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# PSYCHIATRIC CASE FINDING IN ETHIOPIA: SHORTCOMINGS OF THE SELF REPORTING QUESTIONNAIRE

ABSTRACT. Attenders of health care facilities usually present somatic complaints. It is important to identify the psychiatric patients among them, especially the neurotic complainers. They are at risk for being exposed to expensive somatic investigations and being prescribed useless and sometimes harmful drug treatment. The World Health Organization designed the Self Reporting Questionnaire (SRQ), to be a universally applicable psychiatric case finding instrument, for use in medical clinics. A feasibility study with this instrument was carried out with 110 respondents in Ethiopia. A moderate criterion validity was found, limitations being partly due to the sensitivity of the SRQ to help-seeking behavior, even in the absence of any mental illness. This study also revealed problems in transcultural communication because many of the diagnostic concepts used in this instrument were too western to be transposed unchanged to the Ethiopian culture. Items need fairly extensive modification to be applicable there.

## INTRODUCTION

Practicing western medicine, and particularly western psychiatry, in a non-western African culture may produce problems of understanding. The reported research deals with difficulties Ethiopian patients have when they are exposed to the language of western psychiatry, and problems a western psychiatrist has when he tries to understand the way Ethiopians express themselves while asking for professional help for their mental illness.

To study these barriers in transcultural communication we used the Self Reporting Questionnaire (SRQ), a psychiatric case-finding instrument for the detection of psychiatric patients among visitors of health-care facilities, designed by the World Health Organization (WHO) especially for developing countries (Harding *et al.* 1980; Harding *et al.* 1983). The SRQ consists of twenty-four short questions pertaining to key phenomena related to mental disorders according to western psychiatrists. The SRQ is presented in Table I.

Most of the questions have been selected from existing western psychiatric questionnaires such as the Symptom Sign Inventory (SSI) (Foulds and Hope 1968), the General Health Questionnaire (GHQ) (Goldberg *et al.* 1970), and the Present State Examination (PSE) (Wing *et al.* 1974). Therefore the questions of the SRQ are standard diagnostic questions in western psychiatry.

The SRQ requires only a simple yes or no answer for each question. The respondent is considered to be a potential psychiatric case if the number of yes answers on the first twenty questions (the so-called non-psychotic items) reaches or surpasses a fixed value, the cut-off point value, if at least one yes answer is given for the last four questions (the so-called psychotic items), or if both criteria are met.

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TABLE I

Self Reporting Questionnaire (SRQ)

| | |
|---|---|
| 1. | Do you often have headache? |
| 2. | Is your appetite poor? |
| 3. | Do you sleep badly? |
| 4. | Are you easily frightened? |
| 5. | Do your hands shake? |
| 6. | Do you feel nervous, tense or worried? |
| 7. | Is your digestion poor? |
| 8. | Do you have trouble thinking clearly? |
| 9. | Do you feel unhappy? |
| 10. | Do you cry more than usual? |
| 11. | Do you find it difficult to enjoy your daily activities? |
| 12. | Do you find it difficult to make decisions? |
| 13. | Is your daily work suffering? |
| 14. | Are you enable to play a useful part in life? |
| 15. | Have you lost interest in things? |
| 16. | Do you feel you are a worthless person? |
| 17. | Has the thought of ending your life been in your mind? |
| 18. | Do you feel tired all the time? |
| 19. | Do you have uncomfortable feeling in your stomach? |
| 20. | Are you easily tired? |
| 21. | Do you feel that somebody has been trying to harm you in some way? |
| 22. | Are you a much more important person than most people think? |
| 23. | Have you noticed any interference of anything else unusual with your thinking? |
| 24. | Do you ever hear voices without knowing where they come from or which other people cannot hear? |

The SRQ is designed to screen for mental illness. The patient's definite status as a psychiatric case has to be confirmed by a more extensive psychiatric interview. The SRQ may help the health worker to select those patients to whom he should pay special attention because they may be potential psychiatric patients. It may prevent these patients, especially the neurotic complainers – who are inclined to cite a number of somatic complaints when asking for help – from being exposed to expensive somatic investigations and sometimes harmful drug treatment. Such investigations and treatment are useless for the patients and frustrating for the health worker because the patient does not report any improvement and continues medical shopping.

Reviewing the literature we notice that the SRQ has been used in countries around the world. Reports have come from Colombia, India, the Philippines, Sudan (Harding *et al.* 1980), Brazil (Mari and Williams 1985), Guiné-Bissau (Jong *et al.* 1986), Kenya (Dhadphale *et al.* 1983), and Senegal (Diop *et al.* 1982). Remarkable is the wide variety of cut-off point values being used; every researcher seems to have chosen a value that gave an optimum equilibrium as to sensitivity and specificity to detect potential psychiatric cases in the culture in which the study was conducted. The cut-off point varies between 3/4 in Sudan and 10/11 in Colombia. This means that a respondent in Sudan who answers yes

four times becomes a potential psychiatric case, whereas someone from Colombia answering yes two and a half times more often is probably still classified as falling in the healthy group. This finding seems inconsistent with the hypothesis of the designers of the SRQ that the instrument enables the respondent "to report the presence or absence of clearly defined symptoms" (Harding *et al.* 1983), assuming that psychiatric disorders are universally prevalent clusters of symptoms. To prove this inconsistency a more sophisticated analysis should be undertaken, for example by applying the Receiver Operating Characteristic (ROC) analysis (Cleary *et al.* 1987). Apparently the SRQ measures phenomena other than discrete, universal psychiatric symptoms. Otherwise one would expect the same cut-off point to be used in all studies.

In this study we used the SRQ in two different ways. The first was to imagine each SRQ-question and the yes or no answer to it to be a short dialogue between a worker trained in western psychiatry and a patient living in the Ethiopian culture. How do Ethiopians perceive those questions? Do their yes-answers reflect the presence of the psychopathological phenomena which the question intended to uncover? If a question does not have the same meaning for the respondent as it has for the investigator, problems in transcultural communication may emerge. The second use of the SRQ in studying these problems was to establish what this instrument measures in the Ethiopian culture. We asked what reasons there are for its sometimes wrongly assigning mentally healthy people to the group of potential psychiatric cases because of their high scores (false positives), and omitting cases who, in spite of their low score, are in fact mentally ill (false negatives).

In this study therefore, we focused on two questions:

1. What is the content validity of the yes-answers to each of the questions of the SRQ in Ethiopia?
2. What is the criterion validity of the SRQ as a whole in predicting psychiatric 'caseness' in Ethiopia?

## SETTING

This study was carried out in the outpatient department of St. Paul's Hospital, a general hospital in Addis Ababa, the capital of Ethiopia. Since 1974 this country has been governed by a strong Marxist-Leninist regime. The study was carried out by a Dutch psychiatrist (F.K.) who worked for two years (1983–1985) at Addis Ababa University. He was assisted by several fourth-year Ethiopian medical students, trained in psychiatry. St. Paul's Hospital was built for the poorest people of Mercato, a vast market area where half a million people (a third of the total population of Addis Ababa) live. Ninety percent of the patients

come to this hospital on their own initiative, sometimes after travelling several days. At the gate of the hospital a nurse asks them a few questions about their problems and selects those to be sent to one of the specialists. People with 'complaints above the neck' are usually sent to the ear, nose and throat specialist, the eye specialist or the psychiatrist. Most of these patients possess no prior knowledge of psychiatry, because this speciality is extremely rare in Ethiopia. Only two psychiatric hospitals with a total number of about 500 beds exist in this country of 42 million inhabitants. In 1985, only two Ethiopian psychiatrists and five from abroad were working in the mental health field.

## METHOD

The respondents, all above eighteen years of age and speaking Amharic, the official language in Ethiopia, belonged to three groups:

1. Forty first-attenders of the psychiatric clinic at St. Paul's Hospital. In 40 consecutive working days one patient was selected at random out of the 12 new attenders of that particular day. These we call the "psychiatric group."
2. Thirty attenders of the surgical, medical or gynaecological clinics of St. Paul's Hospital. In 15 consecutive working days two patients were selected at random out of all attenders of that particular day. These we call the "somatic group."
3. Forty people from the Addis Ababa community from different social backgrounds, selected at random. These constitute the "non-attender group." Excluded were persons who were at that time in any kind of treatment in any facility. There were no non-respondents.

To study the content validity of the yes-answers on each of the SRQ questions, the SRQ was administered orally. The English version of the questionnaire had previously been translated into Amharic and checked and refined during several successive translation steps. After completion we asked the respondents to explain each of their yes-answers, and to give as many examples as possible to support their information. We recorded these explanations in order to assess later whether or not the yes-answers validate the concept psychiatrists have in mind when asking each particular question. This content-validation was also carried out by four independent raters in an inter-rater reliability study, with satisfactory results (Kortmann 1986).

To study the instrument validity of the SRQ, we determined its sensitivity and specificity in indicating psychiatric cases in the three groups. The sensitivity is the proportion of cases correctly identified by the SRQ (high scores); the specificity is the proportion of normal persons so identified by the SRQ (low

scorers) (Mc Neil *et al.* 1975). For the validation of the SRQ as a case finding instrument, we administered to the psychiatric group an extensive self-designed, semi-structured psychiatric interview, based upon DSM-III (average three hours); the other two groups were given a shorter interview (Kortmann 1986) to determine whether they were to be classified as psychiatric cases. The data from these interviews were submitted to an inter-rater reliability study by four independent raters, with satisfactory results (Kortmann and Ten Horn 1988).

## RESULTS

This study included 110 respondents. 53% of the psychiatric group (N = 40) lived in Addis Ababa; 18% of them were illiterate. Many mentioned having gone previously for treatment of their present ailments to many western health care facilities, and sometimes to traditional healers as well, both without lasting results. The somatic group consisted of 63% people from the capital and 37% illiterates. All the respondents of the non-attender group were literate, even though it had a higher percentage of unskilled laborers (85%) than the two other groups, which included respectively 17 (45%) and 34 (53%).

## CONTENT VALIDITY OF THE SRQ

The 110 respondents gave a yes-answer on the SRQ 846 times. There are three stages at which a yes-answer may become invalid.

1. The respondent may give a yes-answer without having clearly understood the language of the question. In our oral posing of the SRQ, such questions had to be repeated one or more times or needed further explanation before an answer was obtained. This happened for seven percent of the questions, apparently because of their length or their complexity.
2. Another seven percent of the yes-answers appeared to be invalid because the respondent had other motives for saying yes than those pointing to the recognition and confirmation of the phenomena that was being asked for. We assigned a yes-answer to this category if the respondent stuck persistently to his yes, but appeared to be unable to give any further details or examples that made it likely that he answered from his experience, in spite of an abundance of words. This criterion has been used elsewhere (Orley and Wing 1979). This kind of invalid answer seemed to be based upon the wish to benefit from the advantages of being in the sick role, such as receiving somewhat lighter work or being transferred in order to be reunited with other family members.

3. The largest proportion (26%) of invalid yes-answers was due to differences of conceptualization of the question by the investigator, trained in western psychiatry, and the non-western Ethiopian respondent. They did not understand one another properly, as will be shown in following examples.

*Question 3: "Do you sleep badly?"* proved to have a narrower meaning in Ethiopian culture than in a western one. It was understood as solely being an inquiry as to whether or not one's sleep had been disturbed as a result of nightmares or sleepwalking. The question failed to uncover information concerning an inability to fall asleep, or to stay asleep throughout the night, which might be symptoms of anxiety or depression.

*Question 9: "Do you feel unhappy?"* a basic question in the diagnosis of a depression, was associated for many Ethiopians with feelings of mourning from the loss of someone or someone's dying. This became evident as witnessed by the often heard, spontaneous comment accompanying a no-answer on this question: "No, because no one has died." The concept "unhappy" does not appear to exist in the Ethiopian culture unless there is a clear cause for it.

*Question 10: "Do you cry more than usual?"* was interpreted by many respondents as asking whether they had recently attended more funerals than normal, rather than inquiring about feelings of depression, because it was customary for them to attend the funerals of everyone with whom they were even slightly acquainted and to cry while at the funeral, even when the person being mourned was little loved, or even was hated.

*Question 12: "Do you find it difficult to make decisions?"* sometimes indicating a compulsive personality disorder, often failed to achieve its goal. Ethiopians related the question to the lack of social freedom experienced by individuals – their limited ability to make choices and decisions in their country which is governed by an orthodox Marxist-Leninist government. Evidence of this was provided by such statements as: "If I'm not free, what decisions can I make for myself?"

*Question 14: "Are you unable to play a useful part in life?"* an indication of feelings of inferiority, missed its goal sometimes for a completely different reason. The expression "to play a useful part in life" proved to have strong political overtones in Ethiopia. Following the revolution of 1974, this concept was used frequently in compulsory weekly political meetings. A Marxist slogan is that everybody is supposed to play a useful part in life. So when this question was asked, some respondents appeared to hesitate and to get the question out of the way by quickly giving a no-answer, politically speaking the "safest" answer.

*Question 21: "Do you feel that somebody has been trying to harm you in some way?"* frequently missed its intended target of isolating pathological paranoid symptoms. The Ethiopian saying: "It is futile to trust in man" is an indication of the fact that people in this culture are constantly and intensely on their guard (Levine 1965; Ullendorf 1973). The feeling of needing to be constantly vigilant has only been strengthened in the present-day circumstances of economic decline and socialist-political control. For a large number of Ethiopians, therefore, the question fits to a considerable degree with their actual living conditions. A yes-answer in a great many cases is far from being an indication that the respondent is living in a paranoid state of delusion.

Table II gives an overview of the validity of the yes-answers of 110 respondents.

TABLE II
Evidence of problems of content validity of the Ethiopian SRQ
(respondents N = 110)

| SRQ items | | Number yes | Causes of invalid answers | | | |
|---|---|---|---|---|---|---|
| | | (N = ) | Language (%) | Motives (%) | Concept (%) | Total (%) |
| 1. | headache | 45 | – | 2 | 27 | 29 |
| 2. | appetite | 39 | 3 | 3 | 46 | 51 |
| 3. | sleep | 51 | – | 2 | 29 | 31 |
| 4. | frightened | 51 | 2 | 8 | 33 | 43 |
| 5. | hand shake | 29 | 7 | – | 28 | 34 |
| 6. | nervous | 45 | 4 | 13 | 9 | 27 |
| 7. | digestion | 32 | – | 3 | 31 | 34 |
| 8. | thinking clearly | 30 | 3 | 10 | 10 | 23 |
| 9. | unhappy | 39 | 10 | 5 | 28 | 44 |
| 10. | cry more | 21 | 5 | – | 33 | 38 |
| 11. | enjoy activities | 49 | 8 | 8 | 35 | 51 |
| 12. | decision making | 35 | 14 | 11 | 26 | 51 |
| 13. | work suffering | 28 | 4 | – | 14 | 18 |
| 14. | useful in life | 27 | – | 15 | 4 | 18 |
| 15. | lost interest | 59 | 7 | 13 | 30 | 51 |
| 16. | worthless | 32 | 9 | 31 | 9 | 50 |
| 17. | ending life | 19 | 5 | 10 | 16 | 32 |
| 18. | always tired | 33 | 3 | 9 | 18 | 30 |
| 19. | stomach | 50 | 14 | 6 | 10 | 30 |
| 20. | easily tired | 37 | 5 | 3 | 8 | 16 |
| 21. | somebody harm you | 27 | 7 | 7 | 26 | 41 |
| 22. | more important | 15 | 13 | – | 87 | 100 |
| 23. | unusual thinking | 32 | 19 | 6 | 59 | 84 |
| 24. | voices | 17 | 18 | 6 | 29 | 53 |
| 1–20 | non-psych. items | 755 | 6 | 8 | 23 | 37 |
| 21–24 | psych. items | 91 | 14 | 5 | 48 | 68 |
| 1–24 | all items together | 846 | 7 | 7 | 26 | 40 |

## CRITERION VALIDITY OF THE SRQ

In the group of respondents who came to the psychiatric clinic we diagnosed 31 persons as psychiatric cases (77%); the remaining 9 appeared to be without a psychiatric illness, falling into such categories as malingerers or somatic ill patients. In the somatic group we found 8 psychiatric cases (27%) and in the non-attender group 5 cases (12%).

In a separate study (Kortmann 1986) we determined that between 8 and 9 is the optimum cut-off point value for discrimination between cases and non-cases. For clinic attenders the SRQ gave a moderate discriminatory result, using this cut-off point. In the group of visitors to the psychiatric clinic its sensitivity in indicating psychiatrically ill patients was 90%, but its specificity was only 22%. Thus a large number of healthy people were misdiagnosed as psychiatrically ill because of their high SRQ-scores. In the somatic group, the sensitivity was 75% and the specificity 55%. The cut-off value 8/9 appeared to be too high to detect a single case in the group of the non-attenders because none gave a yes-answer more than eight times, not even the respondents we diagnosed as mentally ill. Lowering the value to 4/5 gave better discriminatory results, a sensitivity of 100% and a specificity of 71%. These results are presented in Table III.

TABLE III
Evidence of criterion validity of the Ethiopian SRQ

Sensitivity, specificity and misclassification rate of the SRQ (1–24) with a cut-off point value of 8/9 in the group of the clinic attenders and 4/5 in the group of non-attenders.

| Respondents | Cut-off point | Sensitivity | Specificity | Misclassification rate |
|---|---|---|---|---|
| Psychiatric group | 8/9 | 90 | 22 | 25 |
| Somatic group | 8/9 | 75 | 55 | 40 |
| Non-attenders | 4/5 | 100 | 71 | 17 |

## DISCUSSION

This study showed that in Ethiopia the SRQ in its standard "format" has limitations for the detection of psychiatric illness. It seems to be a useful instrument for epidemiological case finding in the community. Its feasibility for use in an outpatient clinic is somewhat less. The latter fact raises questions about the intended use of the SRQ, for the designers (Harding *et al.* 1980) had especially such settings in mind. Their goal was to provide health workers having limited psychiatric training with an instrument that would help them discriminate between psychiatrically ill and psychiatrically non-ill people among the visitors to their facility. This discrimination is extremely important because

both groups are inclined to present a large number of somatic complaints when asking for help, which puts them at risk of being treated with useless, expensive and sometimes harmful medication for a long period of time.

Several reasons may be given to explain the moderate criterion-validity. First, the content validity of the items was limited. Communication problems occurred for more than one quarter of the questions, due to the different conceptual meanings which the western-trained questioner and the Ethiopian respondent attached to the question. Improvement of the translation and adjustment to the Ethiopian culture may solve some of these problems. However, as Fabrega (1987) has argued more generally, an instrument like the SRQ is less universally applicable in different cultures than was supposed by the WHO.

The criterion validity of the SRQ in predicting psychiatric "caseness" among clinic attenders appeared to be lower than among people in the community. A possible reason for this is that the scores are influenced by the help-seeking behavior of the clinic attenders. They appeared to be attempting to impress the doctor by giving more yes-answers than would be appropriate given their symptoms. The average number of yes-answers given by the psychiatrically ill clinic attenders (N = 31) was 12.5, whereas the psychiatrically ill respondents in the community (N = 5) gave an average of 6.2 yes-answers. For this reason the cut-off points value had to be lowered for the non-attender group from 8/9 to 4/5.

Another possible reason for the moderate usefulness of the SRQ in health facilities is the tendency of some visitors to produce a large number of yes-answers in spite of not being ill at all, to support their wish for a medical certificate, for example to get a less stressful work location or a transfer to a better living area. Workneh and Giel (1981) described this phenomenon in Ethiopia in detail. Kleinman (1986) reported the same findings in China. Our study showed that of those respondents from the psychiatric group asking for a medical certificate (N = 17), almost all (94%) reached a sum-score on the SRQ above the cut-off point value, whereas those not asking for disability certification were equally divided among high and low scorers on the SRQ.

In conclusion, this study showed that the SRQ is a useful instrument in Ethiopia for the detection of the mentally ill. Although its validity is far from optimal, psychiatric case finding using the SRQ compares favorably with normal clinical practice, where many studies have shown that 50–75% of the psychiatric illnesses remain undetected or are confused with somatic disorders, in developing as well as more developed countries (Giel and le Nobel 1971; Dilling *et al.* 1978; Harding *et al.* 1980; Goldberg and Huxley 1980). The criterion validity of the SRQ may increase by improving the content validity of the questions. Many questions are too culture-specific and require serious adaptation for Ethiopian culture. A careful literal translation of the questions is not sufficient. One has to

catch the way in which Ethiopians express themselves while feeling depressed, suspicious, confused and so on. The problem with the validity of the SRQ due to its sensitivity to help-seeking behavior of clinic attenders in general, and especially of people who try to benefit from being placed in the sick role for reasons other than illness, is probably inherent in such a self reporting questionnaire.

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