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Medical Sciences

Prevalence of Depression among Secondary Students in Khartoum Bahri Locality

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Abstract		Original Research Article

Hypothesis: Most studies of depressed mood and its correlates in adolescents have been conducted in Western countries and most of these studies show high adolescent depression prevalane and besides that most of them are significantly underdiagnosed and under treated. The present epidemiological study was designed to assess the prevalence and pattern of depression in a secondary school sample of khartoum bahri localty adolescents. *Methods*: A Cross-sectional survey, using the Arabic Beck's Depression Inventory (BDI), has been conducted. *Participants:* Secondary school students (n = 400, 195 (48.8%) males and 205 females "51%") of age group from (16 to 19). *Results:* The prevalence of depression according to the Beck Depression Inventory (CBDI) (cut-off point: 19) was 108 (27 %) as moderate (19-29), 46 (11.5%) as severe (30-40), and 7 (1.75%) as very severe, with a clear predominance prevalence of depression in girls than in boys (1.5 times). Statistical analysis demonstrated that the most significant risk factors involved were: sex, increasing age, dificulty in dealing with family and friend, history of psychiatric illness, and familial history of psychiatric illness. *Conclusion:* Our findings provide gender differences in the prevalence and presentation of depressive symptoms. The experience psychiatric illness of increase the risk of depression. Assessment using screening is recommended. The increased risk for the onset of depression in adolescents reinforces the importance of early recognition and intervention.
Keywords: Adolescent Depression, Prevalence, Beck's Depression Inventory (BDI), Risk Factors, Gender Differences.

1. INTRODUCTION

1.1. Depression

The World Health Organization estimates that 350 million people throughout the world suffer from depression. They state that depression is the leading cause of disability worldwide.

1.1.1. Definitions 0f Depression:

According to WHO, depression is a common mental disorder, characterized by sadness, loss of interest or pleasure, feelings of guilt or low self-worth, disturbed sleep or appetite, feelings of tiredness and poor concentration.

It can be long lasting or recurrent, substantially impairing a person's ability to function at work or school, or cope with daily life. At its most severe, depression can lead to suicide. When mild, depression can be treated without medicines but, when moderate or severe, people may need medication and professional talking treatments. Depression often starts at a young age. It affects women more often than men, and unemployed people are also at high risk.

In addition, Depression is a mood disorder that causes a persistent feeling of sadness and loss of interest. Also called major depression, major depressive disorder or clinical depression, it affects how you feel, think and behave and can lead to a variety of emotional and physical problems. You may have trouble doing normal day-to-day activities, and depression may make you feel as if life isn't worth living.[1]

1.1.2. Melancholia

Clinical depression is a fairly modern term. Hippocrates, known as the father of Western medicine, described a syndrome of "melancholia". He said melancholia was a distinct disease with specific physical and mental symptoms. Hippocrates characterized it as "(all) fears and despondencies, if they last a long time" as being symptomatic of the illness.

Eugene S. Paykel wrote in the journal *Dialogues of Clinical Neuroscience* that the term "depression" started to appear in the 19th century.[2]

It is estimated that melancholia included a broader range of symptoms compared to clinical depression. It included dejection, sadness, despondency, anger, fear, delusions and obsessions.[3]

1.2. Prevalence of clinical depression
Nobody is sure exactly how many people are affected by depression. Health authorities from country to country and even within the same nation publish different figures:

The National Institute of Mental Health estimates that 6.7% of American adults have had depressive illness during the last 12 months, and 30.4% of these cases (2% of the whole adult population) have severe symptoms.

In addition, it was recorded that women are 70% more likely to develop depressive symptoms during their lifetime,

However, (Angelina R. Sutin *et al*,2013) reported that depression affects 30.6% of men and 33.3% of women, with no statistically significant difference.[4]

According to National Institute for Clinical Excellence (NICE) estimates that in the United Kingdom 21 in every 1,000 16-to-65 year olds live with major depression (17/1000 males and 25/1000 females). If "mixed depression and anxiety", a less specific and broader category is included, the prevalence rises to 98 per 1,000.

1.3. Types of depression
There are several forms of depression (depressive disorders). Major depressive disorder and dysthymic disorder are the most common.

1.3.1. Major depressive disorder (major depression)
Major depressive disorder is also known as major depression. The patients suffer from a combination of symptoms that undermine their ability to sleep, study, work, eat, and enjoy activities they used to find pleasurable. Experts say that major depressive disorder can be very disabling, preventing the patient from functioning normally. Some people experience only one episode, while others have recurrences.

1.3.2. Dysthymic disorder (dysthymia):
Dysthymic disorder is also known as dysthymia, or mild chronic depression. The patient will suffer symptoms for a long time, perhaps as long as a couple of years, and often longer. The symptoms are not as severe as in major depression- they do not disable the patient. However, people affected with dysthymic disorder may find it hard to function normally and feel well. Some people experience only one episode during their lifetime, while others may have recurrences. A person with dysthymia might also experience major

depression, once, twice, or more often during their lifetime.

Dysthymia can sometimes come with other symptoms. When they do, it is possible that other forms of depression are diagnosed. For a patient to be diagnosed with dysthymia he or she must have experienced a combination of depressive symptoms for at least two years [7].

1.3.3. Psychotic depression:
When severe depressive illness includes hallucinations, delusions, and/or withdrawing from reality, the patient may be diagnosed with psychotic depression. Psychotic depression is also referred to as delusional depression.

1.3.4. Postpartum depression (postnatal depression):
Postpartum depression is also known as postnatal depression or PND. This is not to be confused with 'baby blues' which a mother may feel for a very short period after giving birth. If a mother develops a major depressive episode within a few weeks of giving birth it is most likely she has developed postpartum depression. Experts believe that about 10% to 15% of all women experience this type of depression after giving birth. Sadly, many of them go undiagnosed and suffer for long periods without treatment and support. Postpartum depression can start any time within a year of giving birth.

1.3.5. SAD (seasonal affective disorder):
Light therapy boxes can help people manage symptoms of seasonal affective disorder. SAD is much more common the further from the equator you go, where the end of summer means the beginning of less sunlight and more dark hours. A person who develops a depressive illness during the winter months might have SAD. SAD symptoms go away during spring and/or summer. In Scandinavia, where winter can be very dark for many months, patients commonly undergo light therapy - they sit in front of a special light. Light therapy works for about half of all SAD patients. In addition to light therapy, some people may need antidepressants, psychotherapy, or both.

1.3.6. Bipolar disorder (manic-depressive illness):
Bipolar disorder is also known as manic-depressive illness. It used to be known as manic depression. It is not as common as major depression or dysthymia. A patient with bipolar disorder experiences moments of extreme highs and extreme lows. These extremes are known as manias.

1.4. Diagnosis:
Non-specialists can reliably diagnose and treat depression as part of primary health care. Specialist care is needed for a small proportion of people with

complicated depression or those who do not respond to first-line treatments.

1.4.1   DSM-5 Criteria
>5 or more symptoms present during a 2 week period; (1) depressed or irritable mood and (2) loss of interest or pleasure and any three of the following:

1.   significant weight loss or change on appetite (more than 5 % of body weight on month)
2.   Insomnia or hypersomnia.
3.   Psychomotor agitation or retardation.
4.   Fatigue or lack of energy.
5.   Feelings of worthlessness or guilt.
6.   Decreased concentration or indecisiveness.
7.   Recurrent thoughts of death or suicide.

In addition to the above DSM-5 criteria, children and adolescents may also have some of the following symptoms:

- Persistent sad or irritable mood
- frequant vague non specific physical complain.
- Frequent absences from school or poor performance in school
- Being bored
- Alcohol or substance abuse
- Increased irritability, anger or hostility
- Reckless behavior

Symptoms cause significant distress or impairment in functioning.[1]

1.5   Adolescent depression
1.5.1   Adolescence definition:
It is a transitional phase of growth and development between childhood and adulthood. The World Health Organization (WHO) defines an adolescent as any person between ages 10 and 19. This age range falls within WHO's definition of young people, which refers to individuals between ages 10 and 24. Dec 4, 2014.

Adolescents around the world experience depressive symptoms in their teenage years, and the number of cases is growing. A survey released by the World Health Organization found depression to be the No. 1 cause of illness and disability in adolescents worldwide. Mental health experts have identified a number of reasons for the rise, ranging from media to genetics, but the rise and severity of adolescent depression requires a response.

The World Mental Health Survey, which was supported by WHO, found that half of those who suffered from mental health problems, including depression, first experience symptoms at age 14.

1.5.2   Definition of adolescence depression:
Teen depression is a serious medical problem that causes a persistent feeling of sadness and loss of interest in activities. It affects how the teen thinks, feels and behaves, and it can cause emotional, functional and physical problems. Although mood disorders, such as depression, can occur at any time in life, symptoms may be different between teens and adults.

According to the National Institute of Mental Health, about 11 percent of adolescents have a depressive disorder by age 18 according to the National Co morbidity Survey-Adolescent Supplement (NCS-A). Girls are more likely than boys to experience depression. The risk for depression increases as a child gets old Because normal behaviors vary from one childhood stage to another, it can be difficult to tell whether a child who shows changes in behavior is just going through a temporary "phase" or is suffering from depression.

1.5.3   Epidemiology of Depression in Youth
Depression is an important psychiatric disorder in children and adolescents, but it is frequently unrecognized or dismissed as "growing pains". The prevalence of depression is 0.3% in preschool children; 2% in schoolchildren; and 4–8% in adolescents.

Dysthymia is present in 0.6–1.7% of children and 1.6–8.0% of adolescents. Children of both sexes are equally affected, but in adolescents, females are twice as likely to be affected as males. The average recovery time from a depressive episode is 9 months, but 10% of those having a major episode may have chronic illness. The average duration of dysthymic disorder is 3 years. Childhood–onset depression has a 60–70% risk of continuing into adulthood and 20–40% develops bipolar disorder within 5 years. After a recovery from a major depressive episode, children might experience sequelae, such as poor self-esteem, increased risk-taking behaviour, subclinical depressive symptoms, and impairment of interpersonal relations and global functioning.

Thirty to 50% of children with major depressive disorder have comorbid dysthymic or anxiety disorder, and substance use disorder occurs in 20–30%. Depressed youngsters often have problems at home, and in many cases, the parents are depressed too, as depression tends to run in families. Four out of every five runaway youths suffer from depression. Studies have shown that depression in young people is a risk factor for suicide, increased risk-taking behaviour (e.g. substance abuse, early onset sexual experimentation), teenage pregnancy, adult depression, conduct disorder, and delinquency. Suicide is one of the major causes of adolescent mortality in developed countries. In the United States, suicide rates in adolescents have increased threefold during the last 40 years, being the third leading cause of death in those aged 15–24 years, accounting for 13.7% of deaths in this age group. [5]

According of the American association of Family physician, the prevalence of major depressive disorder is approximately 1 percent of preschoolers, 2 percent of school-aged children and 5 to 8 percent of adolescents. The prevalence of depression appears to be increasing in successive generations of children, with onset at earlier ages. The gender ratio is equivalent in prepubertal children and increases to a 2:1 female-to-male ratio in adolescents.

Moreover, Dysthymic disorder has a prevalence of 0.6 to 1.7 percent in prepubertal children and 1.6 to 8 percent in adolescents. It is considered a "gateway" disorder because of its relatively early age of onset and increased risk of subsequent affective disorders

1.5.4 The emergence of gender differences during adolescence

That women are twice as likely as men to have depression is a consistent finding in psychiatric epidemiology and is not simply a consequence of females being more likely to report, recall or seek help for depressive symptoms. Before puberty, boys are slightly more likely than girls to be depressed, but between the ages of 11 and 13 this trend is reversed, with girls outnumbering boys by two to one. This predominance of females over males persists for the next 35 to 40 years. Changes in gonadal steroids are only part of the explanation for this gender gap. Hormonal changes in adolescence, combined with dramatic changes in social environment and relationships, stimulate the development of greater affiliative needs in females such as a preference for intimacy and emotional responsiveness. One result of this is that adolescent girls can be left more vulnerable to the effects of negative life events, especially ones that have interpersonal consequences.[6]

1.5.5 Aetiology of adolescene depression

Depression in young adults occurs as a result of the dynamic interaction of a wide range of risk factors.

1.5.5.1 The role of genetics

Adoption and family studies have established that depression runs in families and that most of this familiality occurs as a result of genetic rather than environmental influences.

Unipolar depression, as a heterogeneous disorder, is likely to include subgroups that represent more genetic forms of depressive illness. Recurrent, early-onset depression, defined as two or more episodes before the age of 25, is associated with a strong family history of affective disorder and appears to follow a particularly malignant course, with frequent recurrence, poor response to treatment and high psychiatric and physical comorbidity.

Although the heritability estimate of major depression across the life span is between 31% and 42%, recurrent early-onset depression carries an estimated heritability of 70%, a figure which is close to estimates for bipolar disorder.

A recent family study of recurrent, early-onset depression found that over one-third of first-degree relatives and one-fifth of extended relatives had a history of depression.

Segregation analysis of these families was consistent with a single major locus being responsible for the expression of the disorder. Findings such as these have given added impetus to genetic studies of affective disorders.[44]

1.5.5.2 Neuroticism

Neuroticism, defined as a general vulnerability to neurotic breakdown under stress, is a heritable personality trait and has been positively associated with depression.

In a longitudinal study of 897 young adults followed between the ages of 18 and 21 years, found a strong association between high premorbid neuroticism and the subsequent development of a depressive illness.

However, the relationship between neuroticism and depression is complicated. Genes that predispose to mood disorders overlap with those implicated in neuroticism and individuals with high levels of neuroticism are more likely to experience depression after stressful life events than those with low levels.

Furthermore, evidence is emerging for a significant person–environment interaction whereby individuals with high neuroticism scores select themselves into high-risk environments and as a result become more likely to experience stressful life events.

For young adults with high levels of neuroticism, a vicious circle can be hypothesised in which they are more likely to place themselves in high-risk situations and, as a result of a high genetic loading for depression, are less able to withstand the adverse effects of stressful life events when they occur.

1.5.5.3 Early adversity

Childhood physical, emotional and sexual abuse are established as important risk factors for the development of a range of psychiatric disorders in adult life and are increasingly recognized as important in early-adulthood psychopathology. Traumatic experiences can interfere with normal emotional and psychological development, with the result that abused or neglected individuals often struggle to negotiate the maturational tasks of adolescence and early adulthood.

The observation that not all abused individuals develop significant psychopathological disorders in later life suggests that our susceptibility to stress is heavily dependent on our genetic make-up. This notion of genetic resilience in some individuals is supported by recent work on depression in adolescent girls, which confirms that genetic factors play an important role in determining their level of susceptibility to environmental stress. [44]

1.5.5.4 Life events

Although it is established that negative life events can precipitate depression, the association is a complex one and probably operates in both directions. People with depression are more likely to generate stressful events, and individuals with a higher genetic loading for affective disorder are more likely to experience depression after a stressful event than those with low genetic loading.[44]

In recurrent depressive disorder, the association between life events and depression is strongest for early episodes and becomes weaker as the number of episodes increases. [44]

Recurrent depressive episodes tend to become more autonomous and are progressively less linked to environmental adversity, a phenomenon which has been called 'kindling'.

Kindling tends to be most marked in individuals at low genetic risk of depression; those at high genetic risk tend to exhibit 'prekindling'. Prekindled individuals appear to become depressed after only minimal environmental provocation. One important implication of this is the possibility that young people with a strong family history of affective disorder are constitutionally vulnerable to the effects of even minor psychosocial stressors. [44]

1.5.5.5 Substance misuse:

Drug and alcohol use in adolescence are important risk factors for the development of affective disorders in early adulthood and are likely to complicate the long-term course of depression. In a 5-year longitudinal study of 155 adolescent females, found that 19% developed a substance use disorder and that substance use was a marker for the eventual occurrence of depression.

Conversely, when followed 274 formerly depressed adolescents to age 24, two-thirds had experienced another depressive episode and, from the remaining third who had not, 77% were found to have a substance misuse disorder. This suggests that an episode of depression in adolescence, or a diagnosis of substance misuse, represents an opportunity for early intervention to prevent recurrence of both disorders in later life [44].

1.5.5.6 Cannabis

Cannabis use in the UK has now reached such a level that a majority of young people use it recreationally. Although the association between cannabis and psychotic illness is well recognized, much less attention has been paid to the association with affective disorders. Evidence is emerging for an important relationship between cannabis use and depression.

Although cross-sectional surveys in young people confirm strong correlations between cannabis and depression, they tell us little about the causal mechanisms in operation.

It may be that those who are premorbidly depressed are more likely to use cannabis as a form of self-medication. Alternatively, higher use in depressed groups may be related to confounding factors such as social deprivation, early adjustment problems and poor academic achievement.

Two recent longitudinal studies support the view that regular cannabis use at a young age is a precursor of depression in early adulthood. In the first, followed 1601 students between the ages of 14 and 21 and found that daily use in adolescence was associated with a significant risk of anxiety and depression by early adulthood. This was particularly true for teenage girls – those who used cannabis on a daily basis were five times more likely to have depression than were non-users.

In the second study, the New York State Children in the Community Study, which followed 736 children between the ages of 14 and 27, found that regular cannabis use was strongly predictive of depression in young adulthood. Interestingly, those who began to use cannabis in their early teens were at much higher risk than those who began in their early twenties, suggesting that a critical period exists during which the brain is acutely sensitive to the pathological effects of cannabis. [44]

1.5.5.7 Alcohol

As in older adults, there is significant comorbidity between alcohol misuse and depression in young adults.

That alcohol use at a young age leads to a higher risk of depression in young adulthood is supported by the findings of the Children in the Community Study mentioned above. Earlier alcohol use significantly predicted not only depression but also any substance use disorder and alcohol dependence by age 27. [44]

1.5.6 Risk factors of adolescence depression:
Many factors increase the risk of developing or triggering adolescent depression, including:

- Having issues that negatively impact self-esteem, such as obesity, peer problems, long-term bullying or academic problems.
- Having been the victim or witness of violence, such as physical or sexual abuse.
- Having other conditions, such as an anxiety disorder, anorexia or bulimia, attention-deficit/hyperactivity disorder (ADHD) or learning disabilities.
- Having a chronic medical illness such as cancer, diabetes or asthma.
- Having few friends or other personal relationships.
- Having certain personality traits, such as low self-esteem or being overly dependent, self-critical or pessimistic.
- Abusing alcohol, nicotine or other drugs
- Being a girl — depression occurs more often in females than in males
- Being gay, lesbian, bisexual or transgender — becoming socially isolated or experiencing bullying may increase the risk of depression
- Having a parent, grandparent or other biological (blood) relative with depression, bipolar disorder or alcoholism
- Having a family member who committed suicide
- Having a dysfunctional family and conflict
- Having experienced recent stressful life events, such as parental divorce, parental military service or the death of a loved one

1.5.7 Clinical Presentation of adolescences depression:

Adolescent depression is not medically different from adult depression. However, symptoms in teens may manifest in different ways than they do in adults. This is due to the different social and developmental challenges facing teens.

The following are some of the most common symptoms of teenage depression. These symptoms don't directly correspond to symptoms of major depression, but they're similar. A teenager who meets some of the following will often qualify for a diagnosis of major depression.[7]

1.5.7.1 Frequent sadness, tearfulness, crying

Teens may show their pervasive sadness by wearing black clothes, writing poetry with morbid themes, or having a preoccupation with music that has nihilistic themes. They may cry for no apparent reason.

1.5.7.2 Hopelessness

Teens may feel that life is not worth living or worth the effort to even maintain their appearance or hygiene. They may believe that a negative situation will never change and be pessimistic about their future.

1.5.7.3 Decreased interest in activities; or inability to enjoy previously favorite activities

Teens may become apathetic and drop out of clubs, sports, and other activities they once enjoyed. Not much seems fun anymore to the depressed teen.

1.5.7.4 Persistent boredom; low energy

Lack of motivation and lowered energy level is reflected by missed classes or not going to school. A drop in grade averages can be equated with loss of concentration and slowed thinking.

1.5.7.5 Social isolation, poor communication

There is a lack of connection with friends and family. Teens may avoid family gatherings and events. Teens who used to spend a lot of time with friends may now spend most of their time alone and without interests. Teens may not share their feelings with others, believing that they are alone in the world and no one is listening to them or even cares about them.

1.5.7.6 Low self esteem and guilt

Teens may assume blame for negative events or circumstances. They may feel like a failure and have negative views about their competence and self-worth. They feel as if they are not "good enough."

1.5.7.7 Extreme sensitivity to rejection or failure

Believing that they are unworthy, depressed teens become even more depressed with every supposed rejection or perceived lack of success.

1.5.7.8 Increased irritability, anger, or hostility

Depressed teens are often irritable, taking out most of their anger on their family. They may attack others by being critical, sarcastic, or abusive. They may feel they must reject their family before their family rejects them.

1.5.7.9 Difficulty with relationships

Teens may suddenly have no interest in maintaining friendships. They'll stop calling and visiting their friends.

1.5.7.10 Frequent complaints of physical illnesses, such as headaches and stomachaches

Teens may complain about lightheadedness or dizziness, being nauseous, and back pain. Other common complaints include headaches, stomachaches, vomiting, and menstrual problems.

1.5.7.11 Frequent absences from school or poor performance in school

Children and teens that cause trouble at home or at school may actually be depressed but not know it. Because the child may not always seem sad, parents and teachers may not realize that the behavior problem is a sign of depression.

1.5.7.12 Poor concentration

Teens may have trouble concentrating on schoolwork, following a conversation, or even watching television.

1.5.7.13 A major change in eating or sleeping patterns

Sleep disturbance may show up as all-night television watching, difficulty in getting up for school, or sleeping during the day. Loss of appetite may become anorexia or bulimia. Eating too much may result in weight gain and obesity.

1.5.7.14 Talk of or efforts to run away from home

Running away is usually a cry for help. This may be the first time the parents realize that their child has a problem and needs help.

1.5.7.15 Thoughts or expressions of suicide or self-destructive behavior

Teens who are depressed may say they want to be dead or may talk about suicide. Depressed children and teens are at increased risk for committing suicide. If a child or teen says, "I want to kill myself," or "I'm going to commit suicide," always take the statement seriously and seek evaluation from a child and adolescent psychiatrist or other mental health professional.

People often feel uncomfortable talking about death. However, asking whether he or she is depressed or thinking about suicide can be helpful. Rather than "putting thoughts in the child's head," such a question will provide assurance that somebody cares and will give the young person the chance to talk about problems.

1.5.7.16 Alcohol and Drug Abuse

Depressed teens may abuse alcohol or other drugs as a way to feel better.

1.5.7.17 Self-Injury

Teens who have difficulty talking about their feelings may show their emotional tension, physical discomfort, pain and low self-esteem with self-injurious behaviors, such as cutting.

1.6 Screening adolescents for depression:

Because depressed adolescents often present with physical complaints, providers are in an important position to help screen and identify depression so that adolescents receive proper assessment and appropriate care. In addition, because adolescents with chronic diseases are at increased risk for developing depressive disorders when compared with the general population, it is particularly important that providers be well informed and use appropriate screening tools for depression.

It has been reported that as many as 50% of cases of major depression are missed because of the absence of screening by family physicians. In recognition of the fact that depression goes undetected in many adolescents, organizations such as the American Academy of Pediatrics and the US Preventive Services Task Force (USPSTF) recommend routine screening for depression in adolescents and having a system in place to handle positive screenings.[8]

Given that depression is a widely prevalent but treatable condition among adolescents that creates long-term social, emotional, and economic burdens for the individual and the family, screening for depression is essential to ensure accurate diagnosis, follow-up, and effective treatment planning. The American Medical Association's Guidelines for Adolescent Preventive Services (GAPS) and Bright Futures suggest that primary care providers in pediatric settings begin screening for depression at age 11 and continue to do so annually thereafter. [9, 10]

In addition the USPSTF now recommends depression screening in children and adolescents aged 12 to 18 years for major depressive disorder when systems are in place to ensure accurate diagnosis, psychotherapy, and follow-up. Even seemingly asymptomatic adolescents should be screened because depression may go unrecognized. The most widely used and recommended screening approaches and tools are discussed herein. U.S. Preventive Services Task Force. [11]

1.6.1 Physician interviews and forms

The GAPS provides templates and forms related to child and adolescent preventive services that can be utilized by all providers. Using these forms, providers are able to identify whether an adolescent is at risk for experiencing depression and also to inquire about suicidality. Age-specific GAPS forms are available for younger adolescents, middle/older adolescents.

HEEADSSS. It is an example of an evaluative approach that can be used in a pediatric primary care setting is the Home, Education and employment, Eating, Activities with peers, Drugs, Sexual activity, Suicide and depression, and **S**afety (HEEADSSS) assessment. This acronym is used to prompt providers to ask adolescents about each of these areas of risk. The symptoms of depression can be subtle; depression may be missed if providers do not explicitly ask about depression while under the assumption that adolescents appear to be doing well. Questions about suicidality naturally follow depression-specific questions. Providers should keep in mind that a trustworthy relationship with the adolescent is essential for openness and honesty.

When using either the GAPS guidelines or the HEEADSSS assessment, an adolescent might endorse having suicidal thoughts. Therefore, providers should be ready to address suicidality directly, assess thoroughly for safety, and take action if needed. Questions that may be asked of the adolescent are: "Have you had thoughts

of dying or death?"; "Have you harmed yourself?"; and "Do you have a plan?" Asking such questions is essential to clarify the adolescent's risk for harm and will assist in developing a safety plan if needed.

1.6.2 Questionnaires

There are a variety of options for structured questionnaires that screen for adolescent depressive symptoms, as well as many that screen for general adolescent mental health. The tools listed here are not exhaustive, but do represent the most commonly used depression measures in primary care settings.

1.6.2.1 Depression-specific questionnaires.
1.6.2.1.1 Mood and Feelings Questionnaire (MFQ).

The MFQ is a 32-item measure that consists of questions regarding how the adolescent has been feeling or acting within the past 2 weeks.[16] A short version is also available that consists of 11 items and usually takes about 5 to 10 minutes to complete. For adolescents, the cutoff score on the full version for distinguishing those who are likely to have a depressive disorder from those who are not is 12 or higher. The MFQ can be used with children aged 8 to 17 years, and also has a parent version that can be used to assess symptoms based on parental report.[12]

1.6.2.1.2 Patient Health Questionnaire (PHQ-9).

The PHQ-9 was originally developed for adults in primary care, with 9 items directly related to each of the criteria listed in the DSM-IV-TR for major depression. The PHQ-9 has been strongly supported for its applicability as a screening tool for adolescent depression in primary care as well as in pediatric hospital settings.[17] The PHQ-9 takes approximately 5 to 10 minutes to complete. The optimal PHQ-9 cutoff score for adolescents is 11 or higher; it has been shown to have a sensitivity of 89.5% and specificity of 77.5% compared with a diagnosis of major depression on a structured mental health interview [18]. There are also algorithms to use to determine if the adolescent meets diagnostic criteria for major depressive disorder or dysthymia [12,13].

In addition, the PHQ-2, a very brief depression screening scale consisting of the first 2 items of the PHQ-9, has been found to have good sensitivity and specificity for detecting major depression. The PHQ-2 may be used as a first step for screening. Adolescents who screen positive on the PHQ-2 may be further administered the rest of the PHQ-9.[14]

1.6.2.1.3 Beck Depression Inventory (BDI)-II.

The BDI-II is a 21-item instrument for detecting depression that can be completed by adolescents aged 13 years and older. The BDI-II aligns with the depressive symptom criteria of the DSM-IV-TR and takes about 10 minutes to complete. It was specifically constructed to measure the severity of self-reported depression in adolescents and adults. Although the BDI-II is typically a self-report measure, providers can also verbally administer the measure to adolescents. It contains 21 questions with a scale value of 0 to 3. A cutoff score above 20 suggests moderate depression and a score of 29 or higher suggests severe depression. The BDI-II can be used with patients aged 13 to 80 years and is available in Spanish.[15]

1.6.2.1.4 Children's Depression Inventory (CDI)-2.

The CDI-2 is a 28-item scale used to assess for depressive symptoms in children and adolescents. It is derived from the BDI but modifies some questions to be more appropriate for younger ages.[21] The CDI-2 is a self-report measure that is completed by the child or adolescent and usually takes about 15 to 20 minutes. It can be administered and scored using paper-and-pencil forms or online. It asks about key symptoms of depression, such as a child's feelings of worthlessness and loss of interest in activities. The 28 items of the CDI-2 yield a total score, 2 scale scores (emotional problems and functional problems), and 4 subscale scores (negative mood/physical symptoms, negative self-esteem, interpersonal problems, and ineffectiveness). Each item allows the patient to respond to 3 choices that indicate 3 levels of symptoms: 0 (absence of symptoms), 1 (mild or probable symptoms), or 2 (definite symptoms). The CDI-2 can be used with patients who are aged 7 to 17 years, and can be particularly helpful for providers who want to track depressive symptoms over the course of treatment [15,16].

1.7 Practical concerns about depression screening and follow-up

The USPSTF emphasizes the importance of implementing screening only when such screening is supported by systems that can assist with further evaluation, including confirming the diagnosis and initiating evidence-based treatments. Thus providers and clinics need to be certain when they institute screening that systems are in place to review screening results and take the next appropriate steps. Among the practical considerations to creating screening protocols, clinics need to determine which staff would be responsible for administering, scoring, and recording the questionnaire, as well as ordering and maintaining the screening supplies. A second consideration is when the screening questionnaire will be administered. For example, should it be administered to the adolescent in the waiting room prior to seeing the primary care provider, or in the room with the provider? If adolescents are asked to complete questionnaires in the waiting room, privacy needs to be ensured, as adolescents may feel uncomfortable answering the questions when their parents or others are present. Providers should explicitly discuss confidentiality expectations with parents and adolescents.

During the course of depression screening the adolescent may disclose information about suicidal thoughts, intents, or plans. For a patient who indicates any suicidality, providers should be prepared to complete a thorough assessment prior to the adolescent leaving the room to ensure his or her safety. For a patient with suicidal thoughts but no plan or intent, a safety plan may be appropriate in which the adolescent agrees to stay safe and has a plan in place to seek assistance (from a trusted adult or the provider) if his or her suicidal thoughts worsen while the provider finds mental health specialty care. It is also important that providers counsel the parents and family of any suicidal adolescent to safeguard the home from medications, weapons, and lethal objects. Prior to assessment, providers should have an understanding of the resources available in their community if further assessment is warranted.

1.7.1 Active monitoring for mild depression:

As mentioned by National Institute of Mental Health, many people with a depressive illness never seek treatment. But the majority, even those with the most severe depression, can get better with treatment. Medications, psychotherapies, and other methods can effectively treat people with depression.

After assessment for depressive symptoms has been conducted with the assessment tools previously discussed, a provider will have information about the level and severity of the adolescent's symptoms. If an adolescent endorses symptoms that are consistent with mild depression, providers should engage in active monitoring practices according to the Guidelines for Adolescent Depression—Primary Care (GLAD-Pc). This is important because more than half of adolescents who screen positive for depression will have resolution of their symptoms without requiring psychotherapy or medications [17].

Active monitoring is analogous to watchful waiting practices used in adult populations. Key aspects of active monitoring as emphasized by the GLAD-PC guidelines include increasing the frequency of follow-up visits, encouraging the adolescent to engage in regular exercise and activities, and identifying peer and adult support [18, 19].

Providers should also involve parents and engage them in being aware of their child's symptoms and assisting in problem solving. Adolescents who are treated with active monitoring and who have persistent symptoms 6 to 8 weeks after screening should then receive evidence-based treatment for depression with regular follow-up visits until their symptoms have resolved.

1.7.2 Evidence-based treatment for moderate-to-severe depression

According to the National Institutes of Health, a significant percentage of people with depressive illness never seek medical help. This is unfortunate, because the vast majority, even those with very severe symptoms, can improve with treatment.

If an adolescent endorses symptoms consistent with moderate-to-severe depression, providers should discuss different treatment options, including psychotherapy, medication, or both. Evidence-based psychotherapies for adolescent depression exist; the most common treatments include cognitive-behavioral therapy (CBT) and interpersonal psychotherapy for adolescent depression (IPT-A), both of which have shown effectiveness in treating children and adolescents with depression [21, 22]. Behavioral activation (BA) is also a promising treatment that has been adapted to treating adolescent depression [23]. Providers should be ready with referrals to therapists who can provide these psychotherapeutic treatments.

In advance of implementing screening, clinics can create a list of potential resources for psychological treatment so that this information is readily available when needed. Medication for depression may also be indicated as part of treatment. Specifically, selective serotonin reuptake inhibitors (SSRIs) have proven effective in reducing symptoms of depression in adolescents [24].

Any adolescent, who is started on antidepressants such as SSRIs, as well as his or her parents, should be counseled for the potential increased risk for suicidality and monitored closely in the beginning of medication treatment. Because medications and psychotherapy have similar efficacy, one reasonable approach would be to work with patients and families to determine their treatment preferences and needs of the adolescent. Similar to active monitoring, the key to the use of evidence-based treatments is to monitor adolescents closely and to advance treatment for those who are not improving after 6 to 8 weeks of treatment. If multiple treatment providers are involved in managing the depression, obtaining a waiver of confidentiality to allow communication on progress and needs is ideal.

2 Rationale

Depression has been considered to be the major psychiatric disease of the 20th century [25]. The World Health Organization identified major depression as the fourth leading cause of worldwide disease in 1990 [26]. Recent studies have shown that greater than 20% of adolescents in the general population have emotional problems and one-third of adolescents attending psychiatric clinics suffer from depression [27]. Numerous outcome studies have documented several negative effects of depression [28-30].

Major depression often appears for the first time during the teenage years, and early onset depression interferes with a child's psychological, social, and academic functioning, placing him or her at greater risk for problems such as substance abuse and suicidal behavior [28,29]. Significant changes in social functioning, the adolescent's environment, and gender-differentiated social support concerning sexuality. These factors, as well as the experience of a severe life event have been significantly related to the onset of major depression in adolescence [31].

Despite the host of new literature on depression in adolescence has appeared in the last decade. The magnitude of child and adolescent depression is clearly a major mental health problem [29]. There have been several efforts to improve the early detection of depression and to develop programs to prevent and treat it as soon as possible [32].

This study was undertaken to find out prevalence and pattern of depression among secondary school students in khartoum bahri locality as well as to clarify the degree to which stressful life events lead to depression.

3 METHODOLOGY

3.1 Study design:

This is study was conducted from January to march 2015 at Khartoum north -Sudan and it is a cross-sectional study for a representative sample of secondary school students aiming at screening for depression using Beck Depression Inventory scale (BDI) and looking for risk factors of depression based on a cut-off level of BDI scale (BDI scale of 19 was chosen as a cut-off point).

The research protocol has been approved by Sudanese ministry of education and permissive letters was introduced to the directors of schools admitted to the study.

3.2 Study area:

Khartoum northland(KN) it is the third largest city in the republic of Sudan it is located on the east bank of the blue Nile near to confluence with white Nile and bridges connect it with Khartoum south and Omdurman to its west , with population of 900000 according to Sudanese census occurred in 1993 but Khartoum north as locality has extended geographical erea that emerge with Nile River state on the north and shargalneellocalty on the east and khartoumlocalty on the south and karari and Omdurman localities. appendixI

3.3 Study population:

There are 63 governmental secondary school on KN locality, these schools are subdivided to urban [37] and rural [26] school according to the geographical distributions of the locality. A two-stage stratified sample of 400(205 female and 195 male) students from six out of 63 secondary schools in Khartoum north locality was randomly selected for the study. The sample constituted approximately 4%of the secondary school population of 9825 students in all the secondary school,

In the first sampling stage, all 63 secondary schools were classified into three groups according to sex and urban and rural (categorized into 37 urban in two group and27 rural in one group) using the appropriate allocation method of sampling four schools from the urban groups and two from the rural group were selected three male school and three female schools. In the second sampling stage, two classes were selected randomly from each of the selected schools and represent the different grades (one to three). Thus, a total of 12 classes were included in the sample. Each class was considered to be a cluster, and all students in the selected classes constituted the target group of the present study.

3.4 Inclusion criteria: All the acadmical governmental secondary schools, males and females are included on the study

3.5 Exclusion criteria: All nongovernmental and non acadmical and not secondary schools are school are excluded from the study

3.6 Sample size: It was determined with the prior knowledge that the lowest prevalence rate of severe depression among this age group is approximately 5%. Allowing an error of 5% and level of significance (type I error) of 1 %, it was believed that a sample size of 400 was adequate to achieve a high degree of precision in estimating the true prevalence rate of severe depression in the target population.

3.7 Data collection tools and list of variables;

The Beck Depression inventory scale (BDI), Arabic version, has been used for screening of depression among study population. It is a 21-item self-reported measure, has been one of the most widely used screening instruments for detecting symptoms of depression. It can be administered to assess normal adults, adolescents, and individuals with psychiatric disorders (13 years of age or older). It was designed to document a variety of depressive symptoms the individual experienced over the preceding week. Responses to the 21 items are made on a 4-point scale, ranging from 0 to 3 (total scores can range from 0 to 63).appendix II

A self-administered questionnaire was utilized including information regarding sociodemographic characteristics, history of psychiatric illness, family history of psychiatric illness, parental loss or divorce. apeddixIII

3.8 Data analysis: Data was analyzed using SPSS 11.0 for windows. Bivariate data analysis was performed and the chi square test was used to test for the association between BDI scale and sex.

3.9 Ethical consideration
I. ethical approval was obtained from the Khartoum north education administration
II. Ethical consent from each subject was obtained and was assured of privacy and confidentiality

4 RESULTS

Table No. 1: The distribution of the sample according to the variables

| Gender		Frequency	Percent
	male	195	48.8
	Female	205	51.3
The life of the parents	yes	373	93.3
	no	27	6.8
Divorcing parents	yes	45	11.3
	no	355	88.8
Educational level of the father	illiterate	17	4.3
	Primary	67	16.8
	Secondary	124	31.0
	University	99	24.8
	Graduate	93	23.3
Educational level of the mother	illiterate	30	7.5
	Primary	81	20.3
	Secondary	139	34.8
	University	83	20.8
	Graduate	67	16.8
The work of Father	yes	368	92.0
	no	32	8.0
The work of mother	yes	59	14.8
	no	341	85.3
Difficulty in dealing with parents and friends	yes	116	29.0
	no	284	71.0
Problems in the family	yes	108	27.0
	no	292	73.0
History of psychiatric illness	yes	55	13.8
	no	345	86.3
A family history of psychiatric disease	yes	33	8.3
	no	367	91.8
Drug use	yes	25	6.3
	no	375	93.8

The distribution of the sample according to the variables
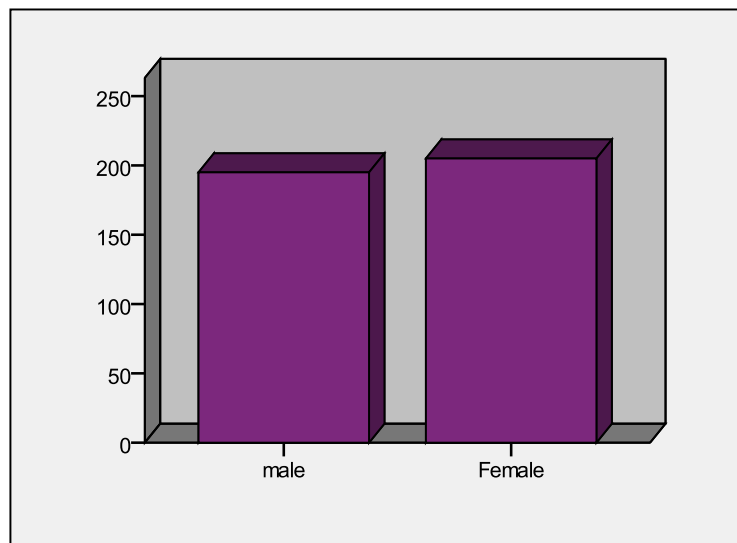
Figure 1: Distribution of the sample according to the gender
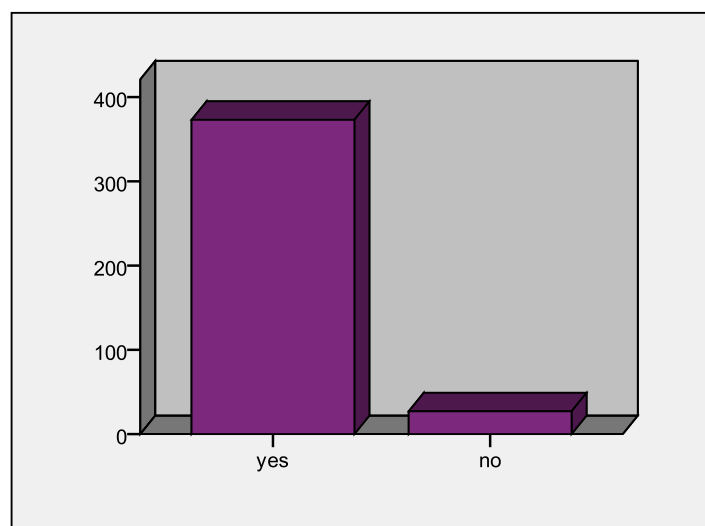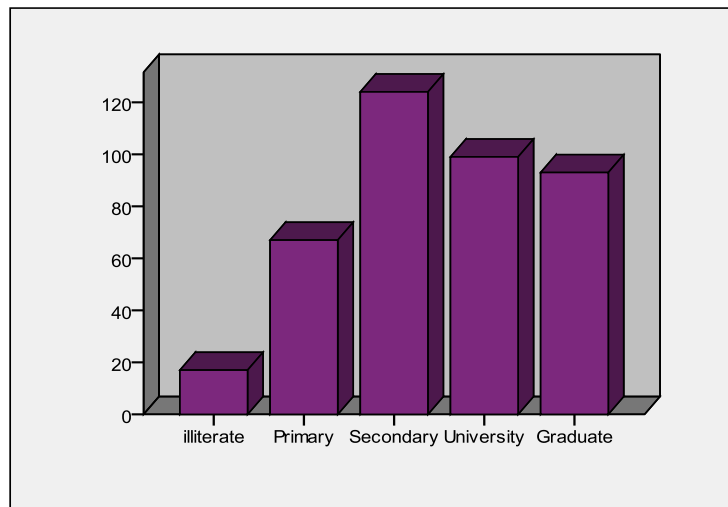

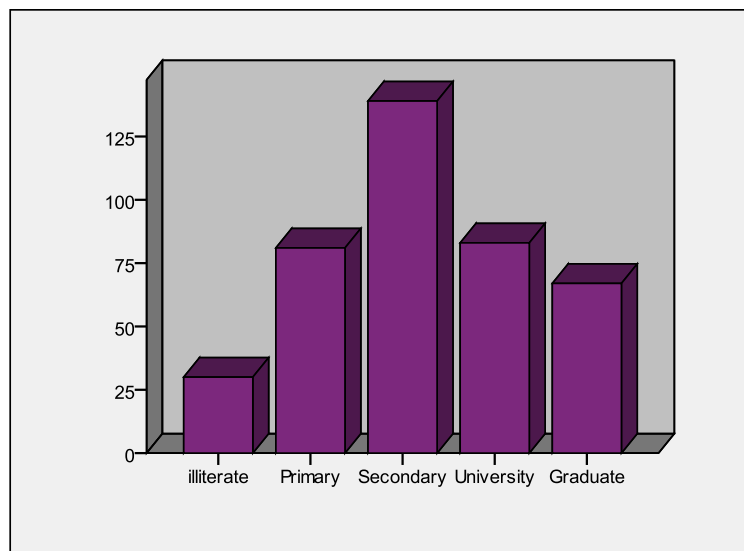**Figure 2: Distribution of the sample according to the life of the parents**
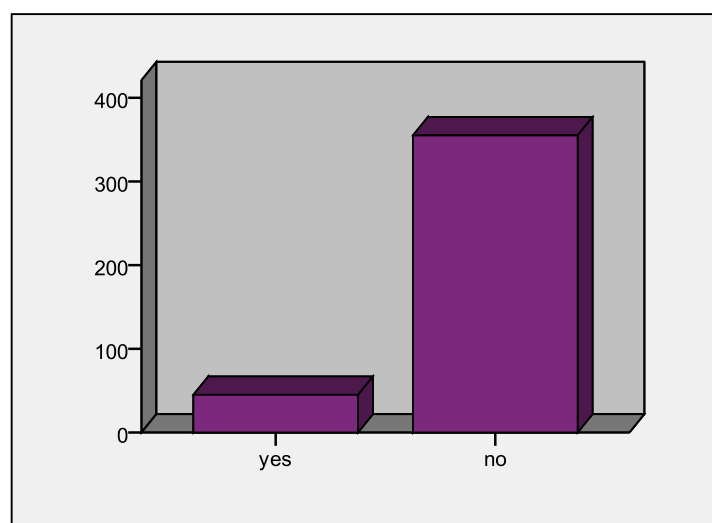
Figure 3: Distribution of the sample according to parents divorcing

Figure 3: Distribution of the sample according to the educational level of the father

Figure 4: Distribution of the sample according to the Educational level of the mother

Figure 5: Distribution of the sample according to the work of Father

Figure 6: Distribution of the sample according to the work of mother
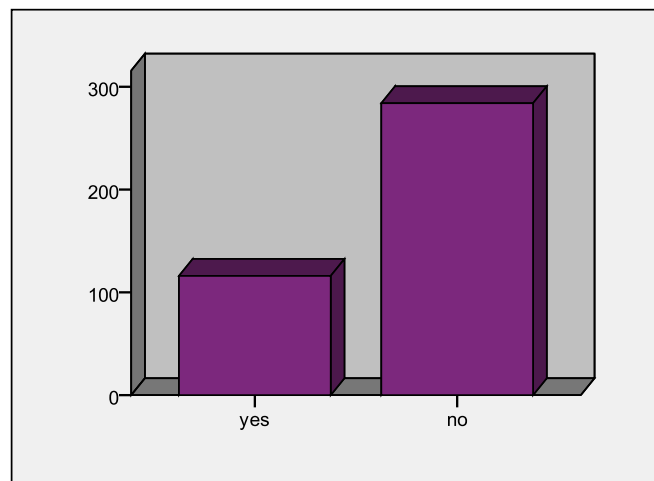
Figure 7:- Distribution of the sample according to the difficulty in dealing with parents and friends
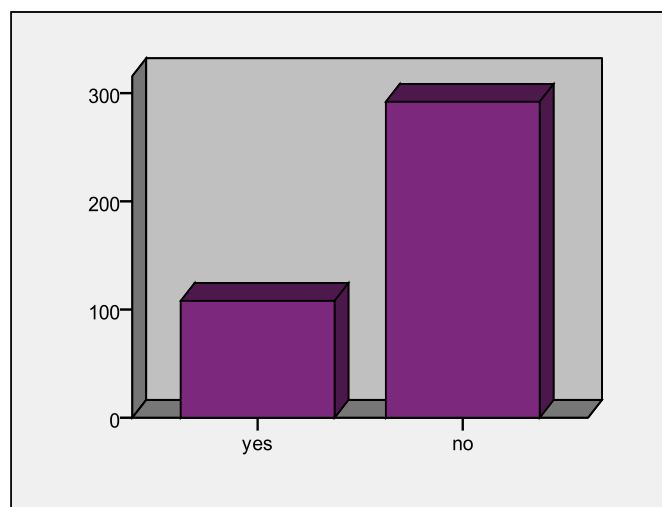
Figure 8: Distribution of the sample according to problems in the family

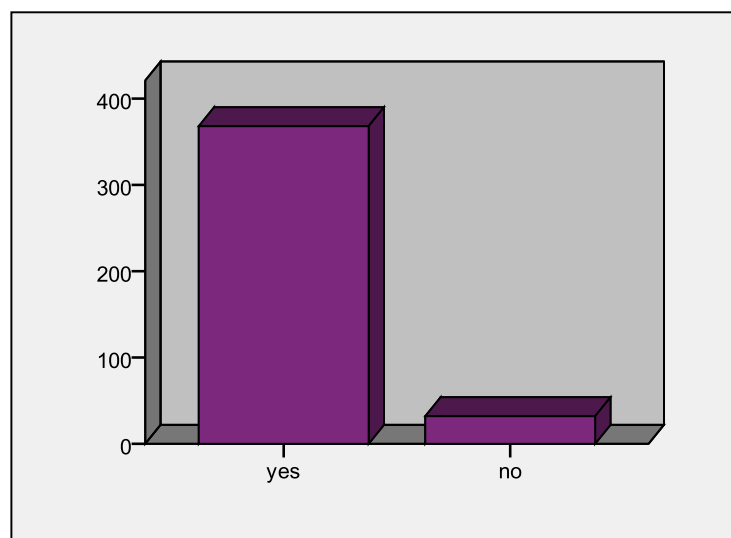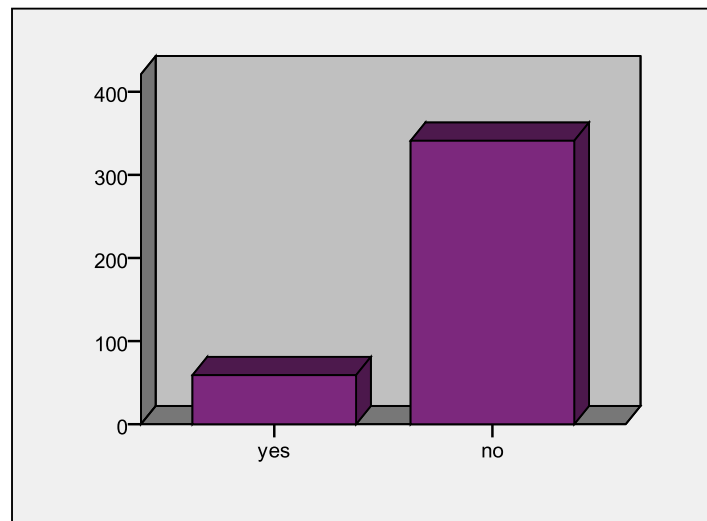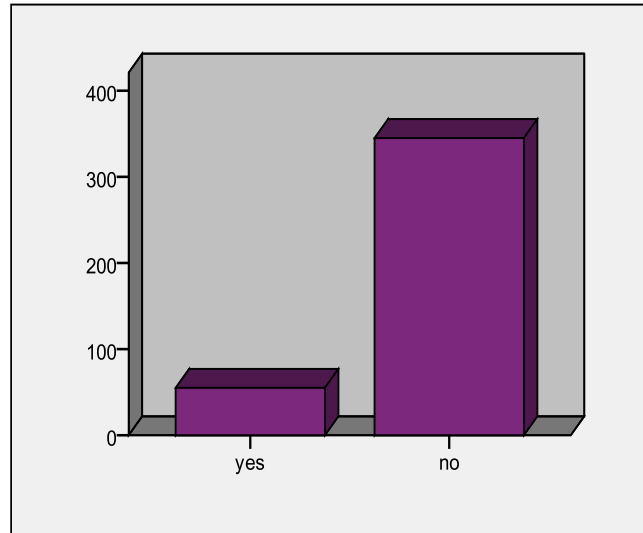**Figure No.10: Distribution of the sample according to the history of psychiatric illness**
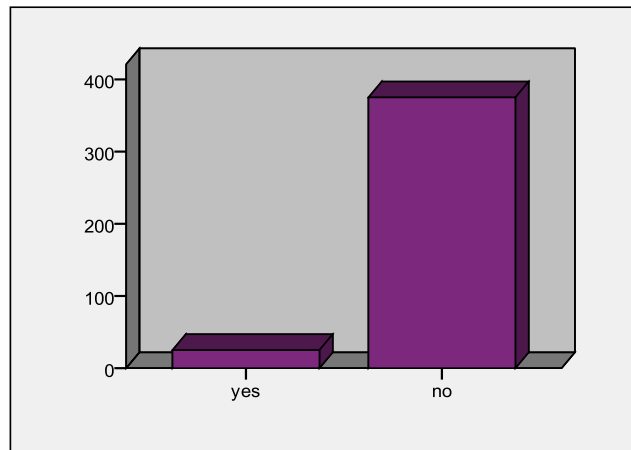
Figure 9: Distribution of the sample according to the Drug using
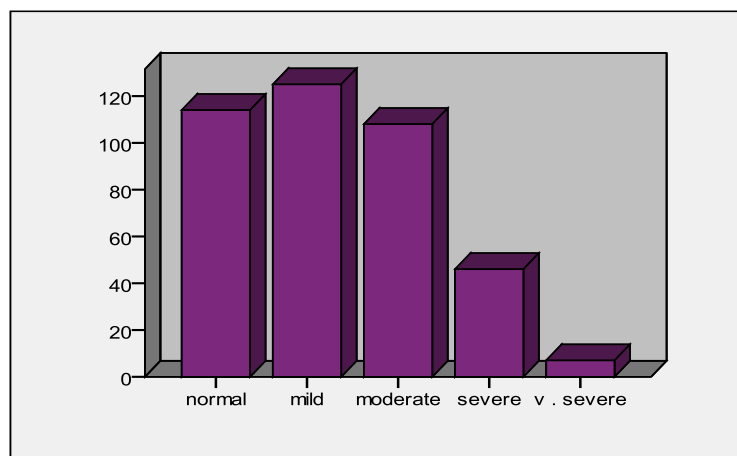
Figure 10: Distribution of the sample according to the levels of depression

Table 1: The results of t test for prevalence of depression

	N	Mean	Percent		t	df	Sig.	Significance
				9	14.969	399		
Depression	400	16.7200	26.5%				.001	Significant

Table No.2: The results of t test for prevalence of depression

Table No. 3: The results of t test for determination the levels of depression

Levels of depression	Frequency	Percent	Chi-Square	df	sig	Significance
Normal	114	28.5	130.625	4	0.001	Significant
Mild	125	31.3				
Moderate	108	27.0				
Severe	46	11.5				
v. Severe	7	1.8				
Total	400	100.0				

Table 2: The results of t test for determination the levels of depression

Table No. 4: The effects of gender difference on the prevalence of depression using t tests

Gender	N	Mean	t	df	Sig.	Significance
Male	195	13.5538	-6.268	398	.000	Significant
Female	205	19.7317				

Table No.5: The percentage of depression according to gender

gender	Percentage of Depression
Male	39.5%
Female	60.5%

Table No.6: The effects of age on the prevalence of depression using t test.

Variables	N	Pearson Correlation	SIG	Significance
Depression				Significant
Age	400	0.173	0.001	

Table No.7: The effects of Number of Family Members on the prevalence of depression using t test

Variables	N	Pearson Correlation	SIG	Significance
Number of Family Members	400	0.036	0.469	Not Significant

Table No. 8: The effects of parents' life of on the prevalence of depression using t test

Parents life	N	Mean	t	df	Sig.	Significance
yes	373	16.5228	-1.423	398	.155	Not significant
no	27	19.4444				

Table No. 9: The effects of parents divorce on the prevalence of depression using t test

Parents divorce	N	Mean	t	df	Sig.	Significance
yes	45	17.6889	.668	398	.504	Not significant
no	355	16.5972				

Table No.10: The effects of educational level of the mother on the prevalence of depression using t test

Depression	Sum of Squares	df	Mean Square	F	Sig.	Significance
Between Groups	561.402	4	140.350	1.323	.261	Not significant
Within Groups	41889.238	395	106.049			
Total	42450.640	399				

Table No.11: The effects of father work on the prevalence of depression using t test

Father work	N	Mean	T	df	Sig.	Significance
yes	368	16.4266	-1.936	398	.054	Not significant
no	32	20.0938				

Table No.12: The effects of mother work on the prevalence of depression using t test

Mother work	N	Mean	T	df	Sig.	Significance

yes	59	17.0847	.294	398	.769	Not significant
no	341	16.6569				

Table No.13: The effects of Difficulty in dealing with parents and friends on the prevalence of depression using t test.

Difficulty in dealing with parents and friends	N	Mean	t	df	Sig.	Significance
yes	116	24.2672	10.571	398	.000	Significant
no	284	13.6373				

Table 3: The distributions of depression levels of the sample according to dealing with parents and friend

Levels of depression	Difficulty in dealing with parents and friends		Chi-Square	df	Sig	Significance
	Yes	No				
Normal	7.9%	92.1%	86.606	4	.000	significant
Mild	19.2%	80.8%				
Moderate	41.7%	58.3%				
Severe	69.6%	30.4%				
v . Severe	85.7%	14.3%				
Total	29.0%	71.0%				

Table 4: The effects of Problems in the family on the prevalence of depression using t test

Problems in the family	N	Mean	T	df	Sig.	Significance
yes	108	22.1296	6.723	398	.000	Significant
no	292	14.7192				

Table 5: The distributions of depression levels of the sample according to problems in the family

Levels of depression	Problems in the family		Chi-Square	df	sig	Significance
	Yes	No				
Normal	12.3%	87.7%	34.251	4	.000	Significant
Mild	23.2%	76.8%				
Moderate	35.2%	64.8%				
Severe	47.8%	52.2%				
v . Severe	71.4%	28.6%				
Total	27.0%	73.0%				

Table No.17: The effects of History of psychiatric illness on the prevalence of depression using t test

History of psychiatric illness	N	Mean	t	df	Sig.	Significance
yes	55	26.1636	7.846	398	.000	Significant
no	345	15.2145				

Table 6:- The distributions of depression levels of the sample according to History of psychiatric illness

Levels of depression	History of psychiatric illness		Chi-Square	df	Sig	Significance
	Yes	No				
Normal	3.5%	96.5%	57.566	4	.000	Significant
Mild	4.8%	95.2%				
Moderate	25.9%	74.1%				
Severe	26.1%	73.9%				
v . Severe	71.4%	28.6%				
Total	13.8%	86.3%				

Table 7: The distributions of depression levels of the sample according to History of psychiatric illness

A family history of psychiatric disease	N	Mean	t	df	Sig.	Significance
yes	33	20.0909	1.967	398	.050	Significant
no	367	16.4169				

Table 8: The distributions of depression levels of the sample according to History of psychiatric illness

Drug use	N	Mean	t	df	Sig.	Significance
yes	25	17.2400	.260	398	.795	Not significant
no	375	16.6853				

Table No.21: The distributions of depression levels of the sample according to a family history of psychiatric disease family history of psychiatric disease

Levels of depression	A family history of psychiatric disease		Chi-Square	df	Sig	Significance
	Yes	No				
Normal	7.9%	92.1%	13.424ª	4	.009	significant
Mild	2.4%	97.6%				
Moderate	12.0%	88.0%				
Severe	17.4%	82.6%				
v . Severe	0%	100.0%				
Total	8.3%	91.8%				

5 DISCUSSION

Many researchers believe that mood disorders in children and adolescents represent one of the most under diagnosed group of illness in psychiatry. This is due to several factors:

Children and young adolescents are not always able to express how they feel. The symptoms of mood disorders take on different forms in adolescents than in adults. Mood disorders are often accompanied by other psychiatric disorders which can mask depressive symptoms. Many physicians tend to think of depression and bipolar disorder as illness of adulthood.[33]

A published longitudinal prospective study found that early-onset depression often persists, recurs, and continues in to adulthood, and indicates that depression in youth may also predict more severe illness in adult life.[34] There have been several efforts to improve the early detection of depression and to develop programs to prevent and treat it as soon as possible.[35]

In the current study, the BDI have been utilized to detect the prevalence of depressive symptomatology and its risk factors in a no clinical adolescent student sample. Although it BDI is not designed for diagnostic purposes, its epidemiologic utility has been evaluated in several studies, which concluded that it is a reliable and valid instrument for detecting depressive disorders in non-clinical populations. Several studies support the BDI's usefulness in measuring and predicting depression in adolescent samples. [36,37]

The scale's format is clear; it is simple to administer; and it is easily understood by this population.[38] Prevalence rates of actual depression are estimated to range from 15 to 25 percent [39].??? In this study and according to the Beck cut off scores about 26.5% of the sample has moderate to severe depression and about 1.75 % has severe to very severe depression, with predominance of female about 60.5%. Comparable findings have been reported by others; A study done on Saudi Arabia to detect Prevalence, symptomatology, and risk factors for depression among high school students in Saudi Arabia in which: A Cross-sectional survey, using the Arabic Beck's Depression Inventory (BDI), by a team consisting of a psychiatrist and psychologist has been conducted. Secondary school students (n = 490, 306 males "62.4 %" and 184 females "37.6 %") of age group from (16 to 20). And Results: The prevalence of depression according to the Beck Depression Inventory (CBDI) (cut-off point: 19) was 110 (22.4 %) as mo derate (19-29), 36 (7.3 %) as severe (30-40), and 18 (3.7%) as very severe (> 40) in this study group, with a clear predominance prevalence of depression in girls than in boys 1.5 times.[40]

An NIMH sponsored study of 9 to 17-year-olds have estimated that the prevalence of any depression is more than 6% in a 6-month-period, with 4.9% having major depression. [41] Also, epidemiological utility and characteristics of the Beck Depression Inventory (BDI) were examined in a sample of 304 non-clinical adolescents in Indian schools and revealed that 22.4% of school going girls and 12.8% of school going boys had depression of various grades. [42] (Rutter,1986), suggest a variety of explanations for increasing prevalence of depression at adolescence age and that increasing level may be genetically determined and these genes triggered at late childhood or adolescence. [43] In accordance with (Jimerson *et al*, year) who indicated that single risk factors can rarely be conceived as resulting in depressive outcomes instead, the biological, psychological, and social systems may be considered within a larger framework for explaining the etiology of depression.[44]

The sex differences found in BDI scores, pointing to significantly higher scores for female subjects (1.5:1 ratio), (60.5% female :39.5 male) are in line with data observed in other studies of adolescents as well as adults Community studies showed that, for girls, there is a progressive rise in depressive symptoms from menarche, so that by the mid-teens girls exhibit at least twice the prevalence rate of males. The finding that of female students, in contrast to of male students, had scores compatible with depression also agrees with

reports of a higher prevalence of depression in women. The cause of this striking rise in the incidence of depressive symptoms in adolescent females is as yet unknown, but hypotheses include the influence of female gonadal hormones, psychological changes that accompany puberty and changes in social roles.

The interaction of genetics and environment are strongly implicated in the onset of MDD???. About 13.8% of the student shows history of psychiatric illness comparable to the study of Saudi Arabia which shows that Students with history of psychiatric illness were 7.5 times more likely to have depression than those without history of psychiatric illness.[40]

There has been a tremendous body of literature that has demonstrated that mood disorders occur more commonly among the relatives of depressed persons than in the general population and this is agree with our study in which 8.3% of student has a famliy history of psychiatric illness. In a review of longitudinal data it was estimated that, by the age of 20 years, a child with an affectively ill parent has a 40% chance of experiencing an episode of major depression.[40]

According to (Kaslow *et al*, 1994) family variables associated with depression are parental psychopathology, divorce, low socioeconomic status, negative life circumstances including loss, abuse, or neglect, and low levels of social support.

In this study, it was found that parental education, socioeconomic status, Parental loss and divorce and numbers of family members are not significant risk factors for depression and this may be unique in this kind of cultures and may be due to the predominance of extended families and remarriage. While increase of age and difficulty in dealing with family and friends was a significant risk factors and this is perhaps due to lake of recognizing of depressive symptoms by Sudanese parent in this age groups.

Conclusively, our results indicate a high rate of depression among secondary school students. Also findings provided gender differences in the prevalence and presentation of depressive symptoms. The findings suggest that being female with history of psychiatric illnes and difficulty with dealing with family and friends increase the risk of depression. Assessment using screening is recommended. The increased risk for the onset of depression in adolescents reinforces the importance of early recognition and intervention.

6 CONCLUSION

My study which is done on adolescent on Khartoum bahri province secondary school to assess the prevalence of depression among them using using the Arabic Beck's Depression Inventory (BDI) reviled statistical significant result for depression which is predominantly present as moderate type

Statistical analysis also demonstrated that the most significant risk factors involved were: sex, increasing age, difficulty in dealing with family and friend, history of psychiatric illness, and familial history of psychiatric illness.

7 Recommendations:
➢ Adolescent depression has high prevalence although it is both under diagnosed and treated so using screening is recommended.
➢ Using screening can be through:
➢ Ministry of education on it is annual school program and also through ensuring that every school has a social worker besides enforcing his role.
➢ Primary health clinic where doctors should be aware about symptoms and sign of adolescent depression.
➢ Regular educational session between the school and the parent or the adolescent care giver about the adolescent depression symptomatoly and early recognition and seek for medical advice
➢ Eduction of secondary school student by the school social worker about the symptoms of depression and when to seek medical advise.

REFERENCE
1. Depressive disorders, Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition TR (2013) American Psychiatric Association).
2. Eugene S. Paykel wrote in the journal *Dialogues of Clinical Neuroscience* that the term "depression" started to appear in the 19th century
3. Radden, J., *Philosophy, Psychiatry & Psychology* Volume 10, Number 1, March 2003, p. 37-52 | 10.1353/ppp.2003.0081.) An article published in *Philosophy, Psychiatry & Psychology* ʿFrom: Philosophy, Psychiatry, & Psychology Volume 10, Number 1, March 2003 pp. 37-52 | 10.1353/ppp.2003.0081
4. Angelina R. Sutin; Antonio Terracciano; Yuri Milaneschi; Yang An, MS; Alan B. Zonderman. The Trajectory of Depressive Symptoms Across the Adult Life Span: JAMA Psychiatry, August 2013 issue
5. E Sabaté - World Health Organization, 2004 - archives. WHO information
6. Daniel J. Smith, Douglas H. R., Depression in young adults, Advances in Psychiatric Treatment, Blackwood edition, Dec 2003(5).
7. (psycenter ast reviewed: By John M. Grohol, Psy.D. on 19 May 2015 Published on PsychCentral.com. All rights reserved.
8. U.S. Preventive Services Task Force, Screening for depression: recommendations and rationale. *Ann Intern Med*. 2002;136(10):760-764.)
9. American Medical Association. Guidelines for Adolescent Preventive Services (GAPS):

Recommendations monograph. http://www.ama-assn.org/resources/doc/ad-hlth/gapsmono.pdf. Published 1997.

10. Maternal and Child Health Bureau. Bright Futures Web site. http://www.brightfutures.org/. Accessed June 11, 2013.)

11. Screening and treatment for major depressive disorder in children and adolescents.) http://www.uspreventiveservicestaskforce.org/uspstf09/depression/chdeprrs.htm. Published March 2009. Accessed June 11, 2013.

12. Angold A, Costello EJ. Mood and Feelings Questionnaire (MFQ). Durham, NC: Duke University Health System Center for Developmental Epidemiology; 1987. http://devepi.duhs.duke.edu/mfq.html. Accessed June 11, 2013.)

13. Allgaier AK, Pietsch K, Frühe B, Sigl-Glöckner J, Schulte-Körne G. Screening for depression in adolescents: validity of the patient health questionnaire in pediatric care. *Depress Anxiety*. 2012;29(10):906-913.)

14. Richardson LP, Rockhill C, Russo JE, et al. Evaluation of the PHQ-2 as a brief screen for detecting major depression among adolescents. *Pediatrics*. 2010;125(5):e1097-e1103.)

15. Beck AT, Steer RA, Ball R, Ranieri W. Comparison of Beck Depression Inventories -IA and -II in psychiatric outpatients. *J Pers Assess*. 1996;67(3):588-597.)

16. Kovacs M. The Children's Depression Inventory (CDI). *Psychopharmacol Bull*. 1985;21(4):995-998.)

17. Richardson LP, McCauley E, McCarty CA, et al. Predictors of persistence after a positive depression screen among adolescents. *Pediatrics*. 2012;130(6):e1541-e1548.)

18. Zuckerbrot RA, Cheung AH, Jensen PS, Stein RE, Laraque D; GLAD-PC Steering Group. Guidelines for Adolescent Depression in Primary Care (GLAD-PC): I. Identification, assessment, and initial management. *Pediatrics*. 2007;120(5):e1299–e1312.

19. Cheung AH, Zuckerbrot RA, Jensen PS, Ghalib K, Laraque D, Stein RE; GLAD-PC Steering Group. Guidelines for Adolescent Depression in Primary Care (GLAD-PC): II. Treatment and ongoing management. *Pediatrics*. 2007;120(5):e1313-e1326.

20. Watanabe N, Hunot V, Omori IM, Churchill R, Furukawa TA. Psychotherapy for depression among children and adolescents: a systematic review. *Acta Psychiatr Scand*. 2007;116(2):84-95.)

21. Watanabe N, Hunot V, Omori IM, Churchill R, Furukawa TA. Psychotherapy for depression among children and adolescents: a systematic review. *Acta Psychiatr Scand*. 2007;116(2):84-95.)

22. Mufson L, Dorta KP, Wickramaratne P, Nomura Y, Olfson M, Weissman MM. A randomized effectiveness trial of interpersonal psychotherapy for depressed adolescents. *Arch Gen Psychiatry*. 2004;61(6):577-584.)

23. Dimidjian S, Barrera M Jr, Martell C, Muñoz RF, Lewinsohn PM. The origins and current status of behavioral activation treatments for depression. *Annu Rev Clin Psychol*. 2011;7:1-38.)

24. David-Ferdon C, Kaslow NJ. Evidence-based psychosocial treatments for child and adolescent depression. *J Clin Child Adolesc Psychol*. 2008;37(1):62-104.)

25. Murphy JM, Monson RR, Olivier DC, *et al*. Affective disorders and mortality: A general population study. Arch Gen Psychiatry 1987; 44:473-480.

26. Murray CJL, Lopez AD. The global burden of disease: a comprehensive assessment of mortality and disability from diseases, injuries and risk factors in 1990, and projected to 2020. Cambridge MA: Harvard University Press, 1996. Kovaks M. Affective disorders in children and adolescents. Am J Psychol 1989; 44(2):209, 1989. Hammen C, Compas BE. Unmasking unmasked depression in children and adolescents: The problem of co morbidity. Clinical Psychology Review. 1994; 14: 585-603.

27. Birmaher B, Ryan ND, Williamson DE, Brent DA. Childhood and adolescent depression: A review of the past 10 years, Part I. Journal of the American Academy of Child and Adolescent Psychiatry. 1996; 35, 1427-1439. Kaslow NJ, Deering CG, Racusin GR Depressed children and their families. Clinical Psychology Review. 1994; 14, 35-59.

28. Cicchetti D, Toth S. The Development of Depression in Children and Adolescents. American Psychologist. 1998; 53 (2): 221-241

29. Beardslee WR, Versage EM, Gladstone TR (1998): Children of affectively ill parents: a review of the past 10 years. J Am Acad Child Adolesc Psychiatry. 1998; 37:1134-1141.

30. Anne Brown MD, Mood Disorders in Children and Adolescents, NARSAD Research Newsletter, winter 1996.)

31. Weissman MM, Wolk S, Goldstein RB, et al. Depressed adolescents grown up. J Am Med Association 1999; 281: 1701-1713.

32. Parker G, Roy K. Adolescent depression: a review. Aust N Z J Psychiatry. 2001; 35:572–80.

33. Barrera MJr, Garrison-Jones CV. Properties of the Beck Depression Inventory as a screening instrument for adolescent depression. J Abnorm Child Psychol. 1988; 16:263–73.

34. Bennett DS, Ambrosini PJ, Bianchi M, Barnett D, Metz C, Rabinovich H. Relationship of Beck Depression Inventory factors to depression among adolescents. J Affect Disor. 1997; 45:127–134.

35. Teri L. The use of the Beck Depression Inventory with adolescents. J Abnorm Child Psychol. 1982; 10:277–284.

36. Horn MP. Competence in daily living: A study of children and adolescents at risk for depression. Paper presented at the Biennial Conference for the Society for Research on Child Development

37. Prevalence, symptomatology, and risk factors for depression among high school students in Saudi Arabia .Europe journal of psychology Vol 2, No 3 (2006) > Abdel-Fattah.

38. Shaffer D, Fisher P, Dulkan MK, et al. The NIMH Diagnostic Interview Schedule for Children version 2.3 (DISC – 2.3): description, acceptability, prevalence rates and performance in the MECA study. J Am Academy of Child and Adolescent Psychiatry. 1996; 35(7): 865-87700)

39. Nair MK, Paul MK, John R. Prevalence of depression among adolescent Indian J Pediatr. 2004; 71:523-524.)

40. Rutter M. Depressive feelings, cognitions, and disorders: A research postscript. In M. Rutter, C. E. Izard, & P. B. Read (Eds.), Depression in Young People: Developmental and Clinical Perspectives, New York: Gilford Press, 1986a, pp. 491-519.)

41. Shane R. Jimerson, Ashley Duggan, Angela Whipple and Jeffrey K. Ellens. Depression; symptoms, epidemiology, etiology, assessment, and treatment. Edited by Shane R. Jimerson, University of California, Santa Barbara