

A VALIDITY STUDY OF THE MIDDLESEX HOSPITAL QUESTIONNAIRE IN MALAYSIAN POPULATION

K Kasmini, O Kyaw

SYNOPSIS

The Middlesex Hospital Questionnaire (MHQ) with its subscales on anxiety, phobia, somatic symptoms, depression and hysteria was devised by Crown and Crisp(1). It has been used to differentiate between neurotic and normal population. The MHQ has been translated into the Malay language and this paper shows the results of an attempt to validate this translated questionnaire in the Malaysian population. The translated questionnaire is found to have useful validity as a whole and also for subscales on anxiety, somatic symptoms and depression.

SING MED J. 1988; 29:48-52

INTRODUCTION

The Middlesex Hospital Questionnaire (MHQ) later known as The Crown Crisp Experiential Index (CCEI) was published by Crown S, Crisp A H in 1966(1). The general validity studies have been done on MHQ on English language speaking populations(2,3). It has been used in more than one culture and language (4,5,6).

MHQ has been translated into the Malay language and used on Malaysian medical students(7) and on Malaysian drug dependents in a rehabilitation centre (8). But a validity study of the Malay language version of MHQ has never been reported.

Therefore the aims of this study are to show the validity of MHQ (Malay language version) on a Malaysian population and to find out a suitable cut off point between the neurotic and the normal population.

MATERIALS AND METHODS

The Malay language version of MHQ was described in the previous paper(7). It is shown as in appendix 1.

The patients selected in this study were from old and new neurotic patients treated at the Psychiatric outpatient clinic in the General Hospital, Kuala Lumpur. These patients were referred by the doctors working in the Psychiatric outpatient clinic. The authors selected the patients based on the current severity of neurotic illnesses and on patients understandability of Malay language. All patients selected are currently under treatment for their neurotic disorders.

The patients who are not able to understand the Malay language are excluded from the study. The patients who cannot read but can speak and understand the language are assisted by the authors. For those

who can speak, read and understand the language, they are allowed to answer the MHQ questions according to the instructions written on the front page of the questionnaire.

The normal control subjects are selected from doctors, medical assistants and nurses who are working at the General Hospital Kuala Lumpur and from the general staff who are working at Faculty of Medicine, National University of Malaysia, Kuala Lumpur. The only criterion used to select the normals is that they are not on any current psychiatric or medical treatment.

Both patients and normal controls are not required to mention their names or identity card numbers on the answer sheet in order to protect confidentiality and to encourage frank and sincere responses.

RESULTS

Table 1 shows the total number of neurotic patients and normal subjects according to their sex, race, and age. There is no significant difference between the two groups with regards to age and racial ratio.

Table 2 shows the type of neurotic disorders amongst the neurotic patients. It is to be noted that in both male and female patients the commonest diagnoses are that of anxiety states and neurotic depression, 4.5% and 35.7% respectively.

Table 3 shows the mean and standard deviation of MHQ subscale scores and total scores of normal subjects and neurotic patients. There is a significant difference between neurotic patients and normal subjects on anxiety, phobia, somatic and depressive subscales, and on total MHQ score ($p < 0.005$). The difference is less significant on hysteria subscale ($p < 0.01$). However the difference is not significant on obsession subscale. In fact obsessional score of normal subjects is slightly higher than that of neurotic patients, but not at a significant level.

Table 4 shows the sensitivity and specificity of total MHQ scale and subscales at various cut off points. It is found that with present cut off points there are misclassifications of around 20% in anxiety, somatic and depressive subscales and on total MHQ scale.

The sensitivity and specificity of the phobic, obsessional and hysteria subscales have high misclassification rate of around 50%.

Department of Psychiatry
Faculty of Medicine
University Kebangsaan Malaysia
Kuala Lumpur

K Kasmini, MBBS, DPM, MRC Psych
Head

O Kyaw, MBBS, DPM, MRCPsych
Lecturer

TABLE 1
RACE, SEX AND AGE OF NEUROTIC AND NORMAL GROUP

	Sex	Race:	Malay	Chinese	Indian	Mean Age And Range
Neurotic Patients N = 70	Male N = 37		28	6	3	28.6 (20-45)
	Female N = 33		25 25	6 6	2 2	26.1 (20-36)
Normal Controls N = 90	Male N = 33		24	5	3	27 (20-26)
	Female N = 57		44	8	5	29.8 (21-46)

TABLE 2
TYPES OF NEUROTIC DISORDERS IN THE STUDY

	Male N = 37	Female N = 33	Total N = 70
Anxiety States	20	14	34
N. Depression	10	15	25
Obsessional Illness	3	1	4
Phobia	3	2	5
Hysteria (conversion)	1	1	2
Total	37	33	70

TABLE 3
MEAN AND STANDARD DEVIATION OF MHQ SUBSCALE SCORES AND TOTAL SCORES OF NORMAL AND NEUROTIC GROUPS ACCORDING TO SEX

	Normal Control Group						Neurotic Group					
	Male (N = 33)		Female (N = 57)		Total (N = 90)		Male (N = 37)		Female (N = 33)		Total (N = 70)	
	X	SD	X	SD	X	SD	X	SD	X	SD	X	SD
Anxiety Score	4.9	3.2	5.1	2.3	5.0	2.7	9.4	3.5	12.2	3.9	10.8	3.7
Phobic Score	5.2	2.6	7.9	2.6	6.6	2.6	8.4	3.1	10.1	3.7	9.3	3.4
Obsessive Compulsive Score	8.2	3.1	8.6	1.8	8.4	2.5	7.8	3.1	7.9	2.5	7.9	2.7
Somatic Score	3.9	2.3	4.4	2.2	4.2	2.3	8.6	2.7	8.0	2.4	8.4	2.5
Depressive Score	5.6	2.1	5.3	2.1	5.5	2.1	8.4	2.8	9.6	2.0	9.0	2.5
Hysteria Score	5.3	2.9	5.3	3.2	5.3	3.1	6.5	4.4	6.7	2.2	6.6	3.4
Total MHQ Score	33.2	9.1	36.4	8.1	34.8	8.6	49.2	10.7	53.3	10.9	51.3	10.8

Neurotic vs. Normal — Anxiety t = 10.9 p < .005 Depression t = 9.5 p < .005
 Phobia t = 5.4 p < .005 Hysteria t = 2.5 p < .01
 OBS t = N.S. Somatic t = 10.8 p < .005
 Total Score t = 10.4 p < .005

APPENDIX 1
MIDDLESEX HOSPITAL QUESTIONNAIRE — Malay Version

No.	Soalan	Jawapan
1.	Adakah anda merasa risau tanpa sebab yang nyata jelas.	Ya. Tidak
2.	Adakah anda merasa takut bila berada ditempat-tempat yang tertutup seperti lif, kedai dll.	Selalu, Kadang-Kadang, Tak Pernah
3.	Adakah orang lain berkata anda seorang yang sangat cermat tekun dan berhati-hati	Tidak. Ya
4.	Adakah anda diganggu dengan pening kepala atau sesak nafas.	Tak Pernah, Kadang-Kadang, Selalu
5.	Bolehkah anda berfikir secepat seperti biasanya	Ya. Tidak
6.	Adakah fikiran anda senang dipengaruhi oleh orang lain.	Ya. Tidak
7.	Adakah anda merasa hendak pitam	Selalu, Kadang-Kadang, Tak Pernah
8.	Adakah anda merasa bimbang kerana takut mendapat sesuatu penyakit yang tidak boleh diubati	Selalu, Kadang-Kadang, Tak Pernah
9.	Adakah anda fikir kebersihan itu perkara yang kedua pentingnya selepas Tuhan	Tidak. Ya
10.	Adakah anda selalu kurang sihat atau rasa makanan tidak hadam	Ya. Tidak
11.	Adakah anda rasa hidup adalah sesuatu beban dan perlu banyak berusaha	Kadang-Kadang, Selalu, Tak Pernah
12.	Pernahkah dalam kehidupan anda suka berlakun	Ya. Tidak
13.	Adakah anda merasa risau dan resah	Selalu, Kadang-Kadang, Tak Pernah
14.	Adakah anda merasa lebih selesa di rumah	Selalu, Kadang-Kadang, Tak Pernah
15.	Adakah anda dapati bahawa perkara yang tidak munasabah selalu datang mengganggu fikiran anda	Selalu, Kadang-Kadang, Tak Pernah
16.	Adakah anda kadang-kadang rasa perit atau rasa menyocok di lengan, kaki atau badan	Kadang-Kadang, Selalu, Selalu, Tak Pernah
17.	Adakah anda menyesal dengan kelakuan anda yang lalu	ya. Tidak
18.	Biasanya adakah anda seorang yang terlalu kuat emosi anda	Ya. Tidak
19.	Adakah kadangkala anda rasa gempar dan darah bergemuruh	Tidak. Ya
20.	Adakah anda merasa tidak selesa apabila menaiki bas atau keretapi walaupun keadaan tidak sesak	Banyak (Terlalu), Sedikit, Tak Pernah
21.	Adakah anda paling gembira semasa bekerja	Ya. Tidak
22.	Adakah selera anda kurang sejak akhir-akhir ini	Tidak. Ya
	Adakah anda bangun pagi terlalu awal di waktu yang luarbiasa	Ya. Tidak
24.	Adakah anda merasa seronok apabila dijadikan tumpuan orang lain	Tidak. Ya
25.	Bolehkah anda katakan yang anda adalah seorang yang selalu runsing	Banyak, Sedikit Tak Pernah

APPENDIX 1
MIDDLESEX HOSPITAL QUESTIONNAIRE — Malay Version

No.	Soalan	Jawapan
26.	Adakah anda tidak suka keluar seorang diri	Ya. Tidak
27.	Adakah anda seorang yang sukakan kesempurnaan	Tidak. Ya
28.	Adakah anda merasa tersangat letih dan penat	Selalu, Kadang-Kadang, Tak Pernah
29.	Pernahkah anda rasa murung dalam jangka masa yang lama	Tak Pernah, Selalu Kadang-Kadang
30.	Adakah anda rasa yang anda mengambil kesempatan dalam sesuatu keadaan untuk kepentingan sendiri	Tak Pernah, Kadang-Kadang, Selalu
31.	Adakah anda kerap kali merasa dalam keadaan ketegangan	Ya. Tidak
32.	Adakah anda terlalu bimbang apabila saudara anda lambat pulang	Ya. Tidak
33.	Adakah anda suka memeriksa sesuatu perkara berulang kali sampai ketahap yang tak sepatutnya	Ya. Tidak
34.	Bolehkah anda tidur dengan mudah sekarang	Tidak. Ya
35.	Mestikah anda lebih berusaha dan memberanikan diri dengan masalah atau krisis	Banyak, Kadang-Kadang, Macam biasa
36.	Selalukah anda menghabiskan wang untuk membeli baju	Ya. Tidak
37.	Pernahkan anda merasa yang anda akan "hilang akal"	Ya. Tidak
38.	Adakah anda rasa takut apabila berada di-tempat yang tinggi	Banyak, Sedikit, Tak Pernah
39.	Adakah anda merasa sakit hati dan marah apabila kerja biasa (rutin) anda diganggu	Banyak, Sedikit, Tidak
40.	Adakah anda selalu berpeluh atau berdebar-debar	Tidak. Ya
41.	Adakah anda rasa perlu menangis	Selalu, Kadang-Kadang, Tak Pernah
42.	Adakah anda merasa seronok apabila dalam keadaan yang mendebarkan	Ya. Tidak
43.	Pernahkah anda mengalami mimpi yang menakutkan dan yang membimbangkan anda setelah bangun dari tidur	Tak Pernah, Kadang-Kadang
44.	Adakah anda rasa takut apabila berada di-tempat dimana ada orang ramai	Selalu, Kadang-Kadang, Tak Pernah
45.	Adakah anda risau keterlaluan tentang sesuatu hal yang kurang penting	Tak Pernah, Kadang-Kadang
46.	Adakah keinginan seks anda berubah	Kurang, Lebih atau sama
47.	Hilangkah kebolehan anda untuk bertimbang rasa terhadap orang lain	Tidak. Ya
48.	Kadangkala pernahkah anda merasa diri anda berlagak atau berpura-pura	Ya. Tidak

TABLE 4
SENSITIVITY AND SPECIFICITY OF MHQ
SCALES AND SUBSCALES

	A. Scale	P. Scale	O. Scale	S. Scale	D. Scale	H. Scale	MHQ Scale
Cut Off Score	7	8	9	7	7	6	42
Sensitivity	0.80	0.57	0.43	0.83	0.84	0.57	00.84
Specificity	0.75	0.56	0.53	0.87	0.76	0.54	00.78

DISCUSSION

It was shown that MHQ (Malay language version) used as an overall neurotic scale is valid, sensitive and specific enough to differentiate between "general neurotic patients" and the normal population. But when the differences are made to specific subscales, it is found that anxiety, somatic and depressive subscales have validity and acceptable specificity and sensitivity. In fact universally there are no accepted definitions that exist for false positive and false negative rates(9).

In the case of phobic and hysterical subscales, although the means scores are significantly higher in neurotic groups than normal groups, misclassification rate is quite high. In the obsessional subscale there is a tendency to have a slightly higher score in normal groups but not significantly. And the misclassification rate is very high. The possible reasons for these findings are that in our neurotic group sample there are very few cases of phobic, obsessional and hysterical neurosis. So in actual sense our study is not validity study for these subscales. As most of our patients are anxiety neurosis and depressive neurosis cases, it is understandable that classification rate of these subscales are acceptable. As shown in other studies(2,3) and in our present study, anxiety and depressive subscales did not differentiate between the various diagnostic groups including those between anxiety and depressive neurosis.

The second possible reason for the unsatisfactory correct classification rate for phobic, obsessional and

hysterical subscales, is that it may be due to the nature of the question itself. For example questions no: 8 (worrying about incurable illness), 14 (more relaxed indoor), 26 (dislike going out alone), 32 (worry unduly when relations are late coming home), are not exactly questions for phobia. These questions inquire on the personality traits and such personality traits are common in the Malaysian population.

It is already known that some of the questions for the obsessional scale are asking for the obsessional "traits" rather than for obsessional "illness". Examples are on question no: 3 (say you are too conscientious), 9 (cleanliness is next to godliness), 21 (happiest when working), 27 (are you a perfectionist), 39 (irritated if routine is disturbed).

Therefore it is not surprising that the obsessional subscale score of neurotic group with obsessional neurosis are not different from the normal population. The higher score of our normal subjects compared to their western counterparts may be due to cultural factors e.g. religious influence.

Similarly there are suggestions that hysteria scale "might be a measure of extraversion"(10) or measures of non-specific morbid factors (2). Others found considerable confusion as to what it actually measures(3).

In view of the above reasons the authors feel that usefulness of phobic, obsessional and hysteria subscale as "measures of illness" for these disorders should be reconsidered. But MHQ as a whole is found to have useful validity in our study. A similar statement is true for anxiety, depressive and somatic subscales for general neurotic disorders.

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