International Journal of Community Medicine and Public Health
Swain SP et al. Int J Community Med Public Health. 2017 Apr;4(4):1131-1136
http://www.ijcmph.com
pISSN 2394-6032 | eISSN 2394-6040

DOI: http://dx.doi.org/10.18203/2394-6040.ijcmph20171337

Original Research Article

An analysis of occupation related mental health referrals of paramillitary forces to a tertiary care hospital

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Received: 25 January 2017
Revised: 04 February 2017
Accepted: 02 March 2017

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ABSTRACT

Background: The security personnel of our country including Army Personnel, C.I.S.F., Police and other security personnel bear a large amount of physical and psychological stress to maintain law and order situations at different corners of the country at different situations. To assess the Psychiatric Morbidity in C.I.S.F., the course of referrals of Para-military persons to a tertiary care hospital and to evaluate the Mental Health burden in the Para-military set up by virtue of their occupation.
Methods: The study sample included all the consecutive patients referred by CISF Headquarters Hospital to the Mental Health Institute (MHI), S.C.B. Medical College, Cuttack, Odisha, from April 2015 to March 2016. The clinical information is collected from the patient and accompanying personnel from CISF or family members who accompanied the patient. The diagnosis is based on ICD-10 and the final opinion is given by the consultants of Psychiatry after final evaluation of all the reports.
Results: Psychiatric assessment for job fitness (48%) was the dominant cause for referral of PMF staff to MHI. Substance abuse (alcohol) related disorders were the next common cause of referral (20%).
Conclusions: Mental health burden in Para-military bases are substantial which should be taken care of in urgency basis. There is urgent need of posting of Psychiatrists with Clinical Psychologists and Psychiatric Social Worker or a team of the Mental Health Professionals should visit the paramilitary set ups regularly to look into improper diagnosis and review cases.

Keywords: Paramilitary personnel, Psychiatric morbidity, Mental health burden

INTRODUCTION

The security personnel of our country including army personnel, C.I.S.F., police and other security personnel bear a large amount of physical and psychological stress to maintain law and order situations at different corners of the country at different situations. The central industrial security force (CISF) which was set up in 1969 under the act of parliament is one of the largest para-military forces of the country having one lakh thirty nine thousand and four hundred personnel. In last four decades it has been converted in to multiskilled security agency of the country providing security cover to major critical infrastructures installation of the country like defense production unit, major ports, nuclear power plants, oil fields & refinery, space installations, fertilizer units and major barrage and other industrial units etc which are situated in different extreme geographic locations with extremes of climate. In recent time, because of large scale demand of the country in other sections like in the situation of disaster management, election duties,

securities of highways and in naxal affected areas, they have been called on to perform rescue, relief operations and to maintain law and order situations in these difficult situations.

After working in adverse situations, in expected and unexpected emergencies, working for long hours in adverse situations, the physical and mental health of these occupational personnel always undergoes both psychological and physical traumatic experiences. But all these base centers of CISF have acute shortage of Mental Health Professionals for which very often these CISF personnel have been referred to nearest Medical College for their Mental Health Problems including Mental Health Fitness for the job. Their occupational profile being related to the use of arms and ammunitions and frequent change of places in different areas, the physical and mental health fitness is highly essential parameter to be scrutinized from time to time. Our Centre, the Mental Health Institute (Centre of Excellence), SCB Medical College, Cuttack, Odisha is one of the Tertiary care Referral centre for diagnosis and management of mental health related disorders in eastern India.

Most of the group centers of the CISF are situated away from major cities where emergency physical and mental health facilities have limited availability. These stressful living environments in day to day life creates minor mental health problems like different emotional problems (e.g. panicky, fear, anger, arousal symptoms), physiological over activity (e.g. increased blood pressure), dysfunctional cognitions (e.g. negative thoughts about oneself), which impacts the quality of life and job performance of the personnel.[1,2] Again job stress, working environment, easy availability of alcohol in these CISF group centre make them vulnerable to Alcohol Use Disorders. Different studies have been focused the occupation related stress, domestic stress of these personnel because of their staying away from home for long period of time and working in adverse conditions which are the major contributors of their minor mental health problems, substance use disorder and physical health problems among these personnel.[3,4]

In a study of CISF personnel at National Industrial Security Academy, Hyderabad, prevalence of psychiatric morbidity was reported to be 28.8% with majority of these personnel suffering from generalized anxiety disorder and major depressive disorder.[5] Other studies have been reported that adjustment disorder, post-traumatic stress disorder, substance use disorder and personality disorder are also common among these personnel.[6-8]

The mental health assessment of these para-military personnel is one of the difficult tasks because neither the family members nor the colleagues, who are staying with these personnel, are available to give the detailed reliable history, which is vital for giving a diagnosis in psychiatry. The health related record supplied, most of the times gives information about the physical health but not about the mental health. In the absence of a reliable informant, para-military personnel often have to be hospitalized for observation and review their mental health status, which mostly depends on the detailed assessment in the hospitalization period for clinical assessment, and to give a final diagnosis and plan future management.

The present study was undertaken to study all para-military referrals to mental health institute (COE), Cuttack, Odisha, the Tertiary care Hospital for diagnosis, evaluation over a period of one year.

Aim of the study

- To assess the Psychiatric Morbidity in C.I.S.F because of the occupation itself.
- To assess the course of referrals of Para-military persons to a tertiary care hospital.
- To evaluate the Mental Health burden in a Para-military set up.

METHODS

The Medical Records of all these patients were analyzed from the reception of Mental Health Institute (MHI), SCB Medical College, Cuttack. The records of all patients attending MHI, SCBMCH, Cuttack were available for detail evaluation of the patient at any point of time. The study sample included all the consecutive patients referred by CISF Headquarters Hospital to the Medical College from April 2015 to March 2016.

The patients are referred to Medical College for diagnosis and management of mental health problems, for fitness from mental and physical disability and drug addiction problems.

The psychiatric medical board constitutes of two consultant psychiatrists in the rank of Asso. Professor and Professor in Psychiatry and other mental health professionals like clinical psychologists, psychiatric nursing personnel, who evaluate the patient independently. The clinical information is collected from the patient and accompanying personnel from CISF and family members when available for clinical history, socio-demographic profile, physical and mental status examination. Observations of junior residents, senior residents of psychiatry and the report of clinical psychologists are taken to give the final diagnosis. The diagnosis is based on ICD-10 and the final opinion is given by the consultants of psychiatry after final evaluation of all the reports. All of the patients are admitted to Indoor for a minimum period of ten days when detail history, clinical psychiatry evaluation and final diagnosis are being done.

RESULTS

Over the entire study period, last financial year (1st April 2015 to 31st March 2016) case records of a total of 74 referrals from paramilitary forces (PMF) stationed in Odisha, could be obtained from the record room of Mental Health Institute, Cuttack (MHI).However, four (out of these seventy four) cases did not proceed for psychiatric assessment and absconded after preliminary OPD registration. Thus data on 70 cases only were available for the final analysis.

Table 1: Socio-demographic parameters.

Parameters	Frequency	Percentage
Marital status		
Married	58	17.1
Unmarried	12	82.9
Religion		
Hindu	70	100
Education		
Class 10	12	17.1
Class 12	32	45.7
Bachelor	26	37.1
Residence		
Rural	24	34.3
Semi-urban	34	48.6
Urban	12	17.1
Family type		
Nuclear	56	80
Joint	14	20
Duration of service (years)		
≤ 9	18	25.7
10—20	22	31.4
21—25	16	22.9
≥ 26	14	20
Family member		
Yes	6	8.6
No	64	91.4
Previous medical records		
Yes	22	31.4
No	48	68.6

The majority of the cases (48 out of 70) reported to MHI on the day of their referral from the paramilitary hospital. In twelve cases, the referral gap was up to two days. In only two cases the delay was just over a week (8 days).The remaining eight cases reported delay in referral of periods ranging from 131 to 294 days.

During psychiatric assessment, the presence of an informant (ideally a family member or any other person who is close to the patient) is essential for evaluation of the patient. In sixty four out of seventy cases (91%), the referred case was not accompanied by any family members. In six cases out of seventy, only a family member accompanied the patient. In another six cases, a paramedic from the paramilitary force accompanied the patient. In the remaining fifty eight cases out of seventy, it was a colleague of the patient who accompanied him. However, in only twelve cases (out of the fifty eight), the colleague was a person who was staying with the patient, and therefore useful in the psychiatric assessment of the patient. In the remaining fifty two cases, the accompanying colleague was somebody who was staying away and unaware about the personal details of the patient.

A psychiatric assessment for job fitness was the dominant cause for referral of PMF staff to MHI. Nearly 48% (32 out of 70) of the cases were referred for job fitness. Substance abuse (alcohol) related disorders were the next common cause of referral (14 out of 70). The remaining 24 cases had been referred for management and/ or follow up of various psychiatric ailments. Just over a third of the cases 31% (22 out of 70) came with no recorded chief complaints about their illness. It is thus quite obvious that the referrals were for administrative reasons (e.g job fitness) or the patients lacked an insight into their own illness.

The age range of the referred staff varied from a minimum of 23 years to a maximum of 58 years of age. A quarter of the cases were aged 31 years or less. The median age was 44 years [IQR 31—49]. The age profile of the cases referred was spread across the entire spectrum of service eligibility, i.e. the lowest to highest eligible age of employment. This shows that no age in the paramilitary forces is spared from the need of psychiatric services. (Figure 1).

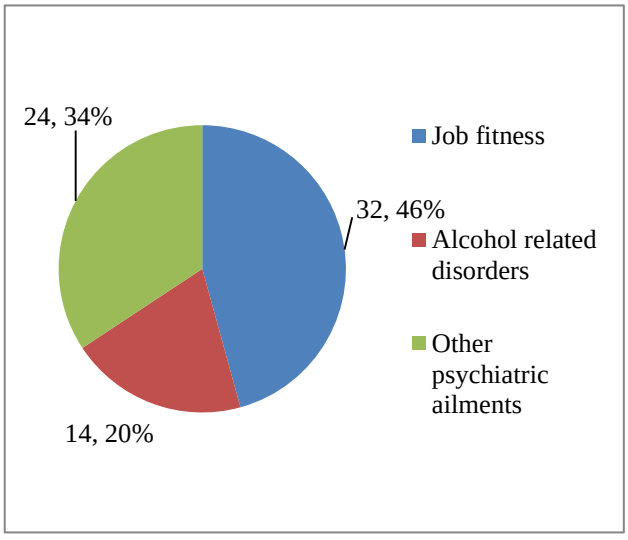

Figure 1: Referral reasons for paramilitary staffs to mental health institute.

Irrespective of the cause for referral, nearly half (34 out of 70) of the cases reported history of substance abuse. In all the thirty four cases out of seventy, the reported

substance of abuse was alcohol. Half of them (16 cases) reported having withdrawal symptoms. Hard liquor (whisky, rum, etc.) was the common form of alcohol consumed. Six out of these thirty four patients said that they had access to free alcohol supply while the rest twenty eight had access to subsidized alcohol. Sixteen patients reported solitary drinking habits while the rest eighteen consumed alcohol in a group. Only four cases reported occasional indulgence in alcohol. Of the remaining thirty nearly half (14 cases) reported alcohol consumption habits of more than ten years each. Six of these had alcohol consumption histories of twenty years. The amount of alcohol consumed by each was probed and was found to vary from 120 ml to 540 ml per drinking episode. On being asked about the last episode of drinking, eight admitted personnel having indulged in drinking the day before coming to MHI. Of the rest twenty six, fourteen reported having had an episode of drinking within two weeks of the date of coming to MHI.

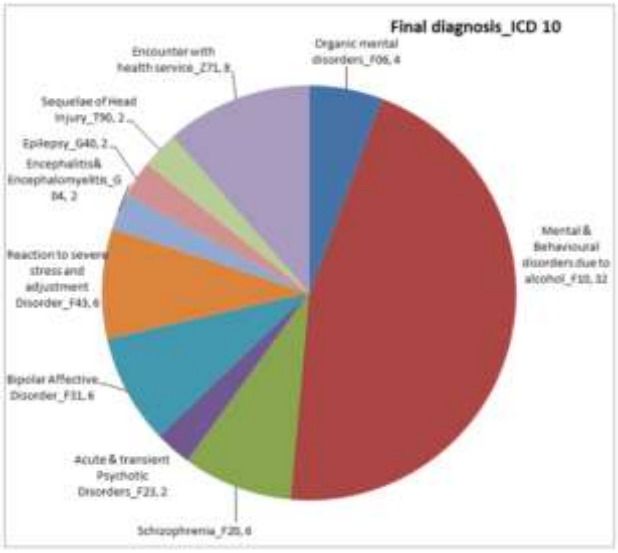

Figure 2: Final diagnosis of paramilitary staffs at mental health institute

Twenty four out of the seventy cases had not received any medication by the time they reached MHI. Of the rest twenty six were on benzodiazepines (26 out of 46). Fourteen of the seventy referred cases had no diagnosis from the referring hospital. At MHI forty two patients did not need any lab test during their psychiatric assessment. The ICD—10 coding of the final diagnosis at MHI revealed that "Mental and behavioral disorders due to Alcohol" [F10] was the commonest diagnosis (32 out of 70) as shown in Figure 2.

Table 2 shows that odds of substance abuse among PMF personnel with10—20 years of service is 6.13 times and the odds of substance abuse among PMF personnel with <10 years of service. Likewise it is 2.10 times among personnel with 21—25 years of service and the maximum is 8.75 times among personnel with more than 26 years of service compared to personnel in the baseline group. This trend of increasing odds of substance abuse does not fit into a perfect linear trend with personnel in 10—20 years and more than 26 years' service showing higher odds of substance abuse than persons in 21—25 years. But the odds are higher in all three strata suggesting an increased risk of substance abuse with increasing years of service in the PMF compared to the baseline group. It was seen that increased duration of service was associated with increased risk of substance abuse. The duration of service in the paramilitary force, reported by each of the referred cases ranged from a minimum of one year to a maximum of thirty years. The median duration was 20 years [IQR 8—25].

Table 2: Odds of substance abuse among paramilitary personnel.

	Substance abuse (alcohol)		N=35	
Duration of service	**Yes**	**No**	**Total**	**Odds Ratio**
<=9years	4 (22.2)	14 (77.8%)	18	1
10—20 years	14 (63.6%)	8(36.4%)	22	6.13
21—25 years	6 (37.5%)	10 (62.5%)	16	2.10
>=26 years	10 (71.4%)	4 (28.6%)	14	8.75
Total	34 (48.6%)	36(51.4%)	70	

DISCUSSION

The current study is an analysis of Case Registry of a Tertiary Care Hospital during a six month period, which indicates the pattern of Mental Health Referrals from para-military Hospitals. From the study, it was observed that from total of 35 referrals in a particular time period, majority were referred on the ground for Mental Health fitness, where no Psychiatric disorder was found on assessment. This raises a question that whether these are unnecessary referrals after an odd behavior towards seniors by the personnel or unawareness of Mental Health symptoms to give a diagnosis. Hence, there is a need for incorporating regular Mental Health Facilities including Psychiatrists, Clinical Psychologists and Psychiatric Social Workers.

In a Psychiatric Assessment, proper history from the informant, who is staying with the person, is highly essential for evaluation of a patient. No reliable informant was available in 91% cases and family members were available in 9% of cases. Because of the above reasons, there is more chance of possibility of wrong diagnosis. This indicates either lack of knowledge of mental health of the referring personnel in the para-military set ups or the casual attitude of referral to the Tertiary Care Psychiatric Hospitals. So, a suggestion for a more detailed history of the patient for a persistent abnormal

behavior, mental status examination and if possible detailed behavioral reports from the source of referrals is needed for the final Diagnosis.

Around 50% of cases were found to be under the category of substance dependence which corroborates with Indian data on substance use disorder.[9] Previous Indian studies on Military personnel have reported to have alcohol use disorder is higher in persons working in High Risk sections.[10,11] Saldhana and Goel (1992) studied subjects in the Armed Force Hospital where alcohol dependence was the third largest group among the Psychiatric population in over a period of 2 years study.[10]

Around 31% cases were referred with no chief complaints about their illness. This raises a question about genuineness of the mental health problems or unnecessary referrals raising question of doubts or because of administrative reasons. However these referrals necessitates the integration of Mental Health Service at Para-Military Hospitals.[12-14]

The other causes which were referred for diagnosis and treatment had a diagnosis of Schizophrenia, Bipolar Illness or Adjustment Disorder.[15,16] All subjects referred were males indicating the Male predominance in CISF. In recent years, females are also being recruited in CISF, which in future will be an area of research as women mental health concerns have now a special place in high risk areas.

The age range of the referral staffs was from 23 years to 58 years of age indicating the need of Mental Health Services in all ages which are either due to substance use disorder or due to any psychiatric disorder which needs continuous follow up. Studies in the military forces have reported that service personnel are at risk of psychological distress following deployment in high risk areas and working in extremes of geographical locations at different times.[17-20] Hence more mental health coping skills training and workshops are to be done at regular interval for managing stressful situation in different adverse situations and different coping strategies to be taught for positive mental health development among these personnel who are the main source of service providers of security of the country. The duration of service in para-military force who are referred, are from maximum one year to maximum thirty years indicating the need of mental health service at all ages and on a regular basis.[3,21]

The most promising finding on substance use disorder which was concluded from our study is that the trend of substance abuse was in an increasing trend with increase in the years of service compared to baseline group.[22,23] The increased duration of service was associated with increased risk of substance use, from where it can be concluded that drug deaddiction and counseling centers should be a part of the mental health service in para-military set up which will decrease the substance related problems by counseling at regular intervals.[13,21]

CONCLUSION

From that study it can be concluded that mental health burden in para-military bases are substantial which should be taken care of in urgency basis. The substance addiction problem is a predominant concern for the para military personnel, the reason for which should be properly assessed at their set ups by Mental Health Professionals. There is urgent need of posting of Psychiatrists with Clinical Psychologists and Psychiatric Social Worker or, a team of the Mental Health Professionals should visit the paramilitary set ups regularly to look into improper diagnosis and review cases. Alcohol addiction cases need special attention by restricting alcohol use, repeated awareness programmes, counseling and reducing job related stress at workplace. The issue of providing physical and mental fitness to these personnel always lies with handling of firearms in daily routine life which is a high risk factor for those workers under intoxication with alcohol and stressful situation. These personnel should be regularly assessed at intervals for their Mental and Physical Health with special importance to the stressful situations and drug deaddiction. For final diagnosis of the persons when sent to tertiary care hospital, the history should be given by the family member and accompanying person, who is staying with patient for at least one year.

Recommendations

- There should be regular Mental health service availability at CISF camps with the help of Psychiatrists, Clinical Psychologists and Psychiatric Social Workers for screening out the cases and measures should be taken to reduce the substance addiction among them in addition to physical health check-up.
- Family members or key caregivers or person staying with the CISF personnel should accompany the physically or mentally ill personnel when they are referred to a Tertiary Care Hospital or Apex Hospital.
- Appropriate steps should be taken at mass organizational level to reduce the job related stress and to learn the strategies to cope and combat stress at occupational place.
- Alcohol and other addictive substances should be restricted as much as possible by different modalities.
- Work environment should be made cordial and healthy by establishing good interpersonal relationships.
- Regular Mental Health Checkups at individual level should be done from early stage of entry to the CISF, where the desired personnels' social, stress related issues, substance addiction problems should be recorded which should be carried over to the next place of posting, which will be very helpful to high risk individuals and also imparting special mental

health services by service providers at the time of need.

- A structured performa for referring paramilitary personnel to a psychiatrist for assessment to be made mandatory in all paramilitary set ups so that a minimum amount of information will be available in record, which will be helpful for current diagnosis and management and further management of future illness.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee

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Cite this article as: Swain SP, Dash MK, Patnaik JI, Rath N. An analysis of occupation related mental health referrals of paramillitary forces to a tertiary care hospital. Int J Community Med Public Health 2017;4:1131-6.