CHARACTERISTICS OF MENTAL MORBIDITY IN A RURAL PRIMARY HEALTH CENTRE OF HARYANA.

JUGAL KISHORE, V.P.REDDAIH, VINAY KAPOOR J.S.GILL

Summary: The prevalence of mental morbidity including comorbidity with physical illnesses in a rural primary health centre is very high. Most common entities in the diagnostic group according to DSM-III-R were mood disorders (28%), somatoform disorders (27%), and anxiety disorders (17.6%). Majority of them presented with somatic symptoms. There were significant differences in rates for mental disorders when age (particularly 35-44 years), marital status, types of family, and females operated for tubectomy were analysed. The study emphasises the need for effective mental health care to the rural community through primary health centres.

Keywords: Mental morbidity, primary health centre.

INTRODUCTION

Great emphasis has been given to the prevention and treatment of communicable diseases at primary health centres but there is growing evidence that burden from noncommunicable diseases is sharply increasing in developing countries. The world Bank report (1993) revealed that the Disability Adjusted Life Years (DALY) Loss due to neuropsychiatric disorders is much higher than diarrhea, malaria, worm infestations and tuberculosis if taken individually. Mental morbidity has been reported very high (8-53%) in primary health care unit in developing countries including India (Chowdhury et al. 1975, Nikapota et al. 1981, Srinivasan & Suresh 1990, Shivagautham et al. 1980, SriRam et al. 1987, Shamasunder et al. 1986, Sen & William 1987) where there is no special provision to tackle such morbidity.

In a country like India where around 75% of the population is living in rural areas where health delivery is mainly through primary health centres, no extensive search has been carried out to detect mental morbidity at rural primary health centres. But knowing the prevalence of mental morbidity among other health problems at the PHC will define the priority of mental health services and welfare programmes. This will also indicate priority among the mental health problems. This study was conducted to determine the prevalence and characteristics of mental disorders and its association with demographic and socioeconomic factors of patients attending a rural primary health centre.

MATERIAL AND METHODS

The primary health centre (PHC) Chhainsa at which the study was conducted is functioning under Comprehensive Rural Health Service Project (CRHSP-Ballabgarh) of All India Institute of Medical Sciences (AIIMS), New Delhi. Among 1788 adult patients atteding the PHC from 15th January 1992 to 14th July 1992, a representative sample of 218 adults were selected for study purpose keeping following criteria of inclusion: a) only new adult patients (18-60 yrs.) taken so that repetition could be avoided; b) patients belonging to village Chhainsa so that home visit could be carried out for detailed evaluation and follow up of cases. The antenatal, intranatal, postnatal clinic patients and seriously ill (e.g., coma, severe cognitive impaired) patients were excluded. The study sample was fairly representative of Chhainsa population also (Table-I).

A two step procedure was applied to all 218 patients. In step 1, a screening instrument modified Self Reporting Questionnaire (SRQ-26 items Hindi Version) was applied independently after receiving the informed oral consent from each patient and socioeconomic status was scored on Uday Parikh Scale (1966). The male female ratio in the study group was 1:1.3, The literacy rate was 50% whereas only 20% of the females...
were literate in the study sample. Majority of subjects were married (78%), and belonged to nuclear families (Table 1).

Comparison of study sample with the PHC attenders and general population of the Village Chhainsa.

|                  | Study Sample (n=218) | PHC Attenders (n=1788) | Population (n=5700) |
|------------------|----------------------|------------------------|---------------------|
| **SEX**          |                      |                        |                     |
| Male             | 48                   | 42                     | 55                  |
| Female           | 52                   | 58                     | 45                  |
| **AGE IN YRS.**  |                      |                        |                     |
| 18 - 24          | 35                   | 31                     | 30                  |
| 25 - 34          | 28                   | 32                     | 31                  |
| 35 - 44          | 19                   | 15                     | 21                  |
| 45 - 54          | 12                   | 12                     | 13                  |
| 55 - 60          | 6                    | 10                     | 5                   |
| **MARITAL STATUS** |                    |                        |                     |
| Unmarried        | 17                   | 20                     | 20                  |
| Married          | 78                   | 76                     | 76                  |
| Widowed / Separated | 5                  | 4                      | 4                   |
| **FAMILY**       |                      |                        |                     |
| Nuclear          | 54                   | 51                     | 51                  |
| Joint / extended | 46                   | 49                     | 49                  |
| **EDUCATION**    |                      |                        |                     |
| Illiterate       | 50                   | 52                     | 52                  |
| Upto 5 class     | 22                   | 22                     | 22                  |
| Upto 8 class     | 14                   | 16                     | 16                  |
| Upto 12 class    | 12                   | 9                      | 9                   |
| Graduate / above | 2                    | 1                      | 1                   |

* Census report (1993) CRHSP - Ballabgarh, AIIMS, New Delhi-29

In step 2 all patients were evaluated in detail clinically with the help of the Diagnostic and Statistical Manual of Psychiatric Disorders III Revised (DSM-III-R, 1987) at the PHC itself. The modified SRQ-26 items Hindi version was found to be a suitable screening instrument in our rural setting. The best cut off score was ≥ 6, the sensitivity was 88% and specificity was 71%. As the cut off values increased the sensitivity of the SRQ decreased but the specificity increased. To produce the clinical diagnosis with the help of DSM-III-R criteria, a resident of Community Medicine got two months reorientation training in the Department of Psychiatry of All India Institute of Medical Sciences, New Delhi. Each mental diagnosis was discussed with Psychiatrist and 5% patients were independently examined by Psychiatrist and diagnoses were cross checked. Majority of the statistical analysis carried out were nonparametric and significance was set at the conventional of 5% level.

**RESULTS**

The study sample was representative of total adult PHC attenders during that period and of population of Chhainsa (Table 1. Out of 218 adult patients, 47 (21.5%) were pure mentally ill patients according to clinical assessment based on DSM-III-R criteria. Comorbidity with physical illness was 22.2% so the total mental morbidity in the study sample was 41.7%. Most of the morbidity was mild in nature, so many diagnoses were grouped into broad categories. Mood disorders (28.6%) and somatoform disorders (27.4%) were the most common mental disorders among mentally ill patients. All nonpsychotic illnesses contributed to 83.5% of the total mental morbidity.

**Distribution of mental morbidity according to sex**

| Diagnoses of Mental disorders | Male n=38 | Female n=53 | Total n=91 | % |
|-------------------------------|-----------|-------------|------------|---|
| Substance Use                 | 05        | 00          | 05         | 5.5 |
| Schizophrenia/                | 01        | 01          | 03         | 3.3 |
| Delusional disorder           |           |             |            |    |
| Mood Disorders                 | 11        | 15          | 26         | 28.6 |
| Anxiety Disorders              | 10        | 06          | 16         | 17.6 |
| Adjustment Disorders           | 02        | 04          | 06         | 6.6 |
| Dissocialive Disorders         | 00        | 03          | 03         | 3.3 |
| Somatoform Disorders**         | 02        | 23          | 25         | 27.4 |
| Sexual Disorders               | 02        | 00          | 02         | 2.2 |
| Personality Disorders          | 02        | 00          | 02         | 2.2 |
| Mental Retarditation           | 03        | 00          | 03         | 3.3 |

* Fisher exact (p=0.01)  
** x²=14.15, df=1, p=0.0001
MENTAL MORBIDITY IN A RURAL PRIMARY HEALTH CENTRE

Distribution of mental disorders by age and sex is presented in Table 3.

| Age in Years | Male  | Female | Total | Male % | Female % |
|--------------|-------|--------|-------|--------|----------|
| 18-24        | 17 (34.0) | 5 (19.2) | 22 | 38% | 26 |
| 25-34        | 12 (43.0) | 18 (54.0) | 30 | 28% | 34 |
| 35-44        | 6 (46.0) | 20 (71.0) | 26 | 13% | 28 |
| 45-54        | 2 (25.0) | 6 (33.0) | 8 | 8% | 18 |
| 55-60        | 1 (17.0) | 4 (57.0) | 5 | 1% | 7 |

$X^2=15.49$, df=4, $p=0.003$.

More females (46.9%) were mentally ill in all age groups except in the 18-22 year groups. About 5.5% of the patients (all males) were suffering from substance use disorders (mainly bhang, ganja and alcohol). No intravenous drug abusers were found in the study sample. Somatoform disorders were significantly more in female patients ($X^2=14.15$, df=1, $p=0.0001$). Age is found to be a significant factor for mental illness. In the age group 35-44 years 63% were mentally ill. ($X^2=15.09$, df=4, $P=0.004$).

Though an inverse relationship was observed, socioeconomic status was not significantly associated with mental illness as a whole. However when lower class was separately compared with other classes as a group, the mental illness was significantly high in the lower class ($X^2=5.18$, df=1, $p=0.02$.)

Occupational status of the patients was not a statistically significant factor for mental illness.

Caste of a person was not a significant factor for mental illness in the study though within artisan caste group there was a 60% mental morbidity.

Unmarried group had 29% of mental disorders whereas married had 44% and widow/widower/separated had 50% of mental morbidity. However the difference was not statistically significant.

Distribution of the mental morbidity according to types of family is given in Table 4. There was significantly more mental morbidity in nuclear families than in joint and extended combined group ($X^2=5.81$, df=1, $P=0.01$). The joint/extended Family seems to have protective effect for mental illness.

Around 36% were tobacco smokers in the study sample. Among them 64.4% were males and 35.5% were females smokers. 49% of the smokers were found mentally ill as compared to 37% of the non smokers. High proportions of those with mood disorders (53.8%) and drug abusers (100%) were tobacco smokers compared to those with anxiety disorders (12.5%).

The higher rate of mental illness was found with dysmenorrhea, menorrhagia and polymenorrhea though the numbers in each disease category were too small. 53% (17/32) of the menstrually disturbed patients were mentally ill (Table 5). Of the 19 (17%) female patients who had undergone tubectomy operation, 14 (73.6%) were mentally ill.
Distribution of Mental Morbidity in Females according to their menstrual histories.

| Menstrual History | Mental Morbidity | Non-Mental | Total |
|-------------------|------------------|------------|-------|
|                   | n=53 (%)         | n=60 (%)   | n=113 |
| Regular Cycle     | 25 (52)          | 23 (48)    | 48    |
| Dysmenorrhea      | 14 (64)          | 8 (36)     | 22    |
| Menopause         | 7 (29)           | 17 (71)    | 24    |
| Lactational       | 2 (22)           | 7 (78)     | 9     |
| Amenorrhea        | 1 (100)          | 0 (00)     | 1     |
| Pregnancy         | 2 (28)           | 5 (72)     | 7     |
| Menorrhagia       | 1 (100)          | 0 (00)     | 1     |
| Polymenorrhea     | 2 (100)          | 0 (00)     | 2     |

\(X^2=12.56, df=6, p=0.05\)

DISCUSSION

A large proportion of the adult patients (41.7%) coming to the rural PHC were diagnosed mentally ill. High prevalence of mental morbidity was also reported by Srinivasan in general OPD of rural hospital of Madras city (53%), and Krishnamurthy in general OPD population (36%). Agarwal in gynaecological OPD (49.9%) and Shukla in dental OPD (44%). Pure mental morbidity (excluding comorbidity with physical illness) was also high (21.6%). Similar high pure mental morbidity (24% and 20%) was also reported by Bagadia (1986) and Srinivasan (1990) respectively, whereas Harding et al. (1980) has reported low (17.7%) mental morbidity for northern India in a WHO Collaborative multicentric study and Sriram (1987) reported 10.4% psychosocial problems among general OPD patients of a hospital in south India. The difference in prevalence rates in present study and other studies could be explained on the basis of diagnostic criteria for mental illness, selection sample, inclusion and exclusion criteria or regional concept of abnormality and presentation of illness.

Majority of mental disorders presented to the doctor at the PHC with somatic symptoms like “ghabrahat” (Similar to term used for the anxious state in other regions), weakness, headache, bodyache and indigestion as a physical illness (Table 6).

Prevalence of different physical symptoms.

| Physical symptoms | Mental Morbidity | Non-Mental |
|-------------------|------------------|------------|
|                   | n=91 (%)         | n=127 (%)  |
| Weakness          | 67 (73.6)        | 87 (68.5)  |
| Headache          | 67 (73.6)        | 73 (57.4)  |
| “Ghabrahat”       | 71 (78.0)        | 86 (67.7)  |
| Easy tired        | 61 (67.0)        | 76 (59.8)  |
| Decrease appetite | 57 (62.6)        | 74 (50.2)  |
| Sleep disturbances| 38 (41.7)        | 30 (29.9)  |
| Discomfort abdomen| 37 (39.0)        | 48 (37.7)  |
| Indigestion       | 24 (26.3)        | 33 (25.9)  |
| Bodyache/Backache | 19 (21.0)        | 17 (13.3)  |
| Respiratory symptoms | 11 (12.0)   | 30 (23.9)  |
| Tintling sensation| 9 (9.8)          | 7 (5.5)    |
| Dizziness         | 7 (7.6)          | 6 (4.7)    |
| Pruritus          | 4 (4.3)          | 6 (4.7)    |
| Burning micturation| 4 (4.3)        | 7 (5.5)    |
| Menstrual symptoms | 3 (3.2)        | 3 (2.3)    |
MENTAL MORBIDITY IN A RURAL PRIMARY HEALTH CENTRE

those with history of being divorced, separated or widowed. It has been accepted that separation, divorce, and bereavement are risk factors for mental disorders (WHO, 1981).

Among females 25 (22%) were having menstrual disturbances. Of these menstrually disturbed females 17 (68%) were mentally ill. Similar higher rates of mental disorders in menstrually disturbed were reported by Indira et al. (1980).

Post tubectomy patients had significantly higher proportion of mental illness (73%) in our study. Khorana and Vyas (197) reported some degree of mental morbidity in 83% of the tubectomised women but in other studies (Wig, 1977; WHO, 1985) the observations were different. The reasons for higher mental rates in post tubectomy females may be due to poor pre and post tubectomy counseling. To establish a causal association between mental illness and tubectomy operation a more detailed study is required.

Substances for example alcohol, ganja, hashish, and bhang use disorders were mainly in male patients in our sample. Similarly the personality disorders were confined to male group only. Similar observation was made by Regier et al. (1988). We have observed a significantly high proportion of somatoform disorders in female patients. Somatisation is more common in female patients as was described by Regier et al. (1988) and Kirmayer (1984).

Mood disorders were more common in females (58%) in the age group of 35-44 yrs. Similar finding was observed by Regier et al. (1988), Agarwal et al. (1990), and Srinivasan and Suresh (1990). It is well recognized that depression is costly and causes a considerable social burden on the family, community and the nation (Klerman et al. 1992). Whereas high prevalence of depressive symptoms (24%) does not meet DSM-III criteria due to insufficient symptom duration (Horwath et al. 1992) it still adds to undetected and unaccounted burden in the community.

Majority of patients with mood, anxiety, conversion, adjustment and somatoform disorders presented with somatic symptoms. Similar observation was made by Chaddha & Bhatia (1990), and Srinivasan et al. (1990). The findings of the study confirmed the complexity of mental illness in its presentation at the health care settings throughout the world. We can safely state that there's a very large "hidden mental morbidity" which is difficult to be recognised by a doctor in a busy rural PHC.

The study highlighted the need for a detailed study to understand the cause and effect association of age, marital status, types of family, socioeconomic class, menstrual history and tubectomy in females and tobacco smoking with mental morbidity. High mental morbidity and its economic implication require an effective mental health care policy and implementation of mental health program in rural primary health centres of the country.

REFERENCES

Agarwal, P., Malik, S.C., Padubidri, V. (1990) A study of psychiatric morbidity in Gyaecology Out patients clinic. Indian Journal of psychiatry 32, 57-63.

American Psychiatry Association. (1987) Diagnostic and statistical manual of Mental disorders, (3rd ed., revised) (DSM-III-R). Washington, DC: American Psychiatric Association.

Bagadia, V.N., Ayyar, K.S., Lakdawala, P.D., Seth, S.M., Acharya, V.N., Pradhan, P.V. (1986) Psychiatric morbidity among patients attending medical out patient department. Indian Journal of psychiatry. 28, 139-144.

Bebbington, P., Hurry, J., Tennant ,C, Stuart, E., Wing, J.K. (1981) Epidemiology of mental disorders in Camberwell. Psychological Medicine, 11: 561-579.

Bhatia, M.S., Balkishman, Dhar, N.K., Bohra, N., Gupta, H.L., Malik, S.K. (1988) Psychiatric morbidity in patients attending medical outpatient department. Journal of Indian Medical Association, 2: 36-38.

Byrne, P. (1984) Psychiatric morbidity in a gynaecological clinic: An epidemiological survey. British Journal of Psychiatry, 144: 28-34.
Chadda, R.K., Bhatia, M.s. (1990) A clinical study of somatising patients attending psychiatric outpatient clinic. Indian Journal of psychiatry, 32, 39-43.

Chowdhury , A.K.M.N., Saimn, M., Sakeb, N. (1975) Some aspects of psychiatric morbidity in the outpatient department of a general hospital. Bangladesh Medical Research Council Bulletin, 1, 51-59.

Harding , T.W., De Arango , M.V., Baltazar, L., Climent, C.E., Ibrahim, H.H.A., Srinvasa Murthy, R., Wig, N.N. (1980) Mental disorders in primary health care : A study of their frequency and diagnosis in four developing countries. Psychological Medicine, 10: 231-241.

Horwath, E., Johnson, J., Klerman, G.L., Weissman, M.M. (1992) Depressive symptoms as relative and attributable risk factors for first -onset major depression. Archives of General Psychiatry, 49 : 817 - 823.

Indira, J.P., and Murthy V. .C. (1980) Nature of psychiatric disturbances in menopausal women . Indian Journal of Clinical psychiatry, 7:7-11.

Khorana, A.B., Vyas, A.A.(1980) Psychological complications in women undergoing sterilization by salpingectomy. British Journal of Psychiatry, 127, 67.

Kirmayer, L.J. (1984) Culture, affect and somatisation. Transcultural psychiatric research review, 21, 159- 188.

Klerman, G.L., Weissman, M.M. (1992) The course, morbidity, and cost of depression . Archives of General psychiatry, 49 : 831- 834.

Krishnamurthy,S., Shamasunder, C., prakash , O., prabhakar, N. (1981) psychiatric morbidity in general practice : A Preliminary report. Indian Journal of Psychiatry, 23, 40- 43.

Nikapota, A.D., Patrick , A., Fernando, L.H.S. (1981) Aspect of psychiatric morbidity in the out patient population of a general population in Sri Lanka . Indian Journal of Psychiatry, 23, 219-223.

Parikh, U. & Trivedi , G. (1966) Manual of socioeconomic status scale (rural). Delhi, Manasayan.

Regier , D.A., Boyd, J.H., Burke, J.D., Robin, L.N. (1988) one month prevalence of mental disorders in the USA : Based on five epidemiologic catchment area (ECA) sites. Archives of General Psychiatry, 45 : 977.

Sen,B., Williams, P. (1987) The extend and nature of depressive phenomenon in primary health care: A study in calcutta India. British Journal of Psychiatry, 151: 486-493.

Shamma Sunder, C., Krishna Murthy, S., Prakash, O., Prabhakar, N., Subbakkrishna, D.K. (1986) Psychiatric morbidity in a general practice in an Indian city. British Medical Journal, 292: 1713-1716.

Shivagautham, K.S., Kapur, R.L., Shama sunder, C. (1980) Psychiatric morbidity and referral in general practice of Bangalore city. Indian Journal of Psychiatry, 22:295.

Shukla, G.D., and Srivastava, R.P. (1983) A psychiatric study of cases attending dental OPD of a teaching general hospital. Indian Journal of Psychiatry. 25, 198-202.

SriRam, T.G., Kumar, K., Molly, S. (1987) Minor Psychiatric disturbances in primary health care: A study on their prevalence and characteristics using a simple case detection technique. Indian Journal of Psychiatry, 23, 212-226.

Wig, N.N., Gupta, A.N., Khatry, R., Verma, S.K. (1977) A prospective study of psychiatric and menstrual disturbances following tubal ligation. Indian Journal of Psychiatry, 22 : 311-316.

World Health Organisation. (1981) Social dimensions of mental health. Geneva WHO.

World Health Organisation. (1985) Mental health and female sterilisation: A follow up report of a WHO collaborative prospective study. Journal of Biosocial Science 17, 1-18.

World Development Report. (1993) Investing in health. New York. Oxford University Press.