

Factors Affecting the Reporting of Mental Disorder in Others*

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Summary. The paper describes a study demonstrating that the screening of a few members of the population and asking them about the distribution of psychiatric symptoms in total population is a very inadequate way of discovering the real prevalence rates. The analysis shows that people report symptoms more amongst those who are socially and geographically close to them and amongst the members of their own sex. The characteristics of the 'reporters' are analysed and the results show that the young, the rich, the highly educated and those belonging to more advanced sections of the society are more prone to reporting symptoms in others. The most interesting finding is that those who have psychiatric symptoms themselves report symptoms in others more than those who are symptom-free.

Ideally the data collection in a field survey should be accurate, comprehensive and economical. Very often, however, the accuracy and the range of inquiry are sacrificed to a varying extent because of shortage of finances, trained investigators and time. Workers look for less expensive, quicker methods of acquiring information and one of the accepted short cuts is to carry out an initial inquiry with the 'wise' persons of the community, asking them to nominate those likely to be suffering from illness. Further investigation (e. g. a detailed interview by an expert) is then limited to the 'suspects' nominated by these 'key informants'.

This technique which has been used in many surveys of mental disorder e. g. Roth and Luton (1943), Lin (1953), Bök (1953), has often been criticized on the grounds that the information gathered may be incomplete or biased since the key informants cannot be expected to know the different members of the population sufficiently or equally well (Gruenberg, 1963; Hagnell, 1966). Such a bias might, however, be due not only to an insufficient knowledge of the members of the community but also to a variety of social

and personal factors which influence the perception and reporting of psychopathology in others.

A review of the literature does not reveal any systematic examination of these factors. In a recent field survey carried out in South India, the design of the investigation permitted such an analysis.

General Background and the Design of the Study

The field survey was carried out to compare the prevalence of mental disorder in three South Indian Caste Groups: Brahmins, Bants and Mogers. A village with a population of just over 9,000 was chosen for the exercise. Roughly one-half of the population was constituted by the three caste groups mentioned above and the rest by eight other minority caste groups.

It was decided to take a 50% sample of all adults (those aged 15 or above) belonging to the three target castes. The subjects were chosen by first taking a geographical area which contained roughly half of the target cast families and then including in the sample, all the adults from these families. The rationale for this sampling procedure will be discussed elsewhere.

The prevalence of mental disorder was determined with the help of Indian Psychiatric Survey Schedule: IPSS, a structured interview instrument designed to examine the presence

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or absence of 124 psychiatric symptoms (Kapur et al., 1974).

This Schedule employs a multi-stage procedure in which a preliminary inquiry is carried out with every member of the population followed by a detailed investigation of the 'suspects'. The criteria for deciding whether a detailed inquiry is necessary and then for deciding the nature and range of the detailed inquiry, are all standardised. A special feature of the IPSS is that for some serious symptom categories the preliminary inquiry seeks information from each respondent not only about himself but also with the help of a 15 - item 'Symptoms in Others' Questionnaire about others in his family or village who might possibly have one or more of these serious symptoms (Appendix A and B)

In the present study the 'Symptoms in Others' Questionnaire was given to all male respondents, the women being excluded because a pilot study had shown that they were reluctant to give information about others without first consulting their menfolk.

The results of the main survey are described elsewhere. This paper is based mainly on the data obtained through the 'Symptoms in Others' Questionnaire.

Some definitions. Those who in response to the 'Symptoms in Others' Questionnaire nominate one or more members of the population as potentially ill are called Reporters; others are called Non-Reporters

Any-one nominated as potentially ill by one or more Reporters is called a Reported case, irrespective of whether the presence of symptoms was confirmed by a subsequent detailed investigation or not.

The symptom categories it is possible to inquire about through the 'Symptoms in Others' Questionnaire are called Serious symptoms for the purposes of this study and any-one confirmed as suffering from one or more of these symptoms is called Serious case, irrespective of whether the first indication of the symptom(s) came through nomination by Reporter(s) or the preliminary inquiry with the subject himself. Since the Serious symptoms are only a few amongst the 124 symptoms in the IPSS, the Serious cases form only a proportion of the total cases as determined by the full IPSS inquiry.

Results

There were no refusals to the 'Symptoms in Others' Inquiry. Out of 426 respondents (all males) 170 (40%) were Reporters. There were 129 reported cases in the whole village.

Distribution of the Reported Cases. An analysis was carried out to compare the Reported case rate/1,000 in the sample vs. non-sample area, target vs. other castes and males vs. females.

Tables 1, 2 and 3 show the results.

Table 1. Geographical distribution and reported case rate

Area	Population	No. of reported cases	Reported case rate/1000
Sample Area	4596	106	23.06
Non-sample Area	4518	23	5.09

Table 2. Caste distribution and reported case rate

Caste group	Population	No. of reported cases	Cast rate/1000
Target castes	4602	106	23.03
Other castes	4511	23	5.10

Table 3. Sex distribution and reported case rate

Sex	Population	No. of reported cases	Reported case rate/1000
Males	3975	71	17.86
Females	5138	59	11.29

The reported case rate is 4 times as high in the sample area compared to the non-sample area and in the target castes compared to the other castes. The reported case rate is higher in males compared to females though the differences are not as striking as those observed between the two geographical areas and the two caste categories.

Table 4 gives a breakdown of the Reported case rate controlling for the geographical area, caste group and sex.

44 out of 91 Serious cases (48%) and 19 out of 1,142 free from symptoms (2%) were reported as potentially ill. Nineteen out of 63 Reported cases (30%) were not, on detailed inquiry, found to have any Serious symptoms.

The Characteristics of Reporters. An analysis was carried out to compare the distribution of Reporters and Non-Reporters in the various caste, age, education, income and occupation categories. Similar analysis was carried out comparing married and unmarried;

Table 4. Reported case rate in various area, caste and sex categories

				No. of reported cases	Reported case rate/1000
Sample area	-	Target castes	- Males (973)	48	49.33
"	"	"	- Females (1354)	40	29.54
"	"	Other castes	- Males (1010)	7	6.93
"	"	"	- Females (1258)	11	8.74
Non-sample area	-	Target castes	- Males (994)	14	14.08
"	"	"	- Females (1281)	4	3.12
"	"	Other castes	- Males (998)	2	2.04
"	"	"	- Females (1245)	3	2.39

The highest rate is in the males of the target castes in the sample area i.e. amongst the respondents themselves and the younger males of their families. The next highest is in the females of the respondents' families.

The Reported case rate in the males of the target castes in the non-sample area is higher than that in the members of the other castes in the sample area - male or female.

A comparison of the Reported-case rate and the Serious-case rate. Not all Serious cases are reported by others; some are discovered through the preliminary inquiry with the subjects about themselves. Not all Reported cases are confirmed as Serious cases after the detailed investigation.

An exercise was carried out to examine the overlap between the Reported cases and the Serious cases. Table 5 shows the overlap.

Table 5. The overlap between the 'reported' and 'serious' cases

	Serious cases	Free from serious symptoms	Total
Reported	44	19	63
Not reported	47	1123	1170
Total	91	1142	1233

those from extended families and those from unitary families; those from large families and those from small; those who had been active in outdoor entertainment and those who had not; those with psychiatric symptoms themselves and those without.

The results are given below:

1. Caste and Reporting

Table 6 compares the distribution of Reporters and Non-Reporters in Brahmins, Mogers and Bants.

Table 6. Caste and reporters

	Caste		
	Brahmins	Mogers	Bants
Non-reporters	75 (49%)	142 (65%)	39 (71%)
Reporters	79 (51%)	75 (35%)	16 (29%)

$$X^2 = 13.60, D. F = 2, p < 0.001$$

The Brahmins have a higher proportion of Reporters compared to Mogers who, in turn, have more Reporters than Bants.

2. Age

Table 7 shows the relationship between age and reporting.

The younger the age group, the greater is the proportion of Reporters. The results are, however, not statistically significant at 0.05 level.

3. Education

Table 8 shows the relationship between education and reporting.

The higher the education category, the higher is the proportion of Reporters.

4. Income

An income index was prepared to suit the local conditions and with its help the population

Table 7. Age and reporters

	Age			
	-20	21-40	41-60	61+
Non-reporters	35 (49%)	104 (59%)	81 (65%)	36 (68%)
Reporters	37 (51%)	72 (41%)	44 (35%)	17 (32%)

$$X^2 = 6.54, D. F = 3, p < 0.1$$

Table 8. Education and reporters

	Education		
	Primary or below	School certificate	Higher education
Non-reporters	202 (79%)	35 (49%)	18 (33%)
Reporters	96 (21%)	36 (51%)	36 (67%)

$$X^2 = 27.82, D. F = 2, p < 0.001$$

was arbitrarily divided into three categories; low, medium and high income group. The low income group roughly corresponded with the group of people who had difficulty in meeting expenses on minimum food and clothing requirements (again arbitrarily defined). The medium income group could afford minimum food and clothing requirements but no more and the high income group could afford something extra. The three groups were compared for the proportion of Reporters. Table 9 shows the comparison:

Table 9. Income and reporters

	Low	Income	
	Low	Medium	High
Non-reporters	134 (64%)	89 (65%)	33 (42%)
Reporters	67 (36%)	47 (35%)	46 (58%)

$$X^2 = 13.71, D. F = 2, p < 0.01$$

Those in the high income group have a higher proportion of Reporters compared to those in the low and the medium income groups.

5. Occupation

The village is situated on the western coast of India and most of the Mogers have fishing as their main occupation. The Brahmins and Bants are in the main farmers but some of them are engaged in small scale business/service occupations. The farmers, fishermen and those engaged in busi-

ness/service occupations (including doctors and lawyers) were compared for the proportion of Reporters. Table 10 shows the results.

Those involved in the business/service occupations have a higher proportion of Reporters compared to farmers and fishermen.

6. Marital State, Family Type and Family Size

There was very little difference in proportion of Reporters and Non-Reporters in single compared to married and widowed, in those coming from extended family compared to unitary family and those coming from a large family (6 or more members) compared to a small family (5 or less members).

7. Leisure Activities

Those who had been out for some kind so entertainment (cinema, folk-theatre, etc.) during the last one month were compared with those who had not. Table 11 shows the difference.

Table 11. Entertainments and reporters

	Entertainments	
	None/last month	Once or more/ last month
Non-reporters	96 (59%)	39 (43%)
Reporters	68 (41%)	51 (57%)

$$X^2 = 5.39, D. F = 1, p < 0.05$$

Table 10. Occupation and reporters

	Occupation		
	Farmers	Fishermen	Business/ service
Non-reporters	88 (68%)	87 (65%)	63 (52%)
Reporters	41 (32%)	46 (35%)	57 (48%)

$$X^2 = 7.37, D. F = 2, p < 0.05$$

Those who had been out for entertainment had a higher proportion of Reporters compared to those who had not.

8. Psychiatric Symptoms

Those who, in the main survey, were themselves found to have one or more symptoms were compared with those who were not. Table 12 shows the difference.

Table 12. "Symptoms in self" and reporting

	Symptoms in self	
	None	One or more
Non-reporters	189 (65%)	67 (49%)
Reporters	102 (35%)	68 (51%)

$$X^2 = 9.02, D. F = 1, p < 0.005$$

Those having one or more symptom themselves had a higher proportion of Reporters compared to the symptom free.

Further analysis was carried out dividing those with one or more symptom into 3 categories (a) somatic symptoms only (b) somatic and psychological symptoms (c) psychological symptoms only.

'Somatic symptoms' are recorded only when no underlying physical pathology can be demonstrated on physical examination and when these are, in the investigators' opinion, of psychological origin.

Table 13 shows the differences when these three groups were compared with the symptom free.

Those with somatic symptoms only have a higher proportion of Reporters compared to the symptom free. Those with both somatic and psychological symptoms have an even higher proportion and the group with psychological symptoms only, has the highest proportion of reporters.

A number of analyses were carried out controlling one by one for each of the variables found to have a statistically significant relationship with reporting and examining the relationship of reporting with the other variables. For example, the relationship between reporting on the one hand and age, education, income, occupation, entertainments and symptoms in self, was analysed for each of the three castes separately, and so on. It was found that in all cases the Brahmins, the younger, the more educated, those in business/service occupations, those who had been out for entertainments during the last month and those with symptoms themselves had a higher proportion of Reporters compared to the other groups, though the differences did not reach statistical significance in some cases.

Discussion

It is clear that the respondents report more amongst those who are geographically close, the reported case rate in the sample area being four times that in the non-sample area (23/1000 compared to 5/1000 - Table 1). They also report more amongst those who are socially close, the reported case rate amongst those of the same caste groups as the respondents being four times that in the other castes, (23/1000 compared to 5/1000 - Table 2). Further, social closeness

Table 13. Type of symptoms and reporting

	No symptoms	Type of symptoms		
		Somatic only	Somatic and psychological	Psychological only
Non-reporters	189 (65%)	17 (59%)	24 (57%)	26 (41%)
Reporters	102 (35%)	12 (41%)	18 (43%)	38 (59%)

$$X^2 = 13.15, D. F = 3, p < 0.005$$

plays a greater part in reporting than geographical closeness. The reported case rate amongst males of the same caste groups as the respondents but geographically distant being twice that amongst those of other castes but geographically close (14/1000 compared to 7/1000 - Table 4). Since the vast differences in the reported case rate are unlikely to be reflecting any real differences in the prevalence of mental disorder, the only probable inference is that people report more amongst those they know well and with whom they have high social interaction. The fact that the caste closeness is more related to high reporting than geographical closeness, is in concordance with often made observation that in the Indian rural setting social interaction is determined more by caste links than the physical distance.

It is not immediately obvious why the reported case rate amongst the males of target castes living in the sample area should be so much higher than that in the females of the same group (49/1000 compared to 30/1000 - Table 4) especially when the 'actual' case rate (to be reported elsewhere) is, in fact, quite similar in the two sexes. It is possible that the sex differences in the reported case rate may be due to one or more of the following reasons.

a) In the conservative rural society of India, the male-female segregation operates to such an extent that the women hesitate to communicate their troubles to (men) respondents.

b) Because of the lower status of women, the symptoms they show possess a lower significance and do not cross the threshold of perception of the respondents.

c) Symptoms are noticed much more when they interfere with the most important task of earning a living - a task almost exclusively assigned to men in this community. These are, of course, only hypothesis and need to be tested with appropriately designed studies.

'Symptoms in Others' Questionnaire as a screening instrument for Serious Symptoms

According to Goldberg (1972), if a questionnaire is to be assessed as a screening instrument it is necessary to make a separate examination of the number of psychiatrically ill it misses (its sensitivity), and the number of normals it misclassifies as potentially ill (its specificity). He goes on to say that when the prevalence rate of a disorder is low the sensitivity is more important than the specificity since one would not like to miss the few cases there are to be found.

The specificity of the 'Symptoms in Others' Questionnaire is high: only 2% of the normals were misclassified as potentially ill. Its sensitivity is, however, very low since it picked up only 48% of the Serious cases in the sample. Also there is a large redundancy element in reporting, 30% of those reported having no Serious symptoms on detailed inquiry. From this point of view it would be disappointing as a screening procedure.

Characteristics of the Reporters

It is apparent that the Brahmins, the young, the educated, the rich, those in business/service occupations and the socially active, have a higher proportion of Reporters compared to the other groups.

The analysis only describes the characteristics of the Reporters; it does not tell why these characteristics are favourable to reporting. It is tempting, however, in the light of the above findings to make some conjectures. It seems that the tendency to report depends on:

a) the degree of contact one has with the rest of the community; the young and those who are in business/service occupations would be expected to have a greater contact with others than the old and those involved in farming/fishing respectively.

b) the sensitivity to perceiving psychological abnormalities in others; the more educated group, because of their intelligence and sophistication, would perhaps be expected to have more of this kind of sensitivity as compared to the less educated.

c) the readiness to report what they know; the rich and the young would be expected to be less cautious and less worried about the others' disapproval of reporting what they knew. These hypotheses also need to be tested with appropriately designed studies.

Those who have symptoms themselves have a higher proportion of Reporters compared to the symptom free. This is not a reflection of the other characteristics of Reporters mentioned above since the Brahmins, the young, the educated and the rich, i. e. all the groups having a higher proportion of Reporters, have, in fact, a lower total symptom rate than the other groups! (details to be published elsewhere).

Further examination shows that those with 'psychological symptoms' have a much higher proportion of Reporters compared to those with 'somatic symptoms' who, in turn, have a higher proportion of Reporters compared to the symptom free. Once again the data do not provide

enough material to explain why those with symptoms, especially those with psychological symptoms, have a greater tendency to report, but two hypotheses may be put forward. It is possible that those with symptoms themselves become more sensitive to the presence of symptoms in others. It is also possible that those with symptoms themselves gravitate towards and have more contact with others who also have psychiatric symptoms.

An Appraisal of Surveys based on Key Informants

The study gives some estimate of how incomplete the information can be in surveys which depend on nominations by key informants. If the 'Symptoms in Others' Questionnaire used with 426 respondents could succeed in picking out only 48% of the Serious cases in the population, it is unlikely that surveys which for practical reasons have to depend on a much smaller number of key informants, would fare any better.

The study also shows how the characteristics of the informants could bias the prevalence figures. The 'wise' persons most often chosen to be key informants are men of high status. If the findings of the study that people report more amongst their own sex and amongst those who are socially close to them, are applicable to such surveys, it would not be wrong to conclude that the proportion of missed cases in women and those of lower social status would be higher than that in men and those of high social status.

Conclusions

This paper describes an attempt to elicit the factors related to reporting of psychiatric symptoms in others and to estimate the sensitivity of 'reporting' as a screening procedure for serious psychiatric symptoms. The study which was a part of a larger field survey was carried out with 426 males who were given a questionnaire inquiring if the respondents had noticed the presence or absence of 15 psychiatric symptoms amongst their family members and others in the village. It was found that:

- a) If the questionnaire had been used as the only screening procedure it would have missed 52% of the Serious cases in the population.
- b) The respondents report much more amongst those who are socially close to them and amongst the members of their own sex.
- c) The rich, the more educated, those in business/service occupations, the young and the socially active have a greater tendency to 're-

port' than the other groups. The Brahmins have a higher proportion of Reporters than the other castes. It is hypothesised that these findings may be due to a combination of factors: greater contact with others in the community, greater sensitivity to perceiving psychiatric symptoms and a great readiness to report what they see.

d) Those with symptoms, especially psychological symptoms, themselves have a higher proportion of Reporters than the symptom free. It is hypothesised that this may either be due to the fact that symptoms themselves makes one sensitive to symptoms in others or that those with symptoms gravitate towards and have more contact with others who also suffer from psychiatric symptoms.

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Appendix A

Symptoms in Others Questionnaire

Introduction

I have asked so many questions about yourself. Now a few more questions about others. In your family or neighbours or friends, is there anyone:

1. Who is admitted to Mental Hospitals?
2. Who is mad, talks nonsense and acts in a strange manner?
3. Who suffers from fits or loss of consciousness?
4. Who has become very quiet and does not talk to people?
5. Who claims to hear voices or see things others cannot hear or see?
6. Who is very suspicious and claims that some people are trying to harm him?
7. Who has become unusually cheerful, makes jokes and brags that he/she is an important person, when he/she is not really so?
8. Who has become very sad lately, and cries without reason?
9. Who has lost his/her memory, or is losing his/her memory?

10. Who has always from birth been stupid or dull like a child?
11. Who has tried to commit suicide?
12. Who actually committed suicide?
13. Who gets possessed by bhutas and spirits?
14. Who is lazy and does not work, though physically healthy?
15. Who drinks too much or gambles too much or has other bad habits?

Appendix B

Symptom Categories Indicated by 'Symptoms in others' Questionnaire:

1. Functional Psychosis.
2. Epileptic fits.
3. Hysterical fits.
4. Depression.
5. Organic Psychosis.
6. Mental retardation.
7. 'Possession' states.
8. Suicide and Parasuicide.
9. Alcoholism.
10. Other sociopathic features.

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