had more training in using the GMHAT/PC based interview.

Good agreement was found between the psychiatrist's *ICD-10* based clinical diagnosis and the GMHAT/PC interview diagnosis, with good sensitivity and specificity, which makes GMHAT/PC a practical clinical tool for health professionals in Arabic-speaking regions.

Mental health treatment needs of the population remain neglected in the EMR due to inadequate resources but more importantly due to lack of awareness, training and knowledge of health professionals to deal with mental health problems in their communities. Easy access to computers even in remote regions makes it feasible to use computers for routine assessments. GMHAT/PC could therefore fill an important gap in equipping health workers with the skills for diagnosing mental illness in their populations and directing them towards appropriate treatments.

The study had some limitations, particularly in that the number of patients interviewed was small and the interview setting was a hospital setting. Further work is therefore needed in assessing the feasibility and psychometrics of the Arabic version of GMHAT/PC in the primary care and general health setting. However, this small pilot study demonstrates the feasibility and applicability for using GMHAT/PC to diagnose mental illness in this population.

Acknowledgements

The GMHAT/PC will be available for free download from: http://www.gmhat.org.

Funding: No specific grant.

Competing interests: None declared.

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