Vignette method for psychiatric case detection in a rural community

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Summary

Vignette method for psychiatric case detection was used on a rural population in Malaysia. Vignettes of six major mental disorders viz. 'acute psychosis', schizophrenia, mania, major depressive disorder, mental retardation and epilepsy were administered to 180 key informants followed by questions on recognition and seriousness of the disorders. This resulted in 569 reports of 'probable psychiatric cases'. Of these, 289 reports were verified by psychiatric interview. A total of 215 cases were found to have epilepsy, mental retardation, schizophrenia or manic depressive illness. A point prevalence rate of these disorders was found to be 0.8%. The value of vignette method in detecting psychiatric cases in the community was shown by: a) 70% of the cases detected had never sought psychiatric consultation b) 50% of the cases had not been to any doctor c) 55% of reports of 'probable cases' turned out to have active psychiatric illness of the types studied.

Introduction

In Malaysia traditional healing of mental illnesses is not only customary but probably also the first choice of treatment options.[1] Help is sought when behaviour is socially disruptive or life threatening. Many mental patients are suspected not to have any contact with modern medicine. Out of the several methods of case detection, vignette method used in the W.H.O. collaborative study[2] appears to be useful in Malaysia. It requires minimal trained personnel, language or writing skills of the interviewees or cumbersome questionnaires. The aims of the present study were to:

1. evaluate the feasibility of using the vignette method of screening the general population for mental illnesses
2. evaluate the extent of false positive reporting and estimate prevalence of major psychiatric disorders.

Materials and method

Population

The population under study consisted of 3 health districts with a population of 26,809 distributed in 5462 households of 93 villages[3] in the Machang district of Kelantan state. The male : female ratio in Machang district was 92. The nearest psychiatric hospital was at Kota Baru, about 40 km. away. Facility for follow up was available at Machang district hospital.

Vignettes

A short history of a person, having the typical and common features of a clinical condition was called a vignette. Six such vignettes were prepared in Bahasa Malaysia (appendix 1), based on vignettes used in a similar study. In preparing these vignettes, the known local presenting features of illnesses, local dialect, the culture and the low educational level of the population in the study area were considered. Each of the vignette described a major psychiatric illness – namely Acute Psychosis (AP), Schizophrenia (SCHIZ), Mania (MA), Major Depressive Disorder (DEP), Mental Retardation (MR) and Epilepsy (EPI). The vignettes were pilot tested on the staff members working in local psychiatric units and key informants in a rural district (Balik Pulau) of Penang state.

Interviewers

Two interviewers with a formal education of 8 years (upto SPM/MCE) were trained in the basic interviewing skills and the administration of vignettes. Each of the interviewer interviewed 5 volunteers in a practice session closely supervised by two of the authors to ensure consistency in administering vignettes and recording information.

Key informants

The two field assistants interviewed the key informants who were selected on the basis of their stay in the area and for more than 5 years, their familiarity with the local population by virtue of their social role and willingness to cooperate in the interview. Out of the 180 key informants interviewed, 152 were males and 28 were females. Their ages ranged from 18 to 76 years with an average of 44.46 (± 11.68). The majority of key informants were labourers and skilled workers (62.9%). The others were teachers (11.9%), village heads (10.8%), businessmen (8%), imams (5.1%) and students.

The key informants were presented with each vignette. A questionnaire was used to record their responses.

Procedure

Each vignette was read out to the key informants followed by a semi-structured questionnaire to elicit their responses with regard to: a) whether they recognize and understand the seriousness of the disorder b) whether they have come across a person with a description similar to the one presented in the vignette and c) their attitudes related to the illness described in each vignette (data related to attitudes is not discussed here). Names and addresses of the person matching with vignette descriptions were recorded and termed 'probable cases'. The interviewers were asked to locate the 'probable cases', collect baseline information and to make an appointment with the project psychiatrist. The cases were examined at the nearest health center and diagnosis was made using International Classification of Diseases.[4] In case of those who failed to keep 2 consecutive appointments, attempt was made to examine them by home visits.

All the relevant records of the only psychiatric unit in the area and the nearest mental hospital were scrutinised to list patients from the study area who had ever consulted the unit. This list was used

to verify whether the patients had visited the psychiatric facility or not.

Results

Only in nine instances, key informants recognized the description in a vignette as that of a normal person. In case of DEP and MR, 33% and 78% of the key informants recognized it as 'problem only', whereas, in vignettes of EPI, SCHIZ, AP and MA, 97%, 81%, 79% and 53% of the key informants respectively recognized it as 'illness'.

As regards the perceived seriousness of the condition described in the vignettes, only in 28 instances the condition described in a vignette was viewed as mild. In case of AP and MA, 79% and 42% of the key informants respectively recognized the condition as moderate, whereas in vignette of EPI, SCHIZ, DEP and MR, 93%, 92%, 63% and 60% of the key informants respectively, recognized the vignette description as 'serious'.

On an average, eack key informant reported 3.16 (± 2.14) 'probable cases'. Only 9% of the key informants could not recall even one 'probable case' of either type, 13% reported at least one and 75% could recall 2 or more. The average cases reported for vignette of EPI, SCHIZ, AP, MR, MA and DEP was 1.0, 0.75, 0.69, 0.67, 0.29 and 0.13 respectively. No cases were reported in response to the above vignettes respectively by 37%, 53%, 53%, 57%, 77% and 90% of the key informants. It was noted that when the key informants did report a probable case, it was more often from the village than from their own family. The frequency of reports for various vignettes from the family was between 1 to 6 % as compared to between 21 to 45% from the village.

A significantly higher proportion ($P<0.05$, chi sq = 5.81, DF 2) of male key informants (42.8%) reported more than 3 probable cases as compared to females (21.4%). Table 1 shows that percentage of businessmen and imams was significantly ($P<.05$) higher than other occupational groups among those who did not report any case at all or those who reported 1 to 3 cases. Vignette-wise analysis did not reveal any significant association of age or occupation with the key informants ability to recall or not recall a 'probable case'.

Of the two interviewers, one obtained an average of 2.52 (± 2.02) 'probable cases' in 93 interviews, and the other obtained 3.85 (± 2.05) in 87 interviews.

In all 569 reports of 'Probable Cases' were received. Out of these, 185 were excluded for various reasons: duplicate reporting (57); residing outside the study area (62); expired before the study began (15); migrated and unlikely to return within 2 years (27) and untraceable inspite of reasonable efforts to find them (24).

Out of the remaining 384 'Probable Cases', 95 could not be examined by the project psychiatrist due to the following reasons: deceased before contact could be made (3); no person to take care (13); refused on the grounds that they were already receiving some treatment (6); patient and relatives considered that no attention was required (25); claimed full recovery from mental illness although there was a reason to believe otherwise (25) and no reason given (23). Thus, 289 'Probable Cases' remained.

In those cases who could not be examined, the key informants' description was matched wth the vignettes. In the case of persons who had migrated, illness appeared to match the vignettes of EPI, MR, SCHIZ, MA IN 7, 6, 10, 2 instances respectively. Similarly, in the case of 'untraceable' persons the description matched the above illnesses in 7, 5, 5, 0 instances respectively. Illness description of 2 'migrated' and 7 'untraceable' persons did not match satisfactorily with any one of the vignettes.

Table 1

Frequency of reporting 'probable cases' – occupation-wise

No of 'Probabale cases' reported	Key Informant's Occupation						
	Labourer	Student	Village Head	Teacher	Skilled Worker	Businessman	Imam
N =	48	4	19	21	61	14	9
0 (None)	2	0	1	1	6	5	3
1-3	27	1	10	15	29	4	3
4 or more	19	3	8	5	26	5	4

Chi sq = 21.58, D.F. = 12, $p < 0.042$

Table 2

Verification of 'probable cases'

	Diagnosis	No. of cases	
Not ill	None	10	
Physical illness	Physical illness	21	
False positives	(No mental illness)		31
Other illness	Dementia/epilepsy	5	
Unclear	Probable epilepsy	5	
	Probable psychosis	6	
Now recovered	Mental illness	11	
False positives	(No current confirmed sickness)	74	
Confirmed cases	MR/EPI/SCHIZ/AD		215
Total cases examined			289

Table 2 shows the diagnosis made in the 298 cases who were examined. About 34.5% of them were seen on home visits. Twenty one cases had only physical illness such as hemiplegia, ischemic heart disease. When 'probable cases' with no history of any psychiatric illness were considered as false positives, the false positive rate was 10.73%. A psychiatric disorder (e.g. during postpartum period) was found in the past history of 11 cases, but they had not suffered from any psychiatric problems in the last 3 years. In 21 cases, the psychiatric disorder detected was not of the type described in the vignettes. When all 'Probable Cases' who were not confirmed to be currently suffering from either EPI, SCHIZ, MR or manic depressive illness (MDP) were considered as false positives, the rate of false positives was 25.6%. Considering the 215 cases currently suffering from either EPI, MR, SCHIZ, or MDP in a population of 26,809 the point prevalence works out to 0.8%. The prevalence of these four disorders considered separately was 0.15, 0.31, 0.30, 0.05 percent respectively. The

Table 3
Characteristics of patients detected

Diagnosis		EPI	MR	SCHIZ	MDP	TOTAL
	N =	39	83	80	13	215
Sex	Males	21	50	38	8	117
	Females	18	33	42	5	98
Marital status	Unmarried	26	81	28	0	135
	Married	7	1	16	7	31
	Divorced	4	0	22	3	29
	Other/unknown	2	1	12	1	16
Present age						
Age groups:	0-4 yrs	10	25	25	3	63
	5-9	9	27	17	4	57
	10-14	9	13	14	3	39
	15-19	2	7	8	0	17
	20-24	3	3	9	1	16
	25>	4	5	1	3	10
	Unknown	2	5	0	3	10
Mean		27.5	13.3	36.2	50.1	26.6
SD		5.7	7.6	12.9	15.7	16.5
Mode		20.0	10.0	25.0	Multimodal	25.0
Duration of sickness in years						
Mean		11.3	9.4	9.5	11.8	–
SD		9.5	7.4	7.1	12.7	–
Mode		Multimodal	4.0	20.0	Multimodal	–
Age of onset						
Mean		15.8	4.0	25.9	37.4	–
SD		14.0	3.8	9.4	10.0	–
Mode		1.0	Multimodal	0.0	35.0	–

age adjusted prevalence for these four disorders was 0.15, .31, 0.49, 0.25 percent respectively.

Table 3 shows the demographic and illness characteristics of the 215 cases who currently had EPI, MR, SCHIZ, or MDP. The sex difference in the 4 diagnostic groups was not statistically significant. In 14.7% cases of schizophrenia the illness began before 15 years of age. About one fifth (21.7%) of the detected MR cases were adults.

Table 4
Previous treatment received by cases detected

Treatment Type	EPI	MR	SCHIZ	AD	TOTAL
N =	39	83	80	13	215
None	21.6	76.3	21.3	23.0	42.4
Traditional (Trad) only	8.1	10.0	5.0	15.4	8.1
General Medical Only	35.1	5.0	7.5	23.0	12.4
General Medicine & Trad	16.2	7.5	3.8	0.0	7.1
Psychiatric only	16.2	1.3	46.3	30.8	22.9
Psychiatric & Trad	2.7	0.0	16.25	7.7	7.1
Unknown	5.1	3.6	0.0	0.0	2.3

Numbers show the percentage of cases

Table 5
Studies of case detection using key informants

Country	Population Studied	Key Informants		Probable cases detected		
		N	per 1000 Pop.	Total	Per Interview	% Pop
India	64000	50	0.78	135	2.7	0.21
Sudan	59000	50	0.85	210	4.2	0.36
Philippines	75000	98	1.31	314	3.2	0.42
Malaysia*	26809	180	6.71	569	3.16	2.12

* present study

Out of 215 patients, 62 had more than one condition. Two patients with epilepsy and 15 patients with MR also had neurosis, personality disorder or behavioural disorder. Five patients with epilepsy had MR and in another 5 cases, it was found to be associated with MR as well as a behaviour disorder. Four cases of schizophrenia had a past history of epilepsy. Twenty two patients with MR and 4 patients with epilepsy has some additional physical defect e.g. cerebral palsy, visual or hearing defects. Five patients with epilepsy has schizophreniform psychosis.

Table 4 shows the treatment sought by the 215 patients. No contact with modern medicine was made by 50.48% of patients and 70% had never sought any treatment from a psychiatric facility. Only 22.38% of patients admitted ever been to a traditional healer.

Discussion

It can be seen from table 5 that the rate of reporting of probable cases by the key informants was similar to that found in other countries.[2] This indicates that using vignettes and key informants, it is possible to detect a significant number of psychiatric 'cases'. The apprehension that the key informants may not divulge information about their acquaintances or relatives is unwarranted. Key informants were able to report cases although they were not health professionals and most of them were uneducated.

It is difficult to determine the optimum number of key informants per 1000 population. While fewer key informants may result in fewer 'probable cases', more number of key informants would not necessarily imply detecting additional cases. In the multicentered collaborative study[2] the key informants per thousand population ranged between 0.78 to 1.31 compared with 6.71 in the present study.

The frequency with which all the psychiatric conditions were detected in the present study were similar to the WHO Collaborative study[2] in India, Sudan and Philippines, except in the case of schizophrenia which was the second most frequent condition reported in the present study. Out of the 384 probable cases, 24.73% could not be verified mainly because of their unwillingness. This highlights the need for greater collaboration with the local leaders. The verification of 34.9% 'probable cases' who did not come to the nearest clinic, requires considerable field work. These problems included unwillingness or inability to come to the clinic, more than one place of residence, inaccurate address, patients changing their names due to cultural belief that it may reverse the bad luck, distortion of names, reluctance for psychiatric examination and unavailability of data in case of wandering/isolated patients besides the logistic difficulties. This implies that providing mental health care involves active participation of local leaders, police and community nurses/health workers.

False positive reporting is an index of the specificity of a method. Only about 11% of the verified cases in the present study were false positives. Inability to verify all the reported 'probably cases' and under-reporting were the two main reasons for false negatives which lower the sensitivity of the method. In order to know the exact number of false negative reporting it would be necessary to examine all the individuals in the population. Possible under-reporting was suggested by the finding of only 10 cases with less than 2 years. This may be due to the key informants' unawareness of the sick person's illness which was too mild or too recent at the time of the interview or clinical manifestations were too different than the typical descriptions in the vignettes. Although this possibility was recognised, it was likely that this may not be a serious limiting factor as the prevalence of the disorders studied was similar to that found in other studies. The prevalence of mental disorder as noted in several studies ranged from 0.68 to 6.94% and that of psychosis alone 0.38 to 1.09%.[5,6] The prevalence of epilepsy using questionnaires in general population was found to be between 0.2 to 0.8%.[7]

The fact that about 50% of patients identified had never sought help from medical facility suggests practical advantage of using vignette method. There was a possibility that not all patients who took traditional treatment admit that fact in spite of careful questioning. Only about 22% in this study admitted it. In the case of about 30% of potentially life threatening and treatable illness like epilepsy, patients had never received any medical treatment.

This shows the need for urgent public education. This need was further supported by the fact that many 'probable cases' could not even be examined due to reasons such as 'untraceable', 'no one to care', 'refusal' and 'claimed full recovery'.

The long duration (9-11 years) of the disorders found in this study also suggests their prolonged course and need for continued treatment and support.

In the case of epilepsy it was evident that a large percentage (46.6%) of them also had a diagnosable mental disorder, which requires a multi-disciplinary approach for treatment.

Conclusion

1. It was found that using about 6 key informants per 1000 population a significant number of

cases with serious mental illness could be detected in a rural population using field workers with secondary education. Para-medical workers could be effectively used in case detection, thus saving manpower of medical personnel.

2. Practical difficulties in case verification includes need for making home visits, careful recording of identity of case reports received and need for collaboration with local leaders and staff. Verification will be facilitated if primary health workers are actively involved.

3. A large percentage of cases detected had no exposure of modern health services.

4. There was a need for more social support for patients with mental illness, especially schizophrenia.

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Samples of Vignettes

a) Epilepsy

Ravi seorang budak lelaki berumur 10 tahun. Dia mendapat (penyakit tarik/sawan babi) semasa berumur lima tahun. Penyakit ini datang dengan tiba-tiba. Ia akan jatuh kebawah dan dalam masa yang singkat badannya akan menjadi keras dan kaki tangannya menyentak-nyentak. Dalam masa penyakit sawan, Ravi tidak sedar diri. Bersama itu dia terkancing gigi dan kadang-kadang buih keluar dari mulutnya. Kadang-kadang dia kencing dengan tidak sedar, menyebabkan pakaiannya basah. Penyakit itu datang selama 2 hingga 4 minit, lepas itu dia pulih kembali seperti biasa. Penyakitnya datang berulang-ulang.

Keluarganya melapur bahawa Ravi sudah berubah perangai dan menjadi seorang pemarah dan degil.

b) Chronic Schizophrenia

Ahmad telah berkelakuan ganjil sejak beberapa tahun lalu. Dia tidak mempunyai pekerjaan, dan memencilkan (menjauhkan) diri sambil bercakap dan ketawa sendirian. Dia merayau-rayau di dalam kampung tanpa tujuan. Dia juga suka mengutip sampah di tepi-tepi jalan. Dia selalu berpakaian koyak dan tidak kemas. Dia tidak pandai campur gaul dan selalu berkata perkara-perkara yang ganjil dimana orang lain tidak memahaminya. Beberapa tahun yang lalu isterinya telah meninggalkannya dan rumahnya perlu dibaiki dengan segera tetapi beliau tidak menghiraukan perkara itu. Dia tidak mempunyai apa-apa pendapatan dan segala keperluan makanan dan pakaiannya adalah atas belas kasihan orang ramai.