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Prevalence of Depression among Hospitalized Patients in a Tertiary Health Care Facility in Pakistan

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ABSTRACT

OBJECTIVE:

To determine the frequency of depression among hospitalized patients in a tertiary health care facility in Pakistan.

MATERIALS AND METHODS :

The Cross-sectional descriptive design was used and conducted in Khyber Teaching hospital Peshawar in the period eight months (27/8/2018 to 27/4/2019). In this study, four hundred individuals have participated. The data were collected through using questioner of the hospital anxiety and depression scale with basic demographics . Before giving questioner the informed consent was handover and brief the purpose of the study. The investigator ensured the Confidentiality of participants.

RESULTS :

In this study, the mean age was 35 years with SD ± 11.271. Thirty-eight percent of patients were male, and 62% of patients were female. Moreover, the frequency of depression was 39% among hospitalized patients in KPK

CONCLUSION :

The findings of our study was that the frequency of depression was 39% in hospitalized patients in a tertiary health care facility in Pakistan. The study concluded that there will be mental health specialist will be engaged in other wards other than psychiatry because of their mental health issues identified in these wards. The mental health specialist provides pharmacotherapy, counseling, and psychotherapy to address the psychological problem of them.

KEYWORDS: Frequency, Depression. Pharmacotherapy, Counseling, And Psychotherapy

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INTRODUCTION

Depression is a condition characterized by low mood and loss of interest in activities [1]. According to the World Health Organization, about 350 million people suffer from depression globally, and the "Global Burden of Disease Study" identified depression as the second leading cause of "years lost to disability "and a contributor of burden allocated to suicide and ischemic heart disease[2] . It has a major part in increasing the suicide attempts, above half of the attempts were happened individuals have depression. However, the lifetime threat of suicide amongst individuals with the untreated depressing disease is approximately twenty percent [3].In USA tenth main cause of death was suicide reported by the Centers for Disease Control and Prevention. From the perspective of ages between 25-34 years second cause of death, third cause in 10-24 years and forth cause in 35-45.[4]

The ratios of suicide in males were increased in the period 1991-2006 and a decrease in the duration 1991-2000 in both genders. It suicide ratio was again increased from 2000 through 2006 among female as compared to male. In the aspect of DSM-V depression is divided into Disruptive mood dysregulation disorder, major depressive disorder, persistent depressive disorder (dysthymia), and premenstrual dysphoric disorder [5]. The major depressive disorder with criteria that individual has a minimum of five S/S from the last two week period (at a minimum level individual has reduced interest, pleasure, and having sad mood) [6]. The treatment plan for individuals with depression there both approaches was used pharm therapy and psychological intervention and get the fastest and most constant response.[7] For children and adolescents psychotherapeutic intervention more favorable when they were suffered from major depressive disorder[8].In the level of moderate to severe major depression treated with both the intervention antidepressant medication and psychotherapeutic intervention(cognitive-behavioral therapy, interpersonal psychotherapy, behavior therapy, and Electroconvulsive therapy) were effective according to American Psychiatric Association (APA). The Patient Health Questionnaire-9 (PHQ-9) scale moreover used for assessment of individuals with depression [9,10].

The studies of functional neuroimaging reported that individuals with depression related to lowering the activities of metabolism in neocortical structure and speedup in limbic structures. [11] According to studies genetic has a forty to fifty percent chance to develop depression among children. The ratio of depression was found three times more in closes relative with family histories of depression than the common people[12].

The disorder of major depression was developed deprived of precipitating factors, which are distress and loss of loved ones and breaking relationship that evolved more risk of this disorder.E.g death of a parent in the early age of ten increase the risk of depression, Cognitive-behavioral models of depression postulate that adverse thoughts and primary all-or-nothing schemata subsidize to and prolong depressed mood[13].

According to the 2010 report of the Centers for Disease Control and Prevention (CDC) which indicated the occurrence of depression from 2006 to 2008 more in adults. In 235,067 adults, nine percent have depression, with 3.4 percent having major depression[14]. Helga's son studied that threat for any mood disorder was 14.8% for women and 9.8% for men [15]. According to WHO

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studied that depressive disorders were found in Canada, Iran, Japan, and Switzerland considerably[16].

The occurrence of depression was 0.9% in preschool-aged children, 1.9% in school-aged children, and 4.7% in adolescents in a study by Kashani and Sherman. [17]the finding of other studies indicated that twenty-two percent of high school female students of depression more than eleven percent of high school male students reported 1 current or lifetime episode of unipolar depression. The percent of male pupils with two or more episodes of unipolar depression was 4.9%; it was 1.6% in female students. [18] The study of Garrison et al studied the 1-year occurrence of major depression of 3.3% in adolescents aged 11-16 years. [19] The ratio of depression in female and male are highest in those aged 25-44 years [20]. The occurrence of depression was increasing in young individuals based on retrospective studies of age at the inception of depression in family and community reports of depressing adults. [21,22]

According to the study, the recurrence of depression will be happening in children were higher. Based on already existed archives regarding recovery of children from major depression in two years. e.g Kovacs and colleagues[23] stated that the collective possibility of retrieval from major depression by one year after onset was seventy-four percent and by two years was ninety-two percent.

Through interviewing numerous informants may produce abundant valuable information, the diagnosis of the depressing disorder in the young individual can still be very challenging? Ideal diagnostic methods such as the DSM-IV and planned psychological interviews can assistant in determining whether the individual has severe depressive symptoms that need proper intervention[24] . The treatment plans for young individuals suffered from depression more depending on the assessment. In the early stage or mild stage depression in children, it can be reduced by stress management techniques and discussion with parent and child[25]. In psychological intervention, Interpersonal psychotherapy is more beneficial for treating depression among adolescents to address interpersonal problems. A randomized trial indicated that significant welfares over non-specific counselling[26]. The study indicated that tricyclic antidepressants (TCAs), particularly imipramine and nortriptyline effective for depression but, with the exemption of one research, with several trials showed no significant variances amongst oral tricyclic's and placebo. A meta-analysis of the tricyclic trials[27.] found that the pooled response rate was around one-third, less than that generally found when tricyclic's are given to depressed adults. The study reported that referral ratio cases were increased in hospitals in the period of the 1960s, 1970s, and 1980s of deliberate self-harm (DSH) among young individuals[28]. Deliberate self-harm in young people is customarily precipitated by stressful life issues i.e. Family issues, refusal of someone, bullying in school, and these problems lead toward depression among young people of soiety[29]. Problems solving therapy and family counseling were useful in adults to reduce the behavior of self-harm[30,31].

The study findings indicated that district Gujrat, Punjab, Pakistan, that projected the occurrence of major depression to be 3.4 % [32] in the area, and additional that directed community-dwelling old in Karachi to 16.5% [31]. Correspondingly, other current researches found and projected

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occurrence of 54.4% in a flood-affected individual of Sindh [32], 24.8% in doctors of Lahore [33], and 40.9% in medical students of Islamabad [34]. The incidence of depression has also been projected in special clusters of patients, counting current studies on patients with hyperthyroidism (84%) [35],prégnant females in Chitral (34%) [36].

Rational

Literature indicated that depression was the burning problem of the world which is a threatening situation for human life in the future. The statistic of previous studies which showed that suicide ratio was increase day by day, which was mostly suffered from major depression. The studies were conducted in Pakistan which indicated the alarming situation regarding depression among people, especially in young individuals. The studies were conducted in another province of Pakistan than KPK which were psychosocially and culturally different from it. Our study was conducted in Khyber teaching hospital Peshawar KPK and target general hospitalized individuals excluded psychiatry and pediatrics. Our study aimed to estimate the frequency of depression, among hospitalized patients in a tertiary health care facility in Pakistan.

OBJECTIVE

To estimate the frequency of depression, among hospitalized patients in a tertiary health care facility in Pakistan.

Opérational Définition

According to the DSM-IV (see Annex III), a person suffering from major depressive episodes must have symptoms of depression such as low mood and loss of interest in daily activities for at least 15 days. For our study, a score of above 10 on depression subscale of 'hospital anxiety and depression scale', will define depression.

Hospitalized Patient: Any person who has been admitted to the hospital for clinical assessment and/or management and has remained in the hospital for 24 hours or more.

MATERIALS AND METHODS

Study Design:

A cross-section study design was used. The study was conducted in Khyber teaching hospital Peshawar in 8 months 27/8/2018 to 27/4/2019. The data were collected through the question of the hospital anxiety and depression scale. The sample was selected through a random sampling technique. With the help of Microsoft Excel, an ID number and a meaningful label e.g. (med_b_24 indicating bed 24 in Medical B ward) were allocated to each bed. Succeeding, through the RAND function of Microsoft Exc
el, four hundred random numbers were produced within the definite range clear by the total numeral of beds. These beds were designated for screening.

Inclusion criteria:

- Participants who have spent 24 hours or more hospitals will be selected for our study.
- 18 to 70 years of individual were part of the study.
- Both gender (Male and female)

Exclusion criteria:

- Participants, who did not easily communicate.
- Those who were not able to speak and understand Urdu

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- labor room and psychiatry unit patients were excluded,

Instruments

Hospital Anxiety and Depression Scale (HADS), a 14 item checklist in which 7 items relate to anxiety the scale developed by Zigmond and Snaith[37]. The translation and evaluation of an Urdu version of the Hospital Anxiety and Depression Scale. The 81-85. Cronbach's alpha coefficient is 0.82 for the anxiety subscale and 0.64 for the depression subscale, while the overall alpha of the HADS/UV is 0.84. The Urdu version is content valid, and the S-CVI of anxiety subscale, depression subscale, and HADS/UV are 0.947, 948, and 0.947, respectively.Test-retest reliability is 0.884 and 0.934 as measured by Pearson correlation and interclass correlation, respectively[38].

Data Ccollection Procédure :

Before handover the questioner to subjects, the informed consent was given and describe if any difficulty was found. The second step was to give questioner of the Urdu version of "hospital anxiety and depression scale with basic demographic characteristics. The investigator ensured the participant's Confidentiality. A score of above 10 on the depression subscale of this scale was defining a 'case' for our study. Individuals recognized as depressed were aware of the situation, its accessible treatments, and the essential for complete clinical evaluation if they are willing to know about these. Stringent exclusion criteria had tailed to reduce the bias resultant from confounders.

DataAnalysis

The statistical analysis of the study through SPSS 21. Through analysis to identify frequencies and of gender, occupation, socioeconomic status, marital status, whether urban or rural and mean and stranded deviation of age and period in hospital of patients. The result of the study was calculated through frequency and percentages of depression. To detect probable confounders, we had stratified depression against age, gender, marital status, occupation, socioeconomic status, education. The post-stratification chi-square test was applied, keeping a P value of 0.05 or less as significant. The findings of the study were displayed in tables.

RESULTS

In this study four hundred individual has participated, in respect of age they were analyzed in which one hundred eight subject (27%) were in a line of 18-30 years, Hundred (25%) in 31-40 years, eighty-eight in 41-50 years, Sixty-four (16%) in 51-60 years, forty (10%) in 61-70 years. The thirty-five years is the mean age with standard deviation SD ± 11.271. In the aspect of gender one hundred and fifty-two (38%) were males and females were two hundred forty-eight (62%). Based on marital status two hundred and eighty-eight (72%) were married and one hundred and twelve (28%) were single. Participants in respect of Occupation forty-eight (12%) were housewives, sixty (15%) were pupil, one hundred and forty (35%) labored, Eighty (20%) were professional and seventy-two (18%) were businessmen.

The ratio of education was one hundred and ninety-six (49%) were none educated and the level of the secondary was ninety-two (23%), The graduates were sixty (15%) and postgraduates were fifty-two (13%). Socioeconomic status of participants in which lower class were 196(49%), the middle class were 152(38%) and the upper class was 52(13%) Prominence of residence in which rural were 232(58%) while urban areas were 168(42%).The period of hospitalization in which duration of hospitalization <48 hours was 260(65%) while the duration of hospitalization ≥48 hours was 140(35%). The mean duration of hospitalization was 48 hours and SD ± 1. 217. The study result indicated that depression was found in one

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hundred and fifty-six (39%) while 244(61%) didn't found depression among four hundred individuals of study. (Table-I) Stratification of depression in the prospective age, gender, socio-economic status, marital status, occupation, and education to see effect modification (Table-II).

Table-I. Distribution of Variable of Age And Gender, Marital Status, Occupation, Education Socioeconomic Status, Residence, Duration Of Hospitalization, and Depression with frequency and percentage (N: 400).

Variables	Category	Frequency	Percentage
Age	18-30 years	108	27%
	31-40 years	100	25%
	41-50 years	88	22%
	51-60 years	64	16%
	61-70 years	40	10%
Gender	Male	152	38%
	Female	248	62%
Marital Status	Married	288	72%
	Unmarried	112	28%
Occupation	House wife	48	12%
	Student	60	15%
	Labor	140	35%
	Professional	80	20%
	Businessmen	72	18%
Education	Non educated	196	49%
	Secondary	92	23%
	Graduate	60	15%
	Post graduate	52	13%
Socioeconomic Status	Lower Class(<10,000/month)	196	49%
	Middle class (10,00049000/month)	152	38%
	Upper Class(>50,000/month)	52	13%
Residence	Rural	232	58%
	Urban	168	42%
Duration	< 48 hours	260	65%
	≥ 48 hours	140	35%
Depression	Yes	156	39%
	No	244	61%

Mean duration of hospitalization was 48 hours and SD ± 1. 217

TABLE-II: Stratification of depression with Age, Gender, Marital status, Occupation, Education, Socioeconomic Status, and Residency**.**

Variables	Category	Stratification of depression	
		Yes	No
Age	18-30 years	42	66

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	31-40 years	39	61
	41-50 years	34	54
	51-60 years	25	39
	61-70 years	16	24
Gender	Male	59	97
	Female	93	151
Marital Status	Married	112	44
	Unmarried	176	68
Occupation	House wife	19	29
	Student	23	37
	Labor	55	85
	Professional	31	49
	Businessmen	28	44
Education	Non educated	76	120
	Secondary	36	56
	Graduate	23	37
	Post graduate	21	31
Socioeconomic Status	Lower Class(<10,000/month)	76	120
	Middle class (10,00049000/month)	59	93
	Upper Class(>50,000/month)	21	31
Residence	Rural	90	142
	Urban	66	102

Chi-square test was applied in which P values for age were 0.9999, 0.9528 for gender, 0.9417 for marital status, 0.9999 for occupation, 0.9963 for education, 0.9762 for Socioeconomic Status, and 0.9205 for residences.

DISCUSSION

Depression is a condition characterized by low mood and loss of interest in activities [1]. The prevalence of depression has been estimated by a large number of studies worldwide. According to the World Health Organization, about 350 million people suffer from depression globally, and the "Global Burden of Disease Study" identified depression as the second leading cause of "years lost to disability" and a contributor of burden allocated to suicide and ischemic heart disease[2].

Our finding of the study indicated that mean of the age was thirty-five years with SD ± 11.271. In respect of gender Thirty, eight percent of participants were males and females were sixty-two percent. Furthermore, the incidence of depression was thirty-nine percent among hospitalized participants in Khyber Pakhtunkhwa. These occurrence rates have also been projected in Pakistan, counting a current study in district Gujrat, Punjab, that estimated the occurrence of major depression to be 3.4% [39] in the area, and additional that directed community-dwelling old in Karachi to 16.5%[40]. Equally, in current researches that estimated occurrence of 54.4% in a flood effective's of Sindh [41], 24.8% in doctors of Lahore[42] and 40.9% in medical pupils of Islamabad[43].

Another sequence of studies by Mumford et al explained the occurrence estimates for depression and anxiety from Northern Punjab. The deceptive point of the occurrence of depression from Urban Rawalpindi was twenty-five percent in females and ten percent male[44] The study was

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conducted in rural areas of Rawalpindi where the findings of the occurrences of depression were 57.5% for women and 25.5% for men , One of the limits in the investigation phase of the study and succeeding demonstration is the absence of age cutoff for the geriatric populace. Investigator reported the occurrence approximations on any focus older than eighteen[45]. According to finding of study it has no support for the belief that individuals who were living in Chitral prime to stress-free lives or have low rates of psychiatric morbity,female were suffer more anxiety and depressive disorders than in Western societies and support our study[46]. These readings give variable occurrence estimates of Depression; from as high as sixty-six in females from rural areas to ten percent in males from urban areas. The mean overall point prevalence is 33.62% (n=2658). These hand full of studies, along with few other center-based studies, comprises the epidemiological evidence for Common mental disorders from Pakistan.

CONCLUSION

Our study concludes that the frequency of depression was 39% in hospitalized patients in a tertiary health care facility in Pakistan. From this study, we concluded that there will be mental health specialist will be engaged in other wards other than psychiatry because of their mental health issues identified in these wards. The mental health specialist provides pharmacotherapy, counseling, and psychotherapy to address the psychological problem of them.

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