Project title

A survey on the pervasiveness of antidepressants among university students of Bangladesh.

[This dissertation submitted to the Department of Pharmacy, Daffodil International University, slightly fulfills the needs for the Bachelor of Pharmacy degree (B.PHARM)]

Submitted To

The Department of Pharmacy

Faculty of Allied Health Sciences

Daffodil International University

Submitted By

Khayrul Alam

Student ID: 191-29-1512

Batch: 21st

Section: D

Department of Pharmacy

Faculty of Allied Health Sciences

Daffodil International University

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02 May, 2023

APPROVAL

This project paper, **A survey on the pervasiveness of antidepressants among university students of Bangladesh;** submitted to the Department of Pharmacy, Faculty of Allied Health Sciences, Daffodil International University, has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of Bachelor of Pharmacy and approved as to its style and contents.

Board of Examiners

…….

Dr. Muniruddin Ahmed

Professor and Head

Department of Pharmacy

Faculty of Allied Health Sciences

Daffodil International University

Internal Examiner 1

Internal Examiner 2

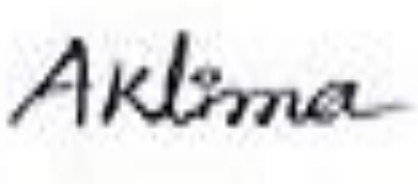
External Examiner

CERTIFICATION

DISSERTATION ACCEPTANCE FORM DAFFODIL INTERNATIONAL UNIVERSITY, DEPARTMENT OF PHARMACY.

This is to certify that the results of investigation of this project works are original & have not been submitted before in this University. This entire project work has been accepted satisfactory requirements for Bachelor of Pharmacy.

Project Supervisor



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Ms. Aklima Akter

Assistant Professor

Department of Pharmacy

Faculty of Allied Health Sciences

Daffodil International University

DECLARATION

I, with this, declare that I do this project under the supervision of Ms. Aklima Akter, Assistant Professor, Department of Pharmacy, Faculty of Allied Health Sciences, Daffodil International University, and reasonably meet the requirements of a Bachelor of Pharmacy (B. Pharm) degree. I declare that this project is entirely my creation. I further certify that the implementations in this project are unique and have never been submitted to any degree program at this university.

Submitted By

……

Khayrul Alam

Student ID: 191-29-1512

Batch: 21

Department of Pharmacy

Faculty of Allied Health Sciences

Daffodil International University

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DEDICATION

I dedicate this work to my parents, my respected teachers, and my friends who have always supported and encouraged me.

Abstract

This study intends to evaluate the pervasiveness of depression and antidepressant medication among public and private university students in Bangladesh with a broader and more varied sample than those gathered in prior studies. A cross-sectional research study was carried out in Bangladesh's 19 public and 12 private universities between March 05 and April 10, 2023. Sociodemographic information, lifestyle factors, signs and symptoms of depression, antidepressant administration history, medication prescribers, adverse effects of antidepressants, living arrangements, financial support during university, and the availability and accessibility of mental health support from their university were all collected from the students.

The survey comprised 528 students across the 31 universities in the country. First-year, second-year, third-year, fourth-year, graduate, and post-graduate students made up, respectively, 30.3%, 17.8%, 17.2%, 20.3%, 10.4%, and 4.0% belonging to them. 93.18% of students reported having depressive symptoms, with male students having a higher frequency than females (61.38% vs. 38.82%). Antidepressant use was positively identified in 26.83% of 492 depressed students. The outcomes of the study revealed that while 6.82% of the total respondents did not suffer from depressive symptoms, the other 55.78%, 24.3%, and 13.1% had moderate, high, and severe depression, respectively. The majority of students were identified as having moderate to severe depression. The main root causes for taking antidepressants were determined as insomnia, depression, anxiety, stress disorder, academic pressure, financial difficulty, and unstable relationships. According to research, students tend to use SSRIs more frequently than other antidepressants, afterward benzodiazepines and TCAs at the very least. The conclusion of the survey revealed that 39.5% of the participants had access to affordable mental health services at their university. 17.6% of those students don't have sufficient access, 41.9% have adequate access, and 40.5% have limited availability and access to mental health services at their university.

Key words: Cross-sectional research, sociodemographic, antidepressant drug, SSRIs, SNRIs, benzodiazepines, TCAs, mental health services.

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CHAPTER - 01

INTRODUCTION

The pervasiveness of antidepressants among university students in Bangladesh.

1. Introduction

1.1. General concept of Depression

Depression is a growing concern among students in Bangladesh, where a significant proportion of the population is young people pursuing higher education. The prevalence of depression in this population is believed to be high, with studies reporting rates as high as 44%. Various factors contribute to depression among Bangladeshi students written bellow. In addition, cultural stigmatization of mental illness and a lack of awareness and understanding of mental health issues can make it difficult for students to seek help and support. [1]

1. Academic Stress: The pressure to excel in academic performance, meet deadlines, and maintain grades can be overwhelming for some students. This stress can lead to feelings of anxiety and depression.
2. Financial Stress: Many university students have to balance their academic work with part-time jobs or other financial obligations, which can cause stress and anxiety.
3. Social Isolation: Some students may struggle to make friends or feel disconnected from their peers, which can lead to feelings of loneliness and depression.
4. Homesickness: For students who have moved away from home to attend university, homesickness can be a significant source of stress and depression.
5. Family or Relationship Issues: Relationship issues with family members or significant others can cause significant distress and can contribute to depression.
6. Substance Abuse: University students may turn to alcohol or drugs to cope with the stressors of university life, which can lead to addiction and depression.
7. Sleep Deprivation: University students often have irregular sleep patterns due to late-night studying or social activities, which can lead to sleep deprivation and exacerbate symptoms of depression.

Depression can have significant impacts on the academic performance and overall well-being of students, leading to a decline in motivation, concentration, and self-esteem. It can also increase the risk of suicidal thoughts and behaviors, highlighting the importance of early intervention and support. Efforts are being made to address the mental health needs of Bangladeshi students, including the implementation of counseling services and mental health awareness campaigns on campuses. However, more work is needed to address the underlying factors contributing to depression and ensure that students have access to adequate and culturally appropriate mental health support. [2, 3]

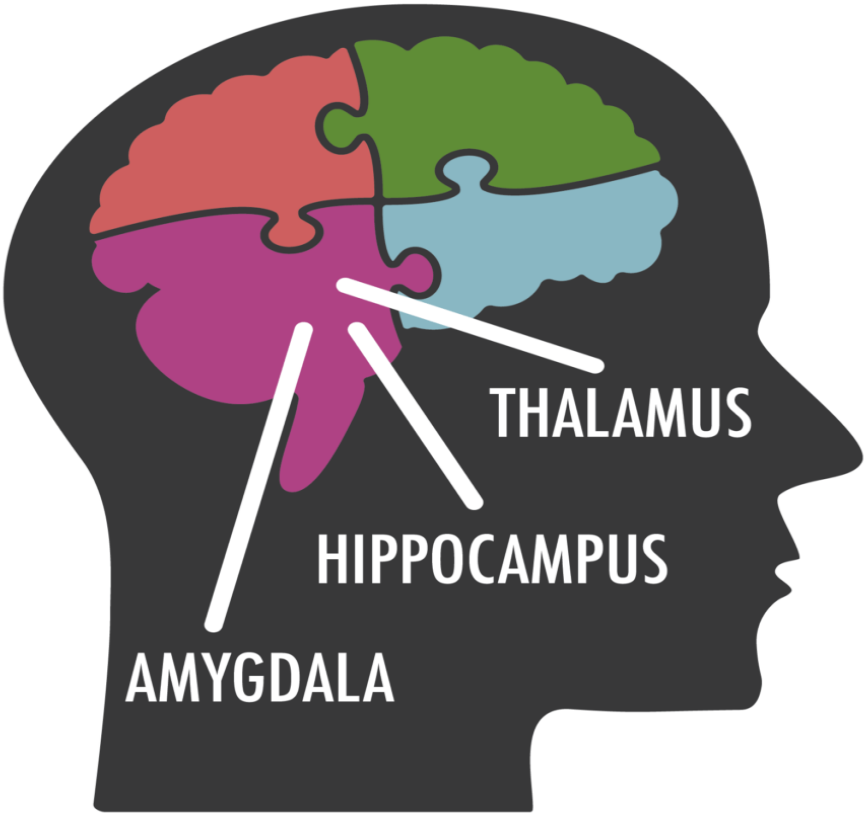


Figure 1. Regions of the brain that regulate mood and emotions.

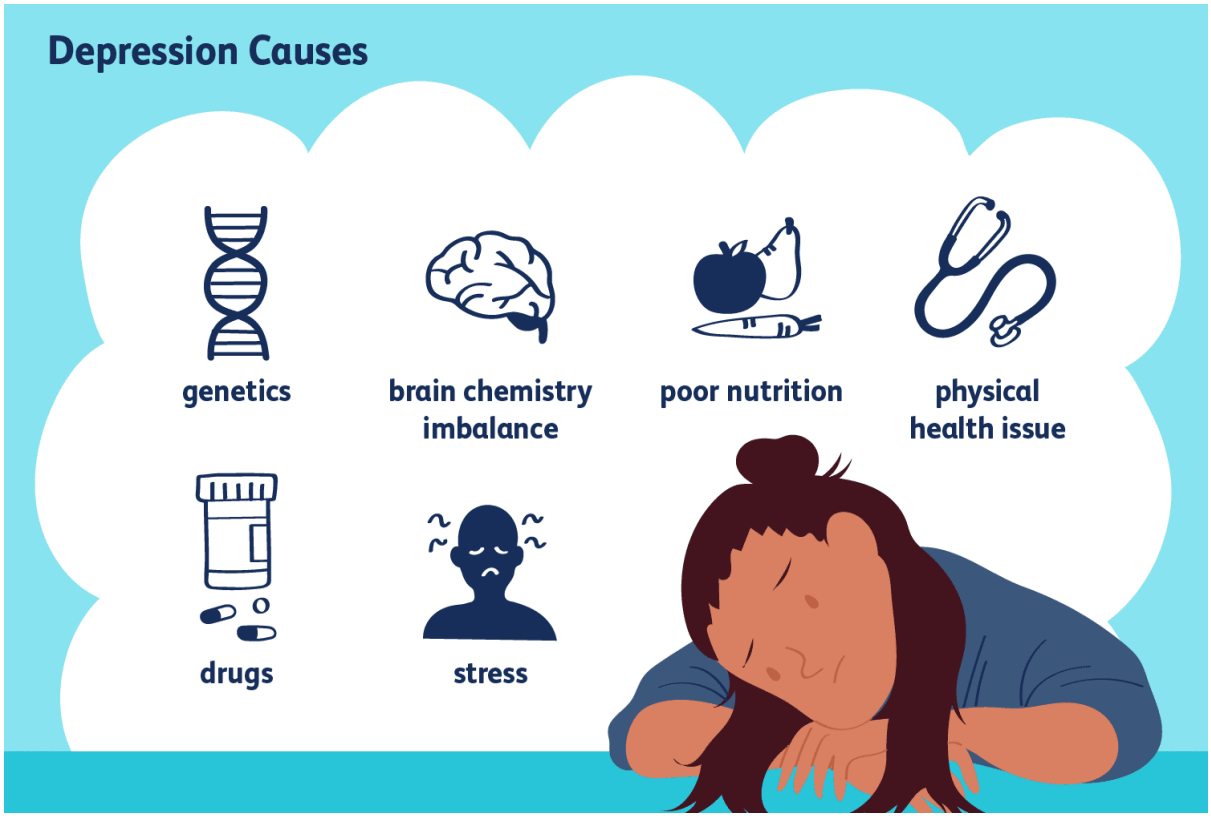


Figure 2. Symptoms of depression

1.2. History of depression and antidepressants

The Roman verb deprimere, which means "to push down," is the root of the English word depression. "To depress" has meant to control or bring down spirits since the 14th century. It was first used in 1665 by English author Richard Baker's Chronicle to describe someone who was experiencing "a deep sadness of soul," and it was then used in a similar way in 1753 by English author Samuel Johnson. The word also started to be used in economics and physiology.

French psychiatrist Louis Delasiauve first used the term to describe a psychiatric ailment in 1856, and by the 1860s, it had begun to appear in medical dictionaries to describe a physiological and metaphorical reduction of emotional function. Before the 1950s, opioids and amphetamines were commonly used as antidepressants. Their use was later restricted due to their addictive nature and side effects. Extracts from the herb Hypericum perforatum have been used as a "nerve tonic" to alleviate depression. Hypericum extracts were eventually licensed, packaged, and prescribed. [4]

The history of antidepressants dates back to the 1950s when researchers discovered the first tricyclic antidepressants (TCAs), such as imipramine and amitriptyline. These drugs work by increasing the levels of serotonin and norepinephrine in the brain, which are neurotransmitters associated with mood.

In the 1960s, the first monoamine oxidase inhibitors (MAOIs), such as phenelzine and tranylcypromine, were introduced. These drugs work by inhibiting the enzyme monoamine oxidase, which breaks down neurotransmitters like serotonin and norepinephrine. By preventing this breakdown, the levels of these neurotransmitters in the brain increase, leading to improved mood. In the 1980s, selective serotonin reuptake inhibitors (SSRIs), such as fluoxetine (Prozac), were introduced. These drugs work by selectively blocking the reuptake of serotonin in the brain, which increases the levels of serotonin available to transmit signals between neurons. [5]

Since the introduction of these early antidepressants, new drugs have been developed that target different neurotransmitter systems, such as serotonin-norepinephrine reuptake inhibitors (SNRIs) and atypical antidepressants. These drugs have been shown to be effective in treating depression and other mental health conditions, such as anxiety and obsessive-compulsive disorder. Esketamine, the first rapid-acting antidepressant to be approved for clinical treatment of depression, was introduced for this indication in March 2019 in the United States. [6]

Overall, the development of antidepressants has revolutionized the treatment of mental health conditions, and ongoing research continues to refine and improve these drugs.

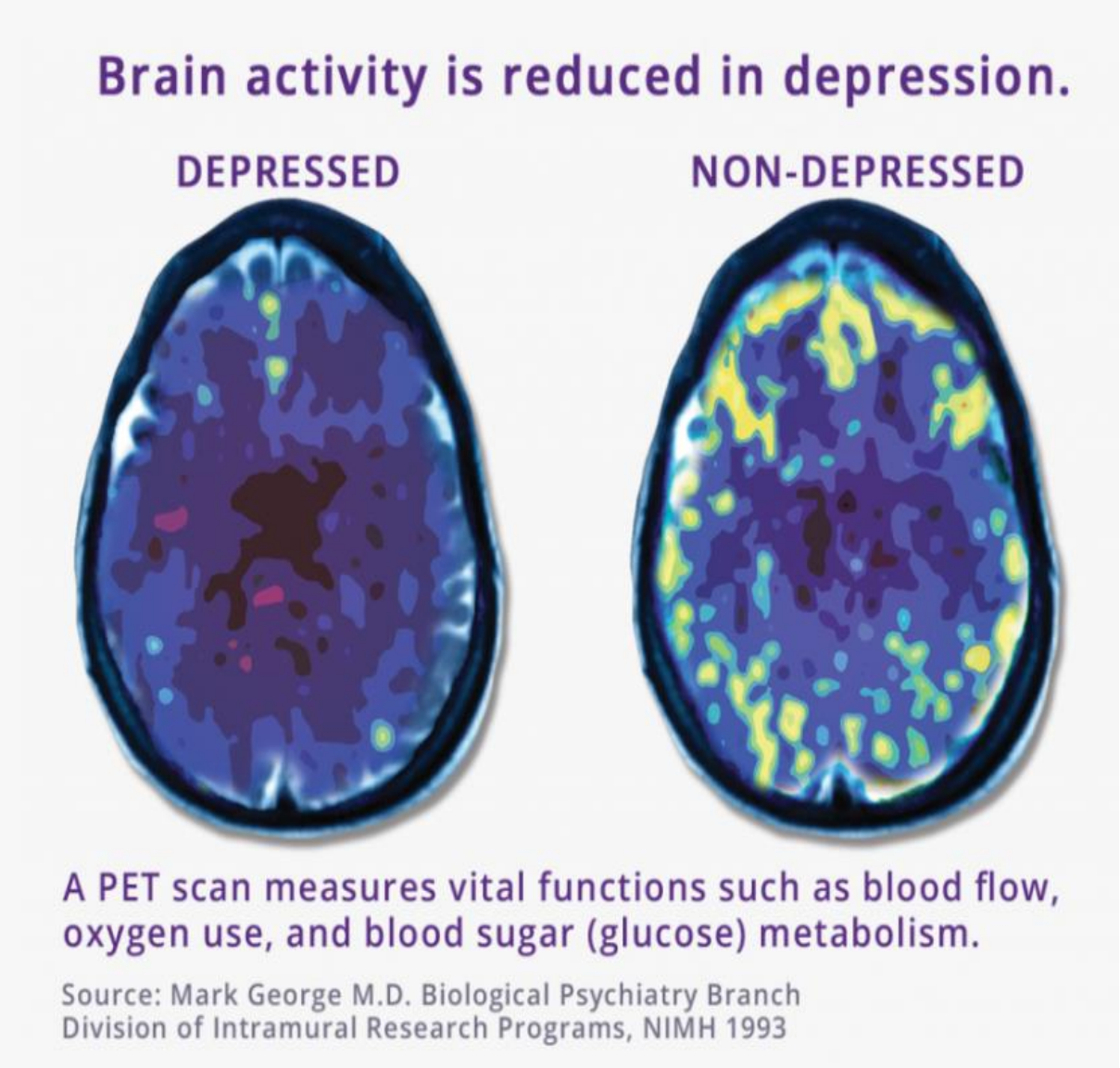


Figure 2. A positron emission tomography (PET) of depressed and non-depressed brain.

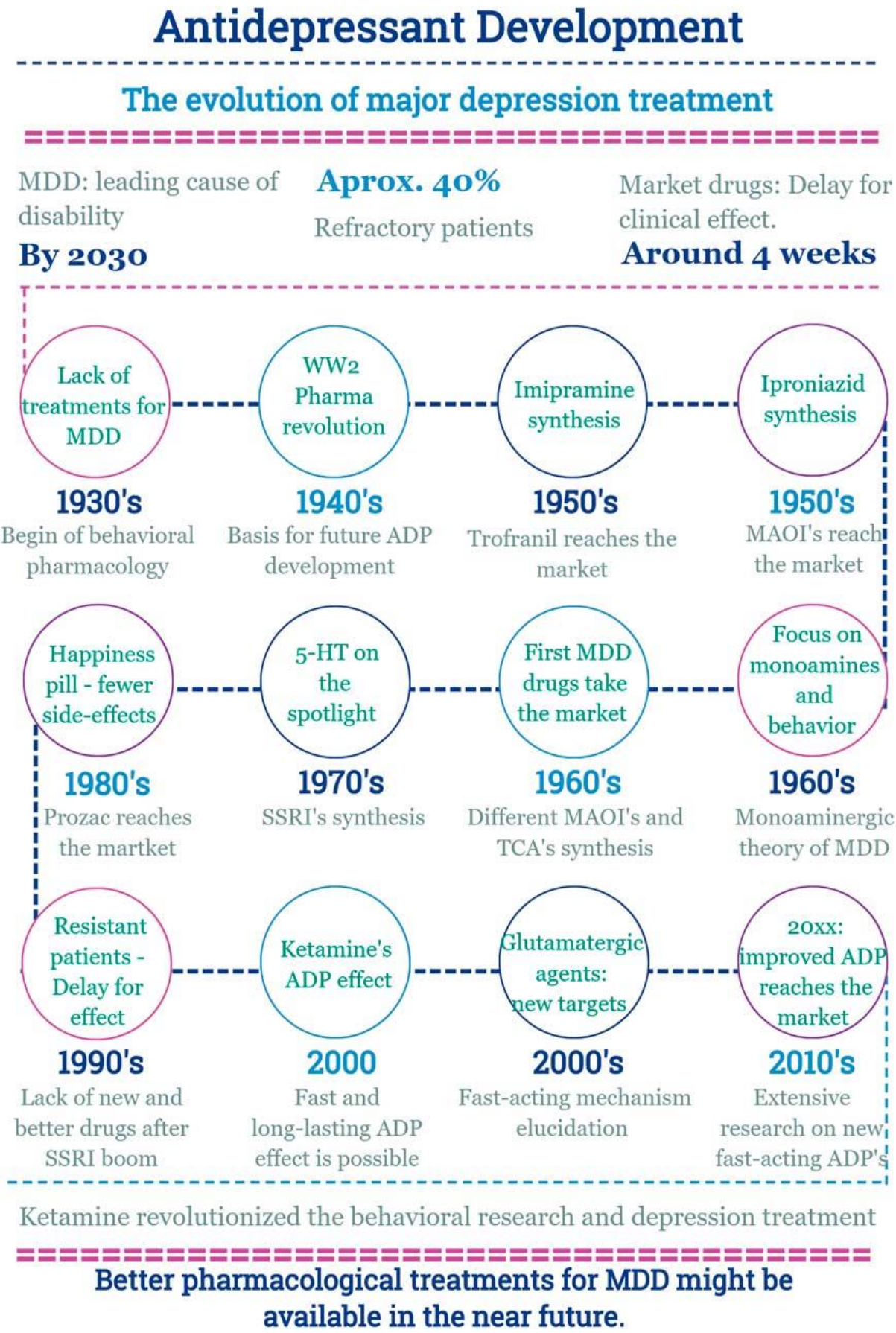


Figure 3. Facts on antidepressant drug development from 1930 until now.

1.3. Variants of antidepressants

Antidepressants are medications that work by balancing chemicals in the brain that regulate mood. Mood and behavioral changes may be caused by chemical imbalances. Since they serve as a channel of communication between brain nerve cells, neurotransmitters are essential. Vesicles present in nerve cells contain neurotransmitters, which are produced by one nerve and absorbed by other nerves. [7] The nerves that released the neurotransmitters are the ones that take up those that are not taken up by other nerves. Reuptake is the name given to this procedure. Serotonin, dopamine, and norepinephrine are the neurotransmitters that are most frequently present in the brain during the depression (also called noradrenaline). [8] Antidepressants, like selective serotonin reuptake inhibitors (SSRIs), which regulate serotonin levels in the brain, generally function by preventing the reuptake of particular neurotransmitters, boosting their levels around the nerves within the brain. [9] These medications can help alleviate symptoms of depression and improve the overall quality of life. Antidepressants are a class of medicines that are primarily used for the treatment of major depressive complaints, anxiety diseases, habitual pain, and dependence as well as other mood diseases similar as anxiety and bipolar complaint. [10]

The following pharmacological classifications include a number of well-known medications for depression:

a) Inhibitors of selective serotonin reuptake (SSRIs)
b) Inhibitors of the serotonin-norepinephrine reuptake (SNRIs)
c) Tricyclic mood stabilizers (TCAs)
d) Antidepressants tetracyclic
e) Inhibitor of dopamine reuptake
f) Antagonists of the 5-HT1A receptor
g) Antagonists of the 5-HT2 receptor
h) Antagonists of the 5-HT3 receptor
i) Anti-monoamine oxidase agents (MAOIs)
j) Noradrenergic disruptors

However, there are natural supplements as St. John's wort and atypical antidepressants, which don't correspond to these therapeutic classes. [11]

1.4. Mechanisms of the variants

Serotonin and noradrenaline are thought to be the key players in the monoaminergic, or main, mechanism of action of antidepressants. Despite selective serotonin reuptake inhibitors (SSRIs) having a well-established therapeutic efficacy, some drawbacks still exist. For instance, with depressed individuals, they frequently need 4-6 weeks to see therapeutic improvements. Several compounds that might reduce this lengthy action delay have been discovered in the past. Presynaptic auto receptors have been intensively researched for their potential antidepressant benefits because their activation results in an inhibitory feedback regulation on neurotransmitter synthesis and release.

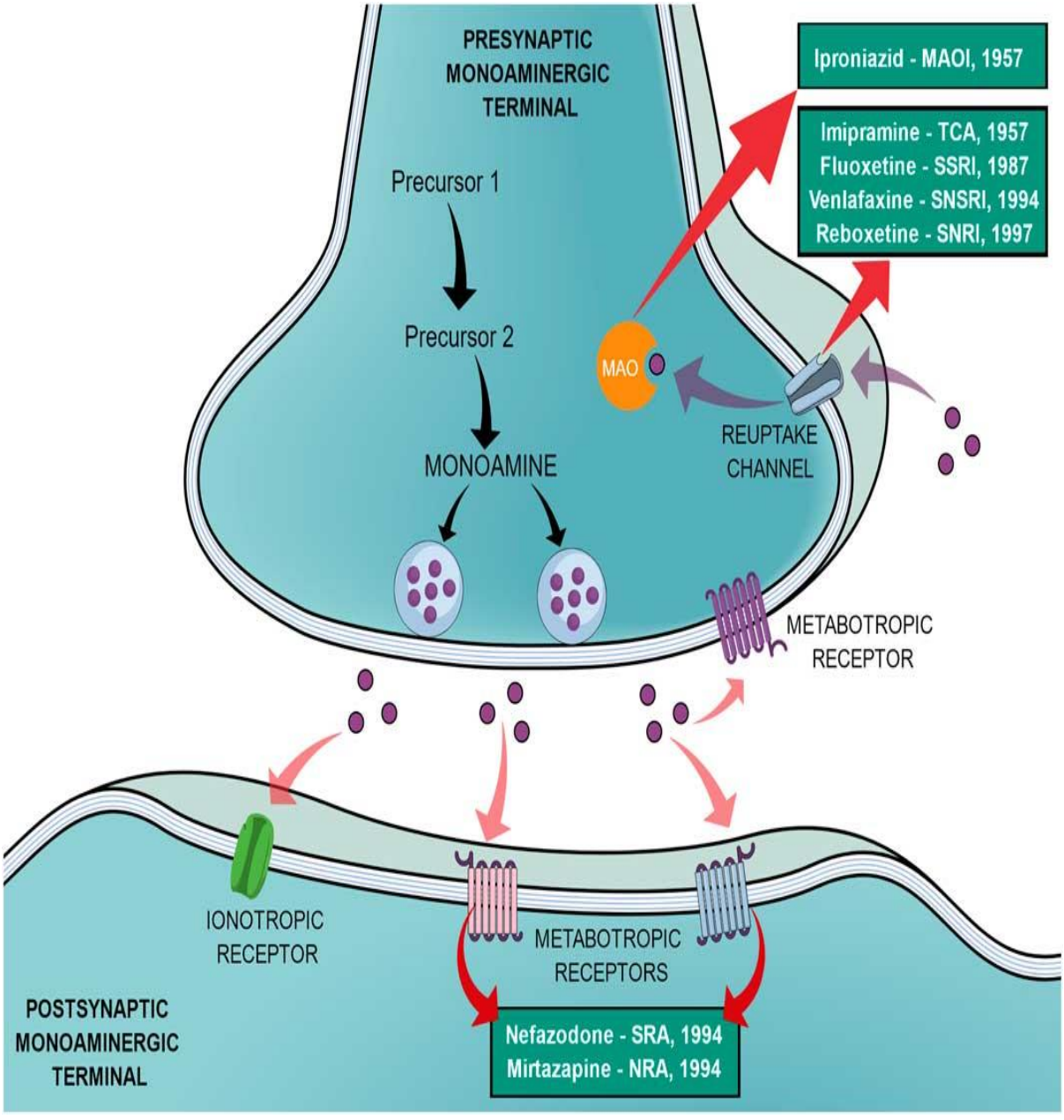


Figure 5. General representation of a monoaminergic neurotransmission.

These different types of antidepressants act with their own unique pharmacology, in other words, mechanism of action. [12, 13, 14, 15]

1. Serotonin Reuptake Impediments (SSRIs): SSRIs work by adding the situations of serotonin in the brain. Serotonin is a neurotransmitter that's believed to play a part in mood regulation. SSRIs widely inhibit the reuptake of serotonin, which increases the quantum of serotonin available in the brain. exemplifications of SSRIs include fluoxetine (Prozac), sertraline (Zoloft), and citalopram (Celexa).
2. Serotonin- Norepinephrine Reuptake Impediments (SNRIs): SNRIs work by inhibiting the reuptake of both serotonin and norepinephrine, which are two neurotransmitters believed to be involved in mood regulation. exemplifications of SNRIs include duloxetine (Cymbalta) and venlafaxine (Effexor). [16]
3. Tricyclic Antidepressants (TCAs): TCAs work by blocking the reuptake of both serotonin and norepinephrine. They also block the exertion of other neurotransmitters, including acetylcholine and histamine. exemplifications of TCAs include amitriptyline (Elavil) and nortriptyline (Pamelor).
4. Monoamine Oxidase Impediments (MAOIs): MAOIs work by inhibiting the exertion of monoamine oxidase, an enzyme that breaks down serotonin, norepinephrine, and dopamine. By inhibiting this enzyme, MAOIs increase the situation of these neurotransmitters in the brain. exemplifications of MAOIs include phenelzine and tranylcypromine.
5. Atypical Antidepressants: This class of antidepressants includes medicines that do not fit into any of the below orders. For illustration, bupropion (Wellbutrin) works by adding the situations of dopamine and norepinephrine in the brain. Trazodone (Desyrel) is an antidepressant that works by adding situations of serotonin in the brain, as well as acting as an opiate. [17]

1.5. Basic justifications for administering these drugs

Figure 6. Art by medicine

There are several causes that may contribute to university students taking antidepressants. Some of the most common reasons include: [18, 19, 20]

1. Pre-existing mental health conditions: Many university students may have pre-existing mental health conditions such as depression, anxiety, or bipolar disorder that require treatment with antidepressants.
2. Stressful environment: The stress and pressure of academic life can be overwhelming for some students, leading to the development of depression or anxiety. Antidepressants may be prescribed to help manage these conditions.
3. Trauma or life events: Traumatic experiences or major life events, such as the death of a loved one or a breakup, can trigger depression or anxiety in university students. Antidepressants may be prescribed to help manage symptoms.
4. Lack of social support: University students who are experiencing mental health problems may feel isolated and lack social support. Antidepressants may be used as part of a treatment plan that includes therapy and support groups.
5. Genetics: Some individuals may have a genetic predisposition to developing depression or other mental health conditions, and may require antidepressants to manage their symptoms. [21]

1.6. Frequently prescribed antidepressants

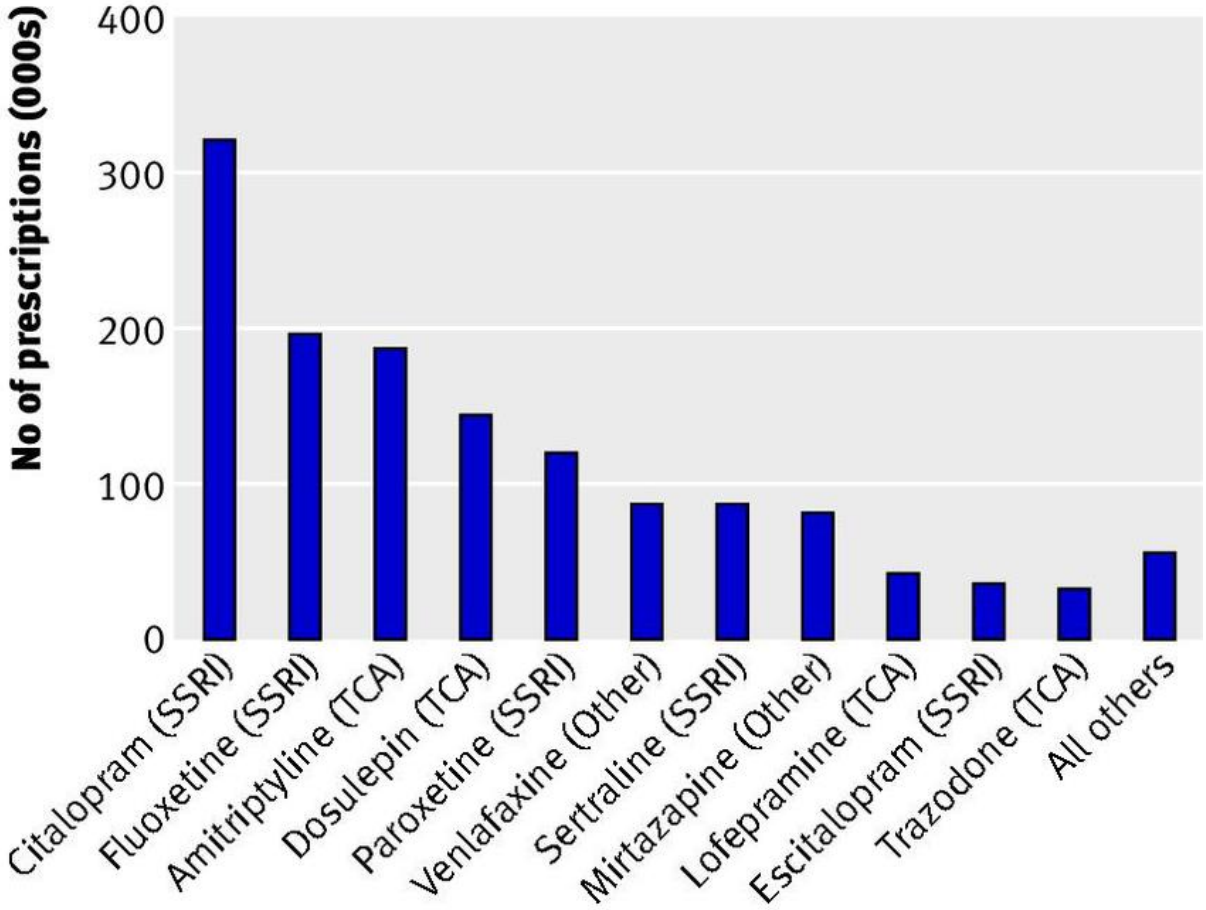


Figure 7. Prescription pattern of antidepressants

Several medical disorders, including depression, are frequently prescribed with antidepressants. As like: [22, 23, 24, 25, 26]

1. A severe form of depression
2. Depression that persists (dysthymia)
3. Disorder of premenstrual dysphoria
4. Obsessive-compulsive disorder (OCD)
5. Panic disorder and social anxiety
6. Generalized anxiety disorder (GAD)
7. Post-traumatic stress disorder (PTSD)

Moreover, studies from 2019 and 2017 Trusted Source looked at how depressant medications were used outside of their approved indications. According to these-research, antidepressants have been recommended for: [27, 28, 29]

1. Insomnia
2. Chronic pain
3. Migraine prevention
4. Attention deficit hyperactivity disorder (ADHD)

The ones that are most frequently prescribed are:

a. The most often prescribed class of antidepressants is known as an SSRI and includes: Fluoxetine, Citalopram, Sertraline, Paroxetine, Escitalopram
b. Similar to SSRIs are drugs called serotonin and norepinephrine reuptake inhibitors (SNRIs). Venlafaxine and duloxetine are common ones.
c. SSRIs and SNRIs function in a different way than bupropion. Also, it helps people give up smoking and improves seasonal affective disorder.
d. Older antidepressants include monoamine oxidase inhibitors, tetracyclines, and tricyclics (MAOIs). Because they frequently result in more side effects than other drugs, they are recommended less frequently. Some people, do, however, function better. [30, 31, 32]

1.7. Efficacy of these medications

Antidepressants frequently deal efficiently. Yet, each person's response to medication varies. The Institute for Quality and Efficiency in Health Care services reports that within 6-8 weeks, 40-60% of those who took an SSRI or SNRI for depression experienced some symptom alleviation. According to the study, antidepressants may be more beneficial for treating chronic depression.

In general, Antidepressants do assist numerous individuals with their psychotic symptoms. Antidepressants are effective, according to a number of recent studies that investigated the topic more closely. [33]

A review in 2018, Each of the 21 antidepressants evaluated in trials assessing their efficacy, according to a dependable source, performs better than a placebo. A total of 116,477 participants from 522 research conducted between 1979 and 2016 were examined. [34]

A 2019 report examined earlier research on the effectiveness of antidepressants from 1990 to June 2019. The scientists noticed that while antidepressants were typically effective, they were

only slightly effective. They came to the conclusion that antidepressants have few positive effects and raise the chance of negative ones. The article did note, however, that more investigation is required before the increased risk of negative effects can be confirmed or refuted. [35]

Data analysis for 2020, Also examined earlier research on the effectiveness of antidepressants. This study's findings on the effectiveness of antidepressants were less upbeat. [36]

Due to the use of the depression rating scale developed by Hamilton, the research assessed whether earlier studies had understated the effectiveness of antidepressants (HDRS). The Montgomery-Asberg Depression Rating Scale (MADRS) was used as an alternative measurement, and the researchers discovered that the earlier studies did not undervalue effectiveness. According to the study, the typical person may not directly benefit from antidepressants.

Besides that, research has examined how well antidepressants work for specific demographic subgroups such as children, adolescents, and middle-aged people.

Based on a 2020 evaluation of research including adults over 65, it was observed that, on average, 50.7% of patients had at least a 50% reduction in depression.

In total, 6,373 respondents from 44 trials were inspected in this analysis. [37, 38]

The effectiveness and acceptability of antidepressants in those under the age of 18 were examined in a 2020 meta-analysis of earlier reviews. For a wide range of reasons, these prescription medications are given to kids and teenagers. Only fluoxetine (Prozac) surpassed the placebo in the meta-major analysis's depressive disorder studies. 34 randomized controlled trials using 14 antidepressants that were given to patients under the age of 18 with major depressive disorder were included in the review. [39, 40]

1.8. Side effects and Adverse effects

Antidepressants can have various side effects and adverse effects, some of which are common and mild, while others are less common but can be more severe. It's important for patients to discuss potential side effects and adverse effects with their healthcare provider before starting antidepressant treatment. The particular alterations you might go through are partially influenced by the drug class you're taking. [41]

Typical negative consequences:

1. Indigestion, diarrhea, constipation, and loss of appetite are gastrointestinal symptoms.
2. Symptoms of the illness include a headache, vertigo, dry mouth, and sweating.
3. agitation, trembling, and an anxious feeling of nervousness
4. alterations in heart rhythm: palpitations, rapid pulse
5. Vision alterations: hazy vision
6. Unexpected weight changes, such as weight gain or loss
7. Low-sex desire is a sexual disorder.
8. Changes in sleep: insomnia

Some antidepressants, such as SSRIs and SNRIs, can cause a withdrawal syndrome if the medication is stopped abruptly. Withdrawal symptoms can include: [42, 43,44]]

1. Dizziness
2. Nausea
3. Headache
4. Anxiety
5. Irritability
6. Fatigue
7. Flu-like symptoms

More serious adverse effects of antidepressants can occur, but they are less common. These adverse effects can include: [45, 46, 47]

1. Syndromic serotonin: Serotonin syndrome develops when serotonin levels are too high, typically as a result of using antidepressants with serotonin reuptake inhibitors. Confusion, jerking muscles, seizures, an irregular heartbeat, or unconsciousness are symptoms. [48, 49]
2. Hyponatremia: In older persons using antidepressants, hyponatremia (low blood sodium) is a hazardous decline in salt levels in the body. Headache, muscle soreness, confusion, agitation, or convulsions are some of the symptoms.
3. Diabetes: Type 2 diabetes may be more likely to develop in antidepressant users.
4. Suicide ideas: When taking antidepressants for the first time, some people, especially those who are younger, may consider harming themselves. You can get assistance from your doctor, a hotline, or the closest emergency room.

5. Seizures, which can occur in people with epilepsy or at higher doses of certain antidepressants

Compared to typical antidepressant side effects, these health hazards don't occur as frequently. [50, 51, 52]

1.9. Consultation for depression

Figure 8. Consultation taking from psychiatrists

It's important to note that antidepressants are not always the first-line treatment for depression and other mood disorders. The treatment for university students taking antidepressants will depend on their individual needs and the nature of their mental health condition. Generally, treatment for depression and other mood disorders may include a combination of medication, therapy, and lifestyle changes. Some of the most common treatments for university students taking antidepressants include: [53, 54]

1. Medication: Antidepressant medications can be effective in treating depression and other mood disorders. They work by balancing chemicals in the brain that regulate mood. Healthcare providers may prescribe SSRIs, SNRIs, or other antidepressants based on the student's individual needs and symptoms. [55, 56]
2. Therapy: Therapy can be an effective treatment for depression and other mood disorders. Cognitive-behavioral therapy (CBT) is a type of therapy that is often used to

treat depression and anxiety. CBT helps students identify and change negative thought patterns that contribute to their depression or anxiety. [57, 58]

3. Lifestyle changes: Lifestyle changes can also be effective in treating depression and other mood disorders. Regular exercise, a healthy diet, getting enough sleep, and reducing stress can all help improve mood and reduce symptoms of depression and anxiety. [59, 60, 61]
4. Support groups: Support groups can provide students with social support and a sense of community. They can also provide a safe space for students to discuss their experiences and feelings with others who are going through similar experiences. [62]

1.10. Natural treatment options

If you want to alleviate your depression naturally, you might be willing to take part. Some patients use these therapies in addition to their antidepressant prescription, while others use them as an alternative to medication. [63]

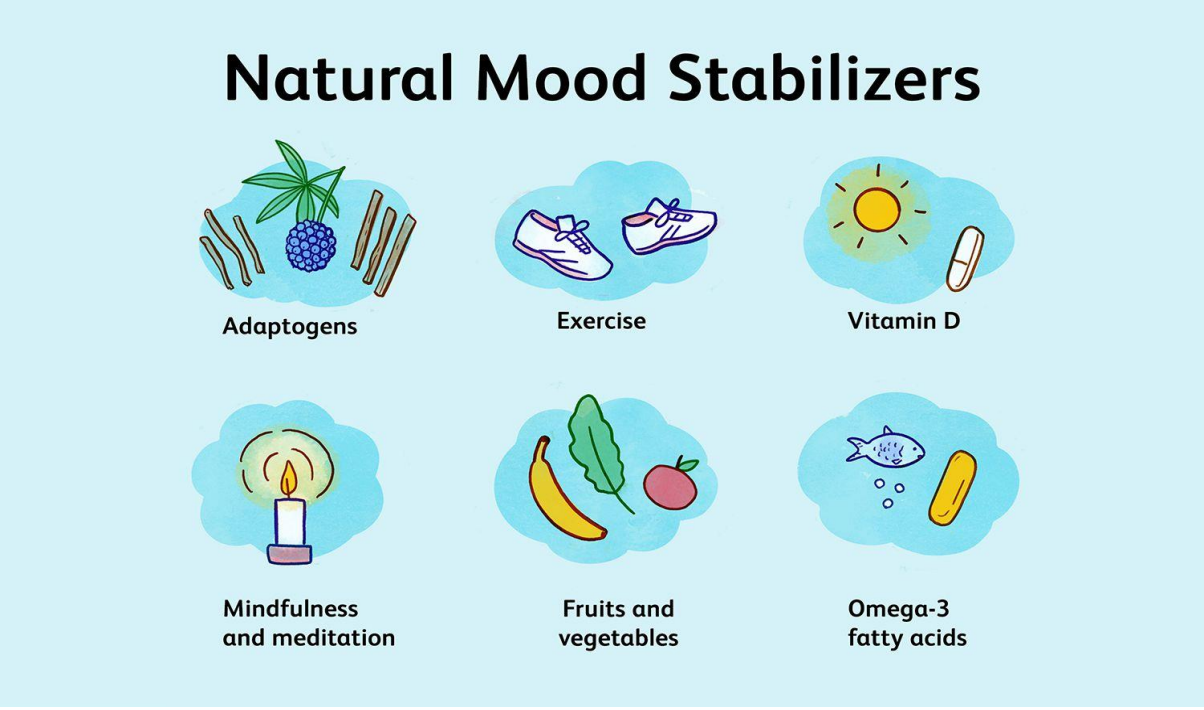


Figure 9. Natural mood stabilizer

Several dietary supplements are recommended by corporate sponsors as remedies for depression:

St. John's wort: Although it is available, this herbal medication has not been given FDA approval to treat depression in Americans. Use it with caution even though it can be beneficial

for mild or moderate depression. St. John's wort can interact with a wide range of pharmaceuticals, including those used to treat HIV/AIDS, blood thinning, birth control, chemotherapy, and to prevent organ rejection after organ transplants. Moreover, steer clear of combining St. John's wort with antidepressants because the results could be disastrous.

SAMe: A substance that naturally occurs in the body is replicated in this food supplement. The abbreviation for S-adenosylmethionine is SAMe (pronounced sam-E) (es-uh-den-o-sul-muh-THIE-o-neen). SAMe is a supplement that is accessible in the United States but has not been given FDA approval to treat depression. To find out if SAMe is beneficial for treating depression, more research is required. SAMe might make you sick and make you constipated in greater amounts. When used with a prescription antidepressant, SAMe can have major negative side effects, so avoid using it if you're on one. For those who have bipolar disorder, SAMe may cause mania.

fatty acids omega-3: Cold-water fish, flaxseed, flax oil, walnuts, and a few other foods contain these lipids. Omega-3 fatty acid supplements are being researched as a potential therapy for depression and depressive symptoms in bipolar patients. Despite being widely regarded as harmless, the supplement can taste fishy and, in large dosages, it may interfere with other drugs. Further research is required to evaluate whether eating foods rich in omega-3 fatty acids has an impact on preventing or treating depression, despite the fact that it appears to offer heart-healthy advantages.

Saffron: Further research is required, however, saffron extract might help with depression symptoms. Significant negative effects can be brought on by high doses.

5-HTTP: 5-hydroxytryptophan, usually referred to as 5-HTP is a dietary supplement that may help elevate serotonin levels, a neurotransmitter that regulates mood. However, the evidence is very preliminary, and more study is necessary. Although the connection between 5-HTP use and serious neurological conditions is unclear, there is a safety concern about this possibility. Another issue with safety is that taking 5-HTP along with some prescription antidepressants may raise the chance of serotonin syndrome, a dangerously adverse effect.

DHEA: Your body produces dehydroepiandrosterone (dee-hi-drone-ep-e-an-DROS-tur-own), commonly known as DHEA. Depression has been associated with changes in DHEA levels.

Preliminary study suggests that consuming DHEA as a dietary supplement reduces the symptoms of depression, but more studies are required. DHEA has potentially harmful side

effects, even though it is typically tolerated well. This is especially true if it is used frequently or in high dosages. It is ineffective to use DHEA manufactured from soy or wild yam.

The FDA does not regulate nutritional and dietary supplements in the same manner that it does pharmaceuticals. You can't always be sure of what you're getting or how safe it is. The best course of action is to conduct research before beginning any dietary supplement. Find out exactly what your supplements include and make sure you're purchasing them from a reliable retailer.

It's important for university students to work closely with their healthcare provider to develop a treatment plan that is tailored to their individual needs. With the right treatment and support, university students can manage their depression and other mood disorders and achieve their academic and personal goals. [64]

Figure 10. Myths about antidepressants.

CHAPTER - 02

OBJECTIVES

2. Objectives of this research

The following are the goals of this project that we should be aware of:

1. To determine the prevalence of antidepressants among university students: This objective aims to provide an estimate of the number of university students who are taking antidepressants. This information can help identify the scope of the issue and the potential need for mental health support services on campus.
2. To identify the reasons why university students are taking antidepressants: Understanding why university students are taking antidepressants can help identify the underlying factors contributing to their mental health concerns. This information can help inform mental health interventions and support services for university students.
3. To explore the perceptions of university students regarding the effectiveness of antidepressants: This objective aims to understand how university students perceive the effectiveness of antidepressants in treating depression. This information can help inform mental health interventions and support services for university students, as well as help to address any misconceptions or stigma around the use of antidepressants.
4. To investigate the side effects experienced by university students taking antidepressants: This objective aims to identify the potential side effects of antidepressants that university students may be experiencing. This information can help improve mental health support services for university students and inform the decision-making process for those considering antidepressant treatment.
5. To examine the impact of antidepressants on the academic performance of university students: This objective aims to investigate the potential impact of antidepressant use on the academic performance of university students. This information can help identify potential barriers to academic success and inform support services for university students.
6. To explore the prevalence of untreated depression among university students: This objective aims to understand the number of university students who are experiencing depression but have not sought treatment. This information can help identify potential barriers to accessing mental health treatment and inform support services for university students.

7. To investigate the sources of information that university students use when considering taking antidepressants: This objective aims to understand where university students are obtaining information about antidepressants and mental health treatment. This information can help inform targeted mental health education and outreach efforts on campus.
8. To explore the attitudes of university students towards mental health treatment: This objective aims to understand the attitudes of university students towards mental health treatment, including antidepressants. This information can help address any misconceptions or stigma around mental health treatment and inform support services for university students.
9. To assess the need for mental health support services for university students who are taking antidepressants: This objective aims to understand the potential need for mental health support services among university students who are taking antidepressants. This information can help inform the development of targeted mental health interventions and support services on campus.
10. Recommend approaches for fostering positive mental health attitudes: There are a variety of techniques that can be used, such as raising awareness of mental health issues, bringing down stigma and discrimination, giving people access to mental health services and resources, encouraging self-care, promoting healthy lifestyle habits, and creating welcoming and inclusive environments in universities. The implementation of organization policies and initiatives, the encouragement of mental health research and innovation, and providing training and support for mental health professionals are additional helpful solutions.
11. Assemble information for additional research regarding this subject: It is crucial to conduct surveys and studies that evaluate attitudes toward mental health, identify barriers and facilitators to accessing mental health resources, and assess the efficacy of interventions and programs intended to promote positive mental health attitudes in order to gather data for suggestions for future research on positive mental health attitudes. The impact of social and cultural variables on mental health attitudes, the connection between mental health condition and outcomes, and the development of methods to increase mental health literacy and lessen stigma associated with mental health conditions are all vital and important topics of research.

CHAPTER - 03

LITERATURE REVIEW

3.1. Literature review

Kamrun Nahar Koly, Sharmin Sultana, Adiba Iqbal, Julia Alexandra Dunn, Grace Ryan, Ariful Bari Chowdhury. Prevalence of depression and its correlates among public university students in Bangladesh. Journal of Affective Disorders, Volume 282, 1 March 2021, Pages 689-694. https://doi.org/10.1016/j.jad.2020.12.137

This study aims to exact the frequency of depression among public university scholars in Bangladesh, with a larger and further different sample than those included in former studies. Between the months of April and September 2018, a cross-sectional research investigation was carried out at two public universities in Bangladesh. Data was collected on socio-demographic characteristics, life factors, history of depression, and symptoms of depression (9-item Patient Health Questionnaire). Multivariable logistic retrogression was applied to explore the independent connections between depression and pupil characteristics. An aggregate of 400 scholars shared in the check. The mean age of the scholars was 22 (SD2.2) times. The frequency of depression was47.3 and advanced in womanish than manly scholars(50.7vs.43.6). Results of the multivariate analysis showed that the odds were roughly4.6 times advanced for scholars who spent further than 6 hours per day on social media (OR4.69, 95 CI1.94-11.30); further, than 2 times advanced among the scholars who had a particular history of depression (OR3.51, 95 CI2.221-5.59). manly gender and having a smoking habit were both identified with depressive symptoms (OR1.90; 95CI1.05-3.41) compared to the womanish scholars (OR1.5; 95CI0.51-4.3). Nearly half of the scholars met the criteria for moderate to severe depression. Poor academic performance, use of social media, and a history of depression were the main factors associated with depressive symptoms. Given the high frequency of depression in this pupil population, it's imperative to develop psychosocial interventions to support scholars during this critical phase of life.

Reza Amiri. "Anxiety, Depression and Antidepressant Drug Usage Among Indian College Students". Acta Scientific Pharmaceutical Sciences 6.8 (2022): 03-13. DOI: 10.31080/ASPS.2022.06.0889

Abstract Background: We aimed to assess the frequency of anxiety and depression as well as using antidepressant medicines among scholars at sodalities combined with the Rajiv Gandhi University of Health Science. styles The study subjects were 428 pharmacology scholars of the Rajiv Gandhi University of Health Science. Anxiety and depression were estimated using the

Sanitarium Anxiety and Depression Scale. Results Overall,34.0 of scholars had anxiety signs. Also,27.0 had mild,11.0 had moderate and 7.0 had severe signs of depression. The most common antidepressant specifics included Moclobemide or Clorgylime, tricyclic antidepressants, and serotonin-norepinephrine reuptake assets. Living alone, connections with musketeers and family, maternal loss, body image, family income, fear of unborn life, exercise, alcohol input, and smoking were the supplements of both depression and anxiety. Conclusion A significant number of scholars suffer from depression and anxiety leading to cerebral medicines operation. This cerebral condition is potentially affected by their socioeconomic status and life.

Ecem YILDIZ, Nilay AKSOY, Rashida UMAR. Evaluation of Antidepressant Medication Use and Determination of Risk Factors for Depression Among University Students in Istanbul. AJHS-A. J. Health. Sci. 2021; 3(1): 3-18.

Depression is one of the most common internal health ails that can get worse without proper medical interventions. Estimates of the depression frequency among university scholars enthrall a fair portion of the general depressed population. This study aimed to assess the frequency of depression among university scholars and identify its characteristics. The conducted cross-sectional study attained data from different seminaries located in Istanbul. The loftiest participation in the study was from Altınbaş, Istanbul, Yeni Yüzyıl, and Istinye Universities. Yeditepe, Maltepe, Biruni, Istanbul Technical, Yldz Technical, Bezmialem, Istanbul Kültür, Beykent, and Marmara Universities are the other universities. This study was conducted between December 2019 and March 2020 after the ethical commission blessing. An aggregate of 286 scholars was included in the study. 75 were womanish and the mean age and standard divagation (SD) of the scholars was21.79 ±1.775 times. Grounded on the 'Beck Depression Inventory', the depressive state was observed to be no or minimum in 59, mild in 20, moderate in 16, and severe in 5 of the actors. The pupil-related factors, similar to the type of academy, and artistic-social-fiscal issues were among the most factors that affect the prevalence of depression in scholars. The scholars included in this study had only information about depression and antidepressants which isn't enough to understand the whole concept of depression and antidepressants.

The pervasiveness of antidepressants among university students in Bangladesh.

Singh, Reshmi L.; Schommer, Jon C.; Worley, Marcia M.; Peden-McAlpine, Cynthia. (2012). Antidepressant Use Amongst College Students: Findings of a Phenomenological Study. University of Minnesota, College of Pharmacy. Retrieved from the University of Minnesota Digital Conservancy, https://hdl.handle.net/11299/128904.

Depression among council scholars is a raising problem and could have serious consequences similar to self-murder. There has been an increase in the use of antidepressants on council premises in the United States. still, an in-depth understanding of this miracle from the council pupil's perspective is lacking in the literature. ideal This study examined council scholars ' gests and treatment decision timber during their depression treatment. styles A longitudinal, phenomenological exploration methodology was completed. The actors were nine scholars who were taking antidepressants for opinion depression. Reclamation was done via leaflets placed on University bulletin boards and an internal health clinic. Three audio-taped, unshaped interviews were conducted with each party over four months. The central question asked was What has the experience of treating depression been for you? Analysis of the textbook was done using Van Manen's lifeworld existential of the lived body, lived time, lived relation, and lived space as the organizing frame. Results in Thirteen themes were linked within the four life worlds. The results showed that lived relationships with providers were important for council scholars decision to both initiate and continue antidepressant use. scholars part was defined in confluence with providers' part by them as wanting to be a ' player ' in their treatment opinions and demanding to be ' conceded ' as similar by their providers. Conclusions Overall, the underpinning essential theme of 'autonomy' was portrayed by the scholars 'existential accounts of their depression treatment and treatment decision timber.

CHAPTER - 04

METHODOLOGY

4.1. Source of data

In order to complete the study, data has been acquired from both primary and secondary sources from 05 March 2023 to 10 April 2023. However, a significant portion of the primary data was gathered by the convenience sampling technique, and data were collected by pretested, structured, self-administered questionnaires. The initial information was collected from the 528 students of 19 public and 12 private universities in Bangladesh.

a) Initial acquiring data

Primary data were gathered via Google-form by utilizing a variety of methods, including a questionnaire survey.

b) Acquiring secondary data

Data were analyzed using a variety of books, journals, reports, newspapers, Google Scholar, Research-gate, and PubMed type search engine were utilized in order to complete this project.

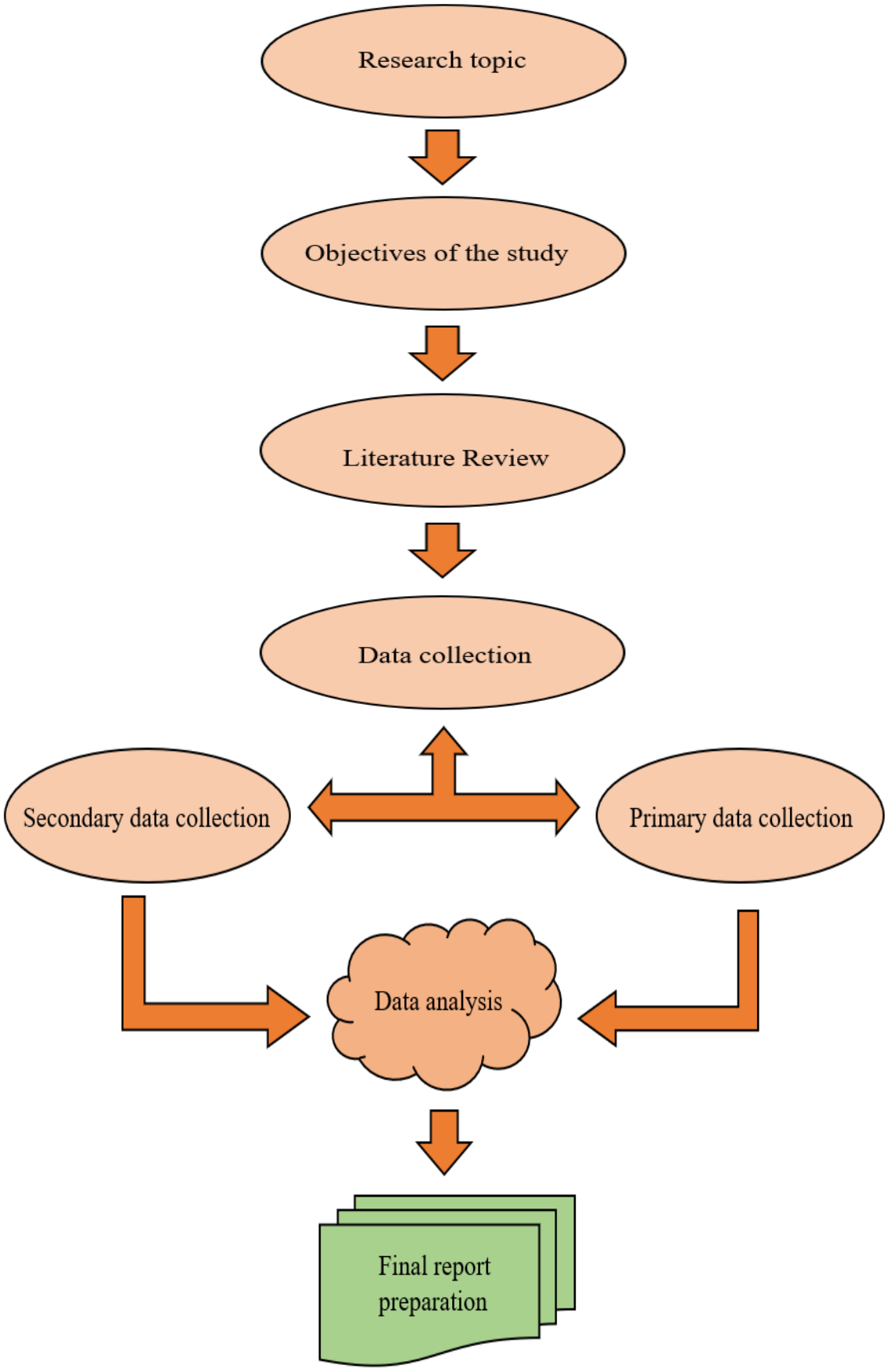
4.2. Questionnaires:

Questionnaires are structured collections of questions used for obtaining data from respondents. A uniform questionnaire was established that captured the primary information from students at 31 different universities, including their existing mental health status, gender, level of study, type of accommodation they had while attending university, the main reason they were taking an antidepressant, any side effects, and whether their university offered psychological services. In order to gather the data required for the study, the questionnaires designed for it mainly consisted of open-ended, closed-ended, and multiple-choice questions featuring alternate responses.

4.3. Data analysis Techniques:

Google spreadsheet and Google form are utilized to gather data. Each item has been imported into the Excel spreadsheet program of Microsoft after the data has been assembled, and a variable is generated according to the questionnaire and marked with every response. The mean, ratio, frequency, percentage are also calculated, interpreted and organized using Excel.

4.4. Methodology of this work

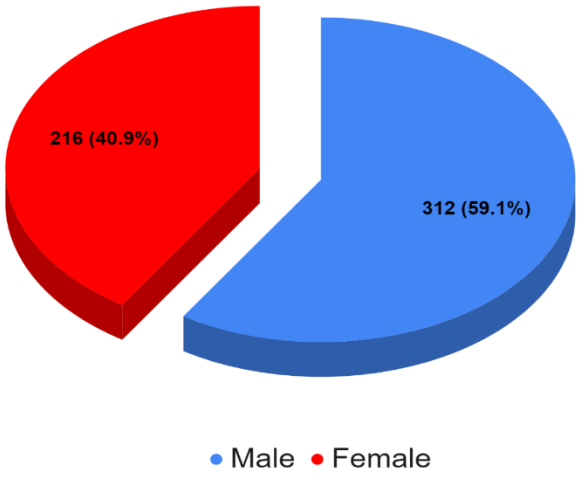


CHAPTER - 05

RESULTS & DISCUSSIONN

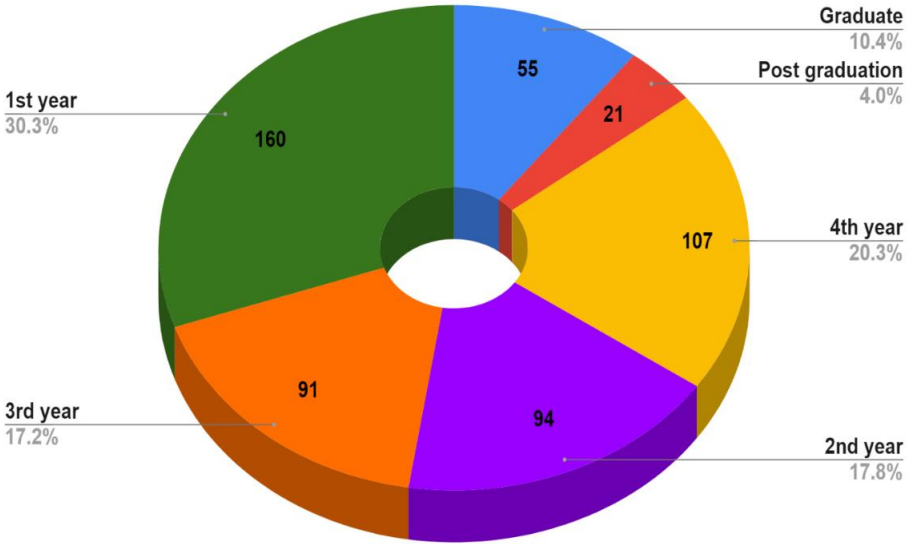
The pervasiveness of antidepressants among university students in Bangladesh.

01) Gender ratio of the respondents of this survey:



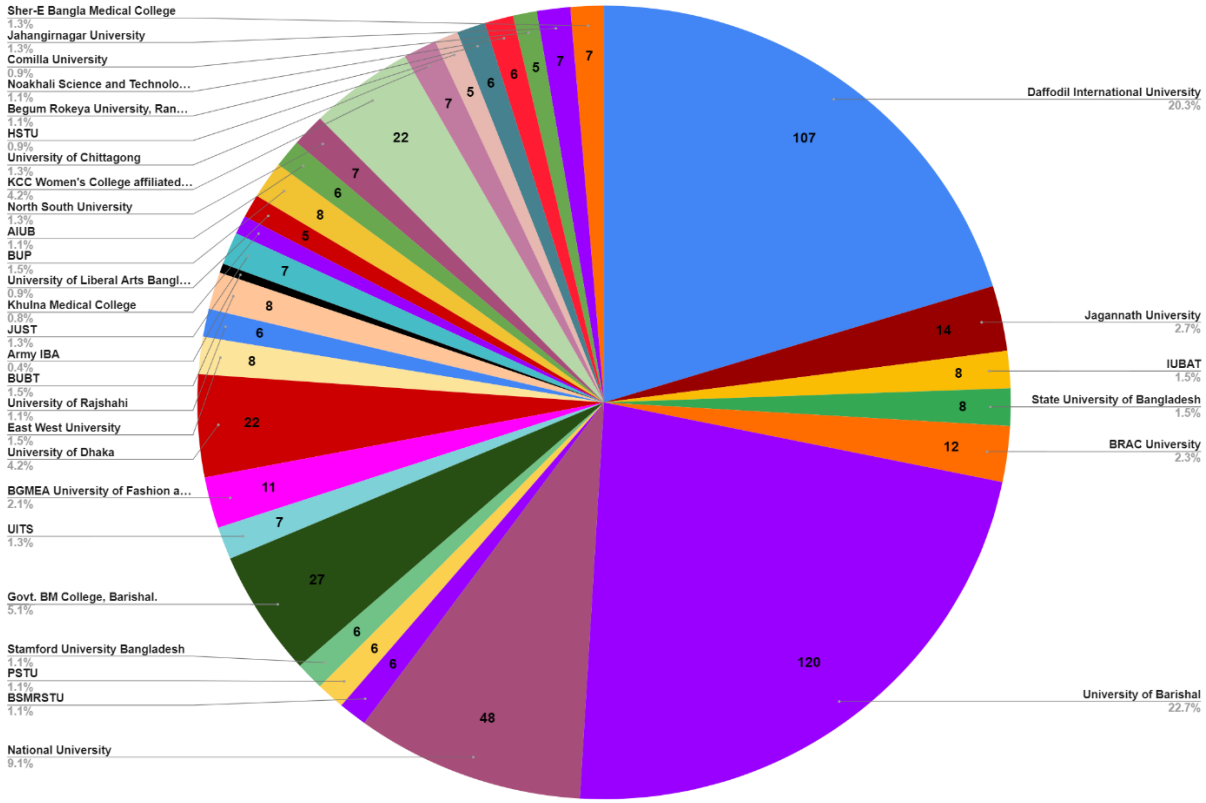
We can see from the pie chart of the student gender ratio that there are 528 students, 59.1% of whom are male and 40.9% of whom are female. Of the 528 respondents to the survey on "The prevalence of antidepressants among university students in Bangladesh," 312 are male students and 216 are female.

02) Respondents level of study:



528 students across the 31 university took part in the survey. First-year, second-year, third-year, fourth-year, graduate, and post-graduate students made up, respectively, 30.3%, 17.8%, 17.2%, 20.3%, 10.4%, and 4.0% of them. Here, we can see that most of the 160 students are first-years. In this survey, there are 94 second-year students, 91 third-year students, 107 fourth-year students, 55 graduate students, and 21 post-graduate students.

03) Ratio of the students from different university



528 students in total took part in this survey. According to the pie chart, students from 31 universities participated in the survey between 9 March and 10 April 2023. There are 12 private universities and 19 government institutions among them. Public university includes University of Barishal, University of Dhaka, Bangladesh University of Professional, Sher-E Bangla Medical College, Jahangirnagar University, University of Chittagong, National University, KCC Women's College Affliated to Khulna University, Jagannath University, Jashore University of Science and Technology, Bangabandhu Sheikh Mujibur Rahman Science and Technology University, Rajshahi University,Noakhali Science and Technology University, Begum Rokeya University, Rangpur, Patuakhali Science & Technology University, Comilla University, Hajee Mohammad Danesh Science & Technology University, Khulna Medical College, Army Institute of Business Administration as well. Private university includes Daffodil International University, BRAC university, BGMEA University of Fashion and Technology, State University of Bangladesh, Stamford University Bangladesh, American International University – Bangladesh, International University of Business Agriculture and Technology, East West University, Bangladesh University of Business and Technology,

University of Information Technology and Sciences, North South University, University of Liberal Arts Bangladesh as well.

Frequency and ratio of the students from the 31 university.

Serial	Respondents university	Frequency	Percentage
1	Daffodil International University	107	20.3%
2	University of Barishal	120	22.7%
3	National University	75	14.20%
4	University of Dhaka	22	4.2%
5	KCC Women's College Affliated to Khulna University	22	4.2%
6	Jagannath University	14	2.7%
7	BRAC university	12	2.3%
8	BGMEA University of Fashion and Technology	11	2.1%
9	State University of Bangladesh	8	1.5%
10	Bangladesh University of Professional	8	1.5%
11	International University of Business Agriculture and Technology	8	1.5%
12	East West University	8	1.5%
13	Bangladesh University of Business and Technology	8	1.5%
14	Sher-E Bangla Medical College	7	1.3%
15	Jahangirnagar University	7	1.3%
16	University of Chittagong	7	1.3%
17	North South University	7	1.3%
18	Jashore University of Science and Technology	7	1.3%
19	University of Information Technology and Sciences	7	1.3%
20	Bangabandhu Sheikh Mujibur Rahman Science and Technology University	6	1.1%
21	Rajshahi University	6	1.1%
22	Noakhali Science and Technology University	6	1.1%
23	Begum Rokeya University, Rangpur	6	1.1%
24	Patuakhali Science & Technology University	6	1.1%
25	Stamford University Bangladesh	6	1.1%

26	American International University - Bangladesh	6	1.1%
27	Comilla University	5	0.9%
28	Hajee Mohammad Danesh Science & Technology University	5	0.9%
29	University of Liberal Arts Bangladesh	5	0.9%
30	Khulna Medical College	4	0.8%
31	Army Institute of Business Administration	2	0.4%
	Grand Total	**528**	**100%**

04) Mental condition and symptoms of depression frequency, ratio of both male and female students are listed below:

No.	Symptoms combination	Female	Male	Total	Percentage
1	Anxiety	9	9	18	3.41%
2	Anxiety + Insomnia or sleep disorder	4	2	6	1.14%
3	Anxiety + Stressful	13	15	28	5.30%
4	Anxiety + Stressful + Insomnia or sleep disorder	5	4	9	1.70%
5	Anxiety + Stressful + Insomnia or sleep disorder + Trauma	1	5	6	1.14%
6	Anxiety + Trauma		1	1	0.19%
7	Depression	12	15	28	5.30%
8	Depression + Anxiety	6	4	10	1.89%
9	Depression + Anxiety + Insomnia or sleep disorder	2	4	6	1.14%
10	Depression + Anxiety + Insomnia or sleep disorder + Trauma	1	3	4	0.76%
11	Depression + Anxiety + Insomnia or sleep disorder + Trauma		1	1	0.19%
12	Depression + Anxiety + Stressful	25	48	73	13.82%
13	Depression + Anxiety + Stressful + Insomnia or sleep disorder	39	67	106	20.08%

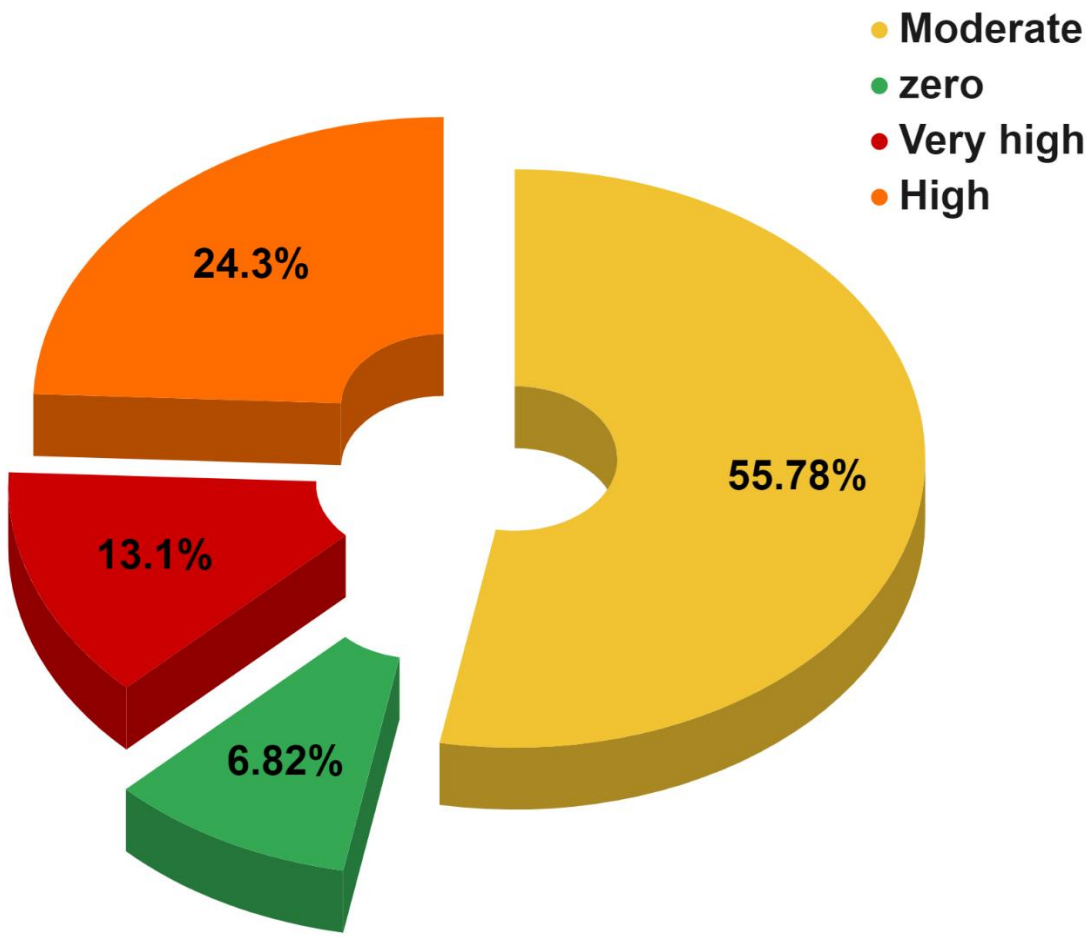
14	Depression + Anxiety + Stressful + Insomnia or sleep disorder	2	2	4	0.76%
15	Depression + Anxiety + Stressful + Insomnia or sleep disorder + Trauma	38	76	114	21.59%
16	Depression + Anxiety + Stressful + Trauma	6	7	13	2.46%
17	Depression + Insomnia or sleep disorder	4	1	5	0.95%
18	Depression + Stressful	2	6	8	1.52%
19	Depression + Stressful + Insomnia or sleep disorder	3	5	8	1.52%
20	Depression + Stressful + Trauma	1		1	0.19%
21	Depression + Trauma	1		1	0.19%
22	Insomnia or sleep disorder	5	7	12	2.27%
23	Insomnia or sleep disorder + Trauma		1	1	0.19%
24	Stressful	6	11	17	3.22%
25	Stressful + Insomnia or sleep disorder	3	2	5	0.95%
26	Stressful + Insomnia or sleep disorder + Trauma		3	3	0.57%
27	Stressful +Trauma		1	1	0.19%
28	Trauma	3		3	0.57%
29	**None of the above**	**25**	**11**	**36**	**6.82%**
	Grand Total	**216**	**312**	**528**	**100%**
	Total depressive symptoms	**191**	**301**	**492**	**93.18%**

From the chart we find that the symptoms they faced include Depression (sadness, frustration, hopelessness, suicidal thoughts), Anxiety (nervousness, panic or fear, restless or tense and rapid heartbeat), Stressful, Insomnia or sleep disorder, Trauma (emotional response to an accident, rape, or natural disaster, flashbacks). According to the chart above which is analyzed from the survey 21.59% or 114 students are going through (Depression+ Anxiety + Stressful + Insomnia or sleep disorder + Trauma) combinedly where 76 are male and 38 are female students. 20.08% or 106 students are feeling (Depression + Anxiety + Stressful + Insomnia or sleep disorder) in which males are 67 and females are 39 in number. 13.82% of students have symptoms of (Depression + Anxiety + Stressful).

Students are represented in the graph by 3.41% Anxiety, 5.30% Depression, 2.27% Insomnia or sleep issue, Stressful 3.22%, and Trauma 0.57%.

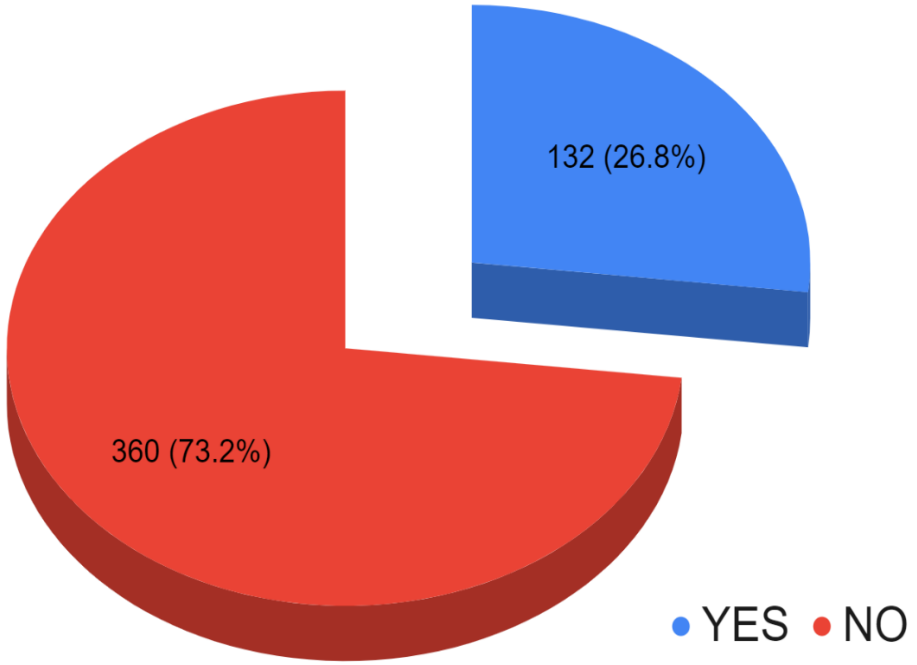
There 6.82% of students don't have any depressive symptoms. So rest of the students or 93.18% (492) are going through depression. In which are 61.38% are male and 38.82% are female students.

05) Percentage of the intensity of depression



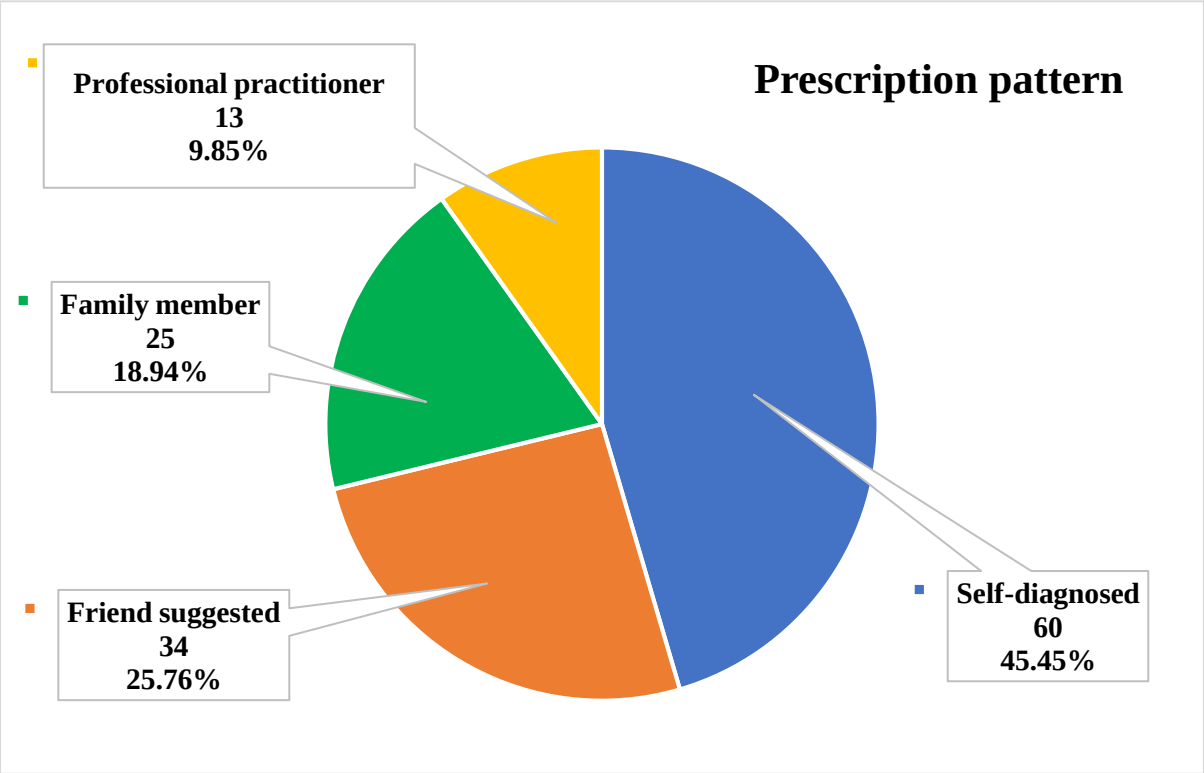
The diagram illustrates the total prevalence of depression or stress disorder among the 528 participants. In this pie chart, 6.82% of children exhibit no signs of depression at all. 13.1% of students have extremely high or severe levels of depression, while 24.3% of students have high levels of stress disorder and 55.78% of students have moderate depression.

06) Antidepressant medicine taker ratio



Among the 528 respondents 492 (93.18%) have depressive symptoms. From the pie chart above we can also see that 26.8% (132) of the 492 students take antidepressant drug and 73.2% students don't take any medication to treat their depressive symptoms.

07) Prescriber or Suggestor ratio of the antidepressant taker.

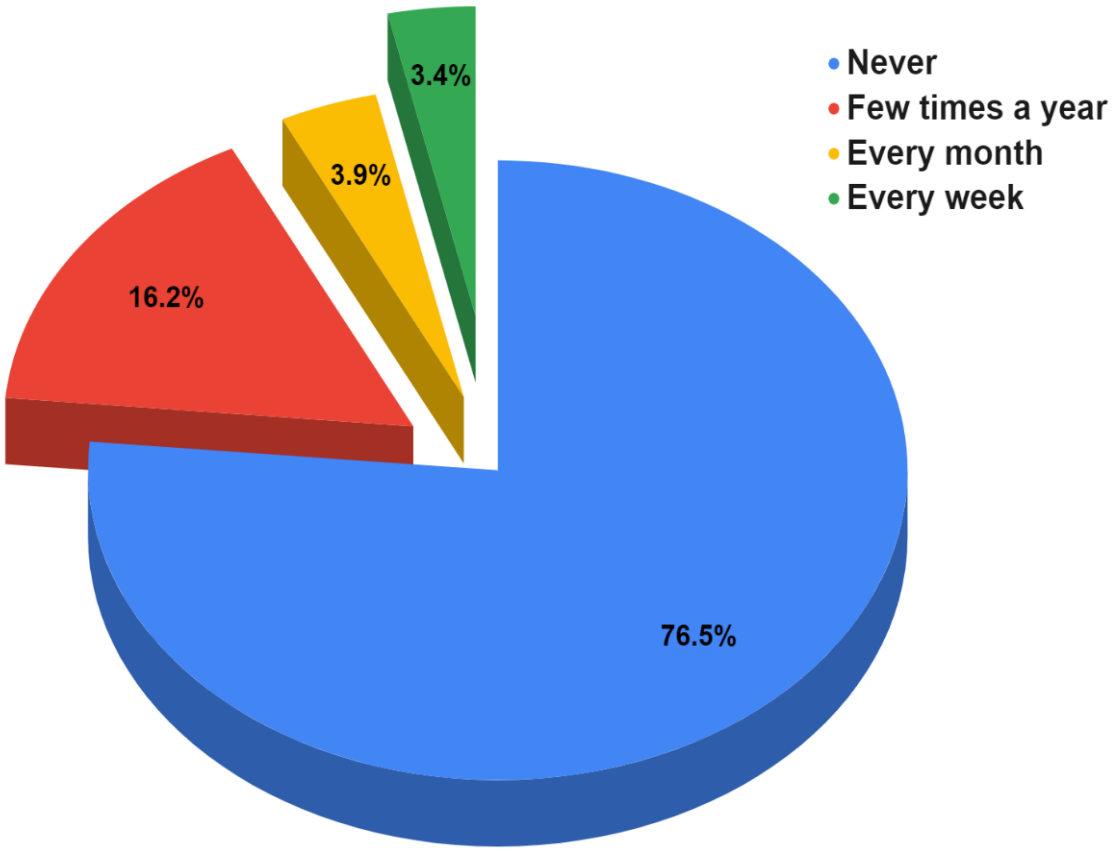


From the pie chart above we found that 26.8% (132) of the 492 students take an antidepressant drug. But this chart shows us the percentage of antidepressant medicine suggestor or prescriber to the students who take medicine to treat their symptoms.

Here 45.45% of the students found self-diagnosed which means they don't take any suggestions from professional practitioners or others. In other words, it can say that they take their antidepressants without any prescription. 25.76% of students take their medicine at the suggestion of their friends.

A family member of 18.94% students suggests their medicine to treat their depressive symptoms. Very few such as 9.85 % of students take suggestions from psychiatrists or professional practitioners.

08) The ratio of how often Depressive respondents visit their health professional or psychiatrist:

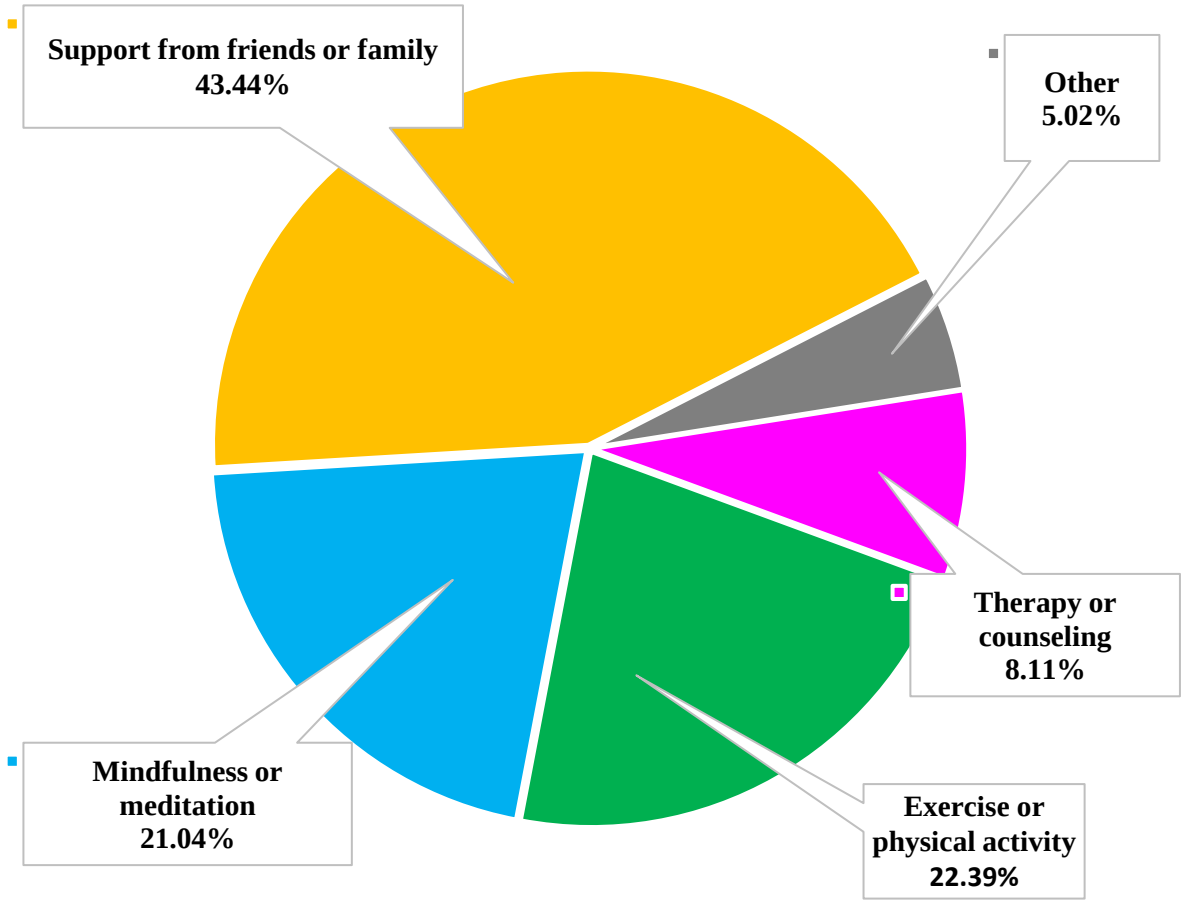


From the previous pie chart, we found that among the 528 respondents, 492 (93.18%) have depressive symptoms.

However, this pie chart specifically shows us how often they visit their prescribers or psychiatrists. Here we can see that 76.5% of 492 students never visit their psychiatrists. That means they treat their symptoms either by self-diagnosed or by family or friends' suggestions.

16.2% of depressive respondents visit their psychiatrists a few times a year. 3.9% of students visit their mental health professionals every month and very few such as 3.4% of students who have a serious condition or are more careful about their health visit their health professional or psychiatrist.

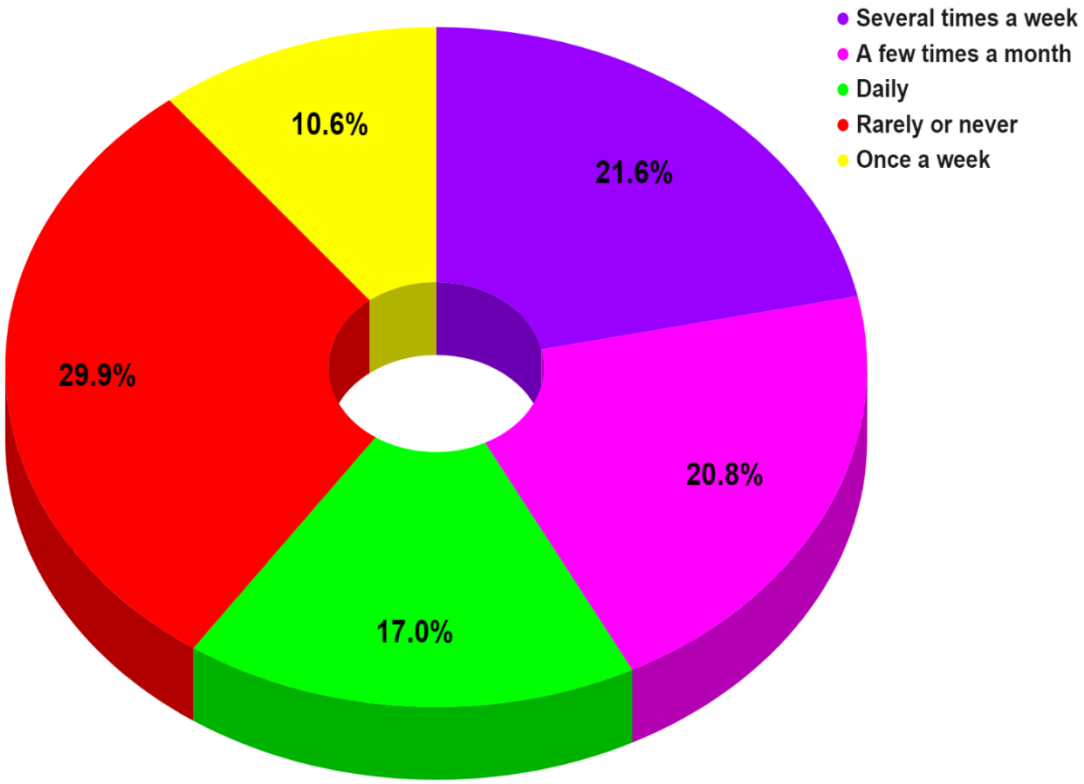
09) Depression management ratio of those students who don't take medicine.



93.18% of the total respondents have depressive symptoms which are found by this survey. Among them, 26.83% of students take medicine to treat their depression. The rest of the respondents try different things to get rid of the depression such as Counseling from psychiatrists, Mindfulness or meditation, Exercise or physical activity, and Support from friends or family which is more important for every individual.

According to this chart we can see how depressive respondents currently managing their symptoms without the use of antidepressant medication. Here most of students get support from friends or family to treat their depression though it is very important for a student and their ratio is 43.44% which is the most. 22.39% of them do exercise and physical activity to treat depression. 21.04% students do meditation, 8.11% respondents take therapy or counselling to remove depression. 5.02% respondents who don’t take antidepressant but do other things like self-motivation, listening to music, make themselves busy doing what the like most, watching movies, sleeping etc. to treat depression.

10) How often respondents engage in physical activity.

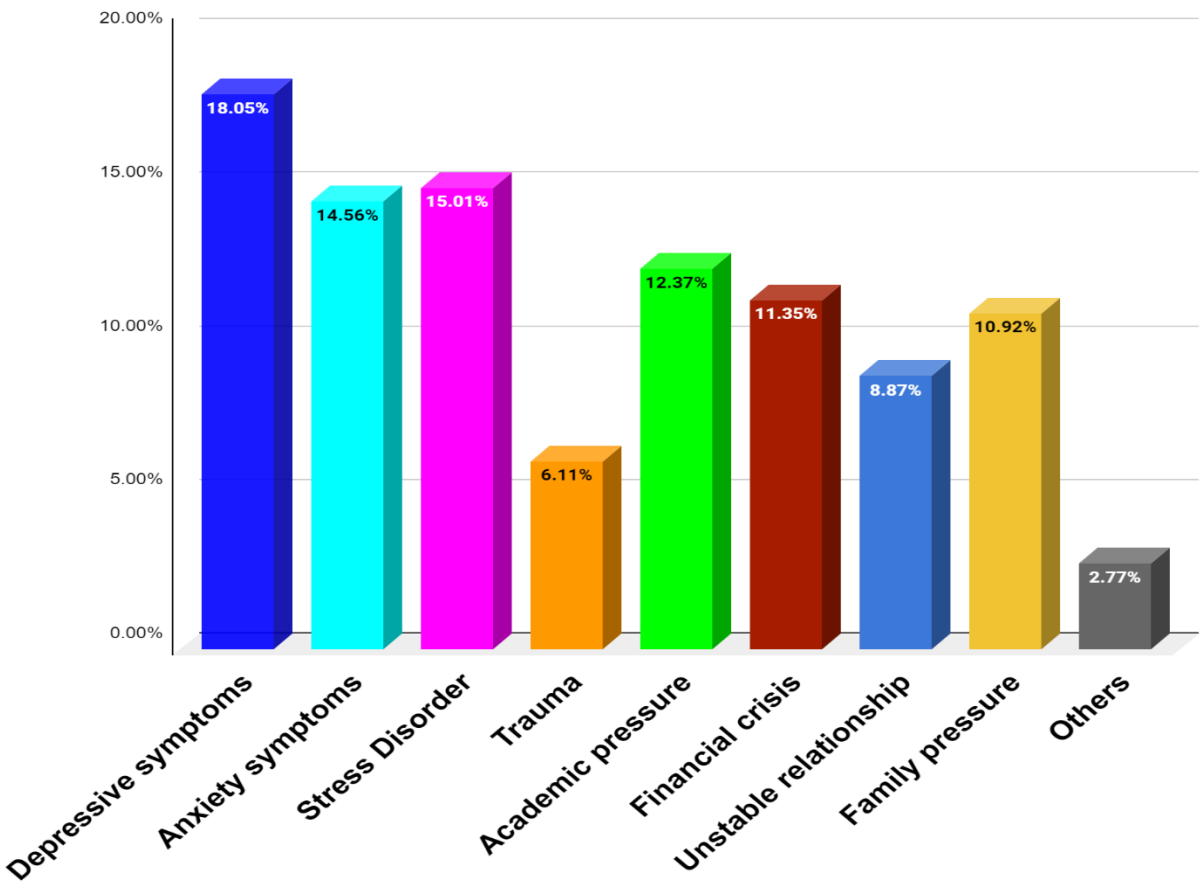


In this graph, we found that 17.0% of students exercised every day, 21.6% of them exercised several times each week, 10.6% of students exercised once per week, and 20.8% of students exercised a few times per month. 29.9% of respondents said they seldom or never exercise.

For a number of reasons, physical activity is a crucial part of depression management. First, by boosting the brain's synthesis of endorphins and other mood-enhancing neurotransmitters, exercise can help to lessen depressive symptoms like low mood, exhaustion, and sleep difficulties.

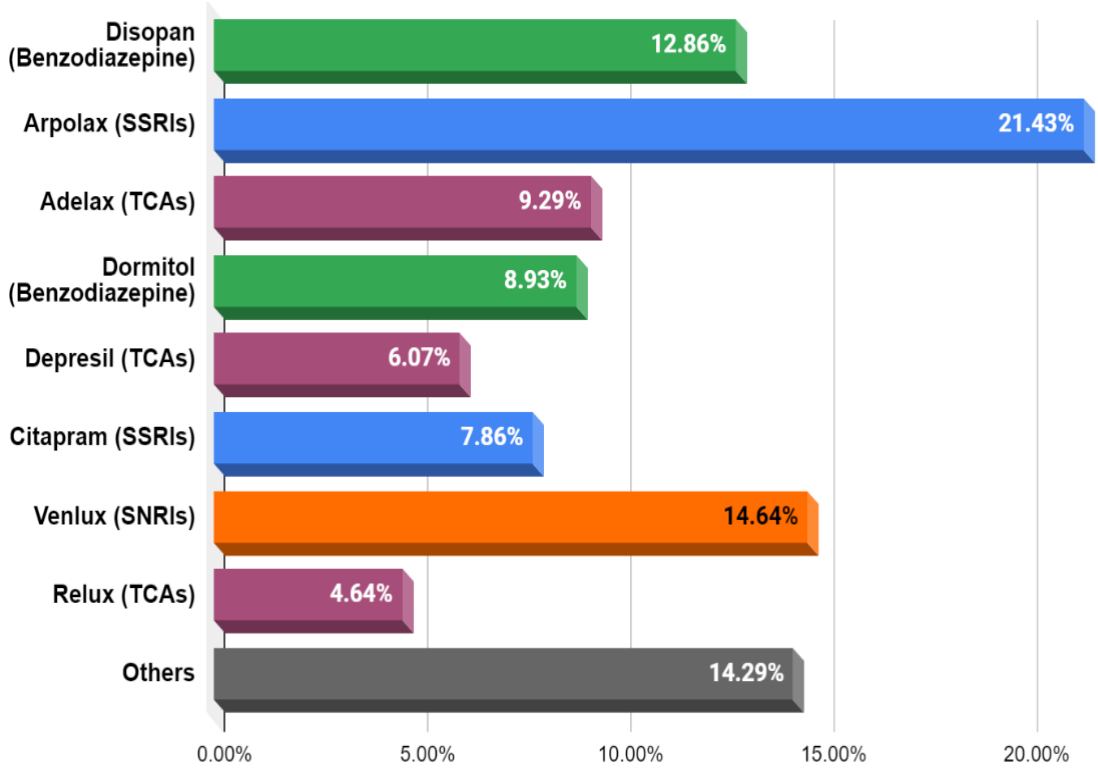
Second, exercise can give people a sense of accomplishment and raise their self-esteem, which is especially beneficial for those who are depressed. Last but not least, engaging in physical activity can be a fun and exciting social activity that can lessen the feelings of loneliness and isolation that are frequently connected to depression. Overall, physical activity is a crucial part of managing depression and a successful complementary treatment option for people who are depressed.

11) Primary cause of antidepressant administration by students.



From the previous chart we found that 26.83% of the total depressive contain respondents take antidepressant to treat their depression. Here in this chart, it shows the exact percentage or ratio of every single cause behind taking their antidepressant. Here, 18.05% of students indicate that depression symptoms are the main reason they take antidepressants. And this ratio is the greatest. 15.01% of individuals take medication to manage stress disorder, one of the main subtypes of depression. 14.56% use medication to treat their anxiety symptoms. Academic pressure is a major issue for all students, and 12.37% of students take medication to relieve it. A financial crisis is mentioned as the main reason for antidepressant use by 11.35% of students. 10.92% of students use medication because they are under familial pressure. 8.87% of students struggle with unstable relationships. Trauma is listed as the main factor by 6.11% of the students. Students who use antidepressants for various reasons, including OCD, gender discrimination, insomnia, anger problems, and a toxic culture, represent 2.77 percent of medications.

12) Ratio of medicine which is mainly used by the students



As seen in the graph, the majority of students (21.34% of 132) use the antidepressant of the selective serotonin reuptake inhibitor class, Arpolax, to treat their depression. 14.64% of individuals use the serotonin and norepinephrine reuptake inhibitor venlux tablet. (SNRIs). A benzodiazepine called disopan is used by 12.86% of respondents. Citapram (SSRIs), Adelux (TCAs), and Dormitol (benzodiazepines) are administered, respectively, by 9.29%, 8.93%, and 7.86%. 6.07 % of students identify the tricyclic antidepressant depresil as their antidepressant medication. (TCAs). Deprex, Frenxit, Indever, Rivo, Amylin, Pase, Lonapam, Amit, Oxapro, Triptin, Ascita, Ancrorate, Sedil, Bopam, Filfresh, etc. are among the additional medications mentioned by 14.29% of respondents.

In this chart we found that SSRIs are mostly used by the students, then benzodiazepine and then TCAs at the least.

BENZODIAZEPINES: Clonazepam is a prescription medication that belongs to the class of drugs known as benzodiazepines. It is commonly used to treat seizures, panic disorder, and anxiety disorders. Clonazepam works by increasing the activity of a neurotransmitter in the

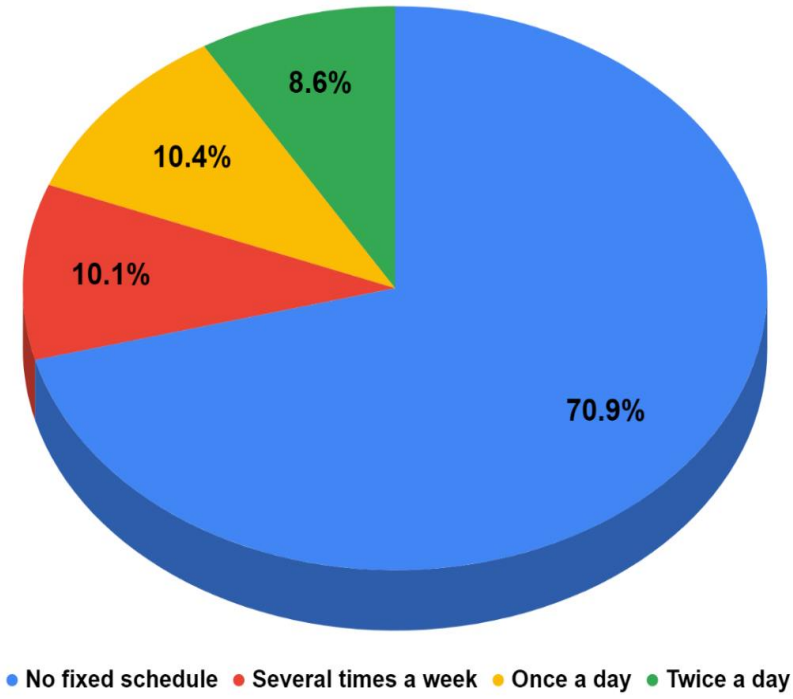
brain called gamma-aminobutyric acid (GABA), which helps to reduce the overactivity in the brain that can lead to seizures or anxiety.

SSRIs: Citalopram hydrobromide is a medication that belongs to the class of drugs known as selective serotonin reuptake inhibitors (SSRIs). It is commonly used to treat depression and anxiety disorders, including panic disorder and obsessive-compulsive disorder. Citalopram works by increasing the levels of a neurotransmitter in the brain called serotonin, which can improve mood and reduce anxiety.

TCAs: Flupentixol + Melitracen is a combination medication that is used as an antidepressant in the treatment of depression, anxiety disorders, and other related conditions. Flupentixol is an antipsychotic medication that works by blocking the action of certain neurotransmitters in the brain, while melitracen is a tricyclic antidepressant that works by increasing the levels of certain neurotransmitters in the brain. This combination medication is classified as a tricyclic antidepressant with antipsychotic properties.

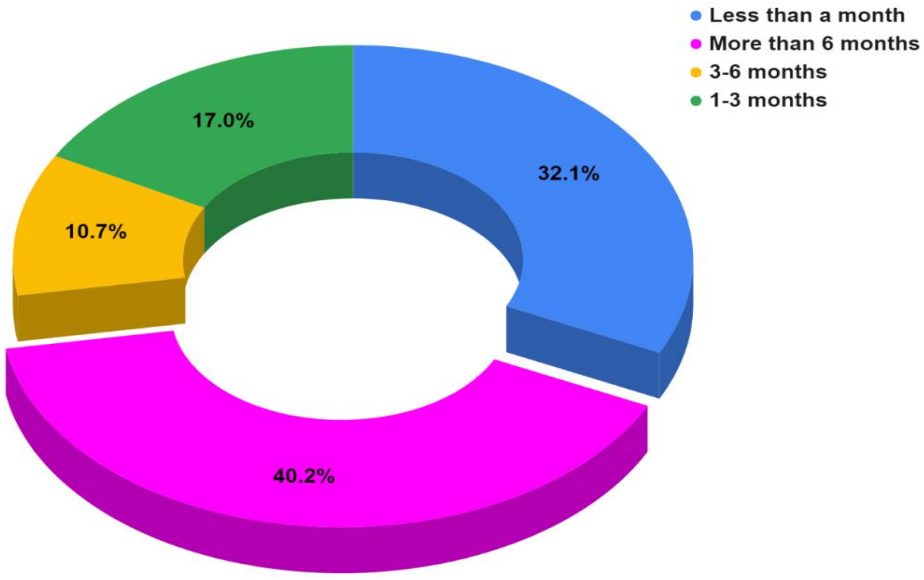
SNRIs: Venlafaxine hydrochloride is a medication that belongs to the class of drugs known as serotonin-norepinephrine reuptake inhibitors (SNRIs). It is commonly used to treat depression, anxiety, and panic disorder. Venlafaxine works by increasing the levels of two neurotransmitters in the brain, serotonin and norepinephrine, which can improve mood and reduce anxiety.

13) Ratio of how often students take antidepressants:



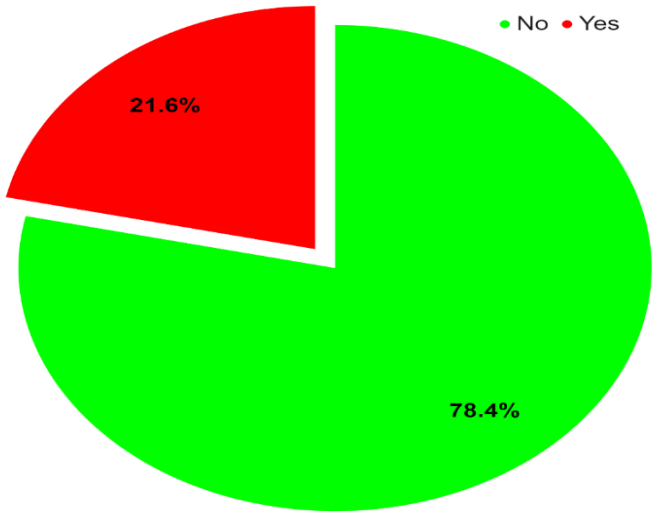
This graph shows the frequency with which students take their antidepressants. here 69.1% of students don't have a regular schedule for taking their medications. One daily dose of medication is used by 10.4% of the learners, indicating that they have a very bad case of depression. 8.6% of students use antidepressants twice day. The graph reveals that 10.1% of these students use their antidepressants several times a week.

14 The time frame for consumption of antidepressants:



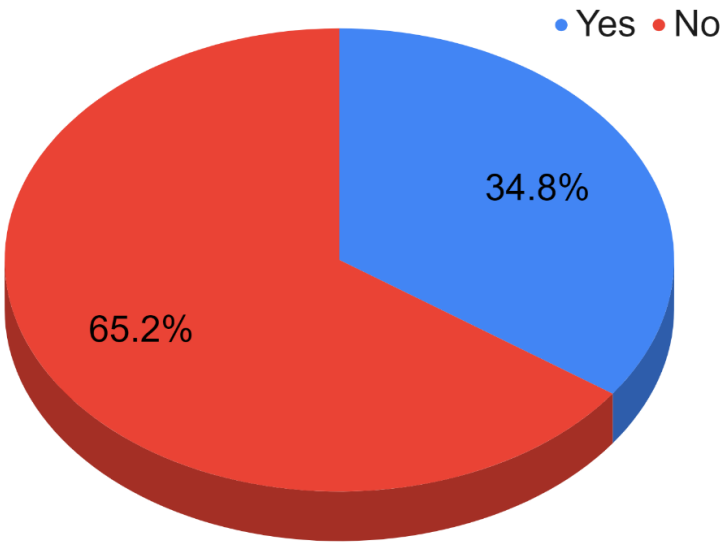
This survey revealed that 132 out of 492 depressed students or 26.83% were taking antidepressants. This graph illustrates the time period during which students consumed antidepressants. Here, we can observe here 32.1% students take their medicine for less than a month. 17.0% of students take their medication for one to three months, whereas 10.7% of students take their medications for three to six months; the remaining 40.2% take them over six months or longer.

15) Percent of students who have ever taken more than the prescribed medication.



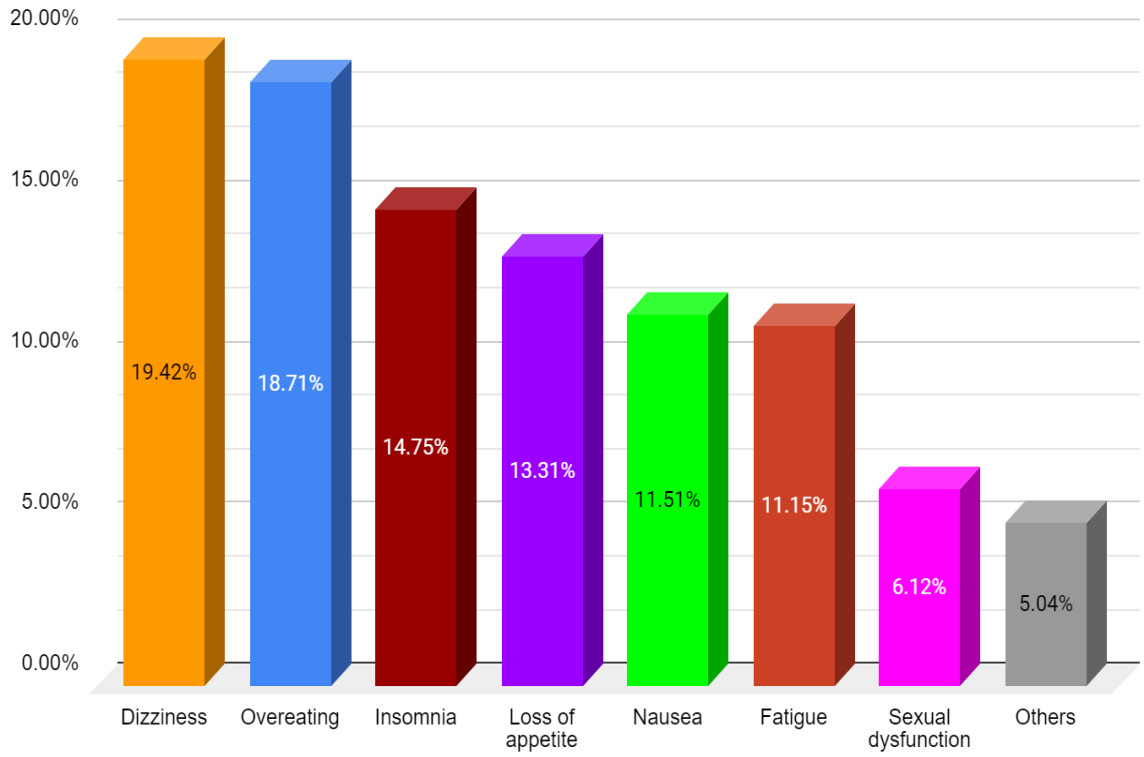
This graph illustrates the percentage of students that either take their medication in excess of the recommended dosage or do not. Here, we can see that 78.4% of students never exceed the recommended dosage, but 21.6% of 132 students who take antidepressants, do so.

16) Percentage of the students who have had side effects.



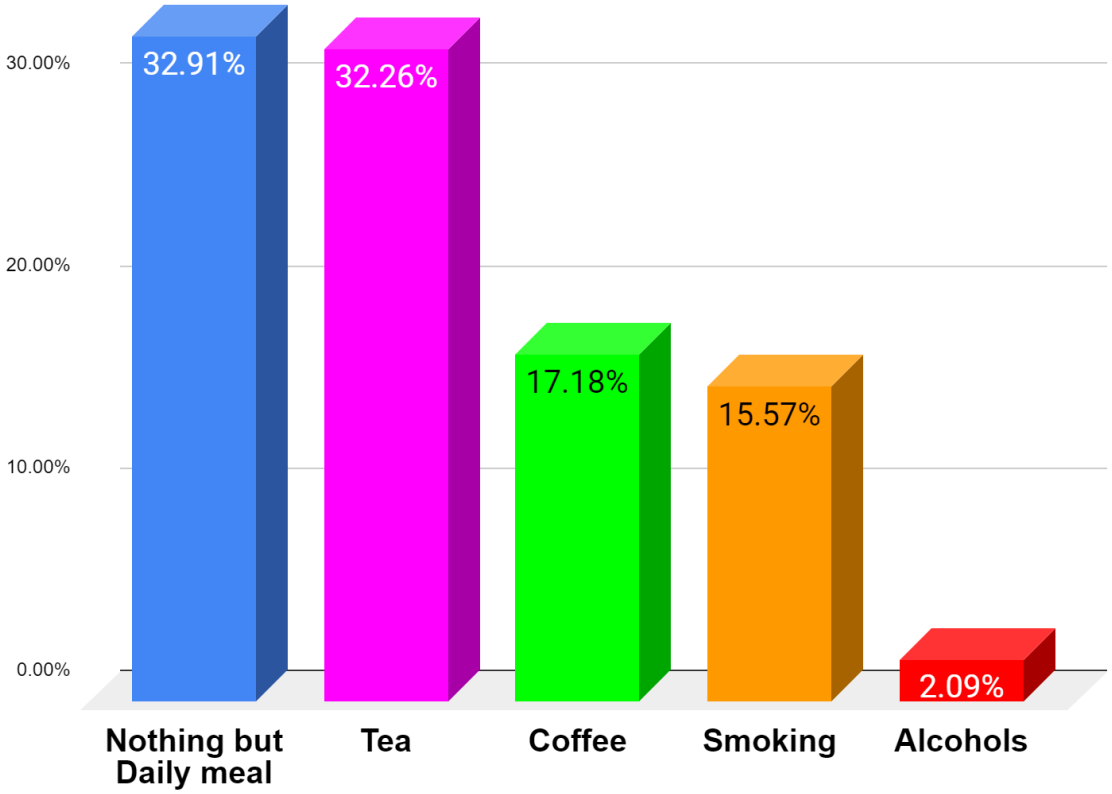
This graph makes it clear that the majority of students 65.2% never experience any side effects, but 34.8% of respondents do after taking an antidepressant to treat their depressive symptoms, which can include nausea, fatigue, overeating, insomnia, appetite loss, dizziness, and numerous other symptoms.

17) More specifically side effects ratio.



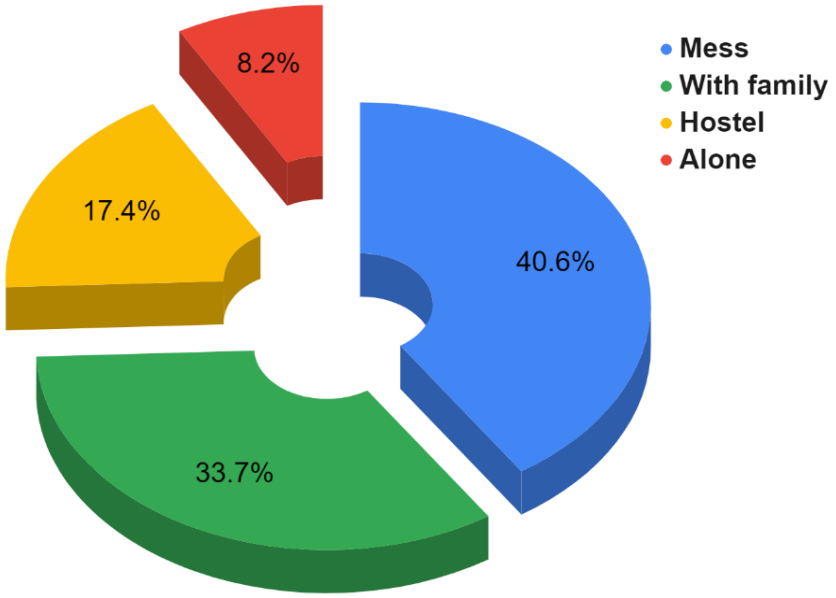
More details on the side effects ratio among students are shown in the above bar chart. 19.42% of the students in this class experience dizziness on a regular basis, and 18.71% of them overeat after using antidepressants. As a side effect of taking antidepressants, 14.75 percent of students reported sleeplessness, 13.31 percent reported appetite loss, 11.5 percent reported nausea, 11.1 percent reported exhaustion, and 6.12 percent reported sexual dysfunction. Other side effects mentioned by 5.04 % of students include impaired short-term memory, sickness, weakness, and restlessness.

18) During depression these are mostly consumed by students



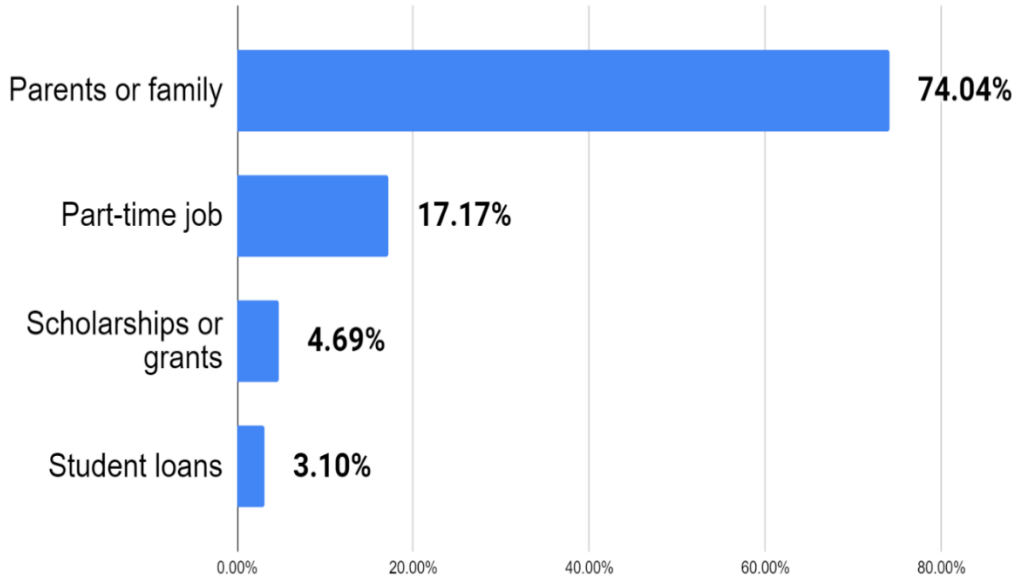
This graph displays the dietary habits of 492 students during an episode of depressive disorders. Here, we can see that the majority of students consumed just daily meals throughout that time, and the ratio is 32.91%. After then, 32.16% of people drink tea, which is the majority. 17.18% of students drink coffee and 15.57% smoke regularly while depressed. Students who were extremely frustrated (2.09%) admitted to drinking during those times.

19) living arrangement while attending university



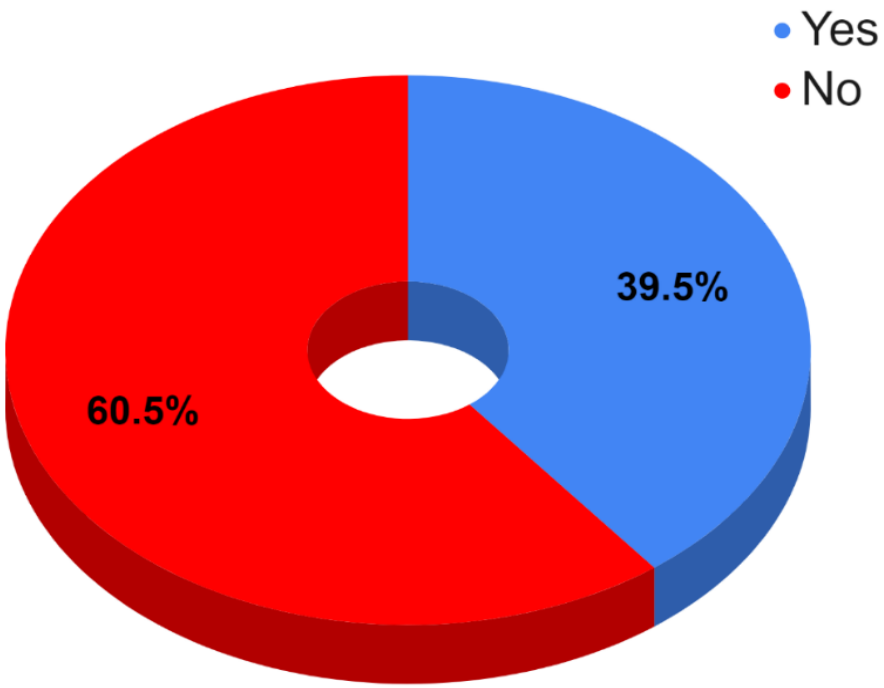
The students' living circumstances while attending their university are portrayed in this chart clearly. As can be seen, 40.6% of respondents indicated that they continued to live in a mess while attending university. 33.7% of respondents said they used to live with their families, which is a significant share. Hostels are mentioned as the primary place of residence by 17.4% of students. The remaining 8.2% of students either handle their housing themselves or live alone while they are in university.

20) Financial arrangement during university



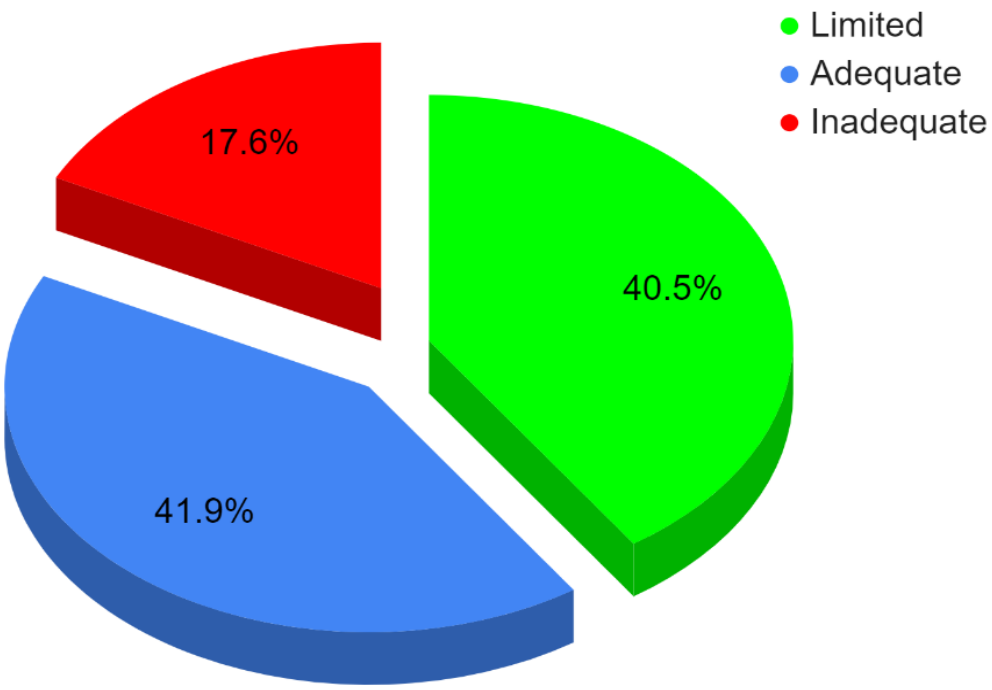
Here, it is abundantly evident that the majority of students (74.04% of 528) receive financial support from their parents or other members of their family to cover their tuition costs. 17.17% of students work a part-time job to pay for their educational expenses. 3.10% of respondents need to take out student loans to cover their educational costs, whereas 4.69% of respondents receive scholarships or grants from their university.

21) Availability and accessibility of mental health services:



This pie chart indicates that 39.5% of respondents have the availability with the accessibility to mental health services while 60.5% of students don't have the availability of mental health services at their university.

22) Specification ratio of availability and accessibility of mental health services.



The regions of this graph clearly show that, while 17.6% of students have insufficient access to mental health services at their university, 41.9% of students have appropriate access to those services, while 40.5% have limited availability.

CHAPTER - 06

CONCLUSION

6.1. Conclusion

The findings of the survey of 528 university students across 31 universities in the country highlight a concerning pervasiveness of depressive symptoms among students. A total of 93.18% of students reported experiencing depressive symptoms. 26.83% of 492 identified as using antidepressants. The severity of depression symptoms varied, moderate, high, and severe depression were reported by 55.78%, 24.3%, and 13.1% of respondents, respectively. This indicates that the majority of students experienced at least moderate levels of depression symptoms. SSRIs were found to be the most commonly used antidepressants among the surveyed students. The survey results also revealed that only 41.9% of the students had adequate access to mental health services at their university.

In conclusion, the survey highlights the need for universities to prioritize the mental health of their students and provide adequate access to mental health services, including affordable antidepressant medications, counseling, and therapy.

6.2. Recommendation

Students around universities are a significant asset for the future Bangladesh. Based on the survey results, it is important to prioritize mental health support services, including affordable medication and counseling services, stress-management programs, and financial aid, should be made more accessible to students. Universities in Bangladesh should partner with local mental health clinics and hospitals to ensure that students have access to comprehensive mental health support services for early diagnosis and treatment of emotional ailments to prevent any future complication.

6.3. Limitations

I encountered various issues when conducting my research. I regard these as the survey's limitations. like as:

i. As a result of a lack of manpower and funding, it was difficult to conduct the survey in large numbers at all universities.

ii. Due to the fact that this survey is conducted using a Google Form and some students were unable to comply with the question, marked answers in a promiscuous manner, and several issues with maintaining accuracy have been experienced.

iii. Some of them had a lack of enthusiasm for revealing facts regarding their personal mental health.

iv. A few survey form questions remain unanswered also.

CHAPTER - 07

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