

**PREVELANCE AND RISK FACTORS ASSOCIATED WITH MENTAL HEALTH
DISORDERS AMONG THE ADULT POPULATION****¹Dr. Bilal Khan and ²Tahira Gul**¹Research Fellow Affiliations: Health Services Academy, Islamabad.²Research Associate Affiliations: ORIC, Fatima Jinnah Medical University, Lahore.***Corresponding Author: Tahira Gul**

Research Associate Affiliations: ORIC, Fatima Jinnah Medical University, Lahore.

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ABSTRACT

Public health is immensely important to sustain the healthy community. Risk factors of common mental health disorders are neglected by healthcare professionals and policy makers. To understand the risk factors and prevalence of common mental health disorder symptoms in district Zhob adult population a primary data-based study was designed and conducted. To progress a healthy and productive society it is important overcome the health issues of common masses. The objective of the study was to examine the risk factors of common mental health disorders in adult population of District Zhob in Baluchistan. The study was carried out on 282 respondents seeking treatment in different THQs, private clinics and BHUs located in District Zhob. Random sampling technique was used to collect the data. The study has used Pashto version GAD-7 score for anxiety and PHQ-9 score for depression. Descriptive statistics and correlation test used to present results from data. The study found that unemployment, poverty, lack of education and overthinking are potential risk factor for common mental disorders and anxiety score of GAD-7 indicating severe anxiety is 16-20%, which is faced by 22.69% of respondents and 12.41% respondent were in moderate category. The study also found that 62.76% respondent score lowest 0-5 on PHQ-9 score for depression and 15.97 have scored 16-20 on PHQ-9 scoring board for depression. The study concluded that common mental disorders were observable in adult population of district Zhob, Baluchistan. However, the intensity of depression was greater, which indicates that age and unemployment were not the responsible factors for such evidences from the data. Other unfolded factors with carrying potential risk for CMDs and anxiety issues among adult population requires further research in context of terrorism affected areas, which can lead to depression and anxiety.

KEYWORDS: Depression, Anxiety, Mental health disorders, Risk factors.**INTRODUCTION**

Mental disorder affects one in four people in the world. depressive and nervous disorder are the most predominant amongst all the mental disorders. According to WHO report 2015, 322 million peoples are suffering from depressive disorders out of which 52.98 million people were present in Eastern Mediterranean region.^[1]

Depression is one of the foremost reasons of debility and it is expected that by the year 2020, it will be the 2nd important determinant of mental illness leading to disability Total of 264 million people were suffering from anxiety disorders out of which 31.36 million were in Eastern Mediterranean region. Depression complaints are categorized as unhappiness, loss of interest in doing certain things, sensation of responsibility; disrupted sleeping pattern, lower hunger, exhaustion and poor attention. Depressive disorder has two sub-categories 1: Major depression disorders are "" dysthymia anxiety disorders, which are furthermore, considered as

emotional state of nervousness and terror which is further classified into comprehensive nervousness syndrome, panic disorder, phobias, social anxiety disorder and obsessive-compulsive disorder.^[2]

Depressive disorder may be caused by environmental stresses, genetic factors, biochemical imbalance or a combination of all these factors. Those who are having depressive and anxiety disorder are at great risk of having difficulties in education, low quality of life, low productivity which ultimately leads to poverty.^[3] The burden of mentally ill patient fall on their parents or family which eventually leads to low productivity and poverty and it affects the society and country.

Prevalence of depressive and anxiety disorders in Pakistan according to previous survey is 34% (range 29-66 % in women and 10-29 % for men).^[4]

Current research is focused on depression and anxiety as risk factors of common mental disorders in adult

population of Baluchistan and furthermore, this study has connected these factors with demographic characteristics of respondents to draw policy relevant conclusions to the issue. This Common mental disorders (CMDs) are the leading causes of incapacity and illness. Pakistan especially Baluchistan Province has scarce data regarding the burden frequency of common mental disorders. It is important to investigate the illness disorders in adult population to come up with relevant policy outcomes. This research is helpful for ministry of health and other organizations, which are working for health in Baluchistan to identify the issue for possible actions. According to a systemic review and meta-analysis 1980–2013 carried out by many researchers like, Zachary Steel, Claire, Iranpour, Tien, John W Jackson, Patel and Derrick published in March 2014 there is significant variation among the mental health status of the countries but one thing is confirm that depression and anxiety mental is highly prevailing across all the countries.^[5]

The Occurrence of MNS disorders in both North America and Latin America varies from (18.7) percent to (24.2) percent. The nervousness disorders vary from 9.3) percent to 16.1 percent. The emotional sicknesses lie between 7.0 to 8.7 percent. The substance use disorders are found in population of 3.6 to 5.3 percent. Research base indications demonstrates a huge action gap. the study shows that MNS disorders are found in 73.5 percent adults and 82.2 percent among children and adolescents.^[6]

The study conducted in Spain and published in 2016, which says mood disorders are most common disorders found more frequently in both the genders male and female. These issues seen and observed in many communities regardless of gender type and composition. Mental disorders mainly affect the excellence of life although physical disorders affect 'the physical' quality of life and power of body. Comparatively the mental disorders had a greater impact on health-related quality of life than chronic physical conditions. Mood disorders had the greatest impact on health-related quality of life. The study suggested the most urgent need of primary medical screening tests for the mental disorders. In the depression patients in primary care center with higher ages.^[7]

The WHO report published in March 2018 reported that globally 300 million individuals of all ages suffer from depression, closely 800,000 people dies every year due to suicide. Depression and other mental disorders The relation between culture and mental disorders can be unfold by the view point of Sadock and Sadock. He argued that a mental health and culture as a vast, complex concept to cover it in a single frame. The association of culture with mental health is used to encompass the behavior patterns and lifestyle of the society and human response to the changes. Culture consists of shared symbols, artefacts, beliefs, values, and

attitudes in social structure. Acting on common grounds are sometime unaffordable for some of us and thus the order of their mental abilities diverts from the social pattern and we call it a mental disorder cause by cultural factors.^[9]

The issue of stigmatization from the people in surrounding creates more intense mental illness, which are not only confined to the Western culture. Acculturation and depression among Latino populations have shown that higher levels of acculturation associated with higher levels of depression.^[10] There is a positive correlation between cumulative torture experiences and psychiatric symptoms. These findings suggest that torture is a causal factor in the development of a major depression issue.^[11] The study found that existing care system for mental health is very weak and strongly suggests need for cost effective new preventive steps to control direct and indirect burden of common mental disorders.^[12] The study conducted by MS Reddy which is published in Indian journal of psychology in 2010 has shown the calculated burden of mental and mood disorders. According to the article 3-4 percent respondents suffer from major depressive disorders in other words 10 million. About 7-10% of the population suffers from minor depressive complaints. Eight epidemiological studies on depression in South Asia showed that the prevalence of common mental disorders in primary care was 26.3%. This is not that much intense as compare to European countries.

These depressive disorders can be easily identified without high level of technology and investments or cost from government at the primary health care level and it does not require any special investigations. The study further suggest treatment should be provided to the patients at primary care level to reduce the burden of the disease on the nation.^[12]

A study conducted by Malik MA and Khan in 2016 about the economic burden of mental illnesses in Pakistan. According to study the economic burden of mental illnesses in Pakistan were PKR 250,483 million in 2006. Cost of medical care was 37% and productivity losses was 58.97% of the economic burden respectively. Tertiary care admissions costs were 70% of total medical care costs.

The average length of stay (LOS) for admissions care was around 8 days. Daily average medical care cost of admitted patients was PKR 3273. For ambulatory care, on average a patient visited the clinic twice a year. The estimated average yearly cost for all mental illnesses was PKR 81,922 and PKR 19,592 for admissions and ambulatory care respectively. Assuming a basic role of primary healthcare (PHC) showed a saving of USD 1577.19 million in total economic burden.^[13] The study conducted about the intimate partner violence and mental health effects in Karachi by Ali, Tazeem S, Mogren, Angrid and Ganilla published in October 2011. The

findings in the study highlighted that the mental health problems were prevalent in women who were subjected to any form of violence. The violence had strongest association found for suicidal thoughts and aggressive physical behavior. The violence women have to face serious mental health problems like anxiety and depression. The study also suggest a reliable surveillance and health care to serve the effected women and to decrease the burden of mental disorders.^[14] The article written by Muhammad Tahir Khalil with the title of "Mental health problem in Pakistani society as a consequence of violence and trauma" published in international problem of integrated care on October 2011. The article reviews the mental health status in Pakistani society as the Common mental health problems were present in both the rural and urban population. The prevalence of depressive and anxiety disorders was highest followed by bipolar, schizophrenia, obsessive compulsive disorders and post-traumatic stress disorder. The study suggests strong political commitment, adequate human and financial resources, and strong advocacy for the integration of mental health into PHC in Pakistan.^[15] It is quite plausible to think that healthy public often contribute towards economic development in a broader spectrum, but specifically public health should be well supervised in case of limited resources. There is limited data available on common mental disorders for Pakistan. The issue of common mental disorders including depression and anxiety can be clearly observed in the local residents of Zhob Baluchistan. To take certain actions, a primary data base study will help to identify potential risk factors for common mental disorders in Baluchistan. Key determinants and factors identification will furthermore make it easy for policy makers to illustrate legal support system and channels.

MATERIAL AND METHODS

Aims and Objectives

Aim of the study is to improve the mental health status of district Zhob

OBJECTIVE

- To identify the frequency of common mental disorders among the general adult population of district Zhob Baluchistan.
- To determine the risk factors for common mental disorders among adult population of district Zhob.

Study design

This study is quantitative and based on cross sectional survey with the use of semi structured questionnaire. This study is case study of District Zhob in Baluchistan

Description of the Data and questionnaire

The study is based on primary data. Adult population from 18 years of age and above. Six primary healthcare setups were selected by a draw among the twelve functional primary health care setups which included THQ hospital, two BHUs, one RHC and two clinics. The study has used Pashto version of patient health

questionnaire (PHQ-9) and generalized anxiety disorder GAD7 tool for data collection.^[16] The cultural background of respondents is Pashto; therefore, Pashto version questionnaire has been used. The questionnaire was translated from English to National language URDU and then it was translated to the Local language Pashto and the respondents were helped to understand the questions written in questionnaires during the data collection process.

Data collection techniques

The Data was collected from the patients visiting outpatient departments in BHU's and THQ hospital and private clinics. Pashto version of PHQ 9 and GAD 7 tool was provided to the patients. The tool has been translated from the Urdu version PHQ9 and GAD7 tool according to WHO translation rules. PHQ-9 total score is 20, 0-5 =mild, 6-10=moderate, 11-15=moderately severe and 16-20=severe depression. Total Score of GAD-7 is 21, 0-5=mild, 6-10=moderate, 11-15=moderately severe anxiety and 15-21=severe anxiety. According to openepi.com the anticipated frequency was 0.34 as the frequency of common mental disorders is 34% and confidence limit 5 and according to this data my sample size is be n=282. The coding of variable in this study is zero for never, one for often, 2 most of the times and 3 for every time. Next the study code is zero for never, one for few days, 2 for most of the days and three for every day. The code is differentiated according the nature questions but are consistent throughout the study.

Sample size & Sampling techniques

According to openepi.com the anticipated frequency was 0.34 as the prevalence of depressive and mental disorders are 34% and confidence limit is 5 and according to this data my sample size were 280. Consecutive sampling was done. Patients visiting THQ and BHUs were selected non-probably because these patients are unpredictable randomly selected would deny and the respondent was dropped, moving to next respondent, convenient sampling has helped a lot in convincing the respondents for information.

Inclusion and Exclusion criteria

Patients having 18 years of age and above are included in the study. All the patients who are willing also included. Below 18 years of age, not willing and mentally challenged patients were excluded to keep the data unbiased.

Data analysis process

Data was analyzed through SPSS version 25, independent variables be presented in tables. The study has also conducted confirmation analysis by calling the patients after results shown for any type of common mental disorder to engage them with doctors. The doctors have confirmed the symptoms after collection of data. Taking to a doctor helped us in confirmation that these answers given by respondents either shows that depression and anxiety exist or not. These patients are

quite sensitive more 50 calls were rejected to talk with doctors and according to the limitations of doctors we were able to communicate only few of these patients with doctors for the cross check and confirmatory analysis.

RESULTS

Average age of respondents is 31 years and minimum age is 18 years. However, the issue of mental disorder

also exists in people with age of 56 years. The data was collected from individuals, seeking treatment. Symptoms of common mental disorder is independent of age and can be found in younger age population as well as in older age. Similarly, common mental disorder can also be found in both educated and uneducated.

Table 1: Descriptive statistics of GAD-7 anxiety and PHQ-9 Depression Aggregate scores.

Statistics	Mean (Std. Dev)	Maximum	Minimum	Score Rang
GAD-7	9.32 (7.50)	17	6.50	0-21
PHQ-9	17.91 (4.00)	19	9.00	0-27
Thresholds	Moderate	Moderately Severe	Severe	
Cutoffs	=10	> 10 <14	>14	

The average aggregated score of GAD7 is 9.32, which is moderate anxiety. This average score is lower than defined threshold or cutoff point. There are some respondents which have scored 17 out of 21, which indicates prevalence of severely moderate anxiety and urgent need of clinical checkup and care. PHQ-9 has 9 components. The total score of PHQ-9 is 27. First Category is 0-4 = Minimal depression followed by the

range 5-9=mild, and so on 10-14=moderate, 15-19=moderately severe and 20-27=severe depression. The average aggregated score for PHQ-9 depression is 17.91, which indicates the prevalence of severely moderate depression in the selected respondents. None of the respondents have entered to last range, which is 20-27 that's why it is moderately severe depression.

Table 2: Frequency distribution of phq-9 aggregated scores for depression.

PHQ-9 Score	Percent % (N) Total N=282
0-4= Minimal depression	37.94% (107)
5-9 =Mild,	24.82% (70)
10-14=Moderate,	8.86% (25)
15-19=Moderately Severe	12.41% (35)
20-27=Severe Depression	15.97% (45)

More than 12 percent respondents are facing severely moderate depression and 15.97 percent of respondents are facing severe depression and these people are at serious risk of mental disorder, who are facing severe depression. The score indicates that most of the patients

are not highly depressed by significant amount of people are facing the issue of depression. Out of 282 respondents 45 are severely depressed, which is matter of thinking for policy makers and health care organizations.

Table 3: Frequency Distribution of GAD-7 aggregated Score for anxiety.

GAD-7 Scores	Percent% (N) Total N= 282
0-5 =Mild,	43.61% (123)
6-10=Moderate,	14.53% (41)
11-15=Moderately Severe	19.17% (54)
16-21=Severe Depression	22.69% (64)

22.69% respondents are facing generalized anxiety disorder at severe anxiety category, whose aggregate score of GAD-7 is between 16-21. Only 19.17 percent respondents are facing moderately severe anxiety disorder. By adding the score of moderately severe and severe anxiety it becomes 41.86 %. Both of these above-mentioned categories make it a significant portion to be considered for possible policy actions. 14.5 percent are facing moderate generalized anxiety disorder and 43.61 percent are below the 5 score on measures of GAD-7.

Table 4: Frequency distribution of common mental disorders in adults PHQ-9.

Item name and number	Statistics		
	Frequency	Percent	Cumulative Percent
Little interest (1)			
Not at all	187	65.6	65.6
Several days	63	22.1	87.7
More than half days	20	7.0	94.7
Nearly every day	15	5.3	100.0
Hopelessness (2)			
Not at all	219	76.8	76.8
Several days	50	17.5	94.4
More than half days	8	2.8	97.2
Nearly every day	8	2.8	100.0
Feeling tired every time (4)			
Not at all	191	67.0	67.0
Several days	66	23.2	90.2
More than half days	2	0.72	90.9
Nearly every day	26	9.1	100.0
Abnormal diet (5)	Frequency	Percent	Cumulative Percent
Not at all	117	41.1	41.5
Several days	97	34.0	75.9
More than half days	35	12.3	88.3
Nearly every day	33	11.6	100.0

Table 5: Frequency distribution of important gad- components.

Overthinking Item (3)	Percent %(N) Total N=282
Not at all	26.7 (76)
Several days	35.8 (102)
More than half days	13.0 (37)
Nearly every day	24.6 (70)
Over anxiousness 4	Percent %(N) Total N=282
Not at all	37.2 (106)
Several days	30.2 (86)
More than half days	
Nearly every day	27.4 (78)
Can't control worrying (2)	Percent %(N) Total N=282
Not at all	74.46 (210)
Several days	20.92 (59)
More than half days	5.67 (16)
Nearly every day	0.00 (0)

Overthinking at every time can create severe mental disorder and almost 25% of the people in Pakistan are on the verge of common mental disorder. Overthinking can cause anxiety, as it has been shown in the table since 25% of respondents are being trapped in overthinking at every time, therefore, almost 27% of the respondents

have experienced over-anxiety every time. Again, 35% of the respondents were involved in overthinking for sometimes; therefore, almost 30% of the respondents have to feel over-anxiety for some time. This argument justifies that overthinking can promote anxiety and if not shifted to another mood can cause over-anxiety.

Table 6: Percentage of non-zero distribution response on gad-7 indicators with respect to age anxiety.

Years	Anxiety (1)	Overthinking (2)	Negative intuition 7	Diversion in thinking 5	Short temperedness 6
Age	Several days	Several days	Several days	Several days	Several days
<25	8.00	6.49	13.59	1.65	17.00
26-32	18.44	18.51	6.41	22.35	16.89
33-40	12.56	11.31	22.32	10.50	13.69
41-47	31.67	9.69	30.68	35.50	2.11
48-55	9.33	31.99	11.23	16.30	11.31
>55	20.00	22.01	15.77	13.70	39.00

Only 16.4 percent think in a way that is self-destructive. Almost 13 percent of respondents with age limit of less than 25 years have negative intuitions, which indicates the existence of common mental disorder. However, the percentage of divert thinking is not highly significant in this age group. Self-destruction thinking can hit a person at any point. It can be also at early stage of adulthood or in mid 30s and it might be in late 50s. The results show that negative intuitions are more frequently found in age group of below 25 years and the age group of 40-47 however, it declines with increasing age.

So, it is concluded that the respondents with age group of < 25 years and > 47 years are more vulnerable to common mental disorders as it is indicated that these two-age group are severely facing common mental disorders.

Unemployment is a risk factor it can cause risk to involve youth in overthinking or self-destruction activities. 65.9% study populations considers a lack of education as one of the risk factor for common mental disorders. 82.63% population consider disturbed sleep as one of the biggest cause of depression and anxiety.

DISCUSSION

The gender composition of respondents indicates male dominancy in selected sample, where 62 percent are male and 38 percent are female respondents. The reason for this composition is the cultural restrictions, which doesn't allow to talk to every women easily. The society is conservative nature that's the reason the researcher was able to cover limited sample from female population. With respect to gender 57 percent male are married in our selected sample and 43 percent are unmarried. Out of all selected female respondents' 56 percent females were married and 44 were unmarried. However, out of total selected sample size of 282 respondents regardless of gender 59.35 percent respondents are married and 40.65 percent respondents are unmarried.

The results of the study indicate that most of respondents are not facing the issue of severe depression. The total score of PHQ-9 is 0-27, the results shows that 107 respondents has scored 0-4 which minimal depression, which is good indicators regarding the mental status of respondents. Only percent respondents are facing moderate level depression.

Study shows that more than 71 percent respondent argued that poverty can be a potential risk factor for common mental disorders like over thinking and negative intuitions. While few respondents argued that it doesn't matter for mental disorders that a person is poor or rich. It can be found in even rich families that someone is facing common mental disorder issues like short temper and self-destruction thoughts. In comparison with the study conducted by Joana Mona, Lisa bates, Sonia balotra, Elizabeth and s sikandar in

2018 found that lower assets, food insecurity, and dept were independently associated with higher depression symptoms.^[17] Furthermore, the study found that employment is also perceived a potential reason of common mental disorders, which indicates that unemployment is a risk factor it can cause risk to involve youth in overthinking or self-destruction activities. Maximum respondents 70.9% argued that unemployment is one of the risk factors for common mental disorder in adult population.

More depression was noted among elderly females than males, Result also shown that different independent factors, including age, economic dependency, health status and family behavior were associated with mental illnesses.^[18]

Short temperedness is quite significant in lower age groups of below 25 years of age group, but it declines in the mid age group and finally increases in the age groups above 40 years. The early adulthood is the strongest group of age for senses. Very small percentage of people has been found facing the issue senselessness in early adulthood.

This issue is stronger and frequently found in later age groups of above 47 years. it is quite interesting that common mental disorders like divergent in thinking and senselessness is almost neglect-able in early stages of adult youth in District Zhob Baluchistan, but negative intuitions self-destruction and lack of interest are the common disorder issues frequently found in the youth of Baluchistan, which can be of serious considerations for better and productive future of young generation.

So, it is concluded that the respondents with age group of < 25 years and > 47 years are more vulnerable to common mental disorders as it is indicated that these two-age group are severely facing common mental disorders. Another study conducted in holy family hospital Rawalpindi by abrar hussain, sadaf Hassan and sharaay abrar in 2016 with the title of frequency and predictors of depression among elderly population in Pakistan in which 209 people was studied and depression was found to be present in 28.71%. There was no statistically significant relationship between education, intimacy, sleep, having children or having not, financial support and depression. The analysis showed that there was a significant relationship between gender, people ever diagnosed for depression in life, persons having suicidal ideas at least once in life, poor marital relationship, monthly income between Rs10,000 to 30,000, elderly having no care giver and depression the study has Concluded that High frequency of depression was found among elderly community and diversity exists in predicting factors.^[19]

This study found that Patient health questionnaire PHQ—9 aggregated score indicates that there is a significant prevalence of depression in adult population,

which can be justify by looking to other factors and reasons given by the local as perception of risk factors, which can cause this disorder. However, it is quite interesting to see that anxiety score of GAD-7 is quite lower as compare to aggregated score of depression PHQ-9. This indicates that there some kind of hidden factors which are exclusively in contact with these two disorders.

According to this study one of the anxiety disorder components, Tiredness has the mean value 0.7836, this indicates that tiredness from few days is one of the symptoms of common mental disorder and if not handled properly can contributes to mental disorder. In other words, it can be said that average respondents feel tiredness for few days and if such behavior on the part of respondents persists for longer period can evokes depression, anxiety and other common mental disorder. Study conducted by Mustahsan SM¹, Ali SM, Khalid F, Ali AA, Ahmed H, Hashmi SA, Syedain M, Feroz F in 2013 the study comprised 364 subjects: 187 (51.37%) house officers and 177 (48.62%) postgraduate trainees. There were 274 (75.27%) females and 90 (24.72%) males. Of those who admitted to being sleep deprived (287; 78.84%), anxiety (n = 110; 38%), depression (n = 86; 30%), and insomnia (n = 52; 18%) .study concludes that working for 80-90 hours per week causes sleep deprivation and there is a risk of anxiety, depression.^[10]

CONCLUSIONS

The study concludes that most of the mental disorders are found in our respondents above the age of 40 years while the common risk factors of mental disorders are not very significant found in age group of below 25 years. The study concludes that anxiety is moderate, but depression is moderately severed. The generalized anxiety disorder frequency is higher but with lower intensity of anxiety prevalence in adult population than PHQ-9 for depression. However, the intensity of depression is greater, which indicates that age and unemployment are not the responsible factors for such evidences from the data. There are other unfolded factors with carrying potential risk for CMDs and anxiety issue among adult population.

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