**FREQUENCIES OF PSYCHIATRIC MORBIDITIES IDENTIFIED IN EMPLOYEES**

**OF PUBLIC SECTOR ORGANIZATIONS PRESENTED TO PSYCHIATRIC SERVICES**

## MUHAMMAD IQBAL AFRIDI', CHOONI LAL2,SABA KHAN3, ZARWALIKHAN',RIDA HANIF5, AMMARAH BADAR6

'""·"Departmentof Psychiatry and Behavioural Sciences, JPMC, Karachi 'Sir Syed College of Medical Sciences for Girls, Karachi.

**CORRESPONDENCE: OR. RIOA HANIF** E-mail: [dr.rida18@gmail.com](mailto:dr.rida18@gmail.com)

Submitted: March 25, 2019

Accepted: September 11, 2019

## ABSTRACT

**OBJECTIVE**

Todetermine the frequency of psychiatric disordersin employees of varioui; public sector organizations that presented to Psychiatric services of tertiary carehospital in Karachi.

## STUDY DESIGN

Cross sectional study

## PLACE AND DURATION OF STUDY

Cases presented to Department of Psychiatry and Behavioural Sciences, JPMC, Karachi during 23 months duration, from January 2014 to November 2015wereincluded.

## SUBJECTS AND METHODS

Data of all government employees diagnosed with Psychiatric disordersat settingIn studiedduration wascollected fromhospital record and analysed.

## RESULTS

The employees diagnosed with psychiatric disorder were from 20 different departments which were later categorized as Law Enforcement departments 1284 (76.42%), Health departments 291 (17.32%), and Civil

departments 105 (6.25%). Their mean age was 32.7 ± 10.13 (S.D). Mood

Disorders foundto beamong718 (42.74%)cases with DepressiveDisorderin 468 (27.85%) cases. Anxiety disorders had been diagnosed among 435 (25.89%) of the cases followed by Psychotic disorders (24.4%), Obsessive Compulsive Disorder 39 (2.32%), Stress related disorders (2.14%) and Substance usedisorders(2.08%).

## CONCLUSION

Depressive Disorder was themost frequent diagnosisamong all the referrals of government employees. Most of the referral were from Law Enforcement departments and Pakistan Rangers department being the most common. Young employees **are** most vulnerable age group to stress and developing psychiatric issues.

## KEYWORDS

Workplace, Psychiatry,Lawenforcement,Pakistan, Mooddisorder

## INTRODUCTION

MentalHealth at workplace is crucial to addressasmental health issues usually arise in productive working age regardless of educational status, income levels and employment categories 1·'. Timely interventions at workplace can assist recovery of those suffering from mental illnesses and can prevent mental health problems'·'. Many studies have been conducted internationally to look for the risk factors at workplace causing metal health problems, which only provided the indicators of occupation related risks but failed to give more information regarding role of workplace factors in mental health"'.

Many workplace factors influence in causing mental health issues including long working hours'·' regular overtime,' high job demands with less decision-making rights". bullying, violence, and discrimination at workplace"·" and job insecurity'"'.A review of the effects of the psychosocial environment on risk of stress-related disorders (SRDs) concluded that high job demands, low job control, low co-worker support, low supervisor support, low procedural justice and ahigheffort- reward imbalance may be the predictors of SRDs". In working population, depression and simple phobia found to be most prevalent disorders". Overtime at work was found to be slightly associated with elevated risk of depressive disorder more among women" while in men, high job strain increased the risk of major depressive disorder In those who worked over 35-40 hours per week''. Major depressive disorder can be predicted in males with job insecurity and family to workconflict" asstrongest factor associated with mental disorders found out to be the imbalance between work and family life in either gender". Female employees have more frequent and longer sickness absences due to psychiatric disorders. Male employees are at a high risk of disability due to psychiatricdisorders".



*PAGE 28 JULY- SEPTEMBER 2019* I *VOLUME 16 NUMBER 3*

i



In working population, depression and simple phobia found to be mostprevalentdisorders".Overtime at workwas foundto be slightly associated with elevated risk of depressive disorder more among women" while in men, high job strain Increased the risk of major depressive disorder in those who worked over 35-40 hours per week". Major depressive disorder canbe predicted in maleswith job insecurity and family to work conflict" asstrongest factor associated withmental disorders found outto be the imbalance between work and family life in either gender". Female employees have more frequent and longer sickness absences due to psychiatric disorders. Male employees are at a high risk of disability due to psychiatric disorders".

Some jobs are more stressful as employees are often away from families, homes and sources of social support and workplace characteristicsare the modifiable factors that maybecome the focus of interventions to reducethe risk of mentalhealth problems"21• This study was conducted to determine the frequency of psychiatric disorders among employees of various government organizations presented to Psychiatric services of public sector tertiary care hospital In Karachi, so that strategies may be formulated to prevent the sequelaeof work-related stress.

**SUBJECTS AND METHODS**

# Participants

It is acrosssectional study of 23 months duration from January 2014 till November 2015 conducted at Department of Psychiatry and Behavioural Sciences,JPMC,Karachi. AllGovernment employees that were diagnosed as case *of* Psychiatric disorders after presenting to the Department of Psychiatry andBehavioural Sciences,JPMC,either

referred from their departments or consulted on their own,whether managed on outdoor (outpatient) or indoor (admitted in the ward) basis were included in the study. Patients with psychiatric Illness attributable to another medical condition were excluded from the study.Totalof 16B0employees participated in the study.

# Instruments

Demographic information was noted along with particulars of the consultancy such as gender, age, psychiatric diagnosis, presenting month, and type of employment of each case. Age was further categorized intogroups as15-25 years, 26-35 years, 36-45 years,46-

55 years and 56 years and older. Type of employment was

categorized on the basis of departments as Law Enforcement departments, Health department and Civil departments. Law enforcement departments included all those departmentsthat work to maintain law and order situation of the country in various aspects and include weapon handling by the employees. Health departments included employees working as medics, paramedics and other staff at hospitals. Civil departments included all other departments that mainly involve office work with fixed duty hours.

Months of the year were categorized as cooler months, warmer months and warmest months. Cooler months included October, November, December, January, and February. Warmer months included March, April and September while Warmest months included May,June,July, and August.Psychiatric diagnosis had been madeby consultant Psychiatrists of thedepartment usingeitherICD

*ri...* + ..1c c; **-ie"'"·**

10 (International Classification of Disease version 10) or DSM- 5 (Diagnostic and Statistical Manual version 5) criteria. Psychiatric Diagnosis was classified into Mood Disorders, Anxiety disorders, Psychotic Disorders, Obsessive- compulsive disorder (OCD), Substance Use Disorders, Neurotic & stress related disorders and deliberateself-harm or suicidalattempts.

Mood Disorders included Depressive disorder and Bipolar affective disorder. Anxiety disorders included Generalized Anxiety Disorder (GAD), Panic disorder, Phobic Anxiety disorder and Mixed anxiety & depressive disorder. Psychotic Disorders included Acute Psychotic disorder and Schizophrenia. Stress related disorders included Adjustment disorder, post-traumatic stress disorder and conversion disorder.

# Procedure

After ethical approval data of all consecutive patients who were government employees and presented to Psychiatric services of studied hospital either new or follow up cases during studied duration was collected from hospital record, keeping all patient's relatedInformation confidential.Data wereanalysed using SPSS v.22 (Statistical Program for Social Sciences version 22). Central tendencies including mean, range and standard deviation of quantitative variable i.e. age were computed. Frequencies and percentagesof allcategorical variables werecalculated.

## RESULTS

Over the period of 23 months, among all government employees presented to the setting 1680 were diagnosed as having psychiatric disorder, including 1361 (81.01 %) males and 319 (18.99 %)females. Among them, 1480 (88.09%) were managed on outdoor basis while 200(11.9%) got admitted to indoor facility. Mean age (in years) of the

patients was32.7 ±10.13(S.D.).Out of them,420 (25%)wereof 15-25

years of age, 588 (35%) were between 26-35 years, 504 (30%) were

between 36 - 45 years, 99 (6%) were 46-55 years old, and 69 (4%) wereof 56yearsand older.

Employees working at 20 different departments of government organizations consulted at the setting that were categorized as Law enforcement departments, health departments, and civil departments. Among them, 7 departments considered as Law enforcement agencies that included Sindh rangers, Coast guard, Sindh police,Airport Security Force(ASF), FrontierConstabulary (FC), Pakistan Navy, Pakistan Air force. There were four Health departments of Karachi that included Jinnah Postgraduate medical Centre(JPMC),CentralHealth Establishment (CHE), National Institute of Child Health (NICH), Pakistan Medical and Research Council (PMRC). While 9 departments were considered as Civil departments that included Pakistan Post, Public Works Department (PWD), Ministry of Law, Water Board, Pakistan Railways, Education department, Pakistan International Airline (PIA), Pakistan Railways and Accountant General of Pakistan (AGPR). Among all registered cases, 1284 (76.42%) were the employees of Law enforcement departments, 291 (17.32%) were of Health Departments and 105 (6.25%) of Civil departments as shown in Figure **l.** Details of Frequencies of Employees of each department that with various psychiatric disordershasshown in Table**1.**



*JULY·SEPTEMBER 2019* I *VOLUME 16 NUMBER 3 PAGE 29*



Table 1

Jou nal of Pak1star n,;yrf : t i c ,.,h,

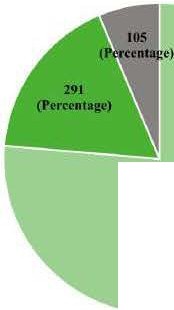
%) had Bipolar disorder. While 435 cases of Anxiety disorder

Freqt1encics of pat1en1s belonging lo various goven1U1Cnt dcpartm nts

|  |  |  |  |
| --- | --- | --- | --- |
| **Type or**  **Employment** | **Government**  **Departme11ts** | **Number ot cases** | **Pertent** |
| Law Enforcement Departments | Sindh Rangers | 885 | 52.70 |
| Coast Guard | 106 | 6.30 |
| Sindh Police | 100 | 5,95 |
| ASF(Airport Security Force) | 92 | *5.50* |
| FC (Frontier Constabulary) | 67 | J,99 |
| Pakistan Navy | 27 | 1.61 |
| PAF (Pakistan Air Force) | 7 | 0.41 |
| Total | 1284 | 76.46 |
| Health Depanments | JPMC | 175 | 10.40 |
| NJCH | 53 | 3.15 |
| CHE (Central Health Establishment) | *55* | 3.27 |
| PMRC (Pakistan Medical & Research Council) | 8 | 0.48 |
| Total | 291 | 17.30 |
| C1v1I  Departments | AGPR (Accountant General of Pakistan) | 30 | 1.79 |
| Pakistan Post | 15 | 0.90 |
| PWD (Public Works D<:pnnrnent) | 13 | 0,77 |
| Ministry of Law | 12 | 0.71 |
| Water Board | 11 | 0,65 |
| Paki'!ilan Rililway | 9 | 0.54 |
| Karachi Cantonment Board | 7 | 0.41 |
| PlA (Pakistan International Airlines) | 5 | 0.29 |
| Educalio11De:partmcnI | 3 | 0.18 |
| Total | 105 | 6,24 |
| Toto.I |  | 1680 | 100 |

figure I

Frtquency of Psychiatric Casc.s from Various Government Organizations



*Over* the years,752(44.76%) patientspresented In the cooler months while 451 (26.84%) in Warmer months and 477 (28.4%) in the warmest months of the years. Mood disorder was the diagnosis of 718 (42.74%) patients, 435 (25.89%) had Anxiety Disorders, 410

(24.4%) had Psychotic disorders, 39 (2.32 %) had Obsessive­ compulsive disorder (OCD), 36 (2.14%) had Stress related disorders, 35 (2.08%) had Substance use disorder and 7 (0.42%) had presented with deliberate self-harm or suicidal attempts. Among 718 cases of Mooddisorder, 468 (27.85%) had Depressive disorder and 250(14.88

constituted 288 (17.14%) of Generalized anxiety disorder, 47 (2.8%) of Phobic anxietydisorder,31(1.84%) of Panic disorder,and69(4.1%) of Mixed Anxiety and Depression. Psychotic Disorder was the diagnosis of 410 cases, included 40 (2.38%) cases of Acute Psychotic disorder and 370(22.02%) of Schizophrenia.In total,36 (2.14%)cases who had diagnosis of Stress related disorders included 18 (1.07%) patients of Conversion disorder, 9 (0.54%) of Post-traumatic Stress disorder and 9 (0.54%) of Adjustment disorders.

## DISCUSSION

Mental illnesses are on increasing *verge* throughout the globe including developing countries like Pakistan regardless of any gender or employment category but in our study, majority of the cases with psychiatric disorders were males constituting 81.01% of the total sample which couldbe because our sample population was from male dominant occupations. Majority of them were young adults (25-36 years); this working age group in our society has so many socio-economic responsibilities and it is most vulnerable group of population to develop psychiatric issuesl}. As many of the patients were young, might had association of other psychosocial factors other than characteristics of occupation or workplace could be a confounding factor and its effects can't be denied. Highest number of casespresentedwere fromlawenforcement departments (76.46%) which could be due to several reasons including lack of sufficient mental health facilities available in those departments, high demand Job work, stressful working environment and Jinnah postgraduate medical centre (JPMC) being a public sector tertiary hospitalismainreferralcentrefor professional carefor them.Lawand ordersituation of the state was alsostressful atthattime whichcould be a factor too as terrorism undoubtedly possess major psychological impact on peopleof all ages"·".While military services have got increase risk of suicide as seen in a study'" on US army and thus people working in such services need assessment for their psychological health on regularbasis.

In line with our findings, mood disorder as the most frequently diagnosed psychiatric illness being Depressive disorder the most common and Anxiety disorders constituted the second most frequent issue for psychiatric referrals, an other study from Pakistan done on general population showed that every third person was suffering fromeitheranxiety or depression or both''.

Majority 752 (44.76%) of the cases found to be presented in cooler months that wascontrary to the study at Vietnam where majority of psychiatric admission donein warmermonths speciallyJune".

Universally delivered workplace mental health interventions can reduce the level of depressive symptoms among workers. A meta­ analysis hasshowed moreeffectiveness of CBTbased programs than otherinterventions on mentalhealth of workers".

Awarenessshould beIncorporated for employeesabout healthyand balanced life style including exercise and balance between personal and professional life. Healthy lifestyle programmes instigation by several employers haveshownresultsin improving employee health and workattendance andisalso important for better productivity. As more incidence of psychiatric disorders may leadto moreabsentees of employees from work and lesser interest with adequate capabilitiesin theirwork'0•

**1284**

**(Pen,\_eatage)**

c:I Law Enforcement

Departme11ts

* Heahb

Departments

* Civil

Departmen1s

*PAGE JO JULY-SEPTEM8ER 2019* I *VOLUME 16 NUMBER 3*





There is need to provide appropriate services, including reducing potential workplaceexposures,improving detection anddeveloping treatment strategies for workers with psychiatric disorders. Care must be taken for employees suffering from psychiatric issues and screen for psychiatric symptoms in all employees on regular basis, attempts to reduce stigma and raising awareness may lead many individuals with otherwise transient minor symptoms, having their distress get medical professional help before getting it worsened.

### LIMITATIONS

It was a retrospective study from hospital data of reported cases, not the true representative of burden of psychiatric Illnessin population.so the results can't be generalized.

Risk factors and associated factors at workplace leading to

development of psychiatricillnesseswerenot considered.

### CONCLUSION

The commonest psychiatric condition identified was Depressive Disorders followed by Generalized Anxiety Disordersandwasmostly found among age group of 26-35 years. The most common presentation was from Rangers;is the department of psychiatry and behavioral sciences,JPMCisthe mainreferral centre for them.Mental health is apressing issuein today's fastpaced and oftenunexpected circumstances.Government employees are prone to mental health issuesin the same wayasthe general public.The dataobtainedin this study can help develop more qualitative prospective studies in future. Preventive strategies at workplace should target the prevention of short-term consequences and long-term impact of mentaldisordersinemployees.

**REFERENCES**

l. Steel Z, Marnane C, lranpour C,Chey**T,**Jackson JW,PatelV,et al. The global prevalence of common mental disorders: a systematic review and meta-analysis 1980-2013. Int J Epidemiol.2014;43(2):476-93.doi:10.1093/ije/dyu038

1. Sick on the job? Myths and realities about mental health and work. Paris: Organisation for Economic Cooperation and Development; 2012
2. Stansfeld 5, Rasul FR, Head J, Singleton N. Occupation and mental health in a national UK survey. Social Psychiatry & Psychiatric Epidemiology.2011;46(2):101-10
3. TanL, Wang M-J, ModiniM, Joyce 5,Mykletun A, Christensen H, et al. Preventing the development of depression at work: a systematic review and meta-analysis of universal interventions in the workplace.BMCMedicine.2014;12(1):74
4. WahlbeckK.Public mental health: the time is ripe for translation of evidence into practice. World Psychiatry. 2015;14(1):36-42. doi:l 0.1002/wps.20178
5. Madsen IEH,Jorgensen AFB,Borritz M, Nielsen ML, RuguliesR.ls the association between high strain work and depressive symptomsmodified by private life socialsupport:acohort study ofl,074Danishemployees? BMCPublicHealth.2014;14(1).
6. Hilton MF, Whiteford HA, Sheridan JS, Cleary CM, Chant DC, Wang PS, et al. The prevalence of psychological distress in employees and associated occupational risk factors. Journal of Occupational and Environmental Medicine.2008;50(7):746-57 doi:10.1097/JOM.0b013e31817e9171
7. Virtanen M, Ferrie JE, Singh-Manoux A. Shipley MJ, Stansfeld S,

A., Marmot M, et al. Long working hours and symptoms of anxiety and depression: a 5-year follow-up of the Whitehall II study.Psychological Medicine.2011;February:1-10

1. Virtanen M. Stansfeld SA, Fuhrer R, Ferrie JE, Kivimaki M.

Overtime work a.s a predictor of major depressive episode: A 5- year follow-up of the Whitehall II Study. PLoS ONE. 2012;7(1):e30719 doi:10.1371/journal.pone.0030719

1. Karasek RA,KawakamiN,Brisson C,Houtman I,BongersP,Amick BC. The Job Content Questionnaire {JCQ): An instrument for internationally comparative assessments of psychosocial job characteristics. Journal of Occupational Psychology. 1998;3(4):322-55
2. Niedhammer I, Sultan-Ta"i'eb H, Chastang J-F, Vermeylen G,

Parent-Thirion A. Exposure to psychosocial work factors in 31 European countries. Occupational Medicine. 2012;62:196-202. dol:10.1093/occmed/kqs020

1. Verkuil B, Atasayi 5, Molendijk ML. Workplace bullying and mental health: A meta-analysis on cross-sectional and longitudinal data. PLoS ONE. 2015;10(8):e0135225 doi: 10.1371/journal.pone.0135225
2. Stansfeld SA, Candy B. Psychosocial work environment and mental health-a meta-analytic review. Scand J Work Environ Health.2006;32(6):443-62.
3. Butterworth P, Leach LS, Strazdins L, Olesen SC, Rodgers 8, Broom DH. The psychosocial quality of work determines whether employment has benefits for mental health: results from a longitudinal national household panel survey. Occupational andEnvironmentalMedicine.2011.
4. Niuwenhuijsen N, Bruinvelds D, Frings-Dresen M. Psychosocial work environment and stress-related disorders, a systematic review. Occup Med. 2010;60:277-286. doi:10.1093/ occmed/kqq081.
5. Sanderson K, Andrews G. Common mental disorders in the workforce: recent findings from descriptive and social epidemiology.CanJPsychiatry. 2006Feb;Sl(2):63-75
6. Watanabe K, Imamura **K,** Kawakami **N.** Working hours and the onset of depressive disorder: a systematic review and meta· analysis. Occup Environ Med. 2016 Dec;73(12):877-884. doi: 10.1136/oemed-2016·103845.
7. Wang J, Patten SB, Currie S, Sareen J, Schmitz N. A population·

based longitudinal study on work environmental factors and the risk of major depressive disorder. Am J Epidemiol. 2012 Jul 1;176(1):52-9.doi:l 0.1093/aje/kwr473.

1. Wang JL, Lesage A, Schmitz N, Drapeau A. The relationship between work stress and mental disorders in men and women: findings from a population-based study. J Epidemiol CommunityHealth.2008Jan;62(1):42-7
2. Dietrich S. Stengler K, Sickness absence and disability due to psychiatric disorders from a gender perspective - a systematic literature review. Gesundheitswesen. 2013 Jun;75(6):e74-94. doi:10.1055/s-0032-1327746.
3. LaMontagne A,Martin A,Page K, Reavley N, Noblet A, Milner A, et al. Workplace mental health: developing an integrated intervention approach.SMCPsychiatry. 2014;14(1):131.
4. Dollard M, Bailey*T,* Mclinton S, Richards P, Mc Teman W,Taylor A, et al. The Australian Workplace Barometer: Report on psychosocial safety climate and worker health in Australia Adelaide, South Australia: University of South Australia, Centre for AppliedPsychological Research for SafeWork Australia 2012.
5. World Health Organization. Mental Health: Young people and mental health in a changing world. Accessed on 1st Oct, 2018.

L *JULY* - *SEPTEMBER 2019* I *VOWME* 76 *NUMBER 3 PAGE31*



1 11 , I *8(* 0.1k·si r· p.\_ychi trir <;o 1Ptv

Available from: https://[www.who.int/mental\_health/world](http://www.who.int/mental_health/world)­ mental-health-day/2018/en/

'

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Sr. | Author **Name** | **Affiliation of Authot** | Conltlbutlon | **Sig11alure** |
| 1 | Prof.Muhammad lqbalAfriili | Department of PsychiatryJPMC. Karachi | Researcho<lea.planning orstudy. design of work |  |
| **2** | Dr.Choonl Lal | Department of PsychiatryJPMC, Karachi | Pla/llllngof stuoy, designotWOik lnlerµrelatiOlol filata for thework, all<Ire,iSinQthework **ciilicaly** |  |
| 3 | **Dr. Saba** Khan | Oepartment or PsychiatryJPMC. Karachi | Plaooln9 or study, designof WOik Datacollection, acquisi1ion,  analysis andinterpretationol data forth,worll | *r:;.* |
| **4** | Dr. Zarwali Kllan | Oopartrnenf of PsychiatryJPMC, Karachi | Plaooingof study, designof work Oatacollection, |  |
| **5** | **Dr. Rida** Hanit | Depanmentof Psychiatry JPMC, Karachi | lnlerJlll!tatiooof data for thewO!l<, Drattrnglhework.and re,isl'lgIt critJCally | *@t.* |
| **6** | Dr.Ammarah  **Radar** | st Syedconege of MedicalScmnces torGirls, Karachi. | lntorpratatiOnordataf0< th& work. Revisingthe workcritically |  |

1. Daraz U., Naz A. & Khan W. (2012) Sociological analysis of terrorismin Pakistan.AcademicResearchInternational,3(1).
2. Nizarni AT,Hassan TM,Yasir S,Rana MH,Minhas FA.Terrorism in Pakistan: the psychosocial context and why it matters. BJPsych International.2018;15(1):20-22.doi:10.1192/bji.2017.9.
3. Ursano RJ, Kessler RC, Naifeh JA, et al. Suicide attempts in U.S. Army combat arms, special forces and combat medics. BMC Psychiatry.2017;17:194.doi:10.1186/s12888-017-1350-y.

*·*

1. Mirza I, Jenkins R. Risk factors, prevalence, and treatment of anxietyanddepressive disorders in Pakistan:systematic review. BMJ:BritishMedicalJournal.2004;328(7443):794.
2. Trang PM,Rocklov J,Giang KB,Nilsson M. Seasonality of hospital admissions for mental disorders in Hanoi, Vietnam. Global Health Action. 2016;9:10.3402/gha.v9.32116. doi:10.3402/ gha.v9.32116.
3. Tan L,Wang MJ, ModiniM, Joyce S, Mykletun A,Christensen H, HarveySB.Preventing thedevelopment of depressionat work:a systematic review andmeta-analysis of universal interventions in theworkplace.BMCMed.2014 May9;12:74.
4. Harvey SB, Glazier N, Carlton 0, et al. Obesity and sickness absence: results from the CHAP study. Occup Med (London) 2010;60:362-8

*PAGE32 JULY-SEPTEM8ER 2019* I *VOLUME 16 NUMBER 3*