

## Awareness of Saudi population about causes, diagnosis and management of Depression: Review Article

### Abstract:

Depression is one of the most concerning psychological disorderS of our modern world., That problem with depression seems to the high incidence of the disease especially among the young population between 20-40 and females. Depression incidence has been increasing in the last decades and is widespread in developed countries as it is in the undeveloped ones, Saudi Arabia is no exception., The awareness about the disease is not enough, some of the patients who have the disease are not also aware of it, and even if they do, little they do to combat it. The self-heal methods that traditional healers try is problematic, because it's also based on supernatural non-scientific beliefs which sometimes leads to further complications of the patient case, on the other hand the population must be aware of the importance of seeking the help of professional well trained doctors instead. **Conclusion:** We need more awareness about the disease, and it's symptoms and how to deal with probably and when to see a doctor, depression is hazardous because it can lead to some serious social and health issues, and can cause death due to suicide

**Key words:** Awareness, Saudi population, Causes of Depression, Diagnosis of Depression, and Management of Depression

### Introduction:

A major medical disorder that affects a person's thoughts, feelings, mood, and behavior is mental illness. Depression, schizophrenia, bipolar disorder, obsessive-compulsive disorder, panic disorder, post-traumatic stress disorder, personality

disorder, eating disorders, and addictive behaviors are all symptoms of mental illness. [1]

Like many other diseases, level of awareness of the disease and its risks plays an acritical role in the outcome of the disease, unfortunately, depression seems to be one of these diseases that left unchecked by a large population, in Saudi Arabia is no exception. As a matter of fact, it seems to even be more problematic due to the wrong practices that sometimes are carried as treatment, such as the local healers or depending on supernatural beliefs to combat the disease, and even though these healers can sometimes have a positive impact, in many cases they don't, in the opposite actually, it leaves severe cases unchecked, these cases require sometimes real medical and psychological treatment by professionals and leaving them or using unfair treatment can lead to adverse complications.

Mental illness can affect people of various ages, nationalities, cultures, faiths, and socioeconomic backgrounds. It's important to note that not every mental health issue is classified as a mental disorder; some people have temporary mental health issues. If the signs and symptoms persist and interfere with one's capacity to function and relate to others, these problems are classified as mental illnesses. [1]

[Depression looks to be a worldwide disease, in the opposite of many diseases which seem to have more prevalence in undeveloped countries, depression doesn't distinguish between undeveloped or developed, in the matter of fact it seems to have more prevalence in developed countries, and that can be because of the increasing social isolation, due to modern life style, increased usage of social networks and internet which in fact cause a reduction of actual world social connections which lead to more chances of depression.]

**Covid-19** effects also contributed to the increasing of depression incidence, due to lack of social contact and social distancing measurements.

**Saudi Arabia** does not differ from the rest of the world when it comes to the depression incidence. It seems to be affecting more of the group aged between 20-40 more than others, also women seem to be more prone to depression than men. The problem when it comes to Saudi Arabia and many in the **Gulf region** countries, is the level of awareness of the disease and the symptoms and when need to see professional help, all of that we are going to discuss in our review.

## Demographics and Prevalence Worldwide:

According to the World Health Organization, depression would be the second leading cause of disability-adjusted life years lost by 2020. Depression is a mental disorder characterized by a chronic low mood and a sense of hopelessness, and a number of risk factors. Its prevalence in primary care ranges between 15.3-22 percent, with a global prevalence of up to 13 percent and a prevalence of 17-46 percent **Saudi Arabian prevalence.** [2]

The prevalence of depression in primary care settings varies by subtype, with major depression accounting for 4.8-8.6%, dysthymia for 2.1-3.7 percent, and moderate depression accounting for 8.4-9.7%. For patients seen in primary care, the cumulative prevalence of all kinds of depression is between 15.3-22 percent. According to the World Health Organization's 2001 Health Report, over 15% of people with **severe** depression have a lifetime risk of suicide. [3,4,5,6] Although recent estimates put the figure as low as 4%. In the United States, depression prevalence has been estimated to be around 9% in the general population and 5-13 percent among adult primary care patients [3,7,8,9].

According to the World Health Organization (WHO), one in every four persons – or around 25% of the global population – suffers from mental disease in both the industrialized and developing nations. **The** mental disease accounts for over 25% of all disabilities in large industrialized nations such as the United States, Canada, and Western Europe. According to the World Health Organization, it is also the biggest cause of disability worldwide. [1,10,11,12]

The overall prevalence recorded in Europe is 8.5 percent, with women accounting for roughly 10% and men for 6.6 percent [3,13]. In the recent decade, the global prevalence of depression has been shown to be rising [3,14]. Depression and anxiety disorders affect 10-44 percent of people in underdeveloped nations, and less than 35 percent of those who are depressed obtain medical treatment [3,15]. Pakistan has a 34 percent overall prevalence [16,17]. The prevalence rate in Qatar is 27.8% [3,18].

Depression is a global problem that affects 264 million people, according to the World Health Organization. However, only 76 to 85 percent of depressive patients

are aware of the condition and its potential therapies, while others refuse to seek medical help for the disease's cure. Furthermore, girls are more susceptible to developing this condition than males. [19]

### **Prevalence in Saudi Population:**

A study looked up at the presented depression cases among patients from 20 to 40 years old : The majority (76.6 percent) were women. The prevalence of depression was 74 percent, with mild depression accounting for 37.8%, moderate for 20.8 percent, and moderately severe to severe depression accounting for 15.4 percent. Patients who were married had a lower risk of depression. Patients who said they **didn't** have any social support were more likely to be depressed than those who did. Patients having a troubled marriage had a nearly four-fold increased risk of depression compared to those who did not have a troubled marriage. When **Compared** to individuals who did not have financial concerns, patients with financial troubles had nearly twice the risk of getting depression. [20]

Despite multiple studies showing the value of early detection and cost savings of up to 80%, primary care physicians continue to miss 30-50 percent of depressive patients in their clinics. [3]

**Depression has multiple underlying risk factors such as chronic medical illness, stress, chronic pain, family history, female gender, low income, job loss, substance abuse, low self-esteem, lack of social support, past history, being single, divorced or widowed, traumatic brain injury, and younger age [37].**

Serval studies that looked into the prevalence among university students show that females are more prone to be having depression as opposed to males. [21] The male-to-female ratio was used in two studies to describe each severity level. Mild-20.5 percent against 15.9 percent, moderate-11 percent vs 7.9 percent, and severe-2.7 percent vs 3.2 percent were found in one study. [22] While mild-24.7 percent vs 21.2 percent, moderate-21.1 percent vs 13.9 percent, and severe-18.6 percent vs 16.4 percent were found in another. [23]

Living alone has been identified as a risk factor. When compared to married students, single students reported higher rates of depression (29.65 percent vs 10.5 percent ). Additional evidence **shows** that married women have higher

depression rates than single students (28.6% vs. 13.7%). Non-Saudi nationality has also been linked to a higher risk of depression. [21]

In 1995, it was estimated that 30-46 percent of primary care patients had a psychiatric illness. Depression and anxiety disorders affect roughly 18% of persons in central Saudi Arabia in 2002. In a systematic study on depression published in 2010, an overall prevalence of 41% was found. El Rufaie et al. found a 17 percent depression prevalence among Dammam locals. In Asir, Al Qahtani et al found a 27 percent prevalence of depression in 2008. In the south-eastern region, Abdul Wahid et al. estimated an overall prevalence of depression nearing 12% in 2011, with 6% of severe cases. Becker et al. discovered a 20% prevalence of depression in primary care settings in Riyadh. [3,24,25,26,27,28,29,30]

Those who had stressful experiences were considerably more likely to develop depression than those who had not. Patients having a family history of depression had a significantly higher risk of depression than those without such a history. In addition, patients who reported sleep difficulties were roughly twice as likely to be depressed as those who did not. [20]

#### **Awareness about the disease in Saudi Arabia:**

In a study done in Al-Jouf: Males made up 56.2 percent of the total 425 participants. Social media was the most widely reported source of information about depression in the Al-jouf area (58.6 percent). Furthermore, 16.7% of the patients had previously been diagnosed with depression. Only 26.4 percent of the participants correctly answered 75 percent of the awareness questions. The majority of the subjects (96.2%) were aware of at least one depressive symptom. [19]

Almost 62.4 percent of participants were aware that females are more vulnerable to depression, 75.3 percent agreed that it **could** affect children and young people, and 76.5 percent believed that a person confronted with unpleasant events is more vulnerable to depression. The stigma of psychiatric disease was the most generally mentioned barrier preventing depressed patients from getting care (37.4 percent). [19]

Some patients in Saudi Arabia consider self-treatment to help or even improve their depression symptoms without seeking professional care. Traditional healers,

who lack specific training or certification, are frequently sought out by these patients. To cure patients' ailments, traditional healers frequently employ some understanding of herbal medicine and acupuncture. On the other hand, traditional healers' knowledge is based on their own experiences rather than any formal training in these tools. As a result, in many nations, traditional healers are viewed as nonprofessionals. [31]

Although the general public is optimistic about the origins and treatments of BP, supernatural beliefs remain prevalent, emphasizing the importance of faith healers. Faith healers should be trained in the detection and treatment of mental illnesses, according to our findings. If necessary, they can then send patients to mental health specialists avoiding any further delays in seeking help and receiving appropriate treatment. [32]

### **Etiology and Pathophysiology:**

Multiple underlying reasons and mechanisms, including genetic, psychological, and environmental factors, may be implicated in the development of depression.

Compared to someone who does not have a family history of depression, having a first-degree relative who is depressed increases the risk of depression by up to three times. According to reports, hereditary factors influence in the varieties of depression that have a late start of symptoms. [19]

According to some studies, genetic variables may play a less role in late-onset depression than in early-onset depression. There are biological risk factors for depression in the elderly that have been found. Higher rates of depression have been linked to neurodegenerative diseases (particularly Alzheimer's and Parkinson's disease), stroke, multiple sclerosis, seizure disorders, cancer, macular degeneration, and chronic pain. Life events and difficulties act as catalysts for the onset of depression. Traumatic occurrences such as the death or loss of a loved one, a lack of or diminished social support, caregiver stress, financial issues, interpersonal challenges, and conflicts are all examples of traumatic events. [33]

Clinical and preclinical studies point to a disruption in serotonin (5-HT) function in the central nervous system as a key cause. Norepinephrine (NE), dopamine (DA), glutamate, and brain-derived neurotrophic factor are among the other neurotransmitters implicated (BDNF). [33]

The therapeutic efficacy of selective serotonin reuptake inhibitors suggests that CNS 5-HT activity plays a role in the pathogenesis of major depressive disorder (SSRIs). In addition to increased neurotransmitter availability, the data suggest a function for neural receptor modulation, intracellular signaling, and gene expression throughout time. [33]

### **Symptoms:**

Depression is a significant health disease marked by a persistently melancholy mood, unhappiness, and a loss of interest in life. Depression is also known as major depressive disorder (MDD) or clinical depression, and it is diagnosed when individuals have depressive symptoms for at least two weeks. [19]

### **Depression Types:**

The Diagnostic Statistical Manual of Mental Disorders, Fifth Edition, published by the American Psychiatric Association, divides depression into five categories: disruptive mood dysregulation depression, major depressive disorders, persistent depressive disorders, premenstrual dysphoric disorder, and depressive disorder due to other medical conditions. [19]

### **Diagnosis:**

The diagnosis of severe depression is based on clinical evidence. Like with other psychiatric diseases, it is determined after a thorough clinical interview and mental status examination. According to research, such an interview has sensitivity and specificity comparable to numerous radiologic and laboratory tests routinely used in medicine. The diagnostic method that is commonly regarded as the standard mentioned here: [35]

The following five (or more) symptoms occurred during the same two week period and represented a different function from the previous; at least one of the symptoms was (1) low mood or (2) loss of interest or pleasure.

1. Depressed mood almost every day for most of the day, as indicated by subjective reports (for example, feeling sad or empty) or observations by others

(for example, looking tearful). Note: In children and adolescents, emotions can be irritable.

2. The interest or pleasure in all or almost all activities is significantly reduced for most of the day
3. Significant weight gain or loss when not dieting
4. Insomnia
5. Almost every day, there is agitation or psychomotor retardation
6. I feel fatigued or lose energy almost every day.
7. Feeling worthless or excessive or inappropriate guilt (perhaps delusion) almost every day (not just self-blaming or being blamed for being sick).
8. Decreased or indecisive ability to think or concentrate almost every day.
9. Repeated thoughts of death (not just fear of death), repeated suicidal thoughts without a specific plan, attempted suicide, or had a specific suicide plan. [35]

**Treatment:**

Nine new antidepressants have been approved in the United States (fluoxetine, sertraline, paroxetine, bupropion, venlafaxine, fluvoxamine, nefazodone, mirtazapine, and citalopram). In comparison to earlier medications, these treatments have a more benign side effect profile, a simpler dosing strategy, improved patient adherence, and a lower risk of death in overdose scenarios. As a result, they were soon adopted in medical settings, and several of them are now among the most widely prescribed medications in the world. On the other hand, these newer treatments continue to show the same delay in complete therapeutic activity (weeks or more) as older drugs, lack a clear relationship between serum drug level and therapeutic response, and several pose considerable drug-drug interactions hazards. [35]

Pharmacological Treatment Classes that are used in Depression treatment:

1. Selective serotonin reuptake inhibitors (SSRIs)
2. Serotonin/norepinephrine reuptake inhibitors (SNRIs)
3. Atypical antidepressants
4. Serotonin-Dopamine Activity Modulators (SDAMs)

5. Tricyclic antidepressants (TCAs)
6. Monoamine oxidase inhibitors (MAOIs) [34]

**Non-Pharmacological Treatment** for depression includes:

Psychotherapy:

- CBT (cognitive-behavioral therapy) is a type of psychotherapy
- Interpersonal Interpersonal counseling

Electroconvulsive Therapy (ECT) for:

- Suicide attempts in a short period
- Depression that is severe during pregnancy
- Refusal to consume food or drink
- Catatonia
- Psychosis with a high level of severity

TMS stands for Transcranial Magnetic Stimulation (TMS):

- FDA-approved for treatment-resistant/refractory depression in patients who have failed at least one drug trial

Vagus Nerve Stimulation (VNS)

- For individuals who have failed at least four drug trials, FDA-approved as a long-term supplementary treatment for treatment-resistant depression. [36]

**Conclusion:**

We need more awareness about the disease and its symptoms and how to deal with probably and when to see a doctor, depression is very dangerous because it can lead to some serious social and health issues, and can cause death due to suicide. Health education campaigns is highly important to increase the public information about this triggered health problem. More and large scale Knowledge, attitude and practice (KAP) studies are needed to investigate the level of knowledge of the general Saudi population about this public health problem.

## References:

1. Almutairi AF. Mental illness in Saudi Arabia: an overview. *Psychol Res BehavManag.* 2015 Jan 30;8:47-9. doi: 10.2147/PRBM.S79268. PMID: 25674019; PMCID: PMC4321637.
2. Al-Qadhi W, Ur Rahman S, Ferwana MS, Abdulmajeed IA. Adult depression screening in Saudi primary care: prevalence, instrument and cost. *BMC Psychiatry.* 2014 Jul 3;14:190. doi: 10.1186/1471-244X-14-190. PMID: 24992932; PMCID: PMC4227058.
3. Al-Qadhi W, Ur Rahman S, Ferwana MS, Abdulmajeed IA. Adult depression screening in Saudi primary care: prevalence, instrument and cost. *BMC Psychiatry.* 2014 Jul 3;14:190. doi: 10.1186/1471-244X-14-190. PMID: 24992932; PMCID: PMC4227058.
4. Pomerantz JM. Screening for Depression in Primary Care *Medscape News.* 2005. Available from: <http://www.medscape.com/viewarticle/511167>.
5. Bethesda. Table 1: prevalence of depressive illness. *Health Services/Technology Assessment Text.* 3 2005.
6. Haden A, Campanini B, editor. WHO. *The World Health Report: 2001: Mental health: new understanding, new hope.* Geneva: World Health Organization; 2001. p. 30
7. Revised prevalence estimates of mental disorders in the United States: using a clinical significance criterion to reconcile 2 surveys' estimates. *Narrow WE, Rae DS, Robins LN, Regier DA Arch Gen Psychiatry.* 2002 Feb; 59(2):115-23.
8. Cost of lost productive work time among US workers with depression. *Stewart WF, Ricci JA, Chee E, Hahn SR, Morganstein D JAMA.* 2003 Jun 18; 289(23):3135-44.
9. Prevalence, nature, and comorbidity of depressive disorders in primary care. *Coyne JC, Fechner-Bates S, Schwenk TL Gen Hosp Psychiatry.* 1994 Jul; 16(4):267-76.
10. World Health Organization . *WHO Mental Health Gap Action Programme (mhGAP)* Geneva: World Health Organization; 2013.
11. World Health Organization . *Mental Health Atlas 2011.* Geneva: World Health Organization; 2011. p. 82

12. National Alliance on Mental Illness Mental Health 2013: An Important Public Health Issue. 2013. [Accessed December 14, 2014]. Available from: <http://www.namigc.org/wp-content/uploads/2013/01/MentalIllnessFactSheet-July-2013.pdf>.
13. Depressive disorders in Europe: prevalence figures from the ODIN study. Ayuso-Mateos JL, Vázquez-Barquero JL, Dowrick C, Lehtinen V, Dalgard OS, Casey P, Wilkinson C, Lasa L, Page H, Dunn G, Wilkinson G, ODIN Group. *Br J Psychiatry*. 2001 Oct; 179():308-16.
14. Increasing prevalence of depression from 2000 to 2006. Andersen I, Thielen K, Bech P, Nygaard E, Diderichsen F. *Scand J Public Health*. 2011 Dec; 39(8):857-63.
15. Prevalence of depression among households in three capital cities of Pakistan: need to revise the mental health policy. Muhammad Gadit AA, Mugford G. *PLoS One*. 2007 Feb 14; 2(2):e209.
16. Risk factors, prevalence, and treatment of anxiety and depressive disorders in Pakistan: systematic review. Mirza I, Jenkins R. *BMJ*. 2004 Apr 3; 328(7443):794.
17. Prevalence of depression and anxiety in a village in Sindh. Luni FK, Ansari B, Jawad A, Dawson A, Baig SMJ. *Ayub Med Coll Abbottabad*. 2009 Apr-Jun; 21(2):68-72.
18. Flamerzi S, Al-Emadi N, Kuwari MGA, Ghanim IM, Ahmad A. Prevalence and determinants of depression among primary health care attendees in Qatar 2008. *World Family Medicine Journal*. 2010;8(2):3–7.
19. Nashmi Salom Aletesh<sup>1\*</sup>, Sultan Abdulrahman Alamrani<sup>2</sup>, Osama Hamza Alshreef, Ziyad Mohammed Alsharif, Mujahed Mohammed Alshehri, Hajar Mohammad Nasser Falah, Rose Mahmood Ali, Yara Nashmi Al-Etesh, Shahd Saud Faleh Almubarak. Public awareness towards depression in Al-Jouf, Saudi Arabia. *Nashmi Salom Aletesh et al*, 2021;5(3):876–884. <https://doi.org/10.24911/IJMDC.51-1610991870>
20. Al Balawi MM, Faraj F, Al Anazi BD, Al Balawi DM. Prevalence of Depression and Its Associated Risk Factors among Young Adult Patients Attending the Primary Health Centers in Tabuk, Saudi Arabia. *Open Access Maced J Med Sci*. 2019 Sep 14;7(17):2908-2916. doi: 10.3889/oamjms.2019.789. PMID: 31844457; PMCID: PMC6901847.

21. AlJaber MI. The prevalence and associated factors of depression among medical students of Saudi Arabia: A systematic review. *J Family Med Prim Care*. 2020 Jun 30;9(6):2608-2614. doi: 10.4103/jfmpc.jfmpc\_255\_20. PMID: 32984095; PMCID: PMC7491843.
22. Jarwan BK. Depression among medical students of Faculty of Medicine, Umm Al-Qura University in Makkah, Saudi Arabia. *Int J Med Sci Public Health*. 2015;4(2):184–191. doi:10.5455/ijmsph.2015.0911201436
23. Alsalameh N, Alkhalifah A, Alkhaldi N, Alkulaib A. Depression among medical students in Saudi Arabia. *Egypt J Hosp Med*. 2017;68:974–81.
24. Faris EA, Hamid AA. Hidden and conspicuous psychiatric morbidity in Saudi primary health care. *Arab J Psychiatry*. 1995;6(2):162–175
25. Prevalence of mental illness among Saudi adult primary-care patients in Central Saudi Arabia. Al-Khathami AD, Ogbeide DO. *Saudi Med J*. 2002 Jun; 23(6):721-4.
26. ALIBRAHIM O, AL-SADAT N, ELAWAD N. Gender and risk of depression in Saudi Arabia, a systematic review and meta-analysis. *Journal of Public Health in Africa*. 2010;1(1)
27. El-Rufaie OE, Albar AA, Al-Dabal BK. Identifying anxiety and depressive disorders among primary care patients: a pilot study. *Acta Psychiatr Scand*. 1988;77(3):280–282.
28. Alqahtani MM, Salmon P. Prevalence of somatization and minor psychiatric morbidity in primary healthcare in Saudi Arabia: a preliminary study in Asir region. *J Family Community Med*. 2008;15(1):27–33.
29. Abdelwahid HA, Al-Shahrani SI. Screening of depression among patients in family medicine in Southeastern Saudi Arabia. *Saudi Med J*. 2011;32(9):948–952.
30. Becker S, Al Zaid K, Al FE. Screening for somatization and depression in Saudi Arabia: a validation study of the PHQ in primary care. *Int J Psychiatry Med*. 2002;32(3):271–283.
31. A review of depression and help-seeking in Saudi Arabia Ohood Khaled Aljizani<sup>1\*</sup>, Hdayah Nassar Alluhaibi, Athal Kamal Filemban, Ammar Mohammad Bahati, Abdulrahman Jalwi M. Korkoman
32. Alosaimi FD, AlAteeq DA, Bin Hussain SI, Alhenaki RS, Bin Salamah AA, AlModihesh NA. Public Awareness, Beliefs, And Attitudes Toward Bipolar

Disorder In Saudi Arabia. *Neuropsychiatr Dis Treat*. 2019;15:2809-2818 <https://doi.org/10.2147/NDT.S209037>

33. Chand SP, Arif H. Depression. [Updated 2020 Nov 18]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2021 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK430847/>
34. Becker SM. Detection of somatization and depression in primary care in Saudi Arabia. *Soc Psychiatry Psychiatr Epidemiol*. 2004;39(12):962–966.
35. Goldman LS, Nielsen NH, Champion HC. Awareness, diagnosis, and treatment of depression. *J Gen Intern Med*. 1999 Sep;14(9):569-80. doi: 10.1046/j.1525-1497.1999.03478.x. PMID: 10491249; PMCID: PMC1496741.
36. Bains N, Abdijadid S. Major Depressive Disorder. [Updated 2021 Apr 20]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2021 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK559078/>
37. DOUGLAS M, MAURER DM, Carl R: Screening for depression. *Am Fam Physician*. 2012, 85 (2): 139-144.