

## A ONE-YEAR REPORT OF THE COUNTRY'S MENTAL HEALTH PROGRAM IN A 22,000 POPULATED REGION OF NORTH-EAST IRAN

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### ABSTRACT

This study began in December, 1989, and continued for one year. 245 cases, 46.5% from urban areas and 53.5% from rural areas, were followed-up. 13.5% were diagnosed by general physicians and receiving drugs accordingly before the program. 30.2% were properly diagnosed, but they did not receive reasonable drugs; and 56.3% were neither properly diagnosed nor did they receive reasonable treatment. The main diagnoses, according to ICD-9, were as follows: 35.9% mental retardation, 35.5% neurotic disorders, 12.2% epilepsy and its psychiatric aspects, 12.2% schizophrenia, and 4.9% affective psychoses. 21.2% were disabled in different stages. The rate of tracing in the first 6 month follow-up period was 46.15%.

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### INTRODUCTION

The 29th article of the constitution of the Islamic Republic of Iran declares access to health and treatment a right for all the country's citizens. Iran is a signatory to the Alma Ata Declaration which has set the aim of "health for all by the year 2000," through a community-based primary care approach.

The National Program of Mental Health of the Islamic Republic of Iran was developed in 1986, and fortunately the first author participated in its development. The first pilot study began in Isfahan in 1987, and our research is the second generation in this field. The most impressive message of this program is the integration of mental health in primary health care. This strategy necessitates training the existing health staff in primary health care, including short training courses in mental health for general practitioners. Fortunately, our health service networks are quite efficient in rural and small urban areas, but we have problems in large cities, including the capital. This difficulty arises due to the engagement of most general practitioners and specialists in private clinics and hospitals.

The aim of our study can be summarized as follows:

1. To examine the mental health needs in rural/urban primary health care centers.
2. To evaluate the usefulness of the program at different levels of health services.
3. To assess the place and ability of para-professionals in case finding and follow-up of psychiatric cases.

### METHOD

Our research began in September, 1989, with the following procedures:

1. Ten days' training of five general practitioners and eight masters of psychology.
2. Instruction to urban health personnel and school teachers for training rural primary health personnel (20 persons for 1 week).
3. Instruction to rural primary health personnel by their trained teachers (20 members for 1 week).

It should be noted that we have instructional readings in Persian for general practitioners, school teachers of rural

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**Table I. Number and percent of patients referred to psychiatrist by general practitioners from urban/rural areas**

URBAN/ RURAL AREA	FEMALE		MALE		TOTAL	
	No.	%	No.	%	No.	%
Torghabeh (U: 10) F: 4367 M: 4468	82	56.5	32	32	114	46.5
Dehbar (R: 35) F: 759 M: 749	6	4.13	8	8	14	5.7
Kang (R: 20) F: 1141 M: 1209	8	5.5	8	8	16	6.5
Azghad (R: 32) F: 481 M: 463	5	3.44	4	4	9	3.7
Mayan (R: 30) F: 834 M: 812	8	5.5	14	14	22	9
Hesar (R: 10) F: 1610 M: 1649	14	9.65	15	15	29	11.8
Noghondar (R: 20) F: 459 M: 498	13	9	7	7	20	8.2
Jaghargh (R: 15) F: 1172 M: 1169	9	6.2	12	12	21	8.6
<b>Total</b>	<b>145</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>245</b>	<b>100</b>

U: urban R: rural

The population of each area has been mentioned according to sex.

The figure beside U and R is the distance from mental health facility in km.

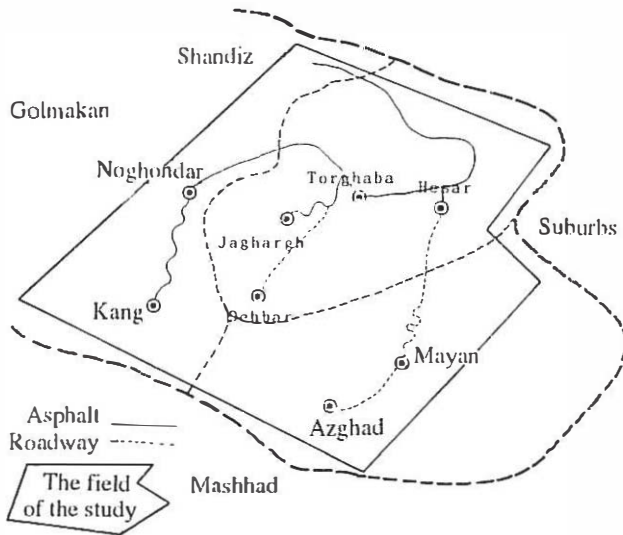


Fig 1. The map of the region.

primary health care, and primary health care personnel. Our psychiatric clinic was started on a once-a-week basis in the outpatient clinics of the local general hospital at the onset of

the program. These local hospitals are responsible for covering other special medical needs of the region.

Case records and research questionnaires were completed by a master of psychology who was there for six hours per week. IQ tests were done by this member as well. A psychiatrist, one of the academic members of the University of Medical Sciences, attended for three hours per week. A group of six to 10 medical students accompanied him and simultaneously visited, discussed, and diagnosed patients for treatment. A resident in psychiatry with 2 years' experience in psychiatry attended the clinic whenever the psychiatrist was engaged elsewhere.

**Field Situation:** The field was a 22,000 populated urban/rural area north of Mashhad. The closest place to Mashhad was 22 kilometers away. The town, Torghabeh, had recently been included along with the 7 rural areas and mountainous roads around it. Health affairs were managed in Torghabeh where a general practitioner divides his time in visiting these villages weekly. The map of the region is shown in Fig. 1.

Table II. Evaluation of Age Groups

age (year)	Female		Male		Total	
	No.	%	No.	%	No.	%
0-9	27	18.6	40	40	67	27.3
10-15	12	8.3	19	19	31	12.65
16-24	29	20	16	16	45	18.4
25-34	36	24.8	8	8	44	18
35-44	18	12.4	7	7	25	10.2
45-54	14	9.65	6	6	20	8.2
55-64	7	4.8	3	3	10	4.1
65	2	1.4	1	1	3	1.2

RESULTS

Table I shows that the urban population is more than half of the entire population in the study. The cases found in the urban areas are 7% less than the rural areas.

This difference is predictable because of the tight relations between the population and the primary health care personnel in rural areas. The evaluation of age groups (Table II) shows that nearly 40% of the clients were under the age of 15 years. Case finding in this age level will have

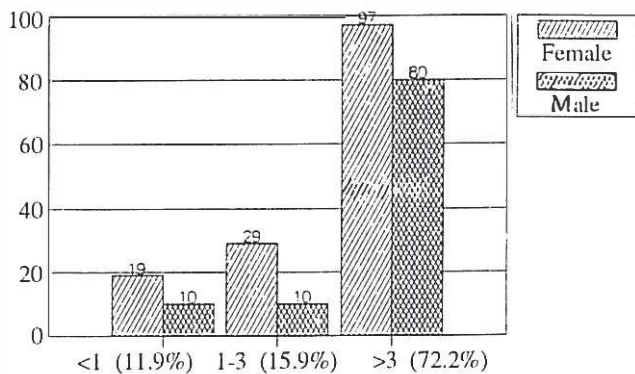


Fig 2. Duration of diseases from the onset.

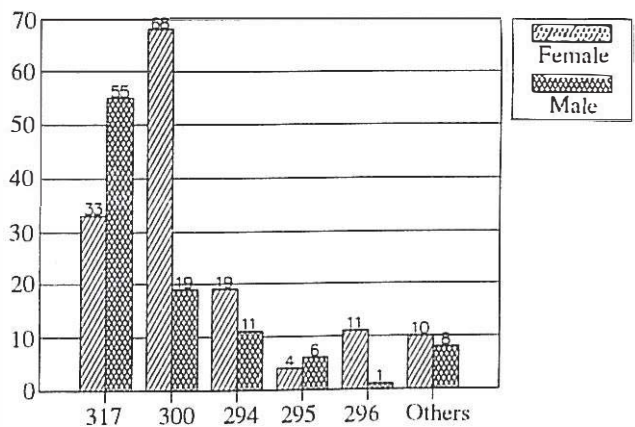


Fig 3. Diagnoses according to ICD9.

a striking role on the prevention of further complications, and can be considered as a primary prevention process.

The study on marital status shows more than 1/3 of patients were married (60.8% single, 36.7% married, 2.44% widowed or divorced). Although the family support is a valuable factor for these patients, the situation should be evaluated for the role of genetic factors. The reproduction of psychotics and epileptics should be diminished as far as possible.

The mutual relations between illiteracy and psychiatric diseases should be studied more and the mechanism of the procedure should be found in the next studies. Our figures in this respect are as follows: 28.6% illiterate, 7.7% less than one completed grade of first level, 35.1% first level, 9.4% second level, 2.8% third level, 2.8% special classes for adults, 13.5% under the age of schooling.

Declared economic status: 2/3 of the clients had low income, and 1/3 of the population were in the moderate income range. In a longer follow-up, the real economic status may be discovered and the relation of psychiatric disease to the economic status can be evaluated.

Occupation status: Only 13.5% of the patients were unemployed. This finding has diminished during the follow-up and is a good factor for the prognosis.

The reaction of patients to psychiatric treatment: 8.2% of cases had come by force. The length of the undiagnosed conditions in 56.3% of cases and inappropriate treatment in 30.2% of patients make this figure predictable (Table III). More refreshing courses in psychiatry and mental health are needed for general practitioners and non-psychiatric specialists to prevent this trend. Fig. 2 shows duration of disease from the onset. 29 (11.9%) of cases suffered from psychiatric diseases for less than one year, and 39 (15.9%) between one and three years. In 177 (72.2%) patients the duration of disease from the onset was more than three years. This figure is very warning. It shows that we should learn to find out the cases as early as possible. 35.9% of the clients were mentally retarded. The most striking factor for this trend is intra-rural marriages and homosanguinity. Further research is needed to confirm the exact reasons for

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**Table III. Treatment status before the program**

age (year)	Female		Male		Total	
	No.	%	No.	%	No.	%
Patient had been diagnosed accordingly and was receiving reasonable drugs	19	13.1	14	14	33	13.5
Patient had been diagnosed properly, but did not receive reasonable drugs	43	29.6	31	31	74	30.2
Patient was not properly diagnosed and did not receive reasonable treatment	83	57.2	55	55	138	56.3

this trend. We have a figure of 35.5% of patients with neurotic disorders. Because of a shortage of time, we could not evaluate neurotic patients who were diagnosed by general practitioners and did not refer to our clinic. So, this figure is actually less than the real figure in this case. These cases should be treated accordingly by psycho-therapeutic sessions. Follow-up of epileptics (12.2%) and schizophrenics (4.1%) can prevent subsequent difficulties. 4.9% had affective psychoses, and 7.3% suffered from other psychiatric disorders (psychic factors associated with diseases classified elsewhere 1.63%, drug dependence 2.86%, senile dementia 0.40%, hyperkinetic syndrome of childhood 0.81%, stuttering 0.81%, adjustment reaction 0.40%, developmental speech disorders 0.40%).

18% of the clients needed economic support. This trend should be fulfilled by governmental or popular resources. Supportive facilities should be provided to help 6.9% jobless patients. The methods of rehabilitation for 21.2% of the clients should be considered. The way to compensate for appropriate places for clients or substitutions according to the existing facilities in the area should be followed-up (Fig.4).

As we can see in Fig. 5, previous history of psychiatric disorders exists in families in 26.5% of first ranks and 24.5% in the second ranks. The findings can and should be the subject of other research; and genetic evaluations, at least, should be done in this pilot study.

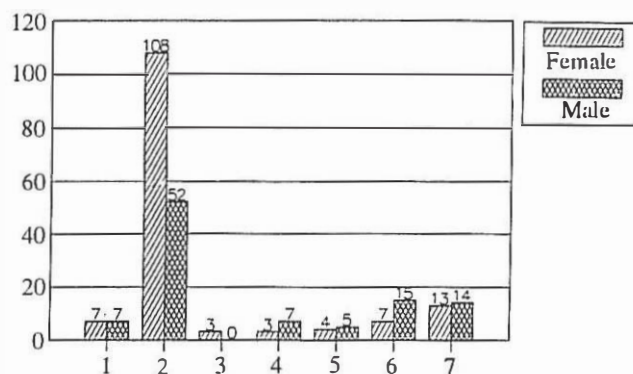
During the follow-up the need for psychiatric hospitalization was nearly 7% of clients. Because of the high number of newly diagnosed patients, this figure may diminish during the 2-year follow-up, so the need for psychiatric beds cannot be evaluated by this figure.

Fig. 6 shows that nearly 70% of the patients have relatively recovered. Nearly 14% of patients had relapses to some degree during follow-up. More education for

relatives and patients should be available in order to decrease this figure as far as possible.

Special research for the 16.7% of patients whose symptoms were fixed should be developed. Methods of rehabilitation should be discovered and applied in these cases.

After follow-up we found that 6.9% of patients were unemployed. In comparison to 13.5% of jobless patients in the first evaluation, it may be concluded that the number of unemployed patients decreased and nearly 7% of clients modified their behavior and gained at least simple occupations.



**Fig 4.** Appropriate placements for rehabilitation or supervision of the cases.

- 1: psychiatric hospital                      2= outpatient psychiatric care
- 3: outpatient medical care                4= day hospital
- 5: chronic diseases or geriatric hospital
- 6: rehabilitation centers for mental retarded patients
- 7: special school for mental retarded

**Note:** The services considered are the best possible for the clients, irrespective of whether or not it is available in the study area.

Table IV. The rate of the first 6-month follow-up

Patients' Situation	Female		Male		Total	
	No.	%	No.	%	No.	%
Cases with possibility of 6-month follow-up	82	52.6	74	47.4	156	100
Cases follow-up	41	50	31	41.9	72	46.15
Death	1	1.2	1	1.3	2	1.3
Emigration from the area	1	1.2	-	-	1	0.64

## DISCUSSION

There is increasing recognition of the importance of mental health in primary care practice. G.L. Adams et al. present a working definition of primary care practice.<sup>1</sup> In their work they integrated primary care mental health training into the education of primary care physicians and mental health professions. Some workers prefer to study only one aspect of mental health problems in rural setting. Alcoholism, drug dependence, or other aspects may be the subjects of study according to Otieno and Smart.<sup>4,6</sup> The use of primary care, even for institutionalized retarded children, has been suggested by S.L. Schor et al.<sup>5</sup>

The model for our mental health program was the Wig et al. study<sup>8</sup> which was developed in 1978 in India. Their field of study was a rural area of 60,000 population near Chandigarh. The percentages of Wig's diagnoses in 166 psychiatric cases in comparison to our findings in the first year and the Bellary Program<sup>3</sup> on a population of 2,000,000 are as follows:

Diagnoses	Wig et al. (India) Findings		Bellary (India) Findings	Our Findings
	1st yr.	2nd yr.		
Mental retardation	5.4	0.59	6.5	35.9
Neuroses	5.6	39.4	12.6	35.5
Epilepsy	13.2	14	60.2	12.2
Affective psychoses	7.8	18.5		4.9
Schizophrenia	12.6	11.6	20.5	4.1
Others	2.4	3.2		7.4
Number of patients	166	335	5852	245

Our rate of mental retardation is nearly six folds higher than Wig's and Bellary's. As mentioned before, it may be due to inter-rural marriages. The exact reason should be sought in the next research. Our figures on neuroses and epilepsy are very near to Wig's findings. Our figures for schizophrenia and affective psychoses are nearly two to three folds less than Wig's findings. I really cannot evaluate

the reason. I even think we have been more precise in this subject. In the mental health program at Bellary, although it is very great because of its population of 2,000,000, only a small percentage of patients or their families reported that they were actually referred by health workers. Most of the patients who utilized the services either came on their own or through referral by other patients. It seems that this project could only help the very prominent features. As we can see in their report,<sup>3</sup> the number of patients referred during the first year in 1983 were as follows: 12 epileptics, 10 psychotics, one neurotic and 12 mentally retarded. It means that during the first year of the project they could help only 105 psychiatric patients in a population of 2,000,000. Comparison of the number of our founded patients (245) in a population of 22,000 with Bellary's obviously shows that in the first year of our project we had a very higher rate of case finding. The most striking reason of this trend is because of good performance of our health workers and their instruction.

Before this program, even in the well-arranged studies in our country, the rate of follow-up was 47.6%. Davidian and Naraghi reported this figure for their follow-up on 107 depressed patients in Tehran University.<sup>2</sup> However, these

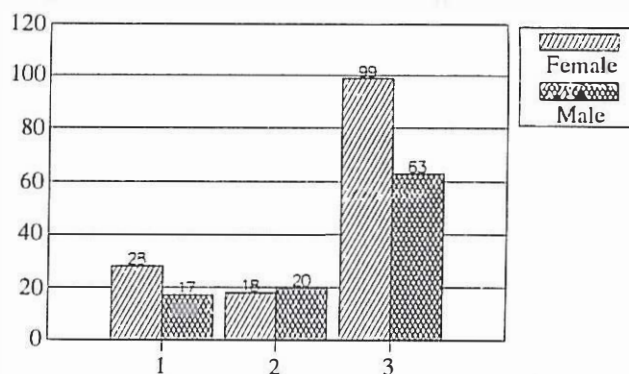


Fig 5. Previous history of psychiatric treatments in the families.

- 1: psychiatric disorders in the first degrees
- 2: psychiatric disorders in the second degrees
- 3: lack of psychiatric disorders in the family

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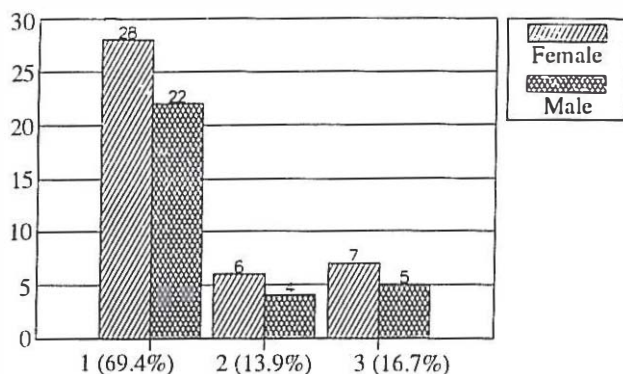


Fig 6. The rate of recovery and relapse.

1: relative recovery

2: relapse

3: fixation of the symptoms

patients were selected as a WHO study, therefore it cannot be considered as a criterion for the rate of follow-up in our country.

In comparison to our study, before the program follow-up during one month was 41.3%; after 3 months 17.4%; after 6 months 7.2%; and after one year, only 1.2%. So the figure 46.15% even if it is not so satisfactory, is very striking. At the analytic stage we noticed that only 156 patients had the possibility of a 6-month follow-up. 89 other patients referred after six months of the study, so there was no possibility to be followed-up.

### CONCLUSION

General practitioners are very eager to gain more instruction in psychiatry and mental health. In order to gain the assistance of general practitioners, we first arranged a 6-month program with condensed psychiatric and mental health content for directing the mental health program in the cities of the province. However, as none of the general practitioners could find the time for such a long program, we had to decrease the duration of the course to 3 months-one month at first, and then one week every month for 8 months. The directors of our health network favor this program, but

the number of possibilities is not clear at the present time. We hope to report it in our next study.

The collaboration of primary health staff is very rewarding, and they are very eager to know more about mental health. This situation should be continued with better relations and instruction.

It has already been established in our country that all newly graduated physicians should spend one year in rural areas. This trend can confirm social medicine and social psychiatry as well.

Mental health committees have been established in the center and all cities of the Province in relation with health councils. The first author suggested these committees himself. The activities and results of these committees are highly rewarding. These committees have been activated in the governmental house.

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