A study of psychiatric referrals for fitness for work

Jaideep Kishore Patil, Ivan Stanley Netto, Suprakash Chaudhury, Daniel Saldanha

Department of Psychiatry, Dr D.Y. Patil Medical College, Hospital and Research Center, Dr D Y Patil University, 'Department of Psychiatry, Maharashtra Institute of Mental Health and B J Medical College, Pune, Maharashtra, India

Background: There are very few Indian studies regarding the psychiatric evaluation of state government workers referred for psychiatric fitness for work. Aim: This study aimed to examine the reasons for referral, psychiatric diagnosis, and outcome of psychiatric referrals for fitness for work at a tertiary-level referral government hospital. Materials and Methods: The study evaluated consecutive psychiatric referrals at a tertiary-level referral government hospital with their informed consent utilizing a specially prepared pro forma, Kuppuswamy’s Socioeconomic Status Scale and the Mini International Neuropsychiatric Interview plus. Psychiatric diagnoses were based on the International Classification of Diseases 10th Edition Diagnostic Criteria for Research. Results: The study included 67 male and 8 female psychiatric referrals with a mean age of 39.5 years. Most of the psychiatric referrals were married (82.6%), Hindu by religion (97.3%), from urban areas (80%), belonged to upper middle class (46.7%), and had rotating shifts or emergency duties (50%). Psychiatric referrals were usually made for a single reason (57%), most commonly absenteeism (84%) followed by undisciplined behavior (38%). A past history of disciplinary action taken against them was given by 56% of the referrals. The most common psychiatric diagnosis was psychoactive substance-use disorder (21.3%) followed by psychotic disorders (20%) and mood disorders (14.7%). No psychopathology was detected in 18.7% of the referrals. Most of the psychiatric referrals (68%) were fit for work, though 22.67% were declared unfit for work (permanent invalidation). Psychiatric referrals with multiple reasons for referrals, longer duration of psychiatric illness (>5 years), and diagnosis of organic mental disorder or psychotic disorder received invalidation (permanent unfitness) on psychiatric grounds. Conclusions: Psychiatric referral for fitness for work is most commonly for absenteeism. The most common psychiatric diagnosis was substance-use disorder followed by psychoses. The majority (68%) were found fit for work after treatment though 22.6% required invalidment from service.

Keywords: Absenteeism, fitness for work, indiscipline, organic mental disorders, psychiatric referral, psychosis, substance-use disorder

Access this article online

Quick Response Code:

Website: www.industrialpsychiatry.org

DOI: 10.4103/ipj.ipj_12_18

How to cite this article: Patil JK, Netto IS, Chaudhury S, Saldanha D. A study of psychiatric referrals for fitness for work. Ind Psychiatry J 2017;26:162-70.
Psychiatric fitness for work is the ability of workers to perform their work without risk to themselves or others.\textsuperscript{[3,8]} It mainly involves two areas: the recruitment of new staff and the return of those who have been sick back to work.\textsuperscript{[9]} For employers, human resource personnel and for occupational health staff the concerns are the performance of a job adequately, health issues, safety risk, future sick leaves and anti-discriminatory laws which have come into effect and are meant to “enable” the “disabled.”\textsuperscript{[9,10]} Some psychiatric referrals are at times pressured by authorities to undergo psychiatric evaluation for administrative reasons. This may be due to conflicts at the workplace, to discredit or even to terminate services on psychiatric grounds.\textsuperscript{[11]} A psychiatric referral may rarely be used to humiliate or punish the individual by sending for psychiatric evaluation. A psychiatrist should be aware of such a possible misuse of psychiatric evaluation.\textsuperscript{[12,13]}

According to the Maharashtra Civil Medical Code 1976 and Bombay Civil Service Rules 1959, “Medical boards” are established to examine candidates being recruited for government service, sick government employees, and others who have applied for leave on medical grounds, commutation of pension, invalidation, and other situations where evaluation for work is required.\textsuperscript{[14–16]} In addition, special “Standing Medical Boards” have been established at Pune, Aurangabad, Nagpur, and two at Mumbai. Any case referred to the medical board for evaluation for fitness for work has to be examined initially by the president of the medical board or the superintendent. If a psychiatric opinion is required, the case is sent to the head of the psychiatry department. In this study, a “Psychiatric Referral” is a case referred to the department of psychiatry by the superintendent, medical board, or standing medical board of government hospital for psychiatric evaluation and certifications regarding fitness for work.

A psychiatric referral is usually evaluated as an indoor admission to facilitate observation and evaluation. The psychiatrist first records the history from the relatives and then does the mental status examination. The psychiatric social worker arranges to get all work-related records of the psychiatric referral from the source of referral. The work-related records contain information regarding the job profile, the service record, the leave record, and the reasons for the referral. The psychiatric referral may be sent for psychometric testing to a psychologist or to the other departments if necessary. The psychiatric referral is evaluated in light of the above findings for fitness for work. Once the psychiatric evaluation is complete, a certified report with the result of the evaluation is submitted to the president of the standing medical board. The psychiatric referral may receive an outcome which may make him/her fit, provisionally fit, or unfit for work. Those referrals that are provisionally fit are called back for re-evaluation after 3 or 6 months with the work record of that period. On some occasions, the referral may be recommended leave and on some rare occasions invalidated on psychiatric grounds (permanent unfitness for work). The psychiatric referral may also be recommended a change in job or modified work.

At present, there is no systematic Indian study or guidelines available regarding psychiatric referrals for fitness for work.\textsuperscript{[17,18]} This study will examine the sociodemographic characteristics, the reasons for referral, the psychiatric diagnostic categories, outcome, and associations, if any, of the psychiatric referrals for fitness for work. This will help to provide better services for psychiatric referrals for fitness for work and in planning further research in this neglected area.

**MATERIALS AND METHODS**

This cross-sectional study was conducted at a large tertiary-level referral government hospital attached to a medical college during February 2011–January 2012. The study protocol was approved by the Institutional Ethics Committee.

**Sample**

The sample of the study consisted of 75 consecutive individuals referred to the department of psychiatry of a tertiary-level referral government hospital for psychiatric evaluation for fitness for work. They were given information about the nature of the study and then written informed consent was taken from the individual and/or relative.

**Inclusion criteria**

i. Psychiatric referrals sent for evaluation for fitness for work
   
   ii. Psychiatric referrals who gave consent to participate in the study
   
   iii. Psychiatric referrals with proper records.

**Exclusion criteria**

i. Psychiatric referrals sent for reasons other than fitness for work
   
   ii. Psychiatric referrals who were prisoners.

**Tools**

*Kuppuswamy’s Socioeconomic Scale (revised 2010)*

Kuppuswamy’s Socioeconomic Status Scale is a popular tool in hospital- and community-based researches in India. This scale takes into account the education, occupation, and income of the family to classify the study groups into high, middle, and low socioeconomic status.\textsuperscript{[19,20]}
Mini International Neuropsychiatric Interview Plus

Mini International Neuropsychiatric Interview (MINI) is a short structured diagnostic interview, developed jointly by psychiatrists and clinicians in the US and Europe, for International Classification of Diseases 10th Edition (ICD-10) and Diagnostic and Statistical Manual of Mental Disorders-IV psychiatric disorders. The administration time is approximately 15 min. It was designed to meet the need for a short but accurate structured psychiatric interview for multicentric trials and epidemiological studies. It is used as the first step in outcome tracking in nonresearch clinical settings.[21,25] The MINI Plus is a more detailed edition of the MINI. The symptoms which are better accounted for by an organic cause or by the use of alcohol or drugs should not be coded positive in the MINI. The MINI Plus has questions that investigate these issues.[21-23]

Methodology

The individuals referred for psychiatric evaluation for fitness for work were selected after they met the inclusion and exclusion criteria. The detailed history of psychiatric referrals was recorded and their mental status examination was done. The Kuppuswamy’s Socioeconomic Scale and the MINI Plus were administered to the patients. Psychiatric diagnoses were made according to the ICD-10 diagnostic criteria for research.[24]

Statistical analysis

Statistical analysis of data was performed using Statistical Package for the Social Sciences SPSS (IBM, USA). Categorical variables were analyzed with the Chi-squared tests and the Fisher’s exact test. Significance levels for all analyses were set at \( P = 0.05 \).

RESULTS

Sociodemographic details of the patients referred for fitness for work are summarized in Table 1. The age range of the referrals was 20–59 years. The mean age of the referrals was 39.5 years. Majority (97.33%) were Hindu, 1.33% each was from Muslim and Sikh communities. The duration of service ranged from training period of 2 months to 44 years of service. Nearly 50.67% \((n = 38)\) had duties in rotating shifts. None of the psychiatric referral was from the lower class of Kuppuswamy Socioeconomic Scale. Reasons for referral and psychiatric diagnoses of the patients are shown in Table 2. A past history of disciplinary action such as memos, notices, suspensions, demotion, fines, or past medical board examination was given by 56% of referrals. Mental and behavioral disorders due to psychoactive substance use were diagnosed in 21.33% \((n = 16)\) of patients, including 20% \((n = 15)\) related to alcohol and 1.33% \((n = 1)\) related to poly-substance use. Psychotic disorders (20%; \(n = 15\)) included schizophrenia \((16\% [n = 12]\), brief psychotic disorder \((1.33\% [n = 1]\), and schizoaffective disorder \((2.67\% [n = 2]\)). Mood disorders \((14.67\%; n = 11)\) included bipolar affective disorder \((8\% [n = 6])\), followed by major depressive episode \((5.33\% [n = 4])\) and dysthymia \((1.33\% [n = 1])\). Neurotic, stress-related, or somatoform disorders \((12\%; n = 9)\) included adjustment disorders \((5.33\% [n = 4])\), panic disorder \((2.67\% [n = 2])\), posttraumatic stress disorder \((2.67\% [n = 2])\), and generalized anxiety disorder \((1.33\% [n = 1])\).

### Table 1: Sociodemographic characteristics of referrals for psychiatric fitness for work \((n=75)\)

| Sociodemographic characteristics | Number of referrals (%) |
|---------------------------------|-------------------------|
| Age group (years)               |                         |
| 20–29                           | 10 (13.3)               |
| 30–39                           | 10 (13.3)               |
| 40–49                           | 27 (36.0)               |
| 50–59                           | 28 (37.4)               |
| Sex                             |                         |
| Males                           | 67 (89.3)               |
| Females                         | 8 (10.7)                |
| Marital status                  |                         |
| Unmarried                       | 10 (13.3)               |
| Married                         | 62 (82.7)               |
| Widow/divorced                  | 3 (4.0)                 |
| Domicile                        |                         |
| Rural                           | 15 (20.0)               |
| Urban                           | 60 (80.0)               |
| Education levels                |                         |
| Uneducated                      | 1 (1.3)                 |
| Primary school                  | 24 (32.0)               |
| Middle school                   | 10 (13.3)               |
| High school certificate         | 11 (14.7)               |
| Intermediate or posthigh school diploma | 13 (17.3)           |
| Graduate                        | 14 (18.6)               |
| Professional                    | 2 (2.6)                 |
| Occupation                      |                         |
| Unskilled worker                | 13 (17.3)               |
| Semi-skilled worker             | 12 (16.0)               |
| Skilled worker                  | 13 (17.3)               |
| Clerical                        | 22 (29.3)               |
| Semi-professional               | 14 (18.6)               |
| Professional                    | 1 (1.3)                 |
| Socioeconomic class             |                         |
| Upper                           | 1 (1.3)                 |
| Upper middle                    | 39 (52.0)               |
| Lower middle                    | 23 (30.7)               |
| Upper lower                     | 12 (16.0)               |

Associations of sociodemographic data and reason for referrals

All the referrals with administrative reasons were from...
young age (20–39 years). Absenteeism, frequent mistakes, and undisciplined behavior were the most frequent reasons for referral in older age group (40–59 years) than younger age group (20–39 years) [Table 3]. Frequent mistakes, undisciplined behavior, and administrative reasons were more common in male psychiatric referrals. Absenteeism was the most common reason for referral in females. None of the females were referred for administrative reasons. Only workers from the upper socioeconomic status (upper + upper middle class) were referred for administrative reasons. Absenteeism, frequent mistakes, and undisciplined behavior were the most common reasons for referral in group with lower socioeconomic status (lower middle + lower class) [Table 3].

Associations of sociodemographic data and diagnostic categories
Psychiatric referrals from the younger age group (20–39 years) had more referrals without active psychopathology. Referrals from the older age group (40–59 years) had more referral with organic and neurotic disorders [Table 3]. Only male psychiatric referrals had substance-use disorder. Substance-use disorder was more common in referrals with lower educational level (<higher socioeconomic class [HSC]). Neurotic disorders and those without psychopathology were more common in referrals with higher educational level (≥HSC). Neurotic disorder, mood disorders, and those without psychopathology were more common in the HSC. Organic mental disorders, substance-use disorders, and psychosis were more common in the lower socioeconomic class.

Table 2: Reasons for referral of psychiatric referrals, disciplinary actions, psychiatric diagnosis, and outcome of referrals for psychiatric fitness for work (n=75)

| Variables                                           | Number of referrals (%) |
|-----------------------------------------------------|-------------------------|
| Reasons for psychiatric referrals                   |                         |
| Absenteeism                                         | 63 (84.0)               |
| Mistakes or accidents                                | 20 (26.7)               |
| Behavioral problems                                 | 29 (38.7)               |
| Administrative reasons                              | 4 (5.3)                 |
| Number of reasons for referral                       |                         |
| Single                                              | 43 (57.3)               |
| Multiple                                            | 32 (42.7)               |
| Past history of disciplinary actions                |                         |
| Yes                                                 | 42 (56.0)               |
| No                                                  | 33 (44.0)               |
| Diagnostic categories of psychiatric referrals      |                         |
| Organic mental disorders (F 00 to F 09)             | 8 (10.7)                |
| Substance-use disorders (F 10 to F 19)              | 16 (21.3)               |
| Psychotic disorders (F 20 to F 29)                  | 15 (20.0)               |
| Mood disorders (F 30 to F 39)                       | 11 (14.7)               |
| Neurotic disorders (F 40 to F 48)                   | 9 (12.0)                |
| Mental retardation (F 70 to F 79)                   | 2 (2.7)                 |
| No psychopathology                                  | 14 (18.7)               |
| Duration of illness of psychiatric referrals (years) |                         |
| ≤5                                                  | 30 (40.18)              |
| >5                                                  | 31 (50.82)              |
| Outcome of referrals                                 |                         |
| Unfit for work                                      | 17 (22.7)               |
| Temporarily fit                                     | 3 (4.0)                 |
| Fit for modified work                                | 4 (5.3)                 |
| Fit for work                                        | 51 (68.0)               |

Our study evaluated the sociodemographic data, reasons for referral, diagnostic categories, outcome, and their associations in 75 psychiatric referrals attending a tertiary-level referral government hospital.

Sociodemographic data
The sociodemographic profile of our study sample is comparable with few earlier studies. Elsayed et al. studied 116 referrals and the mean age was 34.5 years. Out of these, 64.7% were males and 35.3% were females and the male:female ratio was 1.8:1. A total of 67.2% were married and 32.8% were unmarried. Most (50.8%) had high school level of education. As compared to our study, they had a larger sample size, more females, and more unmarried referrals, which can be explained by the cultural and occupational differences in the two countries. The educational levels of both the studies were comparable. They did not comment on the socioeconomic classes and occupational categories. Greenberg et al. studied 76 cases, of which 45% were males and 55% were females and the male:female ratio was 0.8:1. They had a similar sample size and a greater number of females, which can be explained by the cultural differences in the sample. They did not report about the age, marital status, and socioeconomic class of the referrals. Gopala Sarma et al. studied 23 referrals over a period of 6 years (1986–1992), of which 73% were males and 27% were females and the male:female ratio was 2.7:1. They had a smaller sample size with a greater number of females. They did not report about the age, marital status, and socioeconomic class of the cases.

Our study compares with the hospital-based Indian studies which had a smaller sample size and a greater male:female ratio. Our study contrasts with the general population; industrial and armed force studies that had larger sample
executives, and call-center workers had younger age groups as compared to our study. Most of the foreign studies did not report about socioeconomic data. Our study included only psychiatric referrals from government service and none were from a private setting.

### Diagnostic categories

Our study findings with regard to diagnostic categories and comorbid disorders compare with the following studies: Elsayed et al. used MINI and ICD-10 criteria and found that 2.6% had organic mental disorders, 20.7% had substance abuse disorders, 14.7% had psychosis, 18.1% had mood disorders, 38.4% had neurotic disorders, 8.6% had personality disorders, and 6.9% were malingerers. Comorbid mental and physical illness was found in 42.2% of cases. Compared to our study, they had less organic and psychotic disorders and more neurotic disorders and a similar number of mood and substance-use disorders. They also found a similar number of medical comorbidities as those in our study. Greenberg et al. used ICD-10 criteria and found that 2.63% had organic mental disorder (dementia), 19.1% had psychosis, 45% had mood disorders, 14% had anxiety disorders, 1.3% had eating disorders, and 18% did not have any psychiatric disorder. As compared to our study, they found less organic disorders; more psychotic, mood, and neurotic disorders; and a similar number of referrals with no psychiatric diagnosis. Surprisingly, there were no

---

**Table 3: Association between reasons for referral and diagnoses with age, gender, education, socioeconomic status, and occupation of the referrals for psychiatric fitness for work (n=75)**

| Reason for referral            | Age, n (%) | Gender, n (%) | Educational status, n (%) | SES, n (%) | Occupational categories, n (%) |
|-------------------------------|------------|---------------|---------------------------|------------|--------------------------------|
|                               | 20-39 years (n=20) | 40-59 years (n=55) | Male (n=67) | Female (n=8) | Less than high school (n=35) | Greater than equal to high school (n=40) | Upper + upper middle (n=35) | Lower middle + Lower (n=30) | Skilled, semi-skilled and unskilled (n=38) | Clerical, semi-professional and professional (n=37) |
| Absenteeism                   | 14 (58)    | 49 (96)       | 56 (84)       | 7 (88)     | 28 (80)     | 35 (88)     | 31 (78)     | 32 (91)     | 32 (84)     | 31 (84)     |
| Frequent mistakes /accidents  | 6 (25)     | 14 (27)       | 19 (28)       | 1 (13)     | 9 (26)      | 11 (28)     | 10 (25)     | 10 (29)     | 10 (26)     | 10 (27)     |
| Undisciplined behavior        | 5 (22)     | 24 (47)       | 27 (40)       | 2 (25)     | 16 (46)     | 13 (33)     | 13 (33)     | 16 (46)     | 14 (37)     | 15 (41)     |
| Administrative reasons        | 3 (13)     | 1 (2)         | 4 (6)         | 0          | 1 (3)       | 3 (8)       | 4 (10)      | 0           | 0           | 4 (11)      |

**Diagnostic categories**

- **Organic mental disorders**: 1 (5) Male, 7 (13) Female
- **Substance-use disorders**: 2 (9) Male, 14 (27) Female
- **Psychotic disorders**: 5 (23) Male, 10 (19) Female
- **Mood disorders**: 2 (9) Male, 9 (17) Female
- **Neurotic disorders**: 1 (5) Male, 8 (15) Female
- **Mental retardation**: 2 (9) Male, 0 (0) Female
- **No psychopathology**: 7 (32) Male, 7 (13) Female

**Figure 1: Associations between psychiatric diagnosis and outcome of referral**
substance-use disorders. Subsequent studies found that 65.2% had psychiatric diagnosis similar to our findings and 26.1% did not have any psychiatric disorder, but they did not report the diagnostic categories. They attributed such a high number of psychiatric referrals without any psychiatric problem to nonpsychiatric reasons such as irregularities and undisciplined behavior at work. We used ICD-10 diagnostic criteria for research along with MINI Plus similar to that of Elsayed et al. Some studies did not specify the diagnostic criteria used. The diagnostic categories of our study compare with the hospital-based Indian studies but not with the community-based studies, industrial studies, and the special population-based studies done on teachers, physicians, executives, call-center workers, and drivers. Studies on executive, call-center, and social workers found only minor psychiatric disorders. Studies on armed force personnel had more substance-use disorders and neurotic disorders.

### Table 4: Association between sociodemographic and clinical variables with outcome of referrals for psychiatric fitness for work (n=75)

| Demographic and clinical variables | Outcome | Chi-square/Fisher’s exact test# | P   |
|-----------------------------------|---------|---------------------------------|-----|
|                                   | Fit for work | Unfit for work |                  |
| Age (years) (%)                   |          |                   |                  |
| 20-39                             | 17 (85)  | 3                  | .415             | .519 (NS)       |
| 40-59                             | 41 (74.5)| 14                 | #0.2571 (NS)     |                |
| Gender (%)                        |          |                   |                  |
| Females                           | 5 (62.5) | 3                  | #0.3305 (NS)     |                |
| Male                              | 53 (79.1)| 14                 |                   |                |
| Marital status                    |          |                   |                  |
| Married                           | 49 (79)  | 13                 | #0.3305 (NS)     |                |
| Unmarried/widow/divorced         | 9 (69)   | 4                  |                   |                |
| Place of referral                 |          |                   |                  |
| Urban                             | 46 (77)  | 14                 | #0.5429 (NS)     |                |
| Rural                             | 12 (80)  | 3                  |                   |                |
| Socioeconomic class               |          |                   |                  |
| Upper + upper middle              | 33       | 7                  | .75              | .386 (NS)       |
| Lower middle + upper lower        | 25       | 10                 |                   |                |
| Education                         |          |                   |                  |
| Below high school                 | 26       | 9                  | 0.3477           | 0.555 (NS)      |
| Above high school                 | 32       | 8                  |                   |                |
| Rotating shift                    |          |                   |                  |
| Yes                               | 29       | 9                  | 0.004            | 0.950 (NS)      |
| No                                | 29       | 8                  |                   |                |
| Number of reasons for referral (%)|          |                   |                  |
| Single                            | 39 (90.7)| 4 (9.3)            | 8.58             | .0034*          |
| Multiple                          | 19 (59.4)| 13 (40.6)          |                   |                |
| Duration of illness               |          |                   |                  |
| ≤5                                | 40       | 3                  | 14.15            | .00017**        |
| >5                                | 18       | 14                 |                   |                |
| Comorbid medical illness          |          |                   |                  |
| Yes                               | 19       | 10                 | 3.77             | 0.052 (NS)      |
| No                                | 39       | 7                  |                   |                |
| Diagnostic categories (%)         |          |                   |                  |
| Organic mental disorders          | 1 (12.5)| 7                  | #<0.001*         |                |
| Substance-use disorders           | 15 (93.7)| 1                  | #0.533 (NS)      |                |
| Psychotic disorders               | 9 (60)   | 6                  | #0.0105**        |                |
| Mood disorders                    | 10 (90.9)| 1                  | #0.44 (NS)       |                |
| Neurotic disorders                | 8 (88.9)| 1                  | #0.3913 (NS)     |                |
| Mental retardation                | 1        | 1                  | #0.125 (NS)      |                |
| No psychopathology                | 14       | 0                  | -                |

*P<0.001 – Highly significant association; **P<0.05 – Significant association; *Fishers exact test was applied as for example in row 2,3,4 etc., while in the remaining chi square test was applied. NS – No significant association

We used ICD-10 diagnostic criteria for research along with MINI Plus similar to that of Elsayed et al. One hospital-based study used ICD-9 criteria. Some studies did not specify the diagnostic criteria used. The diagnostic categories of our study compare with the hospital-based Indian studies but not with the community-based studies, industrial studies, and the special population-based studies done on teachers, physicians, executives, call-center workers, and drivers. Studies on executive, call-center, and social workers found only minor psychiatric disorders. Studies on armed force personnel had more substance-use disorders and neurotic disorders.

### Reasons for referral

Two earlier studies reported that 61.3% and 65.2% of the referrals for psychiatric fitness occurred following acts
of indiscipline. As compared to our study, they had more of such referrals probably as they included absenteeism and frequent mistakes under indiscipline.[3,26] Greenberg et al. did not mention the reasons for referrals in their study.[23] The reason for referrals of our study compares with the hospital-based studies.[3,26,27] None of the general population and industrial, executive, call-center, physician, social worker, security force, armed force personnel or driver studies had mentioned the reasons for referral.[28-48] Teachers were mainly referred for a past history of psychiatric illness or inability to cope with work.[36]

**Outcome of referral**

In our study, the majority of the psychiatric referrals were declared fit for work and few were advised modified work in the form of unarmed or nondriving work. In our study, many employment agencies had expressed their inability to provide modified work; hence, a less number of referrals were recommended modified work. Our study compared with few earlier studies. Elsayed et al. found that 52.5% were fit for work, 11.2% were unfit, 9.48% were fit for modified work, 18.10% were temporarily fit, and 8.6% were temporarily unfit for work. As compared to our study, they had more referrals declared fit for modified work. They found a similar number of referrals as unfit for work (temporary and permanent) as compared to our study.[36] Greenberg et al. found that 34% of referrals were fit and 58% were advised temporary unfitness and further treatment. Compared to our study, they found less referrals fit for work.[25] Gopala Sarma et al. found that 39.1% were fit for work and 52.2% were unfit for work. As compared to our study, they found that less referrals were fit for work and a greater number of referrals were unfit for work, which can be explained by more referrals for disciplinary action.[20]

The outcome of our study compares with that of the hospital-based studies of Elsayed et al. but not with Greenberg and Gopala Sarma probably due to different criteria of fitness for work.[3,25,26] Studies on teachers, executives, call-center workers, social workers, industrial workers, armed force personnel, and general population had a comparable number of cases fit for work, but studies on drivers had less cases fit for work, probably due to their specific job and different criteria of fitness for work.[28-48]

**Associations**

We found a significant association between a long duration of psychiatric illness (>5 years), psychiatric referrals with multiple reasons, and organic mental disorders with invalidation on psychiatric grounds. A significant association was found between psychotic disorders and unfitness. All the psychiatric referrals without any active psychopathology were made fit for work.

Similarly, Elsayed et al. also found associations between unfitness for work and a long duration of illness, diagnosis of schizophrenia, organic mental disorders, and medical comorbidities. They found that referrals with substance-use disorders were made fit for modified work, whereas we found them to be fit for work, probably due to differences in culture, occupation, and attitude toward substance-use disorders.[19] None of the other hospital-based studies had mentioned an association between various parameters.[25-28]

The hospital-based, general population, and industrial and executive workers’ studies found an association between a diagnosis of psychosis and a long duration of illness with invalidation on psychiatric grounds, which is similar to our study.[3,28-34] In contrast, the military studies found that young and single referrals with a short duration of service were associated with invalidation on psychiatric grounds, which was independent of sex. In both the military studies and our study, the diagnosis of psychosis was associated with invalidation on psychiatric grounds.[43,46] In all studies, shift workers were found to be associated with sleep disorders and those working in high stress areas had more psychiatric illness.[3,25-48]

**Limitations**

This study was conducted over a limited period of time on a small group of state government workers, at a single tertiary-level government hospital. This may not be representative of all workers from the state of Maharashtra or the country. A larger multicentric study of state government workers referred for psychiatric evaluation needs to be undertaken. There were a less number of female state government workers. Those government workers who were not referred and those who left the job because of psychiatric problems by themselves were also not studied.

**Implications**

This study had important implications for mental health services, training of mental health professionals, and further research in the field of occupational health in India.

**Mental health services**

The study highlights the importance of evaluation of work in the overall management plan of all psychiatric referrals as work provides financial security, independence, and a meaning to life. It will help in planning suitable targeted interventions for psychiatric referrals suffering from psychiatric disorders. It will help in the early detection and proper treatment of psychiatric disorders of psychiatric referrals. It will help to enable those psychiatric referrals who are disabled by psychiatric illness by providing suitable modified work and rehabilitation. It is recommended that there should be a special occupation liaison service for such psychiatric referrals with psychiatric disorders.
Psychiatrists are increasingly being called to certify and report about patients in connection with work, related to administrative, legal, and welfare procedures. The assessment of mental fitness for work should be performed with great competence and objectivity; otherwise, it may lead to administrative, legal, and social problems. We should strike a proper balance between fitness for work and safety risks posed by individuals with psychiatric disorders. With the enforcement of labor laws and other anti-discriminatory laws, we should have clear guidelines regarding fitness for work, unfitness for work, and recommendations for modified work. It highlights the importance of having proper criteria for prerecruitment fitness, fitness for work, invalidation, and modified work.

Research
This study highlights the need for further research of psychiatric referrals for fitness for work, which is a neglected area. Research needs to be done in areas such as prerecruitment fitness, ongoing psychiatric fitness for duty, criteria for invalidation on psychiatric grounds, and criteria for modified work. Standardized, validated, and reliable screening tools for evaluation of work in psychiatric referrals need to be designed to improve the quality of evaluation. Research is also required to be done on preventive methods to reduce stress at work and improve occupational health through recreational and stress reduction techniques.

CONCLUSIONS
The most common reasons for psychiatric referral for fitness for work were absenteeism (84%), undisciplined behavior (38%), and frequent mistakes or accidents (26.7%). A few (5.3%) referrals were made for administrative reasons. A past history of disciplinary action taken against them was present in 56% of patients. The common diagnostic categories were psychoactive substance-use disorder (21.3%) and psychotic disorders (20%), followed by mood disorders (14.7%); neurotic, stress-related disorders (12%); organic mental disorders (10.7%); and mental retardation (2.7%). Nearly 18.7% of the psychiatric referrals did not have any psychopathology. Most of the psychiatric referrals (68%) were fit for work, though 22.67% were declared permanently unfit for work. Factors associated with permanent unfitness on psychiatric grounds included multiple reasons for referrals, psychiatric illness of more than 5 years’ duration, and a diagnosis of organic mental disorder or psychotic disorder.

Financial support and sponsorship
Nil.

Conflicts of interest
There are no conflicts of interest.

REFERENCES
1. Glozier N. Mental ill health and fitness for work. Occup Environ Med 2002;59:714-20.
2. Anfang SA, Wall BW. Psychiatric fitness-for-duty evaluations. Psychiatr Clin North Am 2006;29:675-93.
3. Elsayed YA, Al-Zahrani MA, Rashad MM. Factors affecting mental fitness for work in a sample of mentally ill patients. Int J Ment Health Syst 2009;3:25.
4. Brohan E, Henderson C, Little K, Thomnicroft G. Employees with mental health problems: Survey of U.K. employers’ knowledge, attitudes and workplace practices. Epidemiol Psychiatr Soc 2010;19:326-32.
5. Manning C, White PD. Attitudes of employers to the mentally ill. Psychiatr Bull 1995;19:541-3.
6. Stansfeld SA, Marmot MG. Social class and minor psychiatric disorder in British civil servants: A validated screening survey using the general health questionnaire. Psychol Med 1992;22:739-49.
7. Hensing G, Alexanderson K, Allebeck P, Bjurulf P. Sick-leave due to psychiatric disorder: Higher incidence among women and longer duration for men. Br J Psychiatry 1996;169:740-6.
8. Cox RA, Edwards FC, Palmer KL. Fitness for Work: The Medical Aspects. 3rd ed. Oxford: Oxford Medical Publications; 2000.
9. Robbins DB. Psychiatric conditions in worker fitness and risk evaluation. Occup Med 1988;3:309-21.
10. Government of India. Persons with Disability Act 1995. Available from: http://www.nhrc.nic.in/Documents/Publications/KYR_Disabilities_English.pdf. [Last accessed on 2017 Oct 19].
11. Gold LH, Anfang SA, Drukeinis AM, Metzner JL, Price M, Wall BW, et al. AAPL practice guideline for the forensic evaluation of psychiatric disability. J Am Acad Psychiatry Law 2008;36:53-50.
12. Rostow CD, Davis RD. A Handbook for Psychological Fitness for Duty Evaluations in Law Enforcement. Binghamton, NY: Routledge; 2004. p. 342.
13. Pinals DA, Price M. Forensic psychiatry and law enforcement. In: Simon RI, Gold LH, editors. American Psychiatric Publishing Textbook of Forensic Psychiatry. 2nd ed. Washington DC: American Psychiatric Publishing, Inc.; 2010. p. 413-52.
14. Government of Maharashtra. The Maharashtra Civil Medical Code. 1st ed. Bombay: Government of Maharashtra; 1976. p. 232-63.
15. Government of Bombay. The Bombay Civil Services Rules. 1st ed. Bombay: Financial Publication of the Government of Bombay; 1959. p. 230.
16. Government of Maharashtra. Grant of and return from leave. In: Maharashtra Civil Services Rules (Leave). 1st ed., Ch. 4. Mumbai: Financial Publication of the Government of Maharashtra; 1981. p. 14-23.
17. Nizamie SH, Prakash R, Prarahaj SK, Akhtar S. Certification in psychiatry. In: Forensic Psychiatry: Clinical Practice Guidelines for Psychiatrists in India. New Delhi: Indian Psychiatric Society; 2009. p. 35-81.
18. Harvey SB, Henderson M, Lelliott P, Hotopf M. Mental health and employment: Much work still to be done. Br J Psychiatry 2009;194:201-3.
19. Patro BK, Jeyashree K, Gupta PK. Kuppuswamy’s socioeconomic status scale 2010—the need for periodic revision. Indian J Pediatr 2012;79:395-6.
20. Kuppuswamy B. Manual of Socioeconomic Status (Urban). New Delhi: Manasayan; 1981.
21. Sheehan DV, Lecrubier Y. MINI International Neuropsychiatric
Patil, et al.: Psychiatric certification

Interview for DSM IV. (English version 5.0.0). Tampa: University of South Florida; 2002.

22. Sheehan DV, Lecrubier Y, Sheehan KH, Amorim P, Janavs J, Weiller E, et al. The mini-international neuropsychiatric interview (M.I.N.I.): The development and validation of a structured diagnostic psychiatric interview for DSM-IV and ICD-10. J Clin Psychiatry 1998;59 Suppl 20:22-33.

23. Nienhuis FJ, van de Willige G, Rijnders CA, de Jonge P, Wiersma D. Validity of a short clinical interview for psychiatric diagnosis: The mini-SCAN. Br J Psychiatry 2010;196:64-8.

24. World Health Organization. The ICD-10 Classification of Mental and Behavioural Disorders: Diagnostic Criteria for Research. Geneva: World Health Organization; 1993.

25. Greenberg N, Henderson M, Karim S, Holland-Elliott K. Does having an occupational mental health service make any difference? Occup Med (Lond) 2005;55:549-51.

26. Gopala Sarma P. General hospital psychiatry: Psychiatric certificates. Indian J Psychiatry 1993;35:206-8.

27. Sharma LN, Khanna R, Chatterjee S. Experiences of psychiatric consultation service in two coalfield hospitals of Bihar. Indian J Psychiatry 1990;32:131-7.

28. Foss L, Gravseth HM, Kristensen P, Claussen B, Melhus IS, Skyberg K, et al. Risk factors for long-term absence due to psychiatric sickness: A register-based 5-year follow-up from the Oslo health study. J Occup Environ Med 2010;52:698-705.

29. Bratberg E, Gjesdal S, Maeland JG. Sickness absence with psychiatric diagnoses: Individual and contextual predictors of permanent disability. Health Place 2009;15:308-14.

30. Dutta S, Kar N, Thirthalli J, Nair S. Prevalence and risk factors of psychiatric disorders in an industrial population in India. Indian J Psychiatry 2007;49:103-8.

31. Muto T, Sumiyoshi Y, Sawada S, Momotani H, Itoh I, Fukuda H, et al. Sickness absence due to mental disorders in Japanese workforce. Ind Health 1999;37:243-52.

32. Bhaskaran K, Seth RC, Yadav SN. Migration and mental ill health in industry. Indian J Psychiatry 1970;12:102-16.

33. Nieuwhuysen K, Verbeek JH, de Boer AG, Blonk RW, van Dijk PJ. Predicting the duration of sickness absence for patients with common mental disorders in occupational health care. Scand J Work Environ Health 2006;32:67-74.

34. Jenkins R. Minor psychiatric morbidity in employed young men and women and its contribution to sickness absence. Br J Ind Med 1985;42:147-54.

35. Bhuyar P, Banerjee A, Pandve H, Padmnabhan P, Patil A, Duggirala S, et al. Mental physical and social health problems of call centre workers. Indian Psychiatry J 2008;17:21-5.

36. MacAnespie H. Mental illness in school teachers. Br Med J 1978;2:257-8.

37. Duffy JC, Litin EM. Psychiatric morbidity of physicians. JAMA 1964;189:889-92.

38. Talbott GD, Gallegos KV, Wilson PO, Porter TL. The medical association of Georgia’s impaired physicians program. Review of the first 1000 physicians: Analysis of specialty. JAMA 1987;257:2927-30.

39. Brouwers EP, Terluin B, Tiemens BG, Verhaak PF. Predicting return to work in employees sick-listed due to minor mental disorders. J Occup Rehabil 2009;19:323-32.

40. Rao GP, Moinuddin K, Sai PG, Sarma E, Sarma A, Rao PS. A study of stress and psychiatric morbidity in the central industrial security force. Indian J Psychiat Med 2008;30:39-47.

41. Gould M, Sharpley J, Greenberg N. Patient characteristics and clinical activities at a British military department of community mental health. Psychiatr Bull 2008;32:99-102.

42. Creamer M, Carboon I, Forbes AB, McKenzie DP, McFarlane AC, Kelsall HL, et al. Psychiatric disorder and separation from military service: A 10-year retrospective study. Am J Psychiatry 2006;163:733-4.

43. Hoge CW, Toboni HE, Messer SC, Bell N, Amoroso P, Orman DT, et al. The occupational burden of mental disorders in the U.S. military: Psychiatric hospitalizations, involuntary separations, and disability. Am J Psychiatry 2005;162:585-91.

44. Neal LA, Kiernan M, Hill D, McManus F, Turner MA. Management of mental illness by the British army. Br J Psychiatry 2003;182:337-41.

45. Hoge CW, Lesikar SE, Guevara R, Lange J, Brundage JF, Engel CC Jr., et al. Mental disorders among U.S. military personnel in the 1990s: Association with high levels of health care utilization and early military attrition. Am J Psychiatry 2002;159:1576-83.

46. Orme D, Thompson B. Neuropsychiatric aeromedical referrals: Do trends vary with age? Unclassified. Brook AFB. Report No: ADA388423. Texas: School of Aerospace Medicine; 2000.

47. De Las Cuevas C, Sanz EJ. Fitness to drive of psychiatric patients. Prim Care Companion J Clin Psychiatry 2008;10:384-90.

48. Niveau G, Kelley-Puskas M. Psychiatric disorders and fitness to drive. J Med Ethics 2001;27:36-9.