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DEPRESSION;

PREVALENCE & RISK FACTORS OF DEPRESSION AMONG ADULT POPULATION OF DISTRICT PESHAWAR

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ABSTRACT… Prevalence & risk factors of depression among adult population of district Peshawar. **Background:** Depression is one of the most common major mental illnesses and affects 5% to 20% of the adult population and is related to many determinants. **Objectives:** To estimate the prevalence and risk factors of depression among the adult population. **Study Design:** A cross sectional descriptive study. **Setting & Study Duration:** The department of community medicine, Khyber medical college, Peshawar; among the adult population of district Peshawar; from November 2016 to May 2017. **Materials & Methods:** A total of 410 adults, both male and female, of ages 18 and above years were selected from the District Peshawar; on the basis of multistage probability sampling technique. A structured questionnaire was used to collect data regarding the prevalence and risk factors of depression along with important variables. Data was analysed by Microsoft Office and SPSS, and results were presented in tables. **Results:** Results showed that the prevalence of depression was 85.85%. Out of the total depression, 24.88% had positive medical history; 57.8% had tobacco smoking; 29.02 % had history of abuse or neglect; 60.24% had sleep problems; and 18.29% & 10.49% were affected by terrorism and flood respectively. **Conclusions:** It was concluded that the prevalence of depression among the adult population of district Peshawar was high and shows strong association with predisposing determinants. Moreover, whole population needs to be screen to estimate the accurate prevalence and to treat high burden of mental illnesses among the community.

Key words: Abuse, Depression, Flood, Peshawar, Prevalence, Risk Factors, Terrorism, Tobacco.

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INTRODUCTION

Mental disorders are one of the most common disorders in the world and mental health is a major concern of public health in today society. Mental disorders affect a significant number of populations worldwide.[1] Moore, in 2013, reported 17% prevalence of mental disorders both in developed and developing countries.[2] Major depression is a complex disorder that does not result from either genetic or environmental influences alone but rather from both.[3] The risk for major depression was approximately many times as high in the high-risk offspring's and in those vulnerable to food security problems.[4,5] In a study conducted in china, revealed found that 7.0% had mild; 11.3% had moderate and 75.1% had severe depression, whereas in another study, the cumulative prevalence of depression ranged from 13% to 17%.[6]

A strong relationship between gender, behaviour problems, stressful events, exposure to physical & sexual abuse, cigarette smoking, alcohol use, and depression was well documented in many international studies.[7,8] Moreover, researchers have made claims that tobacco smoking leads to depression. It has long been known that smokers have higher rates of depression than non-smokers. The researchers from New Zealand investigated and found a causal relationship; and cigarette smoking increases the risk of depression.[9] Drug addiction and alcohol consumption are associated with an increased risk for developing depression as were found in

many studies.[10,11]

Patients with medical illness have a high prevalence of depression. Increasing evidence suggests that depression may be associated with increased morbidity and mortality from diabetes and heart disease.[12] Moreover, repetitive failure in exams also contributes a lot to the development of anxiety and depression.[13] Furthermore, consumption of food rich in carbohydrate could be a possible risk factor for depression. A study reveals that high glycemic index diets are directly related to depression.[14] Moreover, the psychological benefits of physical activity have been revealed in many studies and had negative effect on the development of depression.[15]

According to the Global Burden of Disease Study 2010, (GBD, 2010); it was estimated that in both developing and developed countries, a significant proportion of the health problems came from mental, neurological and substance use disorders; and had prevalence of 56.7%, 28.6%, and 14.7% respectively and thus contributed significantly in the morbidity and mortality indicators of any community. Thus only cost effective interventions, health planning and evidence based research is vital to develop better prevention and management strategies.[16,17]

Pakistan is a developing country and is facing double burden of diseases. Besides the communicable and non communicable diseases, the prevalence of depression is on rise; so this cross sectional study was proposed to estimate the frequency and potential risk factors of depression among the adult population of district Peshawar.

MATERIALS & METHODS

Study Design

Cross-sectional descriptive study

Sample Size

Based on 95 % CI, and 50 % prevalence; a sample size of 410 adults through multistage probability sampling technique was used; in which adults both male and female, were selected according to WHO sample size calculation formula for a cross sectional study.

Setting

This study was conducted by the Department of Community Medicine, Khyber Medical College, Peshawar; among the adult population of District Peshawar.

Study Duration

From November 2016 to May 2017.

Inclusion Criteria

Adults both male and female individuals

Exclusion Criteria

Those who were not permanent residents of district Peshawar and those having end stage co-morbid medical conditions were excluded from the study.

Procedure & Data Analysis

After taking approval from the Ethical Committee of the Khyber Medical College, Peshawar; data was collected through a structured questionnaire i.e. Patient Health Questionnaire–9; regarding the prevalence and risk factors of depression. Finally, the Microsoft Word office 2010 and SPSS version 22.0, was used for analysis and results were presented inform of tables.

RESULTS

The demographic features of the respondents (n=410); was shown in Table-I; frequency (%age) of depression in Table-II; and relationship of depression with different risk factors in Table-III&IV.

DISCUSSION

In our study, the prevalence was 85.85%; as most of the individuals had mild to moderate depression; whereas in a study conducted in Norway (2012); reported 54 % prevalence.[18] Our study found higher prevalence as compared to international studies showing 23%[19], 25.1%[20], 38.5%[21] and 41%.[22] Thus our study prevalence was more as compared to studies conducted in an Italian population based study of 2014[20]; and in another study conducted in 2015 in Canada[23];

and less as compared to findings from the 2014 National Comorbidity Survey Replication JAMA of United States[24]; and systematic reviews of global population based studies.[25]

Demographics	Variables	Frequency f; (%age)
Age Groups	18-27 yrs	123(30)
	28-37 yrs	148(36.1)
	38-47 yrs	78(19.02)
	48 & above	61(14.88)
Gender Distribution	Male	241(58.78)
	Female	169(41.22)
Monthly Income	< 15000	263(64.15)
	15000-30000	70(17.07)
	30000-45000	41(10)
	45000 & Above	36(8.78)
Occupations	Labour	56(13.66)
	Govt servants	71(17.32)
	Housewife	107(26.1)
	Students	79(19.27)
	Others	97(23.66)
Educational Background	Literate	197(48.05)
	Illiterate	213(51.95)
Tobacco Use	Yes	237(57.8)
	No	173(42.2)

Table-I. Frequency of demographic features of respondents (n= 410)

No	Findings	Frequency f (%age)
a	No Depression	58 (14.15)
b	Depression	352 (85.85)
Total		410 (100)

Table-II. Frequency (%age) of depression among the study respondents (n=410)

Variables	Depression f (%age)	No Depression f (%age)	Total f (%age)
Any medical problem/ condition	93(22.68)	9(2.20)	102(24.88)
No medical problem	259(63.17)	49(11.95)	308(75.12)
Smoking	201(49.02)	36(8.78)	237(57.80)
Not Smoking	151(36.83)	22(5.37)	173(42.20)
Drink alcohol	27(6.59)	4(0.98)	31(7.56)
No history	325(79.27)	54(13.17)	379(92.44)
Any other drug addiction	107(26.10)	7(1.71)	114(27.80)
No history	245(59.76)	51(12.44)	296(72.20)
Victim of any abuse/ neglect	98(23.90)	21(5.12)	119(29.02)
No history	254(61.95)	37(9.02)	291(70.98)
History of trauma	27(6.59)	19(4.63)	46(11.22)
No history	325(79.27)	39(9.51)	364(88.78)
Taking any medicine	195(47.56)	42(10.24)	237(57.80)
No history	157(38.29)	16(3.90)	173(42.20)

Table-III. Relationship of depression with different variables among adult population (N=410) of district Peshawar

Variables	Depression f (%age)	No Depression f (%age)	Total f (%age)
Affected by flood	35(8.54)	8(1.95)	43(10.49)
Not affected	317(77.32)	50(12.20)	367(89.51)
Affected by terrorism	65(15.85)	10(2.44)	75(18.29)
Not affected	287(70.00)	48(11.71)	335(81.71)
Failure in love	59(14.39)	17(4.15)	76(18.54)
No history	293(71.46)	41(10.00)	334(81.46)
Failure in exam	64(15.61)	23(5.61)	87(21.22)
No history	288(70.24)	35(8.54)	323(78.78)
Any sleep problem	209(50.98)	38(9.27)	247(60.24)
No history	143(34.88)	20(4.88)	163(39.76)
Exercise regularly	65(15.85)	44 (10.73)	109(26.59)
No exercise	287(70.00)	14(3.41)	301(73.41)
Taking healthy diet	153(37.32)	40(9.76)	193(47.07)
Not healthy	199(48.54)	18(4.39)	217(52.93)

Table-IV. Relationship of depression with different variables among adult population (N=410) of district Peshawar

In our study, it was found that out of total population n=410; n=119 (29.02%) were abused and n=98 (23.9%) were found depressed; and suggested that there was higher risk of depression in abused individuals. Moreover, it was found that n=46 (11.22%), had history of trauma and n=27 (6.59%) were found depressed, and 79.27% individuals were depressed due to other risk factors, and thus proved that childhood abuse; neglect or loss in early life drastically increases the risk of developing depression.[26]

According to previous researches, relationship was found between food and depression, as was observed in our research. n=193 (47.07 %) of adult population were taking healthy diet. Healthy diet appeared to have negative and protected association with depression and thus healthy diet decreasing the risk of depression.[14] Changes in sleep pattern are responsible for depression; and in our research; n=247 (60.24 %) of cases were having sleep problems and 39.74 % had other risk factor responsible for development of depression. Moreover, according to previous studies, moderate use of alcohol was beneficial for health, in a study conducted in America who drank alcohol, and depression was relieved and mood was elevated; but in our research out of n=31 (7.56 %) drank alcohol; and among them, n=27 (6.59 %) were found depressed; and thus there was contradiction between our and previous studies.[27]

Previous studies reflected that depression rates were higher in smokers as compared to non-smokers. In our study; in which n=235 (57.80%) smoke tobacco and n=201 (49.02 %) were suffering from depression while among non-smokers, only 36.83% had depression; and thus indicating correspondence with previous studies.[28] Our studies exhibit that among n=114 (27.8 %) of addicts, n=107 (26.10 %) suffered from depression and thus showed that drug addiction had a strong role in the onset of depression, as was revealed supported by an international study.[10] Moreover, previous researches revealed that failure in exam had a positive relation with onset of depression and our studies reflected similar results i.e. approximately 75% of those who got failures in exams got depression, indicating that failure in exams had a major role in the development of depression.[13]

According to past research work, there was a strong relation between medical diseases and depression; in our study among individuals having positive medical condition, approximately 90% had depression and thus our study supported that various medical problems/conditions were major risk factors of depression.[29]

CONCLUSIONS

It was concluded that the prevalence of depression among the adult population of district Peshawar was high and shows strong relation

with most of the predisposing determinants like age, gender, family history, smoking status, diet, exercise, medical conditions etc. Moreover, the past history of flood, terrorism, alcoholism, and sleep showed strong association with depression and thus medical and allied fields were needed to provide effective mental health services to reduce the morbidity and morbidity associated with depression.

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3	Imranullah	Data collection & writing.	
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