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EPIDEMIOLOGY OF PSYCHIATRIC PROBLEMS AND THEIR MANAGEMENT

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Developing proper criteria for case-finding in the community and conducting the necessary surveys are already such major undertakings, that we hardly ever achieve the ultimate goals of :

(a) determining the precise psychiatric needs of a population;

(b) establishing the types and numbers of personnel to satisfy these needs; and

(c) defining their tasks, and developing training programmes for the workers who will be imposed with these tasks.

Social context

Before examining the above goals in more detail, we first have to consider the social context of psychiatry in a developing country. On the whole we tend to think in terms of widely dispersed peasant populations in rather inaccessible rural areas and quite out of reach of the sparse health services. We complete this picture with that of individual people who have strong obligations to and are firmly supported by much wider kin than the core family group of western society; and that of people with more confidence in traditional healers than in modern medicine.

Often, we forget that large urban centres with vast and densily populated shanty-towns are just as representative. As are their inhabitants : i.e. to some extent detribalized families, which not only have been reduced to the very core of parents and their children, but from which the father is often missing. Women and children are busily engaged in trying to earn enough money to just survive another day. Savings, if present, are limited, thereby

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restricting a person's resources in case of illness.In these circumstances, attending the much more accessible health services in the town may constitute no less of a problem than in the rural areas.

Whereas health workers in the rural areas are faced with the problem of having to cover great distances to treat few people, the problem of those in the towns is that of an abundance of patients who have converged from all over the country in search of better opportunities for survival, and who have little time left to spend in a busy clinic and therefore remain hidden in the vast urban crowds.

Psychiatric needs

It is doubtful whether results of community surveys do enable us to specify the psychiatric needs of a population. After all, these needs are a product of

(a) the feelings of people who are for some reason dysfunctional and who are under pressure from the environment to do something about it;

(b) the ideas of mental health workers concerning dysfunctions which they consider to belong to the realm of psychiatry; such ideas may vary with the prevailing conventions; and

(c) the capability of psychiatry to deal with those dysfunctions,

there may be restrictions because effective therapeutic techniques are lacking, or because of other health priorities. Studies in the developed countries (1, 2) indicate that the needs for particular types of service, calculated as admission- or outpatient- rates per 1000 of a population, increase with their growing availability.

As the above factors will vary from country to country there is little point in discussing them any further in this paper. We will take some purely quantitative findings in Iran (3, 4, 5) and Ethiopia (6, 7, 8) as indicators of the psychiatric needs of a population as perceived by a psychiatrist. Experience in the field will serve to determine priorities.

Usually, incidence and prevalence rates of a particular illness are taken to demonstrate the existence of a public health problem. Compared with rates for infectious diseases,prevalenc figures of 1% of the general population and a life-time incidence of 10% for seriously incapacitating mental disorders (9) may not look altogether convincing to planners of health services. With regard to mental illness we cannot stop at citing such figures; we also have to take into account :

(a) the often life-long disability resulting from mental disorder;

(b) the heavy burden on the immediate environment of a mentally handicapped person; and

(c) particularly in more industrialized and urbanized communities, the strong demands made by emotionally disturbed people in terms of frequent attendances to health services and of absence from work (10).

In the following discussion we will have to consider these factors, although they have not been systematically studied in the developing countries.

Outline of psychiatric problems

In table 1 some prevalence rates have been given. Iranian and Ethiopian studies have been selected because they are to some extent comparable and include rural as well as (semi) urban surveys. The rural surveys were conducted in the provinces of Fars and Khuzestan in Iran, and the province of Kafa in Ethiopia. The urban surveys are perhaps less comparable because they included the town of Shiraz (Iran), a small road-side town in the province of Kafa, and a religious community in Addis Ababa. Some of the differences may have occurred because of sampling variability and the great variation in size of the samples. Therefore, they should not be taken to indicate more than the relative importance of various categories of mental illness.

The category of psychoneuroses and personality disorders (including psychosomatic conditions) make up the bulk of mental disorder both in rural and in urban communities. Yet, they are by no means as conspicuous as in developed countries, because people don't perceive themselves as mentally disturbed , nor does their environment consider them as such. Nevertheless, they do suffer as is demonstrated by the fact that many regularly consult traditional healers. Surprising numbers are hidden amongst the masses attending general out-patient services (6, 11); percentages as high as 19,5 % have been found. They tend to present with vague physical complaints for which they repeatedly attend clinics, demanding new and further examinations. This type of "illness behaviour" is more evident in urban than in rural populations, and more so in wealthy than in poor people.

The second most important category is that of chronic psychoses and defects, which in this table includes mental retardation, addiction, epilepsy and dementia. Its main problem is more or less permanently disturbing and unacceptable behaviour such as : self-neglect, social

inadequacy, aggressive, homicidal and sexually uninhibited behaviour. Not only do these people need constant care and supervision, but their problems often implicate their families. They have to make great economic sacrifices which threaten the existence of the whole kin group, while in some cases they may even be ostracised by the community. For example, because nobody wants to marry into a family with a psychotic or epileptic member. This category of mentally disturbed people can be found at traditional healing places; amongst beggars in the major urban centres once they have become vagrants, in prisons and occasionally in one of the few mental hospitals available in a developing country. Because they often are deviants and outcasts they very rarely attend health services. It is quite an effort to locate them, and even more to follow them up.

Epilepsy is also considered separately because of its special features. It is a fearsome disease attacking young people out of the blue, gradually crippling them physically, mentally and socially. Even in peripheral general hospitals one can always find a few patients who have been admitted for extensive burns because they fell into the open fire during a fit. As they are rarely treated with anti-epileptic drugs on a regular basis they slowly develop dementia, while sometimes showing behavioural disturbances of an impulsive and aggressive nature. In the meantime they may have become outcasts, first having been sent away from school, next having implicated their families, and finally becoming vagrants. Early recognition, including the not always easy differentiation from possession states and hysterial fits, and regular treatment can prevent most of these complications and consequences.

The functional psychoses have the lowest prevalence. They usually include schizophrenia, manic depressive and reactive psychosis. This category illustrates the fallacy of prevalence or incidence rates to determine priorities. In the table they come last, yet in mental hospitals the life-long sufferers from schizophrenia come first, making up two-thirds to three-quarters of its population. The problems of the chronic schizophrenic patient do really belong to the second and most common category in our table. Here we will only discuss the problems of acute psychosis, whatever its nature. The sudden outbreak of a psychosis with confusion, aggression, paranoia, running away, tearing up of clothes or withdrawal tend to paralyse the immediate environment, not only because of fear but also because it involves great effort to restrain the patient. In the rural areas the patient's kin certainly go to great

length to retain him in their midst, often with the intervention of traditional healers and their shackles, chains or ropes. The problem in this case is that too violent restraint of a patient not infrequently increases his aggression. In the constricted urban conditions of life these cases are more immediately taken to hospital, where they are not eagerly welcomed because general hospital staff rarely know how to handle them properly.

The above may serve as a general outline of the psychiatric problems of a community, for which we have to find and train health workers.

Types and numbers of personnel

About the types and numbers of personnel necessary to satisfy the psychiatric needs of a developing nation we can be brief. On the one hand, the numbers of psychiatric professionals are so minimal (12), that it will be a long time before enough of them will have been trained. Even the smallest increase will be more than welcome. On the other hand, in countries with a high mortality because of nutritional conditions and infectious diseases both sometimes occurring in epidemic forms, mental illness and the training of psychiatric professionals can hardly be assigned high priority. Therefore, it is much more a matter of finding out in what way general health workers can be involved in the delivery of psychiatric care. Having outlined the more obvious psychiatric problems above, it now becomes a matter of (13) :

1. selecting priorities in the spectrum of problems;
2. preparing problem outlines;
3. describing tasks;
4. setting educational objectives, after it has been determined what type of general health worker can take on which task;
5. suggesting teaching methods;
6. producing a practical guide to help the health worker learn the acts and activities expected from him within the limits of his assigned sphere of action;
7. and last but not least setting up a system for referral and supervision.

However, priorities cannot be selected without due consideration of the type of personnel expected to tackle them. As we are really dealing with psychiatric problems as they are freshly manifesting themselves in the community, it is the health worker in the first line about whom we are talking. There is an obvious difference in this respect, between rural and

urban areas. The primary rural general health worker will probably be of a lower level of training, at the most an advanced dresser. The one in the urban areas will be either of a higher level, medical assistant or even general practitioner, or with more immediate support from or access to the next higher level. This implies that the psychiatric problems to be selected in the rural areas have to be much simpler than in the urban situation.

Tasks and training programmes for general health workers

As has been mentioned above we have to distinguish between the rural and urban areas when selecting our priorities. But there will also be differences between countries, not so much epidemiologically as with regard to types and numbers of personnel. Therefore, the selection of priorities presented below is debatable.

Numerically, the psychoneuroses and personality disorders come first. Yet, their management is not at all easy and requires considerable training.

On these grounds they should be rejected as a priority. Perhaps the maximum one can achieve in primary health workers is that they do recognize repetitive complaining with vague physical symptoms for which no organic basis can be found with their usual methods of examining a patient, as possibly of an emotional nature. The only consequences should then be that no further physical examinations are pursued, and that no useless medication (Vitamin B) is administered. This rather negative approach might prevent unnecessary "illness behaviour" on the part of the patient, and unjustified "medicalization" by the health worker.

The second largest category of chronic mental handicaps, also requires considerable effort and particularly long-term application of rather sophisticated psychotropic drugs with sometimes quite nasty side-effects. In the rural areas the primary health worker would have to learn a lot for a few patients who may not be within easy reach. Whereas in the urban areas it might be easier to train and supervise psychiatric auxiliaries whose main task will be locating, following up and rehabilitating chronic patients. Transport and regular contact will perhaps be less of a problem in a town.

Epilepsy should be selected as a priority because it generally affects individuals at a young age, while there is a tremendous discrepancy between its socially incapacitating effect on the one hand, and a person's actual capacity to function normally between fits. We have to admit that the number of epileptic patients is low, but their fits may be frequently recurring events.

a. The problem, grand mal epilepsy, can be outlined as follows.

sudden loss of consciousness (or history of) with tonic and clonic spasms, bloody froth in the mouth, passing of urine, and lasting a few minutes only.

one fit only	more than one fit	one or more fits	atypical fits
no fever	no fever	with fever	
↓	↓	↓	↓
- no action	- phenobarbital	- phenobarbital - further physical examination and treatment	referral

b. The educational objectives should be as follows :

1. The health worker should be able to recognize a grand mal fit when he sees one.
2. He should be able to take a history from relatives or other bystanders enquiring for : sudden loss of consciousness lasting a few minutes, tonic and clonic spasms, bloody froth, urinary incontinence, tongue-bite, desorientation afterwards, previous fits.
3. He will have to realize that there are other types of epilepsy and hysterical fits, which are more difficult with regard to diagnosis and treatment, and therefore need referral. It is not necessary for him to have any detailed knowledge of these conditions.
4. He should know the basic rules about administering phenobarbital in case of epilepsy (15).
5. He should be able to follow-up a patient and assess the effect of phenobarbital on the occurrence of fits.
6. Finally, he should have some understanding of the social reactions towards epilepsy and be able to at least discuss them with the relatives of the patient and significant others.

Acute psychosis can be selected as a next priority. The frequency of its occurrence cannot be a justification; its disturbing effect on the immediate environment and its sometimes disastrous consequences, such as homicide, suicide and social isolation, are more important.

a. The problem can be outlined as follows ·

sudden confusion; incomprehensible aggression, severe depression, or suspiciousness, social withdrawal and mutism; self-neglect.

- acute psychosis	- acute psychosis
- clear consciousness	- somnolence
- no fever	- fever
↓	↓
- promazine	- promazine
- phenobarbital	- further physical examination and treatment

↓

- daily assessment
- reassurance of family
- supervision of nutrition
- if no change within 48 hours

↓

referral

b. The educational objectives should be as follows :

1. The health worker should be able to recognize the above symptoms and signs.
2. He should know about promazine and phenobarbital in relation to psychosis.

   Promazine is preferred because it is less dangerous and acts quicker. Particularly when injected it has fewer unpleasant side-effects.
3. He should know about febrile delirium, and some of the more common intoxications in his country.
4. He should be able to reassure the environment and to manage counter-aggressive actions.

This second priority already poses considerable problems for the health worker. For example, it may be very difficult to do even the most cursory physical examination of a violently psychotic person. Besides, it is not easy to give general guidelines for the management of the environment.

It will be obvious that the above selection of priorities and the crude outline of the tasks and educational objectives need much further elaboration. As to the training programmes we only want to emphasize the importance, particularly with regard to the management of acute

psychosis, of some practical in-service experience. Without such practical experience, and proper support and supervision of the health worker, the programme is bound to fail.

Literature

1. J. Th. M. Dewez and R. Giel (1973) About the regional responsibility of the mental hospitals in the Netherlands.
Psychiat. Neurol. Neurochir. 76, 267 - 274.

2. R. Giel (1974) A survey of psychiatric outpatient services in the province of Friesland (The Netherlands).
I. The mental health services. T. v. Sociale Geneeskunde 52, 542 - 552
II. The epidemiology of mental illness. T.v. Soc. Geneesk. 52, 589 - 593.

3. K.W. Bash and J. Bash-Liechti (1969) Studies on the epidemiology of neuropsychiatric disorders among the rural population of the province of Khuzestan, Iran.
Soc. Psychiat. 4, 137 - 143.

4. K.W. Bash and J. Bash-Liechti (1972) Psychiatrische Epidemiologie in Iran.
In : Perspektiven der heutigen psychiatrie. E. Ehrhardt. Frankfurt.

5. K.W. Bash and J. Bash-Liechti (1974) Studies on the epidemiology of neuropsychiatric disorders among the population of the city of Shiraz, Iran.
Soc. Psychiat. 9, 163 - 171.

6. R. Giel and J.N. van Luijk (1969) Psychiatric morbidity in a small Ethiopian town.
Brit. J. Psychiat. 115, 149 - 162.

7. R. Giel and J.N. van Luijk (1969/70) Psychiatric morbidity in a rural village in south-western Ethiopia.
Int. J. Soc. Psychiat. 16, 63 - 71.

8. R. Giel, Y. Kitaw, F. Workneh and R. Mesfin (1975) Ticket to Heaven : psychiatric illness in a religious community in Ethiopia.
To be published in Social Science and Medicine.

9. J. Moser (1974) Approaches to the development of basic mental health services.
Working paper for the Expert Committee on Organization of Mental Health Services in Developing Countries.

10. R. Giel (1972) Problems of programme development in the mental health field with special references to developing countries. Working paper for the Group Meeting on Mental Health in Alexandria.

11. M. Dormaar, R. Giel and J.N. van Luijk (1974) Psychiatric Illness in two contrasting Ethiopian out-patient populations.
Soc. Psychiat. 9, 155 - 161.

12. T.A. Baasher (1972) Review of mental health services in the Eastern Mediterranean Region. Working paper for WHO Group meeting on Mental Health Alexandria.

13. WHO Working Group (1974) Training and utilization of village health workers. Working Document World Health Organization, Geneva.

14. C.R. Swift (1973) Types and roles of auxiliaries. Working paper for the Seminar on the Organization of Mental Health Services in Developing Countries, Addis Ababa.

15. R. Giel (1968) The epileptic outcast. East African Med. J. 45, 27 - 31.

TABLE I

MENTAL ILLNESS IN IRAN AND ETHIOPIA

	IRAN		ETHIOPIA		
	Rural	Urban	Rural	Urban	
Sample	482	928	370	384	48
All psychiatric morbidity	14.9 %	16.6 %	9.1 %	8.6 %	12.5 %
Functional psychosis	0.2 %	0.4 %	-	0.3 %	2.1 %
Chronic psychosis and defect	5.2 %	5.2 %	1.3 %	1.3 %	4.2 %
Epilepsy	0.2 %	0.6 %	0.5 %	0.5 %	-
Psychoneurosis/personality disorder	9.5 %	11.0 %	7.8 %	7.0 %	6.3 %