

VALIDITY OF A 6-ITEM VERSION OF GENERAL HEALTH QUESTIONNAIRE (G.H.Q.) IN THE HANDS OF A NON-PSYCHIATRIST

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A short 6-item version of General Health Questionnaire (GHQ-6) was evaluated for its validity of a sample of STD patients in the hands of a non-psychiatrist untrained in psychiatry in comparison to independent and detail psychiatric assessment. The GHQ-6 was found to have a moderate sensitivity of 55%, but high specificity rate of 87%.

Despite considerable psychiatric morbidity in primary care setting and speciality clinics the primary physician usually makes no effort to look for psychiatric morbidity unless patients voluntarily report psychiatric distress or have severe overt psychiatric disturbances. One of the important reason for this neglect is the belief that the psychiatric evaluation is time consuming. Therefore it is worthwhile if there is a simple valid psychiatric screening tool which does not take much time in administering and calls for no special skills. Some abridged form of psychiatric screening questionnaire have been used either by qualified psychiatrist (Shamasunder *et al.*, 1986) or medical personnel after psychiatric orientation (Krishna Murthy *et al.*, 1981). Utility of a short (6-item) psychiatric screening questionnaire in routine clinical set up in the hands of a non-psychiatrist has been reported by us elsewhere (Rao *et al.*, 1991).

The present study aims at finding out the validity of a 6-item version of Goldberg's GHQ in the hands of psychiatrically untrained medical personnel against independent and detailed psychiatric assessment.

MATERIAL AND METHODS

A postgraduate student in Skin and STD untrained in psychiatry screened 100 STD pa-

tients attending a General Hospital clinic for psychiatric morbidity using a short 6-item version of General Health Questionnaire (GHQ) of Goldberg. This questionnaire included the short 5-item version of GHQ used by Shamsunder *et al.* (1986) and 6th question was added as considerable number of patients present mainly with somatic symptom of pain. Sixth question was, "Have you got any pain in the body (head, chest, limbs, back, all over) lasting for six months to one year?". The questions were asked in local language. The gradation of answers were retained as it helped to explain the questions. Even one positive answer was considered enough for a positive case.

All the 100 cases were subjected to a detailed clinical evaluation by psychiatrist and psychiatric diagnoses was ascribed to primary psychiatric cases according to DSM-III criteria. The cases who had psychiatric symptoms preceding STD lesion were considered as primary psychiatric cases and the cases who had developed psychiatric symptom in temporal relation to history of exposure or STD lesion were considered as reactive cases. Only the primary psychiatric cases were analysed. The Skin and STD postgraduate and psychiatric team were blind to each other's results prior to analysis of results.

The validity (Criterion) of the questionnaire in detecting the primary psychiatric cases was calculated by using following formula (WHO, 1983).

$$\text{Sensitivity (Detection rate)} = \frac{\text{Subjects who have the disorder and are classified as "positive" by the test (True Positive = TP)}}{\text{All subjects in the population who have the disorder (TP) + False Negative (FN)}} \times 100$$

$$\text{Specificity} = \frac{\text{Subjects who do not have the disorder and are classified as "negative" by the test (True Negatives = TN)}}{\text{All subjects in the population who do not have the disorder (TN + False Positive (FP))}} \times 100$$

Positive Predictive Value (PPV) = $TP/(FP + TP)$

Negative Predictive Value (NPV) = $TN/(TN + FN)$

The reliability of the questionnaire was calculated by using following formula (Reiger and Bruke, 1989).

$$\text{Kappa(K)} = (PO - PC)/(1 - PC)$$

PO = Proportion of Agreement observed = $(TP + TN)$

PC = Proportion of Agreement by Chance = $(TP + FN) \times (TP + FP) + (FP + TN) \times (FN + TN)$

RESULTS

Out of 100 cases 35 cases were scored as positive on screening tool. On detailed psychiatric evaluation 6 out of 35 above cases had no psychiatric illness, and there were 53 positive psychiatric cases including 29 above cases. Thus there were 29 TP, 6 FP, 41 TN and 24 FN cases in the sample. Out of 53 cases 43 had Dysthymic disorder, 5 had Atypical depression, 2 cases major depressive disorder in non-psychotic phase and another 2 cases had inhibited sexual excitement.

The sensitivity of this screening tool in the hands of psychiatrically untrained professional was 55% and the false negative cases were 45%. The specificity was 87% and the false positive figure was 13%. PPV was 0.82 and NPV was 0.63. The reliability of this screening tool was 0.98.

DISCUSSION

The sensitivity of 55% of present screening questionnaire is low when compared to Western studies which quotes sensitivity ranging from 65 to 100% of various screening questionnaires (As summarised by Mayou and Hawton, 1987) and 85% sensitivity of 5-item version of GHQ in an Indian sample (Shamsunder *et al.*, 1986). However, in the present study the screening tool was administered by a non-psychiatrist untrained in psychiatry in contrast to above studies in which psychiatrically trained persons administered the screening tool. The high rate of specificity 87% with only 13% false positive cases and reliability of 0.98 confirms that even when administering a short screening questionnaire the non-psychiatrist does not over estimate the psychiatric morbidity. This is probably because patients do not report the psychiatric symptoms unless they consider it significant (Rao and Shamshad Begum, 1991). Therefore the 6-item version of GHQ could be a valuable effective screening tool even in the

hands of psychiatrically untrained medical professional. These questions can easily be integrated into routine clinical enquiry.

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