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Adherence and Treatment Outcomes among Patients of Depression with Co-Morbidity from Kandahar, Afghanistan

Dissertation Submitted in partial fulfillment of the requirement for the award of the degree of Master of Public Health

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CERTIFICATE

Certified that the dissertation Adherence and Treatment Outcomes among Patients of Depression with Co-Morbidity From Kandahar, Afghanistan, Is a record of the research work undertaken by Dr. Masood Ahmad Noushad, in partial fulfillment of the requirements for the award of the degree of Master of Public Health under my guidance and supervision.

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DECLARATION

I hereby declare that this dissertation **ADHERENCE AND TREATMENT OUTCOMES AMONG PATIENTS OF DEPRESSION WITH CO MORBIDITY FROM KANDAHAR AFGHANISTAN,** Is the bona fide record of my original field research. It has not been submitted to any other university or institution for the award of any degree or diploma. Information derived from the published or unpublished work of others has been duly acknowledged in the text.

Dr Masood Ahmad Noushad

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ABSTRACT

I. BACKGROUND

Psychological well-being is a term used to depict either a dimension of intellectual or passionate prosperity or a nonattendance of a psychological issue. Psychological wellness is an outflow of one's feelings and means an effective adjustment to a scope of requests. The World Health Organization (WHO) characterizes psychological wellness as "a condition of prosperity in which the individual understands his or her own capacities, can adapt to the typical worries of life, can work profitably and productively, and can make a commitment to his or her locale". 1ICD-10 There are at present two generally settled frameworks that characterize mental scatters — , part of the International Classification of Diseases created by the WHO, and the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) delivered by the American Psychiatric Association (APA). These arrangements incorporate an extensive variety of emotional well-being issue. Since national and sub-national studies in Afghanistan have discovered high rates of sadness, uneasiness and post-awful pressure disorders– with no less than one of these influencing half of the populace matured 15 years or more seasoned, for handy purposes in this paper the term psychological well-being is limited to these conditions in addition to epilepsy, the pervasiveness of which is likewise high. Delayed clash and common war in Afghanistan have prompted expanded predominance of the in advance of referenced emotional well-being issue.

In spite of the fact that the Kandahar family has been extremely influenced by the war from most recent 40 years, there is proof of absence of distributed research deals with the help that families give to their ill relatives. The dimension of social pressure that the patients encounter from their social condition, the adherence and treatment results in patients experiencing mental scatters and their comorbidities have not yet been experimentally examined in the Kandahar .

II. METHOD

This was a pseudo-longitudinal study, in which repeated measurements on adherence to treatment; treatment outcomes and level of functioning variables were carried out on each patient who participated in the study in the period between December 2017 and May 2018. The researcher and his assistants did not carry out any

intervention on any patient. The participants were under their usual treatments prescribed and administered by the hospitals clinicians and other health workers at the said psychiatric facilities. The patients came from all over the province and beyond to seek services at the study site. From last six months every month 400 patients were attended this study site. The study sites were Darul sehat clinic in Kandahar in the Southern Western Province of Afghanistan.

III. RESULTS

This study sought to achieve specific objectives and test the hypotheses. and also We obtain the exact number of cases of Co-Morbidity of depression to other mental health disorders and we found during this study the relationship of treatments and adherence of Co-Morbidity of depression in Kandahar Afghanistan and finally we determined the factors that influence adherence to treatment among patients in Kandahar Afghanistan.

IV. CONCLUSION

The prevalence of Co-Morbidity of depression and other mental or neurological disorders was 31.4% where 17.9% had Co-Morbidity of depression and other mental disorders (without neurological disorder), 12.2% had Co-Morbidity of depression and other neurological disorders (without other mental disorders) and 1.3% had Co-Morbidity of depression, other mental and neurological disorders.

The overall level of adherence to treatment was 65.8% which indicated that the patients in Kandahar did not adhere optimally to treatment. Only 32.5% of patients achieved optimal adherence, a rate that is lower compared to developed countries. The vast majority of patients missed scheduled clinical appointments and other non-pharmacological treatments and post- treatment follow-ups.

It emerged that the main significant factors influencing (hindering or promoting) adherence to treatment among patients in Kandahar were side effects associated with medication, the affordability of treatment regimen, poor fit between treatment requirements and patient's lifestyles or daily routine, communication, attitudes of service providers, availability of appointment staff, Co-Morbidity of depression and other disorders, being busy, forgetfulness, travelling, social support, having problems in social environment, having relatives who were stressful, having problems with (barriers to) access to healthcare

services .

The adherence to treatment was significantly related to relapse and re-hospitalization. The study concluded that there was a weak significant relationship between adherence to treatment and treatment outcomes among patients.

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LIST OF ACRONYMS

BASIS: Behavior and Symptoms Identification Scale CARAES: Caritate Aegrorum Servi

DF: Degrees of freedom

DALY: Disability Adjusted Life-Year DCF: Department of Children and Families

DSM: Diagnostic and Statistical Manual of Mental Disorders EMCDDA: European Monitoring Centre for Drugs and Drug Addiction GAF: Global Assessment of Functioning

HIV: Human Immunodeficiency Virus

ICD-10: International Classification of Diseases -10 IRDB: Institute of Research and Dialogue for Peace

MhGAP: Mental Health Gap Action Program MPR: Medication Possession Ratio

N (%): Number (Percentage) P: P-value

PTSD: Post Traumatic Stress Disorder SD: Standard Deviation

UNODC: United Nations Office on Drugs and Crime

UNODCCP: United Nations Office for Drug Control and Prevention US: United States

USA: United States of America V: Cramer's V

WHO: World Health Organization

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CHAPTER-1
INTRODUCTION

I. PSYCHOLOGICAL WELLNESS IN AFGHANISTAN

Psychological wellness is a term used to portray either a dimension of subjective or passionate prosperity or a nonattendance of a psychological issue. Psychological well-being is a statement of one's feelings and implies an effective adjustment to a scope of requests. The World Health Organization (WHO) characterizes psychological wellness as "a condition of prosperity in which the individual understands his or her very own capacities, can adapt to the typical worries of life, can work gainfully and productively, and can make a commitment to his or her community".1ICD-10 There are as of now two generally settled frameworks that arrange mental scatters — , part of the International Classification of Diseases delivered by the WHO, and the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) created by the American Psychiatric Association (APA). These characterizations incorporate an extensive variety of emotional wellness issue. Since national and sub-national reviews in Afghanistan have discovered high rates of melancholy, uneasiness and post-horrendous pressure disorders– with no less than one of these influencing half of the populace matured 15 years or more seasoned, for commonsense purposes in this paper the term emotional wellness is limited to these conditions in addition to epilepsy, the pervasiveness of which is additionally high. Drawn out clash and common war in Afghanistan have prompted expanded predominance of the in advance of referenced emotional wellness issue.

The narrative of the most recent 30 years in Afghanistan is one of extended clash, social agitation, political unsteadiness and substantial scale interior and outer relocation. The nation encountered the Soviet occupation pursued by in-battling among Mujahedeen groups2, the unforgiving routine of the Taliban and now, the on-going military crusade of alliance powers against the Taliban and Al-Qaeda. More than one million individuals have been murdered, one million are debilitated and millions either moved toward becoming evacuees or are inside uprooted. One can scarcely locate an Afghan family that has not lost at least one individuals over the span of the most recent 30 years because of contention.

Furthermore, with simple access to generally low-cost illicit medications, countless have moved toward becoming medication clients and are enduring weakening mental, physical and social issues subsequently.

A United Nations Office on Drugs and Crime (UNODC) sedate use study in 2009 evaluated one million grown-up medication clients in Afghanistan.

Medication misuse and emotional wellness issue shape an endless loop and are both reason and result of one another. Beside the man-made debacle of contention, as of late, the nation has likewise been hit by a drawn out dry spell, which has extremely harmed the nourishment accessibility for family units and has additionally irritated the two relocations of the populace and further savagery in the nation, and in addition a genuine seismic tremor in 1998 in the northern Afghanistan. The majority of the above elements have seriously harmed the social framework of the country. Afghanistan has a portion of the most noticeably awful wellbeing markers on the planet. Maternal mortality is the second most noteworthy on the planet (1600 for every 100,000 life birth), while kid and newborn child mortality are a lot higher than the normal for low-pay nations. Irresistible maladies including respiratory contamination and the runs additionally take a high toll. This illness example of preventable causes is additionally entangled by an expanding weight of emotional well-being issue. As per WHO, around million Afghans experience the ill effects of psychological wellness issue, which could be one of the components adding to viciousness at network and family unit level. The savagery isn't just spouses against wives, yet additionally siblings against sisters, mother-in-laws towards little girl in-laws and dependably against youngsters. Due to socio-social setting (low marriage age, high ripeness rate and absence of authority over possess life), psychological sickness are higher among ladies, which is a probable supporter of the elevated amounts of ailing health among kids in the nation.

It has been all around reported that emotional wellness issues unfavorably influence maternal consideration giving, e.g., bosom bolstering, responsive correlative sustaining, in this way influencing youngster engine and intellectual improvement, and expanded pervasiveness of hindering (interminable unhealthiness), which could be a causative factor in the elevated amounts of hindering in Afghanistan (in excess of 50 percent among kids under five). Meanwhile, because of social limitations, social taboos and absence of female wellbeing experts conveying administrations to female patients remains a vital test.

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II. MENTAL HEALTH IN WORLD

Psychological well-being is characterized as a condition of prosperity in which an individual understands his or her very own capacities, can adapt to the typical worries of life, can work profitably and can make a commitment to his or her locale (WHO, 2010).

It is more than the nonattendance of mental issue or handicaps; it is an essential piece of wellbeing since there is no wellbeing without mental health‖ (Prince et al., 2007).

Emotional wellness issues are perceived by the WHO as a portion of the main sources of significant horribleness and inability on the planet (WHO, 2010; Njenga et al., 2005).

The people suffering from mental disorders form one of the most vulnerable groups in the world.

They are often subjected to social isolation, poor quality of life and increased morbidity, disability and mortality (Njenga et al., 2005; WHO, 2010).

These disorders cause immense suffering and the stigma associated to them is detrimental (Ndetei, 2006).

The stigma not only affects the patients but also the family of the patient and all that are involved in the care of the patients, namely the health workers, institutions, services, treatments among others (Ndetei, 2006; WHO, mhGAP, 2008).

The patients suffering from these disorders often have other medical and chronic conditions such as HIV/AIDS, cancer, heart and cardiovascular diseases, diabetes, gynecological and genitourinary conditions among others (WHO, 2010).

This deteriorates the health status of the patients with mental disorders even more.

There are situations where a patient suffers from one disorder only but cases of Co-Morbidity have also been reported in previous studies (Ndetei et al., 2008).

The comorbidities worsen the health of the patient and affect the socio-economic situation of the patient and family.

In addition to this, the treatment becomes difficult. The total recovery is hard to achieve as the patients relapse because of non-adherence to treatment which results in re-hospitalizations and further disabilities (Mueser and

Gingerich, 2011).

The relapses and re-hospitalization lead to the overuse of services and facilities which results in the increase in associated costs.

As indicated by the WHO (2005) in excess of 450 million individuals overall experience the ill effects of mental or social issue. Chan (2010) noticed that in excess of 150 million individuals experience the ill effects of sadness, somewhere in the range of 125 million individuals are influenced by liquor use issue, upwards of 40 million individuals experience the ill effects of epilepsy and 24 million from Alzheimer's sickness and different dementias, and about 1 million individuals take their own lives by submitting suicide.

The WHO (2006) gauges that neurological scatters and their sequelae influence upwards of one billion individuals around the world, and distinguished wellbeing disparities and social disgrace or separation as central point adding to the related incapacity and enduring. To the extent substance misuse is concerned, 4% of the worldwide weight of the malady was credited to liquor (WHO, 2006).

As indicated by Rehm et al. (2003) liquor was causally identified with in excess of 60 International Classification of Disease codes and Room et al. (2005) noticed that liquor comprises a genuine general medical issue.

Around the world, 185 million individuals were assessed to have utilized unlawful medications amid 1998-2002 with cannabis being the most generally utilized illegal medication with 146.2 million clients in 2002 (UNODC, 2004, UNODCCP, 2002).

III. OBJECTIVES

Broad objective

The main objective of this study was to investigate the adherence and treatment outcomes in patients with Co-Morbidity of depression and other mental disorders in Kandahar.

Specific objectives

- To determine the prevalence of Co-Morbidity of depression and other mental disorders in patients in Kandahar Afghanistan.
- To determine the factors that influence adherence to treatment in patients in Kandahar Afghanistan.
- To find the relationships between the adherence to treatment and treatment outcomes in patients in Kandahar Afghanistan.

IV. RESEARCH QUESTIONS

- What is the prevalence of Co-Morbidity of depression and other mental disorders in patients in Kandahar Afghanistan?
- What are the factors that influence adherence to treatment in patients in Kandahar Afghanistan?
- What is the relationship between the adherence to treatment and treatment outcomes in patients in Kandahar Afghanistan?

V. LIMITATION OF THE STUDY

Galbaud et al. (1993) remarked that Co-Morbidity might be more prevalent in clinical samples and it is important to study patterns of Co-Morbidity between different mental disorders in general population samples. However, it would be extremely difficult to carry out this study in the general population, primary health care facilities and even in district hospitals as reporting, examinations and diagnosis on mental disorders are very limited due to various reasons including stigma, unspecialized or insufficient staff, lack of enough experience, diagnostic equipments and machines among others. The researcher chose to conduct a hospital-based study and strictly adhered to methodological guidelines and differential diagnosis principles in order to address this limitation.

CHAPTER-2
REVIEW OF LITERATURE

In this chapter the review of literature related to this study is presented. The chapter covers the previous studies done on mental disorders, Co-Morbidity of depression and other disorders, adherence to treatment, treatment outcomes, among other relevant aspects to the objectives, research questions and hypotheses of this study.

➢ *Mental disorders*

As indicated by the WHO (2007), mental disarranges are ―psychiatric illnesses‖ which seem fundamentally as variations from the norm of thought, feeling or conduct, creating either pain or disability of capacity.

DSM-IV Axis I incorporates clinical disarranges which incorporate major mental clutters, learning issue and substance use issue and hub II incorporate identity issue and scholarly inabilities. Mental clutters can be named temperament issue, nervousness issue, change issue, schizophrenia and other crazy issue, somatoform scatters, dissociative disarranges, identity issue, liquor and other substance related disarranges, sexual scatters among others. Mental disarranges incorporate clinical gloom, bipolar confusion, schizophrenia, psychosis, summed up uneasiness issue, freeze issue, agoraphobia, phobic scatters, PTSD, liquor and other substance-related clutters, sexual brokenness, standoffish identity issue, fanatical impulsive identity issue, jumpy identity issue among others (DSM-IV-TR, ICD-10).

➢ *Depression and other disorders*

As indicated by the WHO, misery is a predominant mental turmoil influencing more than 150million individuals around the world. It presents with discouraged mind-set, loss of intrigue or joy, sentiments of blame or low self-esteem, irritated rest or craving, low vitality, and poor focus (WHO, 2010).

The issues related with sorrow can prompt generous hindrances in an individual capacity to deal with his or her ordinary duties and at its more awful, melancholy can prompt suicide, a shocking casualty that is related with the loss of around one million lives each year (WHO, 2010).

In 2000, sadness was a main supporter of the worldwide weight of sickness and it is anticipated that

continuously 2020, misery will achieve the second place of the positioning of DALYs determined for all ages (WHO, 2010).

The WHO further announced that less than 25% (in a few nations less than 10%) of those influenced by wretchedness approach compelling medicines, yet the stimulant prescription and brief, organized types of psychotherapy are powerful for 60-80% of those influenced (WHO, 2010). Shekhar (WHO, 2010) gauges that about 95 million individuals with melancholy living in creating nations don't get any treatment or care. As per Ndetei (2006) the lifetime prevalence of depression is 8-12% for men and 20-26% for women.

Around 12-20% of person who encounter an intense scene of discouragement will build up a constant burdensome disorder basically because of improper determination and wrong medication the executives, and 15% of the individuals who experience the ill effects of sadness will in the end pass on of suicide (Ndetei, 2006).the locale (Prince et al., 2007).

The weight of mental and neurological issue is critical in Sub-Saharan Africa where most of the World's poorest nations are found. For example the weight of epilepsy, melancholy, medication and liquor misuse influence the lives of a large number of Africans, disturbing the day by day course of life, testing families and burdening the social and financial texture of the locale (Prince et al., 2007).

Mental clutters, for example, melancholy, substance use issue, seizures and mental conditions convey social shame in all parts of the world and all the more so in Africa where basic changes in conduct, for example, perplexity can be viewed as franticness and seizures can be viewed as ownership by malicious or irate spirits (Baskind and Birbeck, 2005).

As per Acuda and Kuria (2005), liquor is by a wide margin the most as often as possible utilized and manhandled psychoactive substance in Sub-Saharan African nations with 20% of mental doctor's facility confirmations and 20-30% of affirmations by and large restorative wards having liquor reliance issues.

In spite of the earnestness of mental issue, Gureje (2009) noticed that just around half of the nations in Sub-Saharan Africa have psychological well-being strategies set up, which by and large are obsolete.

Co dismalness of sorrow and different issue A patient might be determined to have one, two or more issue. In this investigation, co bleakness will allude to the co-event of at least two issue in a patient (Maree and Heather, 2003).

Therefore, the co dismalness of misery and other mental disarranges can be characterized as the co-event of discouragement and at least one other mental scatters.

Ndetei (2010) noticed that individuals who are discouraged or have other mental conditions, particularly schizophrenia, are probably going to float to cannabis use and that the individuals who utilize the medication on a long haul premise are at twofold danger of building up a psychological issue particularly in the event that they are hereditarily inclined or have a family ancestry of medication use.

In the investigation on co grimness of real gloom and tension issue: acknowledgment and the executives in essential consideration in USA, Robert and Hirschfeld (2001) found that somewhere in the range of 10% and 20% of grown-ups in some random year time span will visit their essential consideration doctor amid an uneasiness or burdensome issue scene, and more that half of these patients experienced a co-bleak second burdensome or nervousness issue (Robert and Hirschfeld, 2001).

Lowe et al. (2008) detailed that over half of the clinical populace determined to have tension issue was at the same time determined to have sorrow where freeze issue, summed up nervousness issue, PTSD, fanatical impulsive clutters and a few fears were the most co-dismal uneasiness issue with discouragement (DSM-IV).

In the investigation done in Korea on the co grimness of PTSD and despondency, Ikin et al. (2010) found that 75% of veterans met the criteria for co grim PTSD and misery, 15% has PTSD without gloom and a further 6% had sorrow without PTSD.

Different investigations have demonstrated the Co-Morbidity of schizophrenia and other mental disarranges with temperament issue being the most predominant (Escamilla, 2001).

As indicated by Siris (2001), the patients with Schizophrenia are more probable than the all inclusive community to encounter burdensome side effects.

The American Psychiatric Association (2000) in its National Co-Morbidity Study detailed that 59% of patients with schizophrenia met the DSM-IV criteria for major or minor despondency. Different examinations have revealed the rates of event of discouragement in Schizophrenia between 7% (Siris, 2000) and 75% (Koreen et al., 1993). Siris (2000) announced that the modular rate of sorrow in Schizophrenia for all investigation reports was 25%.

As per DSM-IV, every single burdensome state happening whenever after an insane scene would qualify as post crazy gloom while diagnosing post maniacal dejection utilizing ICD-10 necessitates that burdensome manifestations create inside a year time frame following the intense maniacal scene. Jeczmien (2001) commented that frequently post insane sadness can be confused with additional pyramidal-like manifestations as the optional impact of antipsychotic medicine. Iqbal et al. (2004) noticed that postpsychotic wretchedness can happen autonomously of the side effects of Schizophrenia.

Iqbal et al. (2000) found that amid the months before the improvement of post maniacal misery, the patients created more noteworthy misfortune, mortification and sentiments of ensnarement in contrast with the individuals who backslid and did not create melancholy.

These analysts likewise discovered that patients who built up a post maniacal dejection were additionally bound to see themselves in a lower status with lower confidence, better understanding and an uplifted familiarity with the conclusion (Iqbal et al., 2004).

Wittmann and Keshavan (2007) saw that distress and grieving happen in patients with schizophrenia and discouragement following the principal scene of psychosis as the patients endeavor to effectively adapt to their acknowledgment of their ailment.

For Siris (2000) dysphoria and discouragement were frequently the principle introductions of clinically huge burdensome indications in patients with schizophrenia once maniacal side effects were balanced out.

Siris (2000) noticed that the event of the phenomenology of dejection in a significant level of patients with schizophrenia (and also psychosis in patients with discouragement) has kept alive the twin issues of the fitting

enlightening limits between the two issue and the best ways to deal with treatment, antipsychotic operators or antidepressants.

As indicated by Felmet et al. (2011), the finding and treatment of patients with schizophrenia and co-happening sorrow is trying for the two clinicians and scientists because of the cover of symptomatology among sadness and burdensome issue.

In an investigation done in Iran to evaluate state of mind, nervousness and maniacal issue in patients with epilepsy, Amir et al.(2006) found that the lifetime predominance of major mental disarranges including disposition, tension and maniacal issue was 68.3% in individual with epilepsy and 36.7% in controls without epilepsy. Real burdensome turmoil was the most common co-grimness with 33% while over the top enthusiastic confusion and burdensome issue not generally indicated were in the second and third positions with 20% and 13.3% separately (Amir et al., 2006).

Pruerter and Norra (2005) likewise discovered that sadness was the most common mental co-horribleness with epilepsy. In another examination to decide the mental issue related with Epilepsy, Vuilleumier and Jallon (1998) evaluated that 20-30% of patients with epilepsy have mental unsettling influences with the most pervasive issue being gloom, tension and psychoses.

The Co-Morbidity of melancholy and migraine issue was accounted for in Italy by Beghi et al. (2007) where MINI meeting identified a burdensome scene in 59.9% of patients with headache, 68.3% of patients with strain type cerebral pain and 69.6% of patients with joined headache and pressure type migraines.

- *Co-Morbidity and families of patients*

The patient and family ancestry, past and continuous social and relationship issues, living and monetary conditions, and some other progressing distressing life occasions are a portion of the imperative components to consider amid evaluation of mental issue in patients (WHO, 2010). The WHO (2010) encouraged to utilize family and network assets to contact individuals who have not came back to doctor's facilities for ordinary development, to be touchy to social difficulties that the patient may face and note how these may impact the physical and psychological wellness and prosperity, to include the relative in the individual's consideration and to empower inclusion in self-improvement and family bolster gatherings. Furthermore, McGraw (1980)

characterized the family as the main division of wellbeing, training and welfare that works. She expressed that the family is the imperative focal point of improvement for individual, a capacity that can't be copied or supplanted by some other foundation.

As per Njenga et al. (2005), individuals with mental clutters are at expanded danger of medication and liquor misuse which are forerunner of viciousness at home.

The specialists noticed that there was proof of weight on African family to modernize, end up atomic and consequently westernize while then again there was an incredible power the other way to hold and regard convention.

Also, there are numerous difficulties that families need to confront today in Africa. These incorporate maltreatment, disloyalty, recklessness and other brokenness, poor correspondence and connections, numbness among others which can be chance components for real misery. For sure the family should assume an imperative job in the treatment and restoration of individuals with mental clutters by changing the frames of mind towards mental scatters, diminishing weight on sick individuals, supporting endeavors at reintegration into a significant social job (WHO, 2010, Njenga et al.2005).

- *Co-Morbidity and adherence to treatment*

Adherence can be characterized as the degree to which patients adhere to guidelines they are given for recommended medicines (Haynes et al., 2002).

Adherence has supplanted the term consistence which has been made a decision to propose lack of involvement and compliance with respect to patients.

The term adherence suggests persistent supplier cooperation and a functioning job of patients in their treatment (Rogers and Bullman, 1995).

As indicated by Levensky and O'Donohue (2006), non-adherence to medicines can take various structures to be specific not visiting or coming late to arrangements, not starting a suggested treatment, not finishing conduct proposals or homework, for example, increments in physical exercises, changes in eating regimen, self-

observing, in vivo presentation and unwinding works out, not accepting prescription as recommended which incorporate taking too numerous or excessively couple of pills, taking drug at inaccurate occasions, not following dietary limitations, and ending the treatment rashly. Levensky and O'Donohue (2006) suggested that when contemplating routine adherence, it is imperative to evaluate the examples of adherence which are never starting the routine, stopping the routine, routine occasions, adherence following side effects involvement and non-adherence with no evident example.

At the point when a patient never starts the routine, it implies that he/she doesn't take a solitary portion of the routine. Some different patients will begin the routine, tail it for some time however stop it later and never continue it. The other circumstance of routine occasion is that in which a patient stops the routine for some timeframe and afterward continues. A patient may likewise follow distinctively dependent on whether the person feels good or more regrettable. The instance of no obvious example is that example of portions taken is whimsical and unusual (Levensky and O'Donohue, 2006). The Co-Morbidity of a few issue has been related with untimely stopping of treatment, prior backslide, poorer treatment reaction, and more awful long haul result (Zikos et al., 2010). The result of non-adherence to medicinal and conduct wellbeing medications is frequently that the helpful effect of conceivably compelling medicines is decreased, and generous and superfluous wellbeing, social and monetary expenses are brought about (Christensen, 2004).

- *Factors influencing adherence to treatment*

Levensky and O'Donohue (2006) noted that the factors related to non-adherence to treatment include those related to the patient, those related the treatment regimen itself, those related to features of the disease or target problem such as Co-Morbidity, those related to the patient-provider relationship and those related to the clinical setting. Among the factors related to the patient, lack of knowledge of treatment requirements, cognitive, language or literacy deficits, lack of self-management and coping skills, lack of tangible resources including financial, housing and transportation stressful life events like death of a loved one and ending of important relationship, inadequate social support, side effects to the patient, fear of stigma for health problem among others can be cited.

The treatment may also be highly complex and demanding such as in the case of large number of pills to be taken, long duration, high cost and frequent and severe side effects of treatment regimen. When there is a poor fitting between treatment requirements and patient's lifestyle and daily activities such as eating and sleeping

patterns, work schedule, social life and other daily activities, then non- adherence to treatment may follow (Levensky and O'Donohue, 2006).

Among the factors related to the disease itself, Levensky and O'Donohue (2006) reported the level of seriousness of the health problem, long-term duration of the health problem, lack of symptoms, or symptoms interfering with adherence such as problems with memory, mobility or vision can be given as examples. Poor communication between patient and provider, lack of trust and/or comfort with provider are few of non-adherence factors related to the patient-provider relationship. The factors related to the clinical setting include poor accessibility of services, availability of appointment staff, hours of operation, wait time for services, unfriendly or unhelpful staff among others (Levensky and O'Donohue, 2006).

In a study to elucidate predictors of non-adherence among psychiatric patients presenting at a tertiary care hospital of Pakistan, Fawad et al. (2008) found that out of 128 patients, those with medical Co-Morbidity represented 32.8% and were less adherent than those without Co-Morbidity ($p=0.002$). They also found that the reasons for non-adherence included sedation (30%), medication cost (22%), forgot to take medication (36%) and inability of the physicians to explain the timing and dose (92%) or benefit of medication (76%).

➢ *Co-Morbidity and treatment outcomes*

As indicated by studies, patients with Co-Morbidity have a poor visualization and poor treatment result. The most steady indicator of poor result for customers in treatment for substance abuse is the nearness of psychopathology (Rounsaville et al., 1987). Similarly, substance abuse is an indicator of poor treatment for rationally sick patients (Carey et al., 1991). Specialists have seen that instances of foolish and solitary practices may create in extraordinary circumstances, prompting vagrancy, withdrawal from family and network, and the introduction of high hazard practices, for example, culpable, intravenous medication use, needle-sharing, suicide endeavors, perilous sex, and gorge utilization (Murray et al. 1999).

Every one of these variables add to expanded danger of early mortality (Evans and Willey, 2000). Swofford et al. (1996) found that co dismalness was related with high rates of backslide and Linszen et al. (1994) found that it was related with re-hospitalization. The viciousness, capture, detainment, vagrancy and poor lodging steadiness were additionally negative components related with Co-Morbidity (Clark et al., 1999; Osher et al., 1994).

In an examination to decide the impact of mental Co-Morbidity on recuperation and repeat in summed up tension issue, social fear and frenzy issue, Bruce et al. (2008) announced that the by and large clinical course was declined by a few co-bleak mental conditions, including significant melancholy and liquor and other substance use issue, and by Co-Morbidity of summed up nervousness and frenzy issue with agoraphobia. It was likewise discovered that the nearness of specific co-sullen mental clutters altogether brought down the probability of recuperation from tension issue and improved the probability of their repeat.

The investigations have uncovered that incorporated treatment that is given in an emotional wellness or a substance abuse benefit or in an uncommon co horribleness program or administration yielded preferable results over successive or parallel treatment (Drake et al., 1998, 2000). Incorporated medications depend on the thought that a solitary customized program provides food for both emotional wellness and substance abuse issues by a similar expert clinicians (Drake et al., 2000).

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CHAPTER-3
METHODOLOGY

I. METHODOLOGY

In this part, the exploration strategy is exhibited. The issues identified with the exploration plan, area of the examination, target populace, test measure assurance, inquire about instruments, legitimacy and unwavering quality, information gathering strategies and information investigation.

This was a pseudo-longitudinal examination, in which rehashed estimations on adherence to treatment; treatment results and dimension of working factors were completed on every patient who took an interest in the investigation in the period among May and October, 2012.

II. VARIABLES

➢ *Independent variables*

In this examination, the autonomous factors incorporated the financial and statistic qualities of the patients, for example, age, sexual orientation, dimension of formal instruction, conjugal status, talked dialects, occupation, religion, salary, number of wards, family attributes, place of living arrangement and work status among different factors that may impact adherence to treatment.

➢ *Dependent variables*

In this study, the dependent variables are the level of adherence to treatment and treatment outcomes.

➢ *Study Site*

The investigation site was Darul sehat mental clinic located in Kandahar at the Southern western Province of Afghanistan. Kandahār (/ˈkændəˌhɑːr/) or Qandahār (Pashto: کندهار; Dari: قندهار; referred to in more established writing as Candahar) is the second-biggest city in Afghanistan, with a populace of around 557,118. Previously called Alexandria Arachosia, the city is named after Alexander the Great, who established it in 329 BC around an old Arachosian town. Kandahar is situated in the south of the nation on the Arghandab River, at a

height of 1,010 m (3,310 ft).

It is the capital of Kandahar Province, and furthermore the focal point of the bigger social locale called Loy Kandahar. In 1709, Mirwais Hotak made the district a free kingdom and transformed Kandahar into the capital of the Hotak line. In 1747, Ahmad Shah Durrani, organizer of the Durrani tradition, made Kandahar the capital of the Afghan Empire. Kandahar is the Regional Hub in southern Afghanistan, near the outskirt with Pakistan. Non-developed land use represents 59% of the aggregate land region.

Inside the developed territory, empty plots possess a marginally higher level of land (36%) than private land (34%). There is a critical business bunch along the way to Pakistan in District 5. India, Iran and Pakistan work their department here for exchange, military and political connections. Kandahar has a semi-dry atmosphere (Köppen BWh), portrayed by little precipitation and high variety among summer and winter temperatures.

Summers begin in mid-May, last until late-September, and are greatly dry Temperatures crest in July with a 24-hour every day normal of around 31.9 °C (89.4 °F). They are trailed by dry pre-winters from early October to late November, with days as yet averaging during the 20s °C (over 68 °F) into November, however evenings are pointedly cooler. Winter starts in December and sees the vast majority of its precipitation as rain Temperatures normal 5.1 °C (41.2 °F) in January, in spite of the fact that lows can drop well underneath solidifying.

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Fig 1:- Map of Kandahar city

They tend toward the beginning of March and are trailed by a charming spring till late-April with temperatures by and large in the upper 10s °C to bring down 30s °C (65– 88 °F) run. Bright climate commands all year, particularly in summer, when precipitation is to a great degree uncommon. The yearly mean temperature is 18.6 °C (65.5 °F).

III. TARGET POPULATION

The target population consisted of all the in- and out-patients who sought services at Darul sehat psychiatric clinic during the period between December2017 and May 2018. These patients come from all over the province and beyond to seek services at the study site about 400 patients attend this study site monthly.

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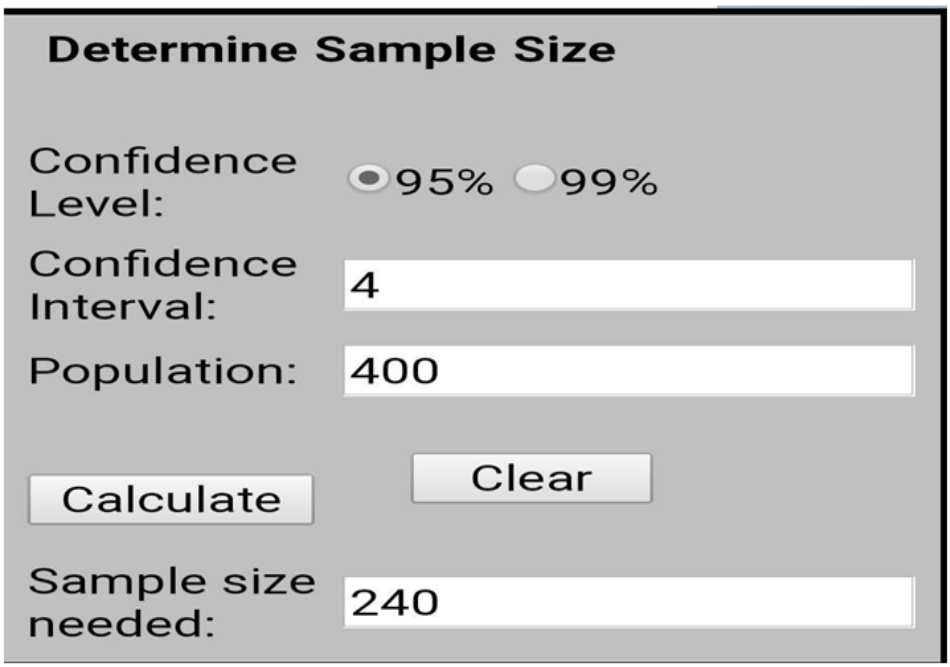

Fig 2:- Sample Size Determination

IV. INCLUSION AND EXCLUSION CRITERIA

➢ *Inclusion criteria*

For a patient to participate in this study, all the following three criteria should be fulfilled:

- To be an in- or out-patient who is above 18 years old.
- To be in a state of mind to be engaged in a meaningful interview.
- To freely give informed consent by signing the consent form

➢ *Exclusion Criteria*

The following criteria were used to exclude the patients from participating in this study: The patients who were in a state of mind that cannot allow him or her to give informed consent.

- The patients who did not consent to participate in the study.The patients who lived in a home or center of chronic patients.

➢ *Sampling*

The questionnaire data was collected without the support of any digital device and directly on paper since it was felt that the presence of these devices such as smartphones tablets and similar – might attract unwanted attention and result in mistrust. The data was later entered into epi info version 7.2 01 (CDC,2016) and analyzed using the same software with a confidence interval of 95 % .

Since there were about 400 patients who attend the hospitals monthly, and a sample of 240 patients was needed then a sampling interval of 4 in systematic random sampling was used. Every 4th patient who attended the study site on the day of data collection was selected and included in the sample if he or she fulfilled all the study inclusion criteria stated above. The patients were interviewed and assessed at the clinic as by given them regular appointments to come back to clinic to monitor progress, to collect medication or to attend to non-pharmacological treatment sessions such as psychotherapy or physiotherapy.

During data collection process, the first step was to select using systematic random sampling a patient among those who attended the study sites from December2017 onwards and fulfilled the inclusion criteria. A patient who was recruited was approached to get the informed consent after ascertaining that he was in a good state of mind to participate in the study.

The inclusion and exclusion criteria were strictly followed during the recruitment period which lasted less than two months to reach the 241 study participants that were needed in this study. Once a patient was selected and gave informed consent to participate in the study, he/she was accompanied to a private quite room in which interviews and assessments were carried out after the patients had received their health services for which they had come to the clinic.

The first specific objective of this study was to determine the point prevalence of Co-Morbidity of depression and other mental disorders among patients attending psychiatric clinic in Kandahar. The Second specific objective of this study was to determine the factors that influence adherence to treatment among patients attending psychiatric clinic in Kandahar. The changes for each patient were determined and recorded. The data collected on these changes was Used to achieve the third objective of the study.

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V. DATA COLLECTION TECHNIQUES AND MEASUREMENTS

The primary diagnosis of the study participant was extracted from his or her medical records. To screen for depression and other mental disorders, the MINI International Neuropsychiatric Interview (Sheehan and Lecrubier, 2006) instruments based on DSM-IV and ICD-10 was used. The prevalence of Co-Morbidity of depression and other mental disorders was thereafter determined.

➢ *Measuring adherence to treatment*

According to Foster et al. (2011), a combination of measures to estimate adherence may be best. In this study, the adherence to treatment was measured using three different techniques and tools. This was done to make sure that the strengths of one method compensate the weaknesses of the other and therefore capture the correct information to measure adherence levels (Vitolino et al., 2000).

➢ *Two- week self-report recall*

The patients were asked to report how they took their medication (psychotropic and other drugs) in the last two weeks. Modified Morisky Scale self-rated measure of medication Adherence was used to measure knowledge and motivation about treatment adherence. The Modified Morisky Scale consists of six questions, three of which are about motivation to adhere to treatment and three others are about knowledge about treatment adherence.

On each question, a respondent scores 0 or 1 depending on his/her response. A total score of 0- 1 indicates low motivation or knowledge, while a total score of 2-3 indicates high motivation or knowledge about treatment adherence. A total score out of 6 or percent can be calculated for each respondent. In this study, the overall score was translated into a percentage score for each patient and an overall mean score percent for all patients participating in the study was computed.

➢ *Pharmacy refill records*

Pharmacy refill data for individual patients was collected and examined during the follow-up period to assess adherence to treatment. It is known that pharmacy refill records provide a reliable and non-intrusive longitudinal measure of medication adherence especially for chronic illnesses (Bosworth, 2006).

➢ *Pill count*

The patients attending psychiatric clinic in Kandahar are normally given monthly clinical appointments to come back to the hospitals to refill their medication. The selected respondents attended their clinical appointments and refilled their psychotropic and other medication at the respective sites where they had been recruited to participate in the study.

During the first interview, each respondent was requested to bring the remaining pills on next clinical appointments given by doctors or on next medication refill at the respective hospital's pharmacy. The number of pills left over since the previous refill was determined.

➢ *Measuring treatment outcomes*

Amid information accumulation, the instruments that were utilized to evaluate the treatment results were the Behavior and Symptoms Identification Scale known as BASIS-32 (Eisen, 2009, rev. January) and Modified Global Assessment of Functioning (Caldecott-Hazard and Hall, 1995, adjusted 2004) where the degree of troublesome experienced by the patient in various regions of working together with the dimension of working were evaluated after like clockwork.

The BASIS-32 is a device that gives tolerant profiles and measures the adjustments in self revealed side effect and issues trouble throughout time. As indicated by Eisen (2009BASIS- 32 is a results estimation apparatus, designed for pre-and post-treatment organization for psychological well-being patients matured 14 and more seasoned.

This instrument comprises of 32 questions that can be arranged into five spaces specifically the connection to other people, dejection and uneasiness day by day living and job working, incautious and addictive conduct, and psychosis. For each inquiry, a score of 0-4 is dispensed relying upon the degree of trouble experienced by the patient. The GAF scale depends on a continuum of psychological wellness and dysfunctional behavior. It is a 100-point scale where a score of 100 speaks to the most abnormal amount of working in all zones.

Each investigation member was evaluated twice amid the period from May to October, 2012 utilizing these treatment result instruments. Albeit every one of the above instruments is an independent apparatus, it was chosen to utilize the two instruments to incorporate both the evaluation perspectives and results from the patient

and from the wellbeing specialist who surveys the patient.

Apart from individual patient's scores, an average was computed to get the final score on treatment outcomes for the sample. The overall mean score percent was used to determine the extent of difficulty and level of functioning, and the changes in time; hence the treatment outcomes among patients.

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CHAPTER-4
RESULTS AND DISCUSSIONS

This study sought to achieve three specific objectives and test the hypotheses. This chapter has two main parts namely the presentation and discussion of results. First, presentation of the socio-economic and demographic characteristics of study participants is given. Then, the presentation and discussion of results were done by each specific objective. The decisions to reject or not reject each of the null hypotheses are also given in this chapter.

➢ *Prevalence of Co-Morbidity of depression and other mental disorders*

It was discovered that 80 (33.3%) patients did not have melancholy, 90(37.5%) had sorrow just and 70(31.4%) had despondency and different issue, be they mental or neurological clutters. It was explicitly discovered that the pervasiveness of co dreariness of dejection and other mental clutters (with no neurological issue) was 40 (57.1%) and the most co dismal mental turmoil with discouragement was schizophrenia and other crazy issue, trailed by PTSD and somatoform issue.

Plus, the examination found that the prevalence of co dreariness of melancholy and other neurological clutters (with no other mental confusion separated from sadness) was 27(38.7%). The most comorbid neurological clutters with sorrow were epilepsy and cerebral pain issue (headache, strain type migraine, among others). 3 (4.2%) patients were found to have co bleakness of gloom, other mental disarranges and neurological issue.

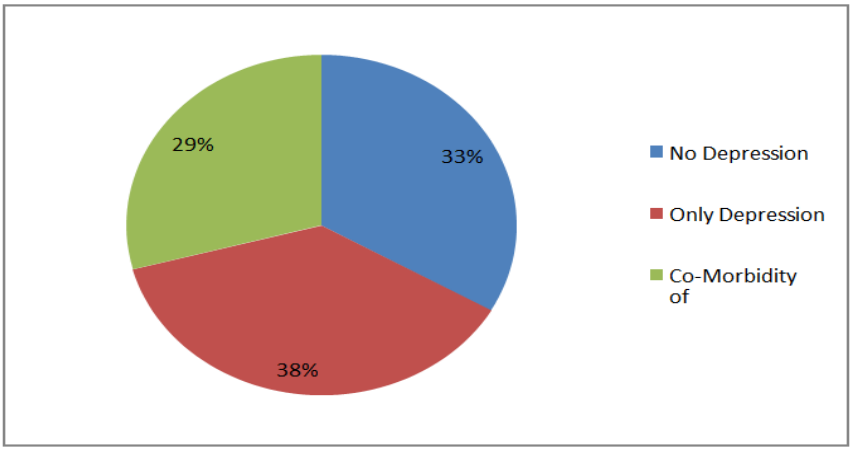

Fig 3:- illustrates the findings.

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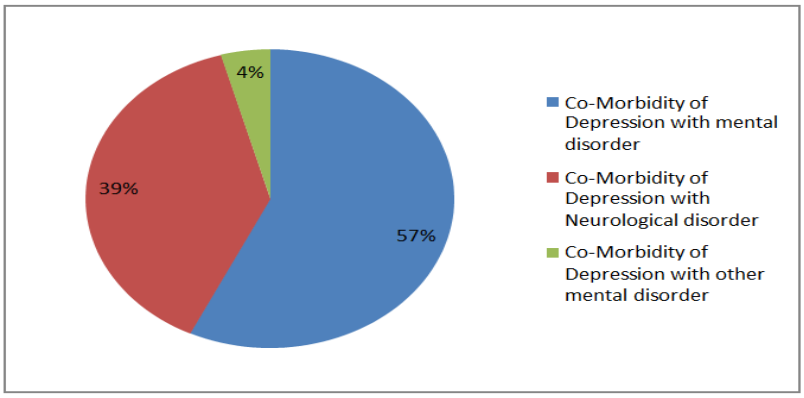

Fig 4:- Illustrates Findings.

The study sought to identify different types of Co-Morbidity of depression and other disorders.

Types of Co-Morbidity	Frequency	Percentage
Depression and schizophrenia and other psychotic disorders	5	2.08
Depression and epilepsy	3	1.2
Depression and headache disorders (migraine and other types)	6	2.5
Depression and PTSD	4	1.6
Depression and somatoform disorder	10	4.1
Depression and substance related disorder	1	0.4
Depression and generalized anxiety disorder	10	4.16
Depression and personality disorder	2	0.8
Depression, personality disorder and epilepsy	1	0.4
Depression, PTSD and headache disorders	10	4.16
Depression and postpartum psychosis	12	5.4
Depression, PTSD and schizophrenia	3	1.2
Depression, schizophrenia and somatoform disorder	1	0.4
Depression, somatoform disorder and sexual dysfunction	3	1.2
Depression, personality disorder and substance related disorder	1	0.4
Depression, schizophrenia and substance related disorder	3	1.2
Total for Co-Morbidity of depression and other disorders	75	31.2
Total for No Co-Morbidity of depression and other disorders	165	68.8
Total	240	100

Table 1:- The results of this investigation

From Table 1 it can be deduced that 75 respondents out of 240 study participants (31.2%) had comorbid mental or neurological disorders with depression. The four most prevalent types of Co-Morbidity were depression and schizophrenia or other psychotic disorders, depression and epilepsy, depression and headache disorders and depression and PTSD in that order among other types of Co-Morbidity.

➢ *Factors influencing adherence to treatment*

In this study, it was found that the mean score for motivation was 2 out of 3 and for knowledge it was 2.6 out of 3. The overall mean score on Modified Morisky Scale was 4.6 out of 6. In general, the respondents were motivated and knowledgeable about adherence to treatment. However, the mean score percent using two-week self-report recall was 76.6% which is statistically significantly less than 80% chosen as cut-off score ($p<0.05$). The proportion of patients who scored less than 80% was 38.2% using this method alone.

➢ *Medication Possession Ratio (MPR)*

It was found that the MPR was 65.4% which significantly less than the cut-off score of 80% ($p<0.05$). The proportion of respondents who scored less than 80% was 39.8%considering the MPR alone.

➢ *Pill count*

It was found that the overall pill count rate was 85.8% which was significantly higher than 80% ($p<0.05$). This means that 85.8% of prescribed pills were presumably taken. The proportion of patients who scored less than 80% using this method was 17.8%.

➢ *Adherence to psychotherapy and other non-pharmacological treatments*

The number of scheduled clinical appointments and failed clinical appointments were recorded for each respondent during the follow-up period. The percentage score on adherence to appointments, psychotherapy sessions and/or other non-pharmacological therapies like physiotherapy was computed. The mean adherence score using this method was found to be 35.3% which is far less than 80% ($p<0.05$). The proportion of patients who scored less than 80% was66.2%.

➢ *Composite adherence to treatment*

The overall adherence score percent was calculated using the scores obtained on the above four methods. In case a method was not applicable to a given respondent, other methods were used to determine the composite adherence score. It was found that the overall adherence mean score was 65.8% which is significantly less than the cut-off score of 80% ($p<0.05$). It can be noted that the patients attending psychiatric clinic in Kandahar adhere partially to their treatment (50% < 65.8% < 80%). Thus the optimal adherence to treatment was not achieved by patients. Therefore, the hypothesis that the patients. Attending psychiatric clinic in Kandahar do not adhere optimally to their treatment was not rejected.

The proportion of patients who are non-adherent (composite adherence score less than 50%) was found to be 24.6%. The proportion of patients with partial adherence to medication (score from 50% to less than 80%) was 42.9%. It means that 67.5% of all respondents do not achieve optimal adherence. Alternatively, it can be reported that 75.4% of all respondents achieve at least partial adherence. Therefore the proportion of patients who attained at least the mean adherence score of 80% was 32.5%. These are patients who optimally adhere to their treatment.

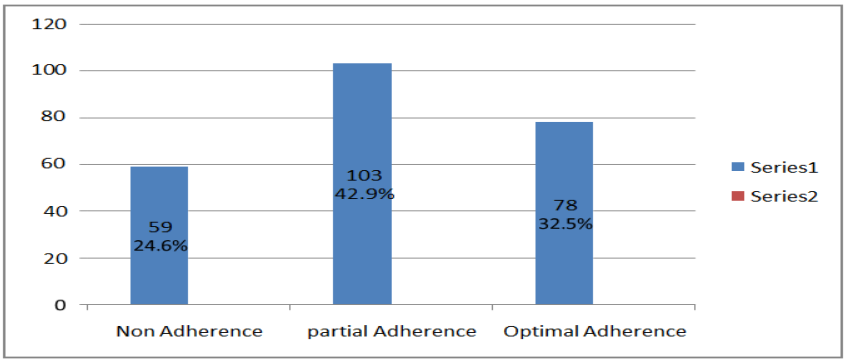

Fig 5:- Illustrates the composite adherence to treatment among patients.

➢ *Relationship between treatment adherence and treatment outcomes*

The last objective of this study was to establish the relationships between adherence to treatment and treatment outcomes among patients Kandahar. The data was collected on adherence to treatment and treatment outcomes in order to test the null hypothesis that there is no relationship between the adherence to treatment and treatment outcomes among patients in Kandahar. In this section of the chapter, the results on treatment outcomes are presented and the relationship between adherence to treatment and treatment outcomes was established.

➢ *Relationship between adherence and treatment outcomes using GAFs*

The Modified Global Assessment of Functioning is one of the standalone tools that was used to measure treatment outcomes during data collection. When applying GAF, the interviewer (usually a clinician) judges the symptoms and functioning of the patients and gives a score between 0 and 100. The GAF1scores mean the results obtained at the first assessment of the patient after two months of follow-up and GAF2 scores are the results at the second assessment after four months using the same tool namely the Modified Global Assessment of Functioning. The results obtained at first and second assessments using this instrument are presentedbelow.

➢ *Changes in levels of functioning using GAF1 and GAF2 Scores*

Code	General Note	N1 (%)	N2(%)
0-10	**Immediate danger from serious neglect or self-injurious behavior**	**2(0,8%)**	**0(0%)**
11.-20	**Suffering from neglect or in danger of hurting self or others**	**1(0.4%)**	**0(0%)**
21-30	**Inability to function in almost all areas**	**8(3.3%)**	**0(0%)**
31-40	**Major impairment in several areas of functioning**	**15(6.2%)**	**2(0.8%)**
41-50	**Some serious symptoms or serious impairment in functioning**	**45(18.7%)**	**15(6.2%)**
51-60	**Moderate symptoms or moderate impairment in functioning**	**49(20.4%)**	**27(11.2%)**
61-70	**Some persistent mild symptoms or persistent mild impairment in functioning**	**67(27.9%)**	**78(32.5%)**
71-80	**Some transient mild symptoms or temporarily mild impairment in functioning**	**38(15.8%)**	**69(28.7%)**
81-90	**Absent or minimal symptoms and no impairment in functioning**	**15(6.5%)**	**49(20.6%)**
91-100	**Superior functioning in a wide range of activities**	**0(0%)**	**0(0%)**
	Total	240(100%)	240(100%)

Table 2:- The frequency changes in GAF scores

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CHAPTER-5
CONCLUSIONS AND RECOMMENDATION

I. CONCLUSIONS

The point predominance of Co-Morbidity of wretchedness and other mental or neurological scatters was 31.4% where 17.9% had Co-Morbidity of sadness and other mental clutters (without neurological turmoil), 12.2% had Co-Morbidity of gloom and other neurological disarranges (without other mental scatters) and 1.3% had Co-Morbidity of sorrow, other mental and neurological scatters. The general dimension of adherence to treatment was 65.8% which shown that the patients going to mental facility in Kandahar did not cling ideally to treatment.

Just 32.5% of patients accomplished ideal adherence, a rate that is bring down contrasted with created nations. By far most of patients missed booked clinical arrangements and other non-pharmacological medicines and post-treatment subsequent meet-ups. It rose that the fundamental noteworthy elements affecting (blocking or advancing) adherence to treatment among patients going to mental center in Kandahar were symptoms related with medicine, the reasonableness of treatment routine, poor fit between treatment necessities and patient's ways of life or every day schedule, correspondence, dispositions of specialist co-ops, accessibility of arrangement staff, Co-Morbidity of wretchedness and different issue, being occupied, distraction, voyaging, social help, having issues in social condition, having relatives who were distressing, having issues with (hindrances to) access to human services administrations and trashing.

The adherence to treatment was altogether identified with backslide and re - hospitalization. The examination inferred that there was a feeble critical connection between adherence to treatment and treatment results among patients.

II. RECOMMENDATIONS

Since the pervasiveness of co dismalness was not insignificant among patients, the Ministry of Health ought to sort out progressing trainings for psychological wellness administrations suppliers particularly the generalist doctors who work for the doctor's facility on the finding and the board of various kinds of co dreariness of sorrow

and other mental or neurological scatters.

The people group and groups of the patients ought to be sharpened for progressively social help to the patients with mental and neurological scatters.

So as to expand the quantity of patients who cling ideally to their medicines, the doctor's facilities the executives should benefit the psychotropic meds with less reactions.

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ANNEXES

I. MODIFIED MORISKY SCALE (MMS)

Directions: Ask the patient each inquiry and circle the comparing ―yes‖ or ―no‖ reaction. Circle the response to each question and entirety the score for the inspiration section and total the score for the information segment. Report the outcomes on the CMAG-1 Patient Summary Assessment frame.

Question	Motivation	Knowledge
1. Do you ever forget to take your medicine?	Yes(0) No(1)	
2. Are you careless at times about taking your medicine?	Yes(0) No(1)	
3. When you feel better do you sometimes stop taking your medicine?		Yes(0) No(1)
4. Sometimes if you feel worse when you take your medicine, do you stop taking it?		Yes(0) No(1)
5. Do you know the long- term benefit of taking your medicine as told to you by your doctor or pharmacist?		Yes(1) No(0)
6. Sometimes do you forget to refill your prescription medicine on time?	Yes(0) No(1)	
Total score	0–1 = Low motivation 2–3 = High motivation	0–1 = Low knowledge 2–3 = High knowledge

The following questionnaire is filled in by the interviewer.

1. Patient number _____

Study site_____Date of interview _____

2. The sex of the patient. Male_____Female _____

3. What is your Age?_____years

4. What is your highest level of formal education?

- Illiterate
- Primary
- Secondary
- Tertiary
- Other, Specify_____

5. How many years of formal education did you do?_____Years

6. Which language (s) do you speak?

- Pashto
- Persian
- English
- Others, Specify_____

7. What is your current marital status? (Check only one that is most applicable

- Single
- Never married

- Currently married
- Separated
- Divorced
- Widowed
- Other , Specify ___

8. What is your current occupation? (Select the single best option)

- Paid employment
- Self-employment
- Non- paid worker, such as volunteer/ charity
- Student
- Keeping house/ House-maker
- Retired
- Unemployed for health reasons
- Unemployed for other reasons, Specify the reasons

- Other , Specify_____

9. What is your religion? (Check one)

- Muslim
- Hindu
- None
- Other, Specify__

10. Where do you reside? Cell___Sector _____

District_____Province _____

Rural_____Urban_____

11. What is your contact address?

P. O. Box_____Telephone number _____

Email of the patient _____

12. What Other contact address? _____

Telephone number of other contact person _____

Email_____Residence _____

13. What is your estimated total monthly household income?_____Af.

14. What is your main source of income?

- Full-time employment
- Part-time employment
- Temporary benefit like sickness unemployment
- Pension like aged, disability, Specify_____
- Student allowance
- Dependent on others
- Retirement fund
- No income
- Other , specify __

15. How long have you been receiving care for your health condition?

___Year's____months

16. How many persons under the age of 18 who depend on you?_____persons

17. How many persons live in your household?_____persons

18. With whom do you live?

- Alone
- Spouse/partner
- Alone with child(ren)
- Spouse/partner and child(ren)
- Parents
- Other relatives
- Friends
- Friends/parents/relatives/ and children
- Other, Specify __

Section 2: Screening for Depression and Other Mental Disorders

Neuropsychiatric Interview.

2. 2 Form to collect data on disorders and comorbidities from medical records.

The interviewer will fill in this form appropriately.

1. Number of the patient _____

2. Diagnosis

a. Major depressive disorder

Other mental disorder(s)

3. Co-Morbidity Yes_____No _____

If Yes, Specify _____

4. Other relevant information on Co-Morbidity of depression and other mental disorders

_____

_____

5. Other general medical conditions/physical diseases

_____

6.

_____

7. Psychosocial and environmental problems

a. Problems with primary support Yes_____No _____

If Yes, Specify _____

_____

b. Problems related to social environment Yes_____No _____

If Yes, Specify _____

_____

c. Educational Problems Yes_____No ____

If Yes, Specify _____

_____

d. Occupational problems Yes_____No ____

If Yes, Specify

e. Housing problems Yes_____No _____

If Yes, Specify _____

_____

f. Economic problems Yes_____No___

If Yes, Specify _____

_____

g. Problems with access to health careservices Yes_____No____

If Yes, Specify _____

_____

h. Problems related to interaction with the legal system/crime Yes_____No___

If Yes, Specify _____

_____

i. Other psychosocial and environmental problems Yes_____No___

If Yes, Specify _____

_____

8. Any disability Yes_____No___

If Yes, Specify

--- Informant Consent ---

Hello, my name is Masood Ahmad Noushad and your physician been chosen to participate in Study.

Description of the research and participation: The objective is to perform to find Co-Morbidity of depression. Your participation will require answering a questionnaire which will take 50-60 minutes.

Benefits of participating: Your information will help to us to find better and exact data for prevalence of Co-Morbidity of depression in this study.

Risks and discomforts: There are no risks or discomfort associated to participation into the study, we will only use some of your time.

Protection of confidentiality: All the collected information will be kept confidentially and analyzed as a whole so that no specific info can be related back to you.

Voluntary participation: Your participation in this research study is entirely voluntary.

Contact information: If you have any questions or concerns about this study or if any problems arise, please contact me, (the interviewer). You may also wish to contact directly to the **study Team Leader** (phone number .....)

If you agree with the statements above, I request your permission to start.