STANDARDISATION OF GUJARATI VERSION OF MIDDLESEX HOSPITAL QUESTIONNAIRE

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SUMMARY

The Middlesex Hospital Questionnaire is a short clinical diagnostic self rating scale for psychoneurotic patients constructed by Crown and Crisp (1966). Aims of the present study was to prepare Gujarati Version of the M. H. Q. and to establish the reliability and validity of the same.

Gujarati version of the M. H. Q. was given to 204 normal population consisting of university students, school teachers, factory workers, house wives and middle aged men from different walks of the life to test the validity. The test was also administered to 30 neurotic patients.

This Gujarati version was found to be reliable. There was highly significant difference between normal population and neurotic patients on total score and on all the six subtests, thus establishing the validity of the Gujarati version. It also related well with the clinical diagnosis in most of the cases.

In psychiatric evaluation, objective assessment is done by psychological tests where subjective bias is eliminated. For this purpose there are many rating scales available in English. Majority of patients attending general hospital psychiatric outpatients do not know English, hence these scales are of limited use. Also these scales are standardised on Western population. Few studies are reported from India on standardisation of the rating scales in regional language. In Western India such attempts are almost nil. Gujarati language is one of the major languages spoken and written in Western India. Hence the study was undertaken in Gujarati language.

In our country the number of patients in any general hospital psychiatric out-patient is never proportionate to existing staff (Neki, 1973). Largest patient group in general hospital psychiatric out-patient consists of neurosis (more than 40%) (Neki and Kapoor, 1963; Khanna et al., 1974; Bagadia et al., 1979; Gada, 1980). There is a constant need to have self-rated questionnaire which can give a quantitative clinical profile in a reasonable short time. The Middlesex Hospital Questionnaire is a short, clinical diagnostic self-rating scale for psychoneurotic patients, constructed by Crown and Crisp (1966). The authors' aim was a rapid quantification of common symptoms and traits relevant to the conventional diagnostic categories of neurotic illness—to provide a rapid approximation to what would be expected from a diagnostic psychiatric interview. Instead of simply telling that somebody is more ill than others, the authors claim that the M.H.Q. gives a "quantitative clinical profile" as the test consists of six subscales having 8 questions each. The subscales are:

1. Free-floating anxiety (FFA)
2. Phobic anxiety (PHO)
3. Obsessional traits and symptoms (OBS)
4. Somatic concomitants of anxiety (SOM)

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(5) Neurotic depression (DEP)
(6) Hysterical personality traits (HYS)

The authors validated the test on the following criteria:

(1) Each subtest differentiated the neurotics from the normals at a highly significant level.

(2) The subtest scores correlated with the clinical ratings of the particular diagnostic category.

Further evaluation of the M.H.Q. was done by Crown et al. (1970), and came to the conclusion that age and social class could be ignored in normal clinical use and sex affected the subtests in a varying manner.

Since its construction, the M.H.Q. was used by various authors, all of whom demonstrated its utility and its superiority over other scales like M.P.I and P.E.N. (Cockett, 1969; Mc Karracher et al., 1968; Young et al., 1971; Wolkind and Forrest, 1972). Regarding the Hysteria subscale. Cockett argued that it measured extraversion rather than hysteria. Moreover, Young et al. (1971) found that the Hysteria subscale of the M.H.Q. correlates with the E scale of the P.E.N. test whereas the rest of the subscales and the F.F.A. in particular, correlate positively with the N Scale of the P.E.N. test. It also seems that the HYS subscale measures the hysterical personality traits and not the hysterical neurosis. M.H.Q. is accepted as one of the self-rated questionnaire for neurosis (Tyrer, 1979).

Prabhu (1972) used the M.H.Q. (Original English form) in the Indian setting and found it to be of same efficacy as claimed by the original authors. He also found the repeat reliability of each of the subtests to be good and the total score of the test to correlate +0.62 with the N score of the E.P.I.

Srivastava and Bhat (1974) used the Hindi version of M.H.Q. for groups of normal population (homogeneous and heterogeneous) and a neurotic population. In this the hysteria scale was actually constructed new, taking into consideration the usual clinical presentation of hysteria in India. They also concluded from their study that the Hindi version of the M.H.Q. is a very sensitive, reliable and valid instrument for differentiating the neurotics from the normals.

Somasundaram and Mathrubootham (1979) used the Tamil version of M.H.Q. in groups of normal populations (industrial workers, medical students and hospital aids) and a neurotic population. They concluded from their study that Tamil version of M.H.Q. is valid and reliable instrument for differentiating neurotics from the normals. They also concluded that it related significantly with clinical diagnosis in most cases.

AIMS

The present study was undertaken with the following aims:

(1) To prepare a Gujarati Version of the Middlesex Hospital Questionnaire.

(2) To obtain preliminary standardisation figures in a normal population.

(3) To establish the reliability and validity of the Gujarati Version.

MATERIAL AND METHOD

A preliminary form of Gujarati Version was prepared by translating the original 48 items of M.H.Q. into Gujarati. Real meaning of the questions was given more emphasis than word to word translation. Copies of this Gujarati version were circulated, along with the original English test among two consultant psychiatrists, two clinical psychologists, two social workers and a principal of Gujarati Medium High School, in all of whom mother tongue was Gujarati. They were asked to go through all the items critically and suggest improvements. All such suggestions were incorporated in the final form of the version.
(A copy of the final form is attached).

The Gujarati version so developed was administered to 204 normals. For the sample size, statistician was consulted. The sample size was worked out on the basis of the census figures of Bombay 1971. The sample was a heterogenous group consisting of university students, school teachers, factory workers, house wives and middle aged men from different walks of life. The factory workers and school teachers were administered the test at their working places whereas others were administered test either individually or in groups.

To test the validity, the test was administered to thirty neurotics (from the private practice and psychiatric department of a general hospital). The ability to read and understand the questionnaire was the only criterion for selection of normals and patients. The results are presented herewith.

RESULTS AND DISCUSSION

Reliability:

Reliability was calculated by split-half method from the scores of normal people. The split-half reliability of the whole test (i.e. between the first 24 items Vs. the next 24 items) was 0.72 (by Sperman Brown Formula). For the subscales the reliability coefficient are given in Table 1.

| Subscales | Reliability |
|-----------|-------------|
| FFA       | 0.77        |
| PHO       | 0.72        |
| OBS       | 0.64        |
| SOM       | 0.70        |
| DEP       | 0.68        |
| HYS       | 0.59        |
| Total Score | 0.72      |

No attempt was made to see the repeat reliability of the test as it was thought that neurotic symptoms have in any case little temporal stability in a clinical situation.

Table 2 gives the reliability coefficient of the present study and those arrived by different workers as well as the method used (original workers and three Indian workers).

This shows that the Gujarati version of M.H.Q. is reliable for total scores and for all the six subscales.

Validity:

The mean values of the test scores along with standard deviations (s.d.) for all the 6 subscales as well as for the total are presented in Table 3.

| Workers                | FFA | PHO | OBS | SOM | DEP | HYS | Total | Method Used         |
|------------------------|-----|-----|-----|-----|-----|-----|-------|---------------------|
| Present Study          | 0.77| 0.72| 0.64| 0.70| 0.68| 0.59| 0.72  | Split half          |
| Somasundram and        | 0.55| 0.55| 0.63| 0.33| 0.21| 0.25| 0.65  | method using        |
| Mathrubootham (1979)   |     |     |     |     |     |     |       | Spearman Brown Formula. |
| Srivastava and Bhat (1974) | 0.80| 0.71| 0.44| 0.70| 0.57| 0.59| 0.85  | Retest Method.      |
| Prabhu (1972)          | 0.71| 0.64| 0.76| 0.68| 0.68| 0.66| 0.70  | Retest Method.      |
| Crown et al (1970)     | 0.77| 0.68| 0.73| 0.68| 0.72| 0.72|       | Retest Method.      |
The mean score obtained for 'OBS' is higher than rest of the subtests.

Table 4 gives the mean and s.d. for the scores of different sub-scales and total score of the present study and of the work done by Somasundaram and Mathrubootham (1979), Srivastava and Bhat (1974), Prabhu (1972), Crown and Crisp (1966) on normal population.

As found in present study, all the workers have found mean score on 'OBS' subtest to be higher. It is observed that the findings of the present study on normal population are comparable with those of other workers.

Table 5 gives mean and s.d. of normal population and neurotic patients. Significance was worked out by using 't' test.

It is clear from the Table that the comparison of mean scores shows that there is highly significant difference between normal population and neurotic patients on all the six subtests as well as for total score.

Somasundaram and Mathrubootham
### Table 6—MHQ—Finding on Neurotics

| Sample & number | FFA Mean s.d. | PHO Mean s.d. | OBS Mean s.d. | SOM Mean s.d. | DEP Mean s.d. | HYS Mean s.d. | Total Mean s.d. |
|-----------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|
| Present study (1980 (N=30) | 12.73 1.95 | 8.6 2.67 | 11.74 2.39 | 11.50 3.33 | 10.23 2.06 | 7.84 2.71 | 63.18 8.23 |
| Somasundaram Mathrubootham (1979) (N=40) | 8.33 4.16 | 6.75 3.33 | 9.68 3.22 | 8.37 4.15 | 7.05 3.35 | 5.45 3.09 | 45.35 15.42 |
| Srivastava & Bhat (1974) (N=100) | 10.1 | 3.6 7.3 | 3.5 9.8 | 3.3 10.3 | 3.8 9.7 | 3.7 8.2 | 3.0 55.4 15.2 |
| Prabhu (1972) (N=100) | 9.10 5.3 6.40 3.90 9.40 4.2 8.2 3.8 5.6 3.4 4.7 7.1 | 2 | |
| Crown Crisp (1966) (N=62) | 8.4 4.4 5.2 3.6 8.5 3.0 7.3 3.3 6.3 3.5 5.1 3.7 | 2 | |

(1979) found no significant difference between normal population and neurotic patients on OBS and HYS subtests but found significant difference on other subtests and on total scores. Srivasava and Bhat (1974) had reconstructed 'HYS' subtest and found significant difference between normal population and neurotic patients on all subtests and on total score. Prabhu (1972) and Crown and Crisp (1966) found significant difference on all the subtests and on total scores between normal population and neurotic patients as found in the present study.

Table 6 gives the mean and s.d. for the scores of different sub-scales and total score of the present study and of the work done by Somasundaram and Mathrubootham (1979), Srivastava and Bhat (1974), Prabhu (1972), Crown and Crisp (1956) on neurotic patients.

It is observed that the findings of the present study on neurotic patients are comparable with those of above workers.

An attempt was made to see the correlation between clinical diagnosis in the 30 neurotic patients and the score of the subtests relevant to diagnosis. It was seen that wherever a diagnosis of anxiety neurosis, phobic neurosis, neurotic depression, obsessive compulsive neurosis was made the scores were found to be more than the other subscales in majority of cases. No case was diagnosed as somatic anxiety and hysterical neurosis.

**CONCLUSION**

It is evident from this study that the Gujarati Version of the M.H.Q. is a very sensitive, reliable and valid instrument for differentiating the neurotics from the normals. It is multidimensional, covering various aspects of neurosis but at the same time relatively short and simple, taking less than 10 minutes for administration.

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