ORIGINAL ARTICLE

SELF REPORTING QUESTIONNAIRE AS A TOOL TO DIAGNOSE PSYCHIATRIC MORBIDITY

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ABSTRACT

Background: Mental health is a neglected health issue in India. It is known fact that person not well mentally will not be able to work efficiently and that will have adverse impact on nation's economy. Therefore it will be helpful if we are able to diagnose possible psychiatric morbidity in individual working. It is very difficult in India where psychiatrist and general population ratio is poor. Present study was conducted with aim of evaluating usefulness of self reporting questionnaire (S.R.Q.) as a tool to diagnose psychiatric morbidity. This will help us lower burden on qualified psychiatrist and also to find more hidden cases of psychiatric morbidity that could lie in community.
Materials and Methods: It's a cross sectional study conducted in two vocational training institutes for blinds. They were subjected to pre tested S.R.Q. and Personality Based Hardiness Index (PBHI) the individuals found positive with this tool and double the number of matched S.R.Q. negative controls from the institute were subjected to psychiatric clinical examination done by qualified psychiatrist. Fisher's exact test and chi square test were used
Results: 15 (7.18%) blinds were found S.R.Q. positive indicating they either have or prone to have psychiatric morbidity.
Conclusion: S.R.Q. is a very useful tool to diagnose psychiatric morbidity and can be used with minimal training. It is very easy to administer and interpret than PBHI. Such tools are needed in the developing nations like ours to screen more population and improve mental health.

Keywords: S.R.Q., Personality Based Hardiness Index

INTRODUCTION

Mental health is probably still a neglected health issue in India. The availability of statistics and reference search in this field is also a challenging task. Epidemiological studies report prevalence rates for psychiatric disorders from 9.5 to 370/1000 population in India[1]

Qualified psychiatrist to patient ratio in India is 3500 psychiatrist to cater about 1.1 billion population[2] this severe manpower crunch in the field of mental health could easily lead to more undiagnosed patients in community which could directly or indirectly have impetus on community health at large. This serious disparity in ratio clearly suggest need of such a solution that could be feasible to apply and will be useful.

This demands need of such a tool that will help easily screen the individuals for their psychiatric morbidity and can be used easily by any healthcare volunteer with minimal training, this tool will be sensitive enough to diagnose true positive and specific enough to diagnose true negative cases. The positive individual found with this tool then could be subjected to qualified psychiatrists clinical examination. This will not only lower unnecessary burden on psychiatrists but also will help diagnose more hidden cases in community. The present study was conducted with a aim to find out possible psychiatric morbidity in the individuals using self reporting questionnaire (S.R.Q.)[3]

AIMS AND OBJECTIVES

- To evaluate usefulness of SELF REPORTING QUESTIONNAIRE (S.R.Q.) as a tool to find psychiatric morbidity in individuals.
- To find out whether it can be used by a healthcare worker with minimal training to screen individuals.
- To draw ROC (Receiver Operative Curve) to find out appropriate cut of point where this tool could have maximum acceptable sensitivity and specificity.

- To compare S.R.Q. results with Personality Based Hardiness Index (PBHI)[4] so as to comment and compare easiness and usefulness of it.

METHODOLOGY

The study is conducted in the two vocational training institutions for blinds in Mumbai one for the men and other for the women. Written permission is obtained from respective authorities of institutions for conducting the study. All the blinds enrolled in these two institutions at the time of the study are included. Information was given to all blinds included in the study about types of questions and answers were obtained by interview technique. After few demographic questions, just to build rapport they were directly subjected to 20 question self reporting questionnaire which was standardized after translating it in local vernacular language i.e. Marathi. Here different cut of points for categorizing individual as S.R.Q. positives were tried and finally 10 was found as the appropriate cut off point. Later they were also subjected to Personality Based Hardiness Index which is a standardized 47 question questionnaire which have scoring system this questionnaire is proved to diagnose individuals hardiness i.e. ability to cope with surrounding environment, which would mean more the score tough is the individual mentally.

RESULTS AND DISCUSSION

Table 1: S.R.Q. results in subjects

S.R.Q. Result	Number	Percent
S.R.Q. +VE	15	7.18
S.R.Q. –VE	194	92.82
Total	**209**	**100**

7.18 % of the total 209 study subjects were S.R.Q. positive and were prone to have psychiatric morbidity. These individuals when subjected to psychiatric examination with double the number of S.R.Q. negative individuals following results were obtained.

Table 2: S.R.Q. result and psychiatric diagnosis

S.R.Q. Results	Morbidity Present	Morbidity Absent	Total
S.R.Q. Positive	10 (83.33)	2 (8.33)	12
S.R.Q. Negative	2 (16.67)	22 (91.67)	24
Total	12*	24	36

(Value in bracket shows percent)
* 3 S.R.Q. positive subjects couldn't be examined due to death in 1 and inability to follow in other 2 cases. Remaining 12 out of 15 S.R.Q. positive subjects and double number i.e. 24 matched S.R.Q. negative subjects were subjected to psychiatric clinical exam to find psychiatric morbidity.

When S.R.Q. positive results were correlated with psychiatric morbidity using Fisher's exact test there was statistically significant difference between the two ($p = 0.00000147$). The result here indicates that significantly high proportions of cases were conglomerated in true positive and true negative categories. This would mean that S.R.Q. results served as a good indicator of psychiatric morbidity.

Table 2 shows S.R.Q. results and psychiatric diagnosis. It was observed that subjects having psychiatric morbidity belonged to diagnostic categories of ICD-10 classification[5] of mental and behavior disorders with morbidities such as disthymic disorder, mixed anxiety and depressive disorder, anxiety and dependent disorder and adjustment disorder.[5]

Bansal et al[6] in their study observed that visually handicapped subjects showed significantly high scores in the areas of depression and tension.

Fitzgerald[7] in his study found that blind goes through phases of disbelief, protest, depression and finally recovery.

The result here indicates that significantly high proportions of cases were conglomerated in true positive and true negative categories. This would mean that S.R.Q. results served as a good indicator of psychiatric morbidity. As revealed in the table 83.33 % of S.R.Q. positive subjects were confirmed to be having psychiatric morbidity, while 91.67 % S.R.Q. negative subjects did not have any psychiatric morbidity.

In order to confirm whether same cut-off point serves the purpose when used for screening blind persons an attempt was made to analyze the effect on sensitivity and specificity when cut off points varying from 1 to 20 were used. The results are given in the table given below and also depicted in the graph.

As can be observed from the table and accompanying graph, up to the cut-off points 1 to 6 though sensitivity computed to be high, the corresponding specificity values were unacceptably low. Conversely, beyond the cut-off point 11, the sensitivity dropped to very low unacceptable level. Keeping in mind that S.R.Q. is meant as a screening test, if cut-off point up to 6 is utilized there will be unnecessary burden of false positive cases on already overworked psychiatrists. If cut off point is taken beyond 11 a large number of psychiatric morbidities are likely to be missed as they will be screened out at first phase.

Cut-off points 7 to 10 shown fairly high specificity values. Change from 7 to 10 did not affect sensitivity but change from 9 to 10 brought the specificity from 83 % to 91 %. Thus a score of 10 was confirmed as the most suitable cut-off point with highest possible sensitivity-specificity combination. It can thus be concluded that S.R.Q. positive results at cut-off points 10 can be taken as an acceptable indicator of psychiatric morbidity.

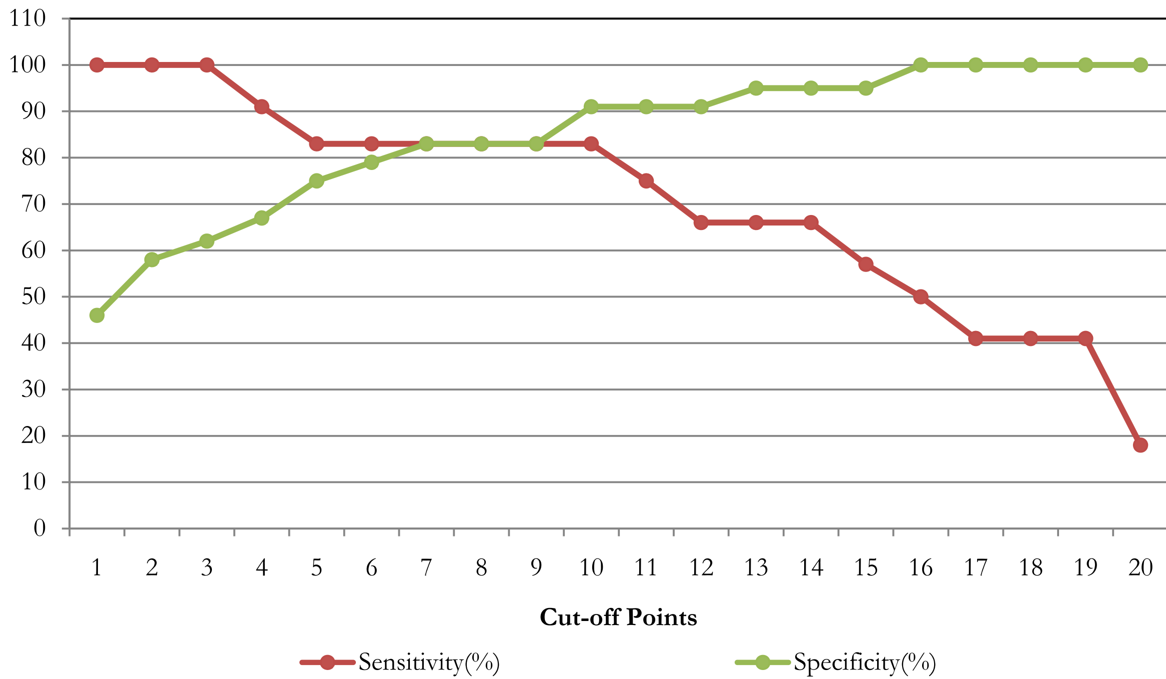

Fig 2: Line diagram showing sensitivity & specificity at various cut off points

Table 3: Personality Based Hardiness Index

Hardiness status	Number	Percent
Non-hardy	16	8.79
Hardy	166	91.21
Total	182*	100

* Excluding subjects below age 15 years as recommended by Kobasa and Maddi.

It can be observed that 8.79 % subjects were 'Non hardy' while 91.21 % were 'Hardy' this would mean that 8.79 % study subjects were ill equipped to cope up with stressful conditions of life and were more prone to develop psychological maladjustments, while remaining 91.21% were well equipped to do better in stressful condition in life. The hardiness status of the subjects was linked with the age, sex, socio-economical class, social acceptance etc of the subject to find possible reasons behind non hardy personality and significant association in lower socio economic class and social acceptance of individual was found.

Table 4: Hardiness status and SRQ result

S.R.Q. Result	Non-hardy	Hardy	Total
SRQ +VE	13(81.25)	2(1.20)	15
SRQ-VE	3(18.75)	164(98.80)	167
Total	16(100)	166(100)	182

$\chi 2= 113.28$, d.f. = 1, $P < 0.01$

When hardiness status and SRQ results were correlated high level of agreement between the two tests was seen. S.R.Q. results as well as results of personality based hardiness index study are meant for quantification of two aspects of psychological profile of the subjects. While S.R.Q. can help as screening test for identifying persons with higher risk of psychiatric morbidity, Hardiness index estimates the psychological defense mechanism of subjects. From the clinical examination of psychiatrist it is clear that S.R.Q. work as a good and easy screening tool to diagnose psychiatric morbidity in individuals. Personality Based Hardiness Index was a scoring system questionnaire as compared to S.R.Q. which was closed ended easy to administer and interpret questionnaire. S.R.Q. thus could be a very useful tool in the hands of health worker as they can diagnose mental morbidities in the community that will help improve community health at large. S.R.Q. or similar tool should be evaluated with more number of samples so that it can then be applied to general population for screening.

RECOMMENDATIONS

S.R.Q. at the cut of point of 10 was successful to show sensitivity of 83 and specificity of about 93 percent which suggest that this or similar tool should aggressively be invented and applied in the general population that will help find hidden cases in the community and mental health will no longer be a neglected issue.

REFRENCES

1. Suresh Bada Math, C. R. Chandrashekar & Dinesh Bhugra, Indian J Med Res 126, September 2007, pp 183-192

2. Mental Health Legislation in Developing Countries with Special Reference to South Asia: Problems and Solutions Global Social Policy December 2008 8:308-311, sited at http://gsp.sagepub.com/content/8/3/308.extract on 03 Feb 2012

3. Harding T. W. Climent C.E., Giel R., Ibrahim, Murthy R.S., Suleman M.A., Wig N.N. W.H.O. collaborative study on strategies for extending mental health care II. The development of New Research methods. American Journal of Psychiatry. 1983; 140: 1474-1480.

4. Kobasa S.C. stressful life events, Health, Personality and Health. An enquiry into hardness; Journal of Personality and Social Psychology. 1979; 37: 1-11.

5. International Statistical Classification of Diseases (ICD) and Related Health Problems 10th Revision Version for 2006. Available on http://www.who.int/classifications/icd/en/. Accessed on 1st Dec, 2011.

6. Bansal R.K., Jain I.S., Kohli T.K. Psychological factors associated with visual impairment. Indian J psychiatry. 1980; 22:173-175.

7. Fitzgerald R.G. Reactions to blindness. An exploratory study of adults with recent loss of sight. American J Psychiatry 1970; 22: 370-379.