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Comparative analysis of phobias with psychotherapy and psychopharmacology

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MAGİSTR TEZİSİ

Fobiyaların psixoterapiya və psixofarmakologiya ilə müqayisəli təhlili

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INTRODUCTION

The actuality of the subject. Anxiety disorders are a group of mental health conditions characterized by persistent and excessive fear or worry in situations that are not threatening. According to the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) and the International Classification of Diseases, Eleventh Revision (ICD-11), anxiety disorders are categorized based on specific criteria that distinguish various forms of these conditions. Anxiety disorders include: Generalized Anxiety Disorder (GAD), Panic Disorder, Social Anxiety Disorder (Social Phobia), Specific Phobias, Agoraphobia, Separation Anxiety Disorder, and Selective Mutism. Phobic disorders, in particular represent a significant public health issue, severely impacting individuals' quality of life and functioning.

Anxiety disorders, including phobic disorders, are among the ten most common mental illnesses globally, significantly impacting individuals' quality of life and daily functioning.h (World Health Organization, 2018). Given their high prevalence and substantial impact on individuals' lives, it is essential to explore and evaluate effective treatment options. While everyone experiences anxiety occasionally, those with anxiety disorders endure fear and worry that are intense and excessive. These feelings are often accompanied by physical tension and various behavioral and cognitive symptoms. They are difficult to control, cause significant distress, and can persist for a long time if untreated (Kulkarni, Rane & Pawar, 2020).

Anxiety disorders interfere with daily activities and can impair a person's family, social, academic, or working life. Interestingly, mild levels of anxiety can be beneficial in some situations, as they alert us to dangers and help us prepare and stay attentive. Fear and anxiety can serve as adaptive responses, alerting us to potential threats and prompting appropriate protective actions. However, when these feelings become chronic and overwhelming, they require effective treatment to prevent long-term impairment (American Psychiatric Association, 2013).

This thesis aims to compare two primary treatment modalities: a combination of psychotherapy and psychopharmacology, versus medication-only treatment. By providing a critical analysis, this study seeks to fill a gap in current research and contribute to the development of more effective treatment strategies for phobic disorders.

Object of Research: The object of this research is to study patients diagnosed with anxiety disorders accompanied by phobias, ranging in age from 15 to 60 years. This research focuses on phobic disorders and their treatment modalities specifically through psychotherapy and psychopharmacology. The primary objective is to evaluate the effectiveness of these treatments in real-world clinical settings. This evaluation not only seeks to measure the

reduction in symptoms but also to assess improvements in overall functionality and quality of life for patients. Through this comparative analysis, the research endeavors to provide actionable insights and guidance for clinicians to optimize treatment strategies for phobic disorders.

Subject of Research: The subject of this study includes the treatment methodologies and outcomes of psychotherapy and psychopharmacology for phobic disorders. This involves examining how patients respond to these treatments, the extent of symptom reduction, and the sustainability of the effects over time. The research will analyze different therapeutic approaches to determine which methods provide the most effective and enduring relief from phobic disorders.

Purpose of the Research: The primary aim of this research is to conduct a detailed comparative analysis of psychotherapy and psychopharmacology in the treatment of phobic disorders. The research aims to identify which treatment provides more effective and lasting outcomes.

Tasks of the Research: To review existing literature on phobia treatments. Evaluate the efficacy of psychotherapy and psychopharmacology. Compare long-term outcomes and patient satisfaction between the two treatments. Analyze demographic factors affect treatment outcomes.

Hypotheses of the Research: There are three (one main and two auxiliary) hypotheses in the research study:

- Hypothesis 1 (Effectiveness of Treatment Modalities Hypothesis): Patients treated with a combination of psychotherapy and psychopharmacology exhibit fewer symptoms of anxiety disorders compared to those treated with pharmacotherapy alone. This hypothesis tests the idea that a multimodal approach, integrating both psychological and pharmacological strategies, yields better therapeutic outcomes than treatment using a single modality.

Auxiliary hypotheses:

- Hypothesis 2 (Age Differences in Treatment Efficacy Hypothesis): The efficacy of both combined psychotherapy and psychopharmacology treatment, as well as medication-only treatment, varies with age; older adults experience a less pronounced reduction in anxiety symptoms post-treatment.
- Hypothesis 3 (Marital Status and Treatment Efficacy Hypothesis): Compared to married and divorced patients, single patients exhibit a more significant reduction in anxiety

symptoms when treated with either a combination of psychotherapy and psychopharmacology or with medication-only treatments.

Methodologies used in the Research: The research uses both qualitative and quantitative methods. Clinical trials are conducted with patients diagnosed with phobic disorders, who are divided into groups receiving combination treatment and medication only treatment.

1. Demographic questionnaire (prepared by the author). A specially designed demographic questionnaire was used to collect essential personal and socio-economic information from each participant. The questionnaire included their gender, age, marital status, employment status, educational level, the presence and treatment type of phobias
2. Standardized measurement tools such as the Hamilton Anxiety Rating Scale (HAM-A) are employed to assess post treatment outcomes. This scale includes 14 items and determines the level of anxiety (low, medium, high), where <17 indicates mild severity, 18–24 mild to moderate severity and 25–30 moderate to severe (Hamilton,1959).

Scientific Importance of the Research: This study provides valuable empirical evidence on the comparative effectiveness of psychotherapy and psychopharmacology in treating phobic disorders. The findings can guide clinical practice and inform treatment guidelines.

Scientific Novelty of the Research: The research offers new insights into how different treatment modalities impact various demographic groups, enhancing the understanding of personalized treatment approaches for phobic disorders.

Structure of the Research: The dissertation include introduction, 3 chapters, as well as sub-chapters included in each chapter, conclusion, references and appendices.

The analysis conducted in this thesis will not only highlight which treatments are most effective but also explore whether a synergistic approach combining both methods could offer superior outcomes compared to each treatment alone. By addressing these questions, this thesis aims to contribute to the ongoing discourse in the field of clinical psychology and offer evidence-based recommendations for the treatment of phobias.

CHAPTER I. LİTERATURE REVİEW

Overview of phobias. Treatment of phobic disorders using psychotherapy and psychopharmacology.

1.1 Types, history, and etiology of phobias.

Anxiety is a future-oriented mood state characterized by apprehension, fear, and somatic symptoms. The term ‘anxiety’ was first described by Freud in 1926 as characterizing the discomfort, tension, worry, apprehension and nervousness that people often experience in response to what they perceive as challenging or difficult situations, such as public speaking, performances, job interviews, or significant life changes like divorce or job loss (Freud, 1936). While anxiety acts as a natural response to life’s stresses and challenges, when persistent feelings of fear and worry continuously disrupt daily life, they can evolve into an anxiety disorder (Kulkarni, Rane & Pawar, 2020).

Anxiety disorders are the world’s most prevalent psychiatric disorders, which impact almost 30% of adults of all ages at some stage in their lives. According to the American Psychological Association (APA), anxiety disorder differs from normal anxiousness feelings wich we experience in a stressful situation and include excessive fear and anxiety that is difficult to control, leading to significant distress or dysfunction in social, work-related, or other crucial aspects of daily life (American Psychiatric Association, 2013).

Fear and anxiety are often used together, but the terms are different from each other. Some of research indicates that anxiety and fear reactions differs psychologically and physically (Barlow, 2002). Anxiety is a mood state focused on the future, characterized by worry because we cannot control what will happen next and associated with avoidance behavior. In contrast to anxiety, fear is an immediate emotional response to current danger, characterized by a strong desire to escape and this emergency reaction is often called the flight or fight response (Barlow, Brown, & Craske, 1994). The neuroanatomical response to threats involves key brain structures such as the amygdala, insula, ventral striatum, hypothalamus, periaqueductal gray, and parts of the anterior cingulate cortex and prefrontal cortex (PFC). These form the ventral part of the emotiogenic system, crucial for emotional assessment and response to threats. The amygdala plays a central role in generating fear, while the PFC and hippocampus help regulate emotions by assessing threats and modulating responses (Левин & Ляшенко, 2016).

Although anxiety can produce unpleasant feelings, mild levels of anxiety can be psychologically and physically beneficial in certain situations for a limited period of time. Psychologically – in difficult situations, anxiety increase attention and physically – anxiety can

prepare our body to flee from danger or defend itself. This response called “fight or flight” and first described by Walter Cannon in the 1920s (Keeley et al, 2016).

According to the Azerbaijan Republic Ministry of Health’s Scientific Medical Council, the clinical protocol for the diagnosis and treatment of anxiety disorders states that symptoms of anxiety disorders can be divided into two groups: somatic and psychological symptoms (Table 1.1).

Table 1.1. Symptoms of anxiety disorders

Somatic symptoms	Psychological symptoms
➢ Shortness of breath, lack of air ➢ Increased heart rate ➢ Chest discomfort (tightness, tightness, stinging) ➢ Dizziness, headaches ➢ Weakness, feeling of exhaustion ➢ Sweating ➢ Nausea ➢ Abdominal discomfort ➢ Numbness of different parts of the body ➢ Tremors ➢ Sensation of increased body temperature ➢ Dryness in the mouth	➢ Excessive worry ➢ Sensitivity ➢ Fear of death ➢ Fear of going crazy ➢ Fear of losing reality ➢ Difficulty concentrating ➢ Decreased memory ➢ Irritability

There are two major classification systems for the clinical diagnosis of mental and behavioral disorders such as anxiety disorders: The Diagnostic and Statistical Manual of Mental Disorders (DSM) and The International Classification of Diseases (ICD). According Tyrer the ICD is currently the official world classification system for the clinical diagnosis of mental and behavioral disorders, such as anxiety disorders and has a history of more than two hundred years. The DSM is the official classification for clinical diagnosis in the USA (Tyrer, 2014). There are main differences between ICD and DSM:

- The current version of the International Classification of Diseases (ICD) is the 11th edition (ICD-11), which was officially published by the World Health Organization (WHO) in June 2018 (Rebello, Keeley, Kogan, Sharan, Matsumoto, Kuligyna, & Reed, 2019). The current edition of the DSM is the 5th edition (DSM-5), which was published by the American Psychiatric Association (APA) in May 2013 (Regier, Kuhl, & Kupfer, 2013). So the ICD is world classification system, but the DSM is United State classification system for clinical diagnosis (but used in many other countries).

- The ICD include all health conditions documented in the world, such as physical diseases and mental health disorders, but The DSM include only psychiatric disorders for the clinical diagnosis of mental and behavioral disorders (Tyrer, 2014).
- The ICD include a comprehensive classification system not just for diagnosis but also for applications in health policy, epidemiology, and insurance, whereas the DSM provides specific diagnostic criteria, including symptoms, and guidelines regarding the duration of symptoms (Tyrer, 2014).
- The ICD is used by all health practitioners, such as researchers, physicians for clinical diagnosis of physical and mental health conditions, whereas the DSM is primarily used by psychologists and psychiatrists for diagnosing mental health conditions (American Psychiatric Association, 2013).

It is important to mention that there are a few similarities between ICD and DSM such as several similar codes for diagnosis and the major groups of mental disorders are diagnosed in the same way (Craddock & Mynors-Wallis, 2014). Accoring to the Tyrer (2014) there are main subgroups of psychiatric disorders in both DSM and ICD:

1. Organic, including symptomatic, mental disorders
2. Mental and behavioural disorders due to use of psychoactive substances
3. Schizophrenia, schizotypal and delusional disorders
4. Mood [affective] disorders
5. Neurotic [a term now dropped], stress-related and somatoform disorders
6. Behavioural syndromes associated with physiological disturbances and physical factors
7. Disorders of personality and behaviour in adults
8. Mental retardation
9. Disorders of psychological development
10. Behavioural and emotional disorders with onset usually occurring in childhood and adolescence
11. Unspecified mental disorders

In ICD-11, anxiety disorders are classified under anxiety and fear-related disorders, however, in ICD-10, anxiety disorders have been grouped into neurotic, stress-related, and somatoform disorders (Kogan, Stein, Maj, First, Emmelkamp & Reed, 2016).

As we mentioned anxiety disorders are categorized by two primary classification systems: the International Classification of Diseases, 11th Revision (ICD-11), and the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5). According to the ICD-11 there are several types of anxiety disorders, including: 6B00 generalized anxiety

disorder (ICD-10 code – F41.1), 6B01 panic disorder (ICD-10 code – F41.0), 6B02 agoraphobia (ICD-10 code – F40.0), 6B03 specific phobia (ICD-10 code – F40.2), 6B04 social anxiety disorder (ICD-10 code – F40.1), 6B05 separation anxiety disorder (ICD-10 code – F93.0), and 6B06 selective mutism (World Health Organization. (2018).

On the other hand, the DSM-5 also categorizes anxiety disorders with specific codes and includes separation anxiety disorder (309.21, F93.0), selective mutism (312.23, F94.0), specific phobia (300.29, F40.2), social anxiety disorder (social phobia) (300.23, F40.10), panic disorder (300.01, F41.0), agoraphobia (300.22, F40.00), generalized anxiety disorder (GAD) (300.02, F41.1), substance/medication-induced anxiety disorder, and anxiety disorder due to another medical condition (American Psychiatric Association, 2013).

1. Generalized Anxiety Disorder (GAD). This is a mental illness characterized by persistent and excessive worry that persists for at least several months and affects all areas of a person's life (work, family). Symptoms include recurring gastrointestinal symptoms such as nausea and abdominal discomfort, tachycardia, sweating, tremor, dry mouth, difficulty concentrating, irritability, and sleep disturbances (Stein et al,2020).
2. Panic Disorder: Panic disorder is a prevalent mental health condition characterized by recurrent, unexpected and sudden panic attacks and often associated by intense fear and apprehension. Symptoms of panic disorder include: increased heart rate, sweating, tremors, shortness of breath, chest pain, nausea or stomach discomfort, dizziness, shivering or hot flushes, paraesthesia, depersonalization or derealization, fear of losing control or passing out, fear of death.
3. Agoraphobia - is a disorder characterized by marked fear or anxiety about being in situations from which escape might be difficult or help might not be available.
4. Social Anxiety Disorder (Social Phobia) characterized by significant anxiety or fear of being scrutinized, negatively evaluated, or rejected in social or performance situations. For example being observed (when eating or drinking) and performing in front of others.
5. Specific Phobia: A significant fear or anxiety about a specific object or situation (e.g., flying, heights, animals), leading to avoidance or enduring with intense fear or anxiety.
6. Separation Anxiety Disorder: Excessive fear or anxiety concerning separation from those to whom the individual is attached, beyond what is expected for the individual's developmental level. Separation anxiety in children is usually related to a caregiver, parent, or other family member; in adults, it usually occurs in relation to a romantic partner or child.

7. Selective Mutism: A consistent failure to speak in specific social situations where there is an expectation for speaking (e.g., at school), despite speaking in other situations.

According to the Laporte (2017) some phobias, particularly in children and teenagers, may disappear on their own without treatment. For example, while about 2.9% of children suffer from social phobia, the prevalence drops to just 0.3% in adolescents. This decrease suggests that many fears children experience dissipate as they grow older. Untreated phobias, however, can lead to significant challenges such as social withdrawal, strained relationships, and various forms of dysfunction. Around 30% of individuals with phobias report moderate impairment from their fears, and 22% describe their phobia as causing significant disruption in their daily lives (Laporte, Pan, Hoffmann, Wakschlag, Rohde, Miguel, & Salum, 2017)

Experiencing a phobia can be frightening and overwhelming, and it can be difficult to seek help. However, it is important to recognize that engaging with a mental health professional can be effective in reducing symptoms, gradually overcoming the phobia, and improving overall quality of life.

The causes of anxiety disorders, including phobias, are complex and multifaceted, involving a combination of genetic, biological, and environmental factors. Key contributors include traumatic life events such as parental loss, divorce, and abuse, particularly during early childhood, which can significantly affect brain development and increase the risk of psychiatric conditions. Adolescents, especially girls from lower socioeconomic backgrounds and those with parents who have anxiety or depression, are more susceptible to developing anxiety disorders (Cabral & Patel, 2020). These disorders are also influenced by child temperament traits like shyness, low frustration tolerance, and poor effortful control, which can predispose individuals to both internalizing and externalizing problems, including anxiety (Narmandakh, Roest, de Jonge & Oldehinkel, 2021).

Biologically, dysfunctional responses in the hypothalamic-pituitary-adrenal (HPA) axis due to chronic stress and imbalances in the autonomic nervous system (ANS) - such as low parasympathetic reactivity and hypersensitivity in the sympathetic system - may lead to anxiety (Maron & Nutt, 2017). These conditions manifest physically as higher heart rates and blood pressure, indicative of an overactive stress response. Despite these findings, robust longitudinal studies confirming these associations are limited. Overall, the development of anxiety disorders is likely due to a convergence of psychosocial difficulties, biological vulnerabilities, and specific temperamental characteristics (Domschke & Maron, 2013).

According to the clinical protocol of the Scientific Medical Council of the Ministry of Health of the Azerbaijan Republic, there is a table outlining the risk factors for anxiety disorders (Table 1.2).

Table 1.2. Risk factors of anxiety disorders

Biological factors	Psychological factors	Social factors
➢ Genetic predisposition ➢ Diabetes ➢ Pheochromocytoma ➢ Vitamin deficiency ➢ Effects of Alcohol, caffeine, cocaine and some drugs ➢ Brain tumors ➢ Thyroid gland disorders ➢ Basic infectious diseases	➢ Improper daily routine ➢ Death of a loved one ➢ Excessive worry ➢ Interpersonal problems ➢ Being single or widowed ➢ Presence of mental trauma in one's medical history ➢ Being sexually assaulted	➢ Unemployment or threat of unemployment ➢ Low social security ➢ Unsatisfactory living conditions ➢ Living in dangerous conditions ➢ Undesirable working conditions ➢ Existence of economic or political crisis ➢ Limited access to medical and social assistance

In 2015, The World Health Organization (WHO) published that anxiety disorders classified in sixth place among all mental and somatic diseases worldwide and in fourth place in developed countries, making them some of the most impactful chronic diseases on patients' lives. The most common type of anxiety disorder is specific phobia (World Health Organization, 2017).

Anxiety disorders, especially specific phobia and social phobia, often begin in childhood or adolescence (Beesdo, Pine, Lieb, & Wittchen , 2010). Most children experience a transient period of non-pathological aversion to strangers, typically starting around eight or nine months old. In 2-3% of children, severe separation anxiety continues into their preschool or school years (Ströhle, Gensichen, & Domschke, 2018).

The term "phobia" comes from the Greek word "phobos," which means fear and the most prevalent type of anxiety disorder, where people experience excessive and irrational fears about a specific objects, situations, activities, people, creatures, or places (Kulkarni, Rane & Pawar, 2020). Phobias are characterized by an intense fear of objects or situations that realistically pose no threat. Although individuals with phobias recognize the irrationality of

their fears, they continue to struggle with ongoing anxiety and fear, which makes them feel powerless and unable to control their emotions (Rofé & Rofé, 2015).

According to the American Psychiatric Association (APA, 2013) there are three specific types of phobias: specific phobia, social phobia and agoraphobia.

1. A specific phobia is irrational fear and anxiety about a specific situation or object that is excessive in relation to the actual danger and in some cases it can intensify to the level of a panic attack (Singh & Singh, 2016). People with specific phobias usually recognize that their fear is unreasonable and excessive, but they are unable to stop their irrational fear, which provokes anxiety and avoidance behaviors in the individual (Garcia, 2017). According to Wittchen et al. (2011), specific phobia is a common anxiety disorder in children and adolescents that significantly disrupts social, educational, and daily functioning, with a global lifetime prevalence varying between 3% and 15% (Wittchen et al., 2011). There are common types of specific phobias such as fears of animals, high places, insects, germs, darkness, thunderstorms, driving, public transport, illness, airplane, lifts, blood, and procedures related to dentistry or medicine. Physical symptoms of specific phobias include: increased heart rate, sweating, tremors, shortness of breath, feelings of dizziness or lightheadedness, chills or hot flashes, chest discomfort, and numbness (Örengül, Meral & Görmez, 2019).
2. Social phobia or Social Anxiety Disorder (SAD), is a condition that typically emerges in adolescence and is characterized by extreme and persistent anxiety associated with social or performance situations (Morrison & Heimberg, 2013). Social phobia is characterized by physical, emotional, and cognitive symptoms. Physical symptoms include blushing, trembling, increased heart rate, shallow fast breathing, sweaty palms, nausea, tense muscles, dry throat, stomach pain, and feeling faint or light-headed. Emotional symptoms include excessive self-consciousness and anxiety in everyday social interactions, strong feelings of embarrassment and humiliation, and fear of being judged and criticized. Cognitive symptoms include negative, often irrational beliefs about oneself in social contexts, such as “I’m sure I’ll embarrass myself” or “Everyone is judging me.” While it’s common for many to feel shy or nervous in scenarios like public speaking or meeting new people, these feelings do not typically signify a social phobia. In contrast, for those with social phobia, social interactions provoke feelings that go far beyond ordinary anxiety or nervousness (Keeley,2016). Unlike triggers for specific phobias that can often be avoided, social situations are everywhere and almost impossible to evade, making the challenges of social anxiety particularly severe (Clauss & Blackford, 2012).

3. Agoraphobia is the anxiety disorder characterized by an intense fear of being in places or situations from which escape might be difficult or where help might not be readily available (Balaram & Marwaha, 2020). According to DSM-5, agoraphobia involves significant anxiety about being in public spaces, with this fear occurring consistently in at least two out of five specific situations. To be formally diagnosed with agoraphobia, a person must experience not just fear of certain scenarios but also engage in active avoidance through changes in behavior or thinking. The fear should be excessive compared to the real threat, not be based on cultural norms, and not stem from substance use. Additionally, these symptoms need to be present for over six months (APA, 2013). Previously, in DSM-IV, agoraphobia wasn't recognized as a separate disorder but was associated with panic disorder, which involves sudden, severe episodes of fear accompanied by physical symptoms like heart palpitations, dizziness, and a fear of dying. In the current edition of the DSM-5, agoraphobia is recognized as an independent diagnosis, similar to generalized anxiety disorder or panic disorder (Regier et al, 2013). Symptoms of agoraphobia include a fear of leaving home alone, being in crowds or waiting in line, and being in enclosed spaces such as movie theaters, elevators, or small stores, using public transportation, such as buses, planes, or trains. These fears often lead to the avoidance of these situations, significantly impacting daily activities and quality of life (Craske & Simos, 2013).

The DSM-5 identifies five subtypes of phobias: animal, natural environment, blood-injection-injury, situational, and other fears related to loud sounds or costumed characters (APA, 2013). The most common subtypes are animal and natural environment phobias, which can vary in the age at which they first appear and in how they are behaviorally expressed (Essau, Conradt, & Petermann, 2000; Öst, 1987). Also according to the APA (2023) there are common animal phobias such as: arachnophobia (fear of spiders), chiroptophobia (fear of bats), cynophobia (fear of dogs), ophidiophobia (fear of snakes), zoophobia (fear of animals) (APA, 2023).

Research has consistently shown that phobias are more prevalent among women than men, with women having significantly higher prevalence rates of agoraphobia and specific phobias. However, no notable gender differences have been identified in the prevalence of social phobia (Bourdon et al., 1988). Additional research supports these findings, indicating that the overall point prevalence of any specific phobia is significantly higher among females, particularly for animal and situational phobias (Fredrikson et al., 1996). This gender disparity in phobia prevalence highlights the need for tailored approaches in the understanding and treatment of phobias, considering these demographic variations (Craske & Simos, 2013).

1.2 Phobias and comorbid mental disorders

The term “comorbid” was first described by epidemiologist Alvan R. Feinstein in the 1970s. Feinstein introduced this term to refer to medical conditions existing simultaneously but independently with another condition in a patient. The concept has since been widely adopted in healthcare to describe the coexistence of multiple diseases or disorders in the same individual (Feinstein, 1970).

According to the DSM-V, primary anxiety disorders include panic disorder, agoraphobia, specific phobias, social phobia, separation anxiety disorder, selective mutism, and generalized anxiety disorder (APA,2013). Secondary anxiety disorders may develop due to other medical conditions, such as epilepsy or respiratory diseases (Table 1.3). It's crucial to differentiate anxiety disorders from other mental, somatic, endocrine, metabolic, and neurological conditions. Diagnosticians should also consider the potential co-occurrence with other anxiety disorders, including panic disorder, phobias, obsessive-compulsive disorder, and post-traumatic stress disorder (Левин & Ляшенко, 2016).

Table 1.3 Diseases accompanied by chronic anxiety syndrome

Group of diseases	Diseases
Endocrinopathies	Thyrotoxicosis, hypothyroidism, thyroiditis, diabetes mellitus, pheochromocytoma
Gastrointestinal diseases	Peptic ulcer, irritable bowel syndrome, celiac disease
Respiratory diseases	Bronchial asthma, chronic obstructive pulmonary disease
Cardiovascular diseases	Angina, mitral valve prolapse
Neurological diseases	Epilepsy, dementia, Parkinson's disease, migraine, fibromyalgia and other chronic pain syndromes
Infectious diseases	HIV infection, tuberculosis
Other	Cancer, obesity, chronic fatigue syndrome

Stress exposure activates the release of catecholamines and increases cortisol levels, enhancing alertness to threats while suppressing non-essential functions. Hippocampal neurons provide negative feedback to the hypothalamic-pituitary-adrenal (HPA) axis, helping to adjust the stress response as needed. The medial PFC aids in controlling this axis, ensuring proper emotional regulation and adaptive responses to environmental challenges (Fiksdal, 2019).

Frequent or chronic activation of the stress system can impact the functions of other physiological systems, such as the immune, endocrine, and cardiovascular systems, leading to an increased risk of various diseases, including cardiovascular disease, diabetes, metabolic syndrome, and neuropsychiatric disorders. Evidence suggests that chronic anxiety may initiate or accelerate neurodegenerative processes (Ray, Gulati & Rai, 2017).

The presence of chronic anxiety increases the risk of developing Alzheimer's disease by 2.5 times in cognitively preserved elderly individuals and in those with amnestic mild cognitive impairment. Recent research has also shown that anxiety can accelerate the progression of Alzheimer's disease, even considering cognitive and affective impairments (Mendez, 2021).

The severity of anxiety correlates with an increased rate of atrophy in the medial temporal lobes, a key early marker of Alzheimer's disease. Research also indicates that middle-aged women experiencing significant psychosocial stress face a higher risk of developing Alzheimer's disease two decades later. Chronic stress and excessive glucocorticosteroid exposure can cause hippocampal damage, cerebral atrophy, and hinder neurogenesis. Furthermore, while structural and functional changes lead to a decrease in dendrites in the prefrontal cortex (PFC), the amygdala experiences the opposite effect, exacerbating the imbalance between the brain's ascending and descending systems (Mah, Binns & Steffens, 2015).

According to the Wardenaar, Lim, Al-Hamzawi, Alonso, Andrade, Benjet & De Jonge (2017) Up to 81% of people with phobias have comorbid mental disorders:

1. Other anxiety disorders: It's common for individuals with phobias to also suffer from other anxiety disorders, such as generalized anxiety disorder (GAD), panic disorder, or social anxiety disorder.
2. Mood disorders: such as major depressive disorder, bipolar disorder. Parallel to the adult studies, mood disorders comprise the class of psychiatric disorders that are most frequently associated with anxiety disorders in youth. Many individuals with phobias also experience symptoms of depression. The limitations imposed by the phobia can lead to feelings of hopelessness and helplessness, common in depressive disorders.

3. Obsessive-Compulsive Disorder (OCD): OCD and phobias can co-occur, particularly when the phobia is related to fears of contamination, which may overlap with compulsive washing or cleaning.
4. Post-Traumatic Stress Disorder (PTSD): Phobias can develop after a traumatic event, especially if the phobia is directly related to the trauma. For instance, a person who survived a car accident may develop a phobia of driving.
5. Substance Use Disorders: Some individuals may turn to alcohol or drugs to self-medicate the distress caused by their phobia, leading to substance abuse or dependence.

The most common comorbid conditions in patients with social phobia are: simple phobias (59%), agoraphobia (44.9%), alcoholism (19%), major depression (17%), and drug abuse (17%) (Диденко, Аксенов, & Аленина, 2020).

Social phobia is most often associated with Cluster C personality disorders (avoidant, dependent, obsessive-compulsive disorders), though it also occurs in combination with other types of personality disorders (Сагалакова & Труевцев, 2011). According to T. Millon, the comorbidity rates are as follows: social phobia co-occurs with personality disorders at 94%, impulse control disorders at 67%, schizoid personality disorder at 35%, and dependent personality disorder at 23%. Combinations of social phobia with obsessive-compulsive (7.3%) and schizotypal (8.5%) personality disorders are less common (Millon, 2011).

1.3 Psychotherapy approaches for treating phobias

1.3.1 Cognitive-behavioral therapy (CBT)

Phobias, as intense and irrational fears triggered by specific objects, situations, or activities, significantly impair individuals' daily lives. The treatment of phobias generally includes two main approaches: psychotherapy and psychopharmacology. Non-medication interventions should be preferred for mild anxiety disorders. The first non-pharmacological step is to educate the patient about their condition. The doctor presents information about anxiety disorders, their various manifestations, treatment methods, and prevention measures. To maintain a healthy lifestyle as part of preventive measures, it is recommended to: reduce the use of caffeine, nicotine, and chocolate, minimize the use of sedatives as much as possible, engage in aerobic exercises (20-40 minutes, 3-5 times a week), follow a healthy eating pattern and diet, avoid alcohol and breathing exercises (Azerbaijan Republic Ministry of Health Scientific Medical Council, 2021).

To address these pervasive disorders, psychologists have developed various therapeutic strategies. Among these, Cognitive Behavioral Therapy (CBT) stands out due to its well-documented efficacy and structured approach.

Dr. Aaron T. Beck, the world's famous psychiatrist, is internationally recognized as the pioneer of Cognitive Behavioral Therapy (CBT) and as a prominent researcher in psychopathology. Developed in the 1960s and 1970s, this evidence-based therapy has been validated in over 2000 clinical trials as effective for a diverse array of mental disorders, psychological issues, and medically related psychological conditions (Beck & Fleming, 2021).

Cognitive Therapy was established as the first talking therapy proven to be more effective than medication in treating depression and gained international attention following a validating UK study in 1981 (Blackburn et al., 1981).

Dr. Beck and his colleagues expanded the use of Cognitive Therapy to include a variety of disorders such as anxiety, personality disorders, substance use, and suicidality. He developed a comprehensive theory of psychopathology which served as a foundation for both treatment strategies and methods to assess the validity and efficacy of the therapy. For each condition, Beck started with clinical observations to identify the maladaptive beliefs linked to the disorder, often developing scales and tools for their assessment. He then designed treatments targeting these dysfunctional beliefs and behaviors and these treatments were rigorously tested through randomized controlled trials and the results were published, allowing other professionals to study, implement, and further refine these methods. Dr. Beck discovered that when he helped his patients evaluate and change their distorted thoughts, they improved their well-being and altered their behaviors, also their improvement was long-lasting (Beck, 2019)..

In 1994, Dr. Aaron Beck and his daughter, Dr. Judith Beck, established the Beck Institute for Cognitive Behavior Therapy (BI), a nonprofit organization. BI's mission is to enhance lives globally by promoting excellence and innovation in CBT through training, practice, and research. The institute has provided training to over 28,000 health and mental health professionals from 130 countries via a range of in-person and online programs, as well as through distance supervision, and includes some of today's top researchers in CBT among its trainees (Beck & Fleming, 2021).

Cognitive behavioral therapy (CBT) focuses on changing the automatic negative thoughts that can contribute to and worsen our emotional difficulties. According to Beck, by learning to assess these thoughts more realistically and adaptively, individuals can achieve improvements in their emotional states and behaviors. Through exercises in sessions, as well as 'homework' exercises outside of sessions, patients/clients are assisted in developing coping

skills, where they can learn to change their own thinking, problematic emotions, and behavior. CBT enables individuals to become their own therapists and focuses on the issues present in their current lives, rather than the events that led to their difficulties (Beck, 2011).

Cognitive behavioral therapy (CBT) is an evidence-based psychological treatment that helps people shown to be effective for a wide range of issues, including depression, anxiety disorders, obsessive-compulsive disorder (OCD), post-traumatic stress disorder (PTSD), eating disorders, personality disorders, sleep disorders, marital problems, and problems related to alcohol and drug use, as well as severe mental illnesses (David, 2018). Many research studies have demonstrated that CBT leads to significant improvements in functioning and quality of life. In numerous cases, CBT has proven to be as effective as, or more effective than, other types of psychological therapies or psychiatric medications. Additionally, it has been successfully applied to individuals of all ages, such as children, teenagers, adults, and older adults (Compton, 2004).

There are several specific types of CBT: Dialectical behavior therapy (DBT), Rational emotive behavior therapy (REBT), Cognitive therapy, Mindfulness-based cognitive therapy, problem-solving therapy, acceptance and commitment therapy and multimodal therapy. Beck's cognitive behavior therapy often incorporates techniques from all these therapies, and other psychotherapies, within a cognitive framework (Beck, 2011).

1. DBT is an empirically supported, comprehensive treatment developed as an intervention for suicidal women. The theory behind DBT is called the biosocial theory (Linehan & Wilks, 2015).
2. Mindfulness - Based Cognitive Therapy (MBCT) is a therapeutic approach that combines techniques from cognitive therapy with mindfulness practices derived from Buddhist traditions, and helps cultivate a non-judgmental, present-oriented attitude, which is referred to as mindfulness. The primary goal of MBCT is to help individuals change their relationship with their thoughts and feelings, rather than attempting to alter the content of their thoughts directly. Structured as an 8-session group program, MBCT is effective in managing conditions such as anxiety, depression, and bipolar disorder (Sipe & Eisendrath, 2012).
3. Rational emotive behavior therapy (REBT) – include identifying irrational beliefs, actively disputing these beliefs, and finally learning to recognize and manage their emotions, thoughts and behaviors in more realistic manner (Turner, 2016).

4. Cognitive therapy – has proven beneficial for a range of problems including anxiety disorders, depression, and significant stress. Cognitive therapy focuses on recognizing and modifying incorrect or distorted thinking patterns, emotional reactions, and behaviors. (Rnic, Dozois, & Martin, 2016)
5. Problem solving therapy - involves psychoeducation, engaging problem-solving activities, and motivational homework tasks. Thomas D'Zurilla and Marvin Goldfried introduced problem-solving therapy (PST) in their 1971 article on problem-solving and behavior modification. They introduced the PST as a method aimed at teaching clients effective strategies for managing the problems that contribute to emotional distress (D'Zurilla & Nezu, 2010).
6. Acceptance and commitment therapy (ACT) - is a form of mindful psychotherapy that encourages present-moment focus and nonjudgmental acceptance of thoughts and emotions (Twohig & Levin, 2017).

There are most common cognitive-behavioral techniques for treatment anxiety disorders especially phobias such as: exposure techniques, relaxation techniques, cognitive restructuring, behavioral activation and social skills training, mindfulness and others(Overholser, 2002).

- Exposure Techniques: A core component of CBT is exposure therapy, where patients are gradually exposed to the objects or situations that provoke fear. Relaxation training and cognitive restructuring are often integrated to help modify the negative thoughts associated with the phobia (Denis, 2015).
- Relaxation Techniques such as progressive muscle relaxation,can help reduce the physical symptoms of anxiety that accompany phobias. American physician Edmund Jacobson introduced progressive muscle relaxation (PMR) in the early 20th century, positing that mental relaxation follows physical relaxation. This technique teaches individuals to manage stress by sequentially tensing and then relaxing specific muscle groups, allowing them to gain control over stressors while promoting skeletal muscle relaxation (Ferendiuk, Biegańska, Kazana, & Pihut, 2019).
- Cognitive Restructuring: This technique involves identifying and challenging irrational or maladaptive thoughts that contribute to phobic behavior. Specific interventions like safety behaviors experiments and video feedback are utilized to alter these problematic cognitions (Huppert et al., 2003).
- Behavioral Activation and Social Skills Training: For social phobias, behavioral activation and social skills training are crucial. These methods encourage patients to engage more actively in social interactions and life activities while managing their

anxiety, equipping them with necessary social skills (Taheri, Amiri, Birashk, & Gharrayi, 2016).

- Mindfulness: Mindfulness involves staying present and fully engaging with the moment without judgment. It helps in managing and accepting the feelings of anxiety instead of avoiding feared situations (Call, Miron, & Orcutt, 2014).

1.3.2 Exposure and response prevention therapy

Exposure therapy is the most effective empirically supported cognitive behavioral therapy method for treating various disorders, including anxiety, phobias, panic disorder, PTSD, social anxiety, and other conditions (American Psychological Association, 2023).

According to American Psychological Association the therapist's role in exposure therapy is to help the client systematically overcome their fears by repeatedly encountering feared objects, actions, situations, thoughts, or feelings. The core goal of exposure therapy is to reduce the fear response through a process known as extinction. Although initially the patient may experience heightened fear, this response is expected to decrease over time through repeated exposure. This method relies on the natural process of habituation, where the patient's fear diminishes despite continued exposure to the stimulus (Abramowitz, 2013).

By encouraging clients to face their fears, we disrupt the pattern of avoidant behavior and fearful reactions. Exposure results in the brain adapting to new information, demonstrating that fearful consequences are unlikely and that stress is tolerable. Exposure therapy also helps combat cognitive distortions such as probability overestimation and catastrophizing (Boeldt, McMahon, McFaul & Greenleaf, 2019).

Exposure therapy (ET) is one of the most effective treatments for anxiety problems. It is based on the fact that anxiety is maintained by avoiding what is feared. The more the client avoids what he fears, the stronger the fear becomes. The effect of ET works in such a way that by allowing the patient to come into contact with what he is afraid of, he learns that the negative consequences he expects do not occur, and anxiety decreases (Singh & Singh, 2016).

According to APA (2023) there are several types of exposure therapy:

1. In vivo exposure: This involves direct confrontation with a feared object, situation, or activity in real life. For instance, a person afraid of snakes might handle one, or someone with social anxiety could give a speech in front of an audience.
2. Imaginal exposure: Here, individuals vividly imagine the feared object, situation, or activity. This method is often used for those with PTSD, who might recount and describe their traumatic experience to lessen their fear.

3. Virtual reality (VR) exposure: include using virtual reality for exposure practice. When real-life exposure is impractical, virtual reality technology can simulate the feared environment. An example is simulating a flight for someone with a fear of flying, complete with the visual, auditory, and olfactory cues of an airplane.
4. Interoceptive exposure: This method involves inducing physical sensations that are harmless but feared, such as having someone with panic disorder run in place to increase their heart rate, helping them learn that this sensation is not dangerous.

1.3.3 Psychodynamic therapy

Sigmund Freud, the founder of psychoanalysis, was born in Austria and spent much of his childhood and adult life in Vienna. He pursued a medical education and trained as a neurologist, obtaining his medical degree in 1881, and subsequently introduced the concept of psychoanalysis in the late 19th century (Gay, 2006).

Psychoanalytic theories of anxiety trace their origins to Sigmund Freud and remain significant, especially in clinical settings. Freud introduced two models of anxiety in 1917 and 1926. Initially, he posited anxiety as a result of libido transformation due to repression; later, he suggested that repression stems from anxiety, signaling danger and triggering avoidance mechanisms (Pitman & Knauss, 2020).

Psychoanalysis is a therapeutic approach based on the belief that our past experiences shape our present. We often don't pay attention to the impact these experiences have on us. Unresolved painful emotions can linger in our subconscious, affecting our mood, behavior, self-esteem, personality, relationships and work performance. Through psychoanalysis, people can identify and understand the causes of these hidden influences, gaining insight into their development over time. This understanding allows them to consider and manage how these factors currently impact their lives (Pick, 2015).

There are multiple psychoanalytic schools that adhere to different models of the mind and clinical approaches, such as the object relations school associated with Klein and Winnicott, Jung's analytic psychology, and Lacanian psychoanalysis (Gaztambide, 2021).

Sigmund Freud's influence is largely due to his theory of the human mind, which he described as having three main layers: the conscious, preconscious (or subconscious), and unconscious. The conscious mind includes our present thoughts and emotions. The preconscious contains all that we can remember or retrieve from memory. The deepest layer, the unconscious, serves as a repository for the innate desires and processes that influence our behavior (Freud, 1995).

Freud later refined his theory with a more structured model that clearly delineates these levels of mind and integrates them with his concepts of human personality. According to the Freud there are the three key elements of personality (Freud, 1995):

- Id: According to Freud, the id is the only component of personality present from birth and includes instinctive and primitive behaviors. It functions unconsciously, driving our fundamental instincts: Eros, which promotes life-sustaining behaviors, and Thanatos, which leads to aggression and destructiveness (Pick, 2015).
- Ego: According to Freud, the ego develops from the id and functions within the conscious, preconscious, and unconscious mind (Freud, 1995). The ego is the personality component responsible for dealing with reality. While the term "ego" is commonly used to suggest an inflated self-image, it actually plays a beneficial role. It is the part of your personality that keeps you grounded in reality and prevents the id and superego from pulling you too far toward your most basic urges or moralistic virtues. Having a strong ego also means having a strong sense of self-awareness (Boag, 2014).
- Superego: According to Freud, the superego, the final component of personality development, begins to develop around the age of five (Freud, 1995). It includes the moral principles and ideals learned from our parents and society, influencing our perception of right and wrong. The superego aims to improve our behavior, repressing the id's inappropriate impulses and encouraging the ego to pursue idealistic goals rather than just realistic objectives (Lapsley & Stey, 2011)

Freud believed that these three components of the mind are in constant conflict because each has a different goal (Freud, 1995). To manage this conflict and protect itself from the resulting anxiety, the ego deploys various unconscious defense mechanisms such as repression, denial, projection, displacement, regression, and sublimation. These strategies help with emotional conflicts and threats, allowing the individual to maintain psychological stability (Di Giuseppe & Perry, 2021).

There are some psychoanalytic techniques for treating anxiety and phobias:

1. Free Association: This technique is useful for uncovering the underlying content linked to a phobia. Clients are encouraged to freely express their unconscious emotions and thoughts related to their anxiety, which might reveal connections to past events or subconscious fears. The therapist then interprets these responses to help the client understand and manage their fears (Lothane, 2018).
2. Dream Analysis: Freud described dream analysis as "the royal road to the unconscious," suggesting that it provides direct access to our deeper thoughts. Analyzing dreams can

provide insights into what might be driving a phobia or anxiety, especially when the direct triggers are not conscious or clear (Sharpe, 2018).

3. Transference Analysis: Transference is a fundamental element in psychoanalytic therapy, in which clients with anxiety may project their fears onto the therapist or the therapeutic relationship itself. Freud initially observed that his patients often reacted to him as if he were a significant figure from their past. These reactions could be positive or negative, and sometimes even hostile. Freud believed that these were remnants of previous emotional attitudes directed towards key figures in the patients' lives (Yeomans, Levy & Caligor, 2013).
4. Interpretation: The therapist's interpretations help clients see the links between their unconscious thoughts and their phobic reactions. This can include interpreting how past experiences are shaping current fears (Pick, 2015).

1.3.4 Rational emotive behavior therapy (REBT)

Rational emotive behavior therapy (REBT) is an action-oriented approach that focuses on active engagement rather than passive conversation, aiming to help individuals identify and modify irrational beliefs, emotions, thoughts, and behaviors towards healthier and more realistic perspectives (Ellis, & Joffe, 2019).

Rational emotive behavior therapy, developed by Albert Ellis in 1955, is recognized as the earliest form of cognitive behavior therapy (CBT). Central to REBT, and by extension to most CBT approaches, is the "ABC" model introduced by Ellis (David, Szentagotai, Eva & Macavei, 2005). A fundamental principle of this model posits that our emotional and behavioral issues are not directly caused by external events, but rather by our interpretations and beliefs about these events. The "ABC" model stands for: (Turner, 2016)

- A (Activating Event): An activating event is an external trigger, like a situation, thought, or memory, that initiates a sequence of thoughts. It could be anything: a conflict at work, criticism from the outside, a stressful situation, etc.
- B (Beliefs): Beliefs are the thoughts and beliefs a person develops in response to an activating event. These beliefs can be rational or irrational. Irrational beliefs are often unrealistic, destructive, and can lead to negative emotional and behavioral consequences.
- C (Consequences): These are the emotional and behavioral reactions that result from one's beliefs. These reactions can range from mild emotions to extreme feelings such as anger, anxiety or depression.

Rational Emotive Behavior Therapy (REBT) can be effectively used to treat phobias, which are intense, irrational fears of specific objects or situations. According to Albert Ellis treatment process in REBT for phobias typically involves several key steps (Ellis, 2021):

1. Assessment. The initial step involves identifying the specific phobia and its associated irrational beliefs by discussing what triggers the phobia and the thoughts and feelings that arise in those situations.
2. Identifying irrational beliefs. People with phobias frequently have catastrophic and irrational beliefs about the object or situation they fear.
3. Disputing irrational beliefs. The core of REBT involves disputing irrational beliefs by challenging them using techniques such as logical, empirical, and pragmatic disputing.
4. Replacing irrational with rational beliefs . The next step is to replace irrational beliefs with more rational and realistic beliefs.
5. Behavioral techniques. REBT used various behavioral techniques which correspond with the ABC model.
6. Developing coping skills. Developing coping skills to manage anxiety is an essential aspect of REBT, which includes techniques such as deep breathing, mindfulness, and other relaxation methods to control physiological symptoms of anxiety.
7. Maintenance and relapse prevention. Finally, individuals learn to maintain their new rational beliefs and continue practicing their skills in various situations to prevent relapse.

1.4 Psychopharmacological approaches for treating phobias

1.4.1 Overview of medications commonly used in phobia treatment

While psychotherapy is frequently the primary treatment for phobias, medication is also sometimes used in addition to therapy.

According to Singh, medication is more commonly used for treating agoraphobia and social phobia, than specific phobias (Singh, 2016). Pharmacotherapy of phobic disorders includes: antidepressants (SSRIs and SNRIs) and benzodiazepines (BZDs) (Garakani et al, 2020).

1. Antidepressants, which encompass selective serotonin reuptake inhibitors (SSRIs) like sertraline, fluvoxamine, escitalopram and paroxetine; tricyclic antidepressants (TCAs); and serotonin-noradrenaline reuptake inhibitors (SNRIs) like venlafaxine.

2. Benzodiazepines (BZDs), such as diazepam, alprazolam, clonazepam, lorazepam (Ativan), and clonazepam (Klonopin), along with monoamine oxidase inhibitors (MAOIs) like phenelzine and moclobemide, β-adrenergic blockers, buspirone, gabapentin, pregabalin, and D-cycloserine, are various pharmacological agents used in the treatment of psychiatric disorders.

Selective serotonin reuptake inhibitors (SSRIs) and serotonin-norepinephrine reuptake inhibitors (SNRIs) are categories of antidepressants considered first-line pharmacological treatments for managing anxiety, social phobia, and agoraphobia.Both classes of drugs are used to treat depression and anxiety disorders. These medications adjust the serotonin levels in the brain, which is crucial for mood regulation. SSRIs are primary treatments for anxiety disorders, with treatment durations varying from 3-6 months to 1-2 years or more, and few adverse outcomes reported from long-term use (Bandelow, Reitt, Röver, Görlich, & Wedekind, 2015).

Clinicians often prefer SSRIs to tricyclic antidepressants and benzodiazepines due to their more favorable side effect profile, virtually no risk of drug dependence, and minimal risk of overdose. Most importantly, SSRIs have minimal effects on the cardiovascular system. In contrast, tricyclic antidepressants can cause cardiac conduction disturbances and decrease blood pressure (Murphy, Capitão, Giles, Cowen, Stringaris & Harmer, 2021). Common side effects include nausea, headache, and sexual dysfunction, the latter often requiring additional management strategies. Initial use may cause increased anxiety, which can be controlled by slow dosage increases or adding benzodiazepines (Garakani et al, 2020).

Serotoninn-Norepinephrine Reuptake Inhibitors (SNRIs) (Sansone, & Sansone, 2014).

Tricyclic antidepressants (TCAs) like clomipramine and imipramine, historically used for anxiety, are prescribed less often due to concerns about side effects like weight gain, dry mouth, sedation, urinary hesitancy or retention, arrhythmias, and a higher risk of death from overdose. (Bakker, Van Balkom & Spinhoven, 2002).

Monoamine oxidase inhibitors (MAOIs), another older class, serve as a third-line treatment, primarily due to their side effects and dietary restrictions, and are considered for SSRI-resistant cases of SAD. While not approved by the Food and Drug Administration (FDA) for anxiety disorders, MAOIs may be considered for patients with social anxiety disorder (SAD) who do not respond to SSRIs (Garakani et al, 2020).

Similarly, monoamine oxidase inhibitors (MAOIs), another group of older antidepressants, are generally relegated to a third-line treatment option due to their side effects and dietary limitations. While not approved by the Food and Drug Administration (FDA) for anxiety

disorders, MAOIs may be considered for patients with social anxiety disorder (SAD) who do not respond to SSRIs (Garakani et al, 2020).

In the United States, Benzodiazepines (BZDs) are extensively prescribed psychoactive medications known for their central nervous system depressant properties (Edinoff et al, 2021). These drugs efficiently penetrate the blood-brain barrier to influence the GABA neurotransmitter, inducing calming effects. BZDs are utilized for treating conditions such as anxiety, sleep disturbances, muscle spasticity related to CNS issues, muscle relaxation, and epilepsy. However, their significant downside is a strong potential for addiction, leading to dependency and intense withdrawal symptoms comparable to those of alcohol withdrawal, which can be life-threatening (Griffin, Kaye, Bueno & Kaye, 2013).

According to the clinical protocol approved by the Scientific Medical Council of the Azerbaijan Republic Ministry of Health, medication treatment for anxiety disorders should follow specific guidelines (Azerbaijan Republic Ministry of Health Scientific Medical Council, 2021).

1. In cases of severe anxiety, or if non-drug interventions fail within 4-12 weeks, drug treatment should be prescribed.
2. Before prescribing treatment, patients should be informed in advance about the possible types of treatment, the importance of treatment, the effects of the received treatment, and possible side effects.
3. The following factors must be considered when prescribing medicinal treatment:
    - Age of the patient
    - Previous treatments
    - Potential risks, including overdose for the purpose of suicide
    - Tolerance to the drug
    - The patient's preferred treatment methods and costs
4. In the treatment of anxiety disorders, antidepressants from the group of selective serotonin reuptake inhibitors (SSRIs) should be the first choice. Sertraline, escitalopram, paroxetine, and fluvoxamine are preferred for their cost-effectiveness, ease of administration (can be prescribed once a day), and safety.
5. During the prescription of SSRIs, patients should be informed about the following:
    - Possible side effects, mainly in the first week of taking the drug
    - Gradual disappearance of anxiety symptoms over several weeks
    - The necessity of adherence to the treatment regimen and maintenance therapy

- The importance of informing the doctor about any changes after starting the treatment

6. The effectiveness and side effects of the medication should be reviewed every 2-4 weeks during the first three months of treatment and every three months thereafter. If the drug is effective, considering the high probability of recurrence, the patient should be advised to continue taking the medication for one year.
7. If a patient does not respond to an SSRI within 6 weeks, another drug from the SSRI group or a drug from the serotonin-norepinephrine reuptake inhibitors (SNRIs) group, such as venlafaxine, may be prescribed.
8. The risk of suicide due to drug withdrawal syndrome (especially with paroxetine and venlafaxine) and toxic effects at high doses should be considered when prescribing SSRI and SNRI drugs.
9. In severe anxiety disorders, alprazolam may be used as an additional aid for a short period of time (no longer than 2 weeks) to manage a crisis.
10. Antipsychotic (neuroleptic) drugs should not be prescribed for the treatment of anxiety disorders in the primary healthcare system.
11. Referral to a specialized level of care should be considered in the following cases:
    - Threat of suicide or neglect of the patient's own needs
    - Resistance to treatment within 3 months
    - Patient's use of alcohol and drugs
    - Co-occurring psychiatric disorders, including personality disorders
    - Failure to achieve desired results in primary care
12. When making a referral to a specialist, the primary healthcare doctor must provide information about the continuity, severity, and dynamics of the anxiety disorder, suicidal tendencies, and both ongoing and initial treatments.

In addition to just being a short-term strategy for specific phobia, there is evidence that taking benzodiazepines is harmful long-term. Moreover, there are significant long-term risks associated with benzodiazepine use for phobias. Research has indicated that once an individual uses benzodiazepines to manage a phobia, their fear can intensify when not medicated, suggesting that the phobia may actually become more severe (Cottraux, 2004).

Benzodiazepines, such as Xanax, Ativan, and Klonopin, are the most commonly prescribed medications for phobias. These drugs are designed for acute anxiety episodes, like panic attacks, and they are commonly used with individuals who have a flying phobia. However, their effectiveness is limited to the short term; they must be administered each time

an individual encounters the phobia trigger to prevent intense anxiety. Prescribing benzodiazepines should be avoided in patients with histories of drug abuse or dependence, and those with organic brain lesions and cognitive impairments due to potential disinhibited behavior and worsening cognitive defects. Caution is also advised in elderly patients and those with liver function impairment, as benzodiazepines' active metabolites may accumulate. Additionally, individuals with pulmonary diseases should use these drugs cautiously due to their potential to depress respiration. Combining benzodiazepines with other central nervous system depressants like alcohol or barbiturates is risky and can lead to severe, potentially fatal respiratory depression. Furthermore, unlike with most other psychiatric medications, benzodiazepines have a high likelihood of dependence and tolerance, resulting in potential substance abuse and withdrawal. (Edinoff et al, 2021).

The correct choice of drug is possible only after establishing an accurate diagnosis, recognizing comorbid conditions, and identifying concomitant somatic diseases. For example, patients with anxiety disorders often experience depression, and successful treatment depends on the recognition and management of this condition. Additionally, anxiety disorders are frequently complicated by the development of dependence on psychotropic drugs, which necessitates a specialized approach to treatment (Левин & Ляшенко, 2016).

1.4.2 The role of the placebo effect in phobia treatment

The placebo effect, a phenomenon where patients experience real improvements after receiving an inert treatment and often used in controlled trials to compare with potentially active drugs. The concept of the placebo effect was first described by Henry K. Beecher in 1955. (Howick, 2016). In cases where drugs are not available, the placebo effect may still operate. For example, during World War II, saline was used as a substitute when morphine was in short supply, and both patients and doctors reported a decrease in pain (Charlesworth et al, 2017). Types of placebo effect

- Positive placebo effect: Increases the effect of the medicine, enhances its healing properties. The most common type of placebo.
- Negative placebo effect: It neutralizes the therapeutic effect of the drug and may even lead to a worsening of the condition.
- Neutral placebo: No placebo effect. It is observed extremely rarely.

The placebo effect, traditionally seen as the patient's psychological response to the belief in treatment, plays a significant role in the management of various disorders, including phobias. While pharmacotherapy is a common treatment approach, understanding the placebo

effect is crucial to comprehending how and why certain treatments may appear effective even when they are pharmacologically inactive. The placebo effect in psychological disorders, especially in anxiety and phobias, is often comparable in magnitude to the effects seen in pharmacotherapy. For instance, in the treatment of depression and anxiety, placebo treatments can result in significant improvement in patients, which is nearly as substantial as that achieved through medication. This phenomenon can be attributed to the patient's expectations of the treatment's efficacy, which potentially activates the brain's self-healing mechanisms (Kirsch, 2019), (Hall, Loscalzo, & Kaptchuk, 2015).

The underlying mechanisms of the placebo effect include psychological processes such as expectancy, conditioning, and the therapeutic alliance between the patient and the healthcare provider. These elements significantly contribute to the placebo effect, emphasizing the impact of mental states on physiological health outcomes. In phobia treatment, where psychological factors are predominant, the placebo effect can thus play an essential role (Holmes, Tiwari & Kennedy, 2016).

The eye-tracking study on the placebo effects in spider phobia, as detailed in the article by Andreas Gremsl (2018), suggests that placebo treatment can indeed be useful in reducing visual avoidance behavior in individuals with spider phobia. This eye-tracking experiment included 37 women with spider phobia. They viewed pairs of pictures (a spider paired with a neutral picture) for 7 seconds each in a retest design: once with and once without a placebo pill, accompanied by the verbal suggestion that it could reduce phobic symptoms. The placebo was labeled as Propranolol, a beta-blocker previously used to treat spider phobia. In the placebo condition, both the fixation count and the dwell time on the spider pictures increased, particularly in the second half of the presentation time This corresponded with a minor reduction in the severity of symptoms reported by the participants. In summary, the placebo treatment demonstrated a positive impact on modifying the behavior and psychological responses of individuals with spider phobia, reducing avoidance and fear associated with spider images. These findings suggest that placebo interventions could be considered as a supplementary approach in treating spider phobia, potentially enhancing the outcomes of exposure-based therapies (Gremsl, Schwab, Höfler & Schienle, 2018).

According to the Kirsch, 2019 one of the mechanisms of work is the person’s belief that he will feel better after taking the medicine. Changes also occur at the physiological level. The part of the cerebral hemispheres responsible for higher cognitive functions, called the prefrontal cortex, is activated after taking a placebo. Probably, as a result, the activity of pain centers

decreases and our perception of pain changes. Also, in response to taking the pill, natural painkillers are produced - endorphins and dopamine (Kirsch,2019).

In clinical trials focusing on phobias, treatments that included a placebo component often reported outcomes where the placebo group showed notable improvement, suggesting the high influence of patient expectations and therapeutic settings. These findings highlight the potential for non-pharmacological interventions that harness the placebo effect to effectively manage phobias. Studies comparing the placebo responses in pharmacotherapy versus psychological interventions for phobias indicate that non-pharmacological treatments may harness the placebo effect more effectively. This is particularly relevant in cognitive-behavioral therapies where the engagement and active participation of the patient in confronting and managing fear can mimic and amplify placebo responses (Kirsch, 2019).

The study of Fernández-López builds upon prior research which demonstrates that the type of control group employed can significantly influence the estimated effects of treatments in mental health research. It specifically investigates how the distinction between active (placebo) and passive (no treatment/usual care) control groups impacts the perceived efficacy of treatments for phobias and other mental disorders. This meta-analysis synthesizes findings from 25 randomized controlled trials (RCTs), encompassing data from 24 scholarly articles. The analysis included three-arm RCTs that contrasted active controls (placebo) with passive controls (no treatment/usual care). Outcomes were assessed through standardized mean differences (SMD), and heterogeneity among studies was evaluated using I^2 statistics and meta-regression techniques. The meta-analysis found a small but statistically significant placebo effect across all mental disorders examined. The standardized mean difference (SMD) was 0.24, with a 95% confidence interval (CI) ranging from 0.06 to 0.42, indicating a positive effect of placebo treatments. Notably, placebo effects were more pronounced in anxiety disorders (SMD = 0.45) and less so in depression (SMD = 0.22). In contrast, no significant placebo effect was detected in schizophrenia. Among treatments, psychotherapeutic placebo exhibited a small but notable effect, whereas inactive medications did not demonstrate significant placebo outcomes. The results indicate that there is a noticeable placebo effect in the treatment of anxiety, with a standardized mean difference (SMD) of 0.45. This suggests that the placebo treatments did have a significant effect when compared to no treatment or usual care for individuals with anxiety disorders. The findings suggest that placebo treatments can indeed have beneficial effects, particularly in the management of anxiety and, to a lesser extent, depression (Fernández-López, Riquelme-Gallego, Bueno-Cavanillas, & Khan, 2022).

Understanding and leveraging the placebo effect in phobia treatment can lead to more ethical and practical treatment approaches. By recognizing the significant role of psychological and contextual factors, healthcare providers can improve treatment strategies that not only focus on pharmacological interventions but also enhance the therapeutic environment and patient expectations. The placebo effect holds significant implications for the treatment of phobias. It challenges the traditional reliance on pharmacotherapy and underscores the importance of patient-centered approaches that integrate psychological and contextual factors. Future research should aim to dissect further the components of the placebo effect (Kaptchuk & Miller, 2015).

According to the Vambheim study on sex differences in placebo and nocebo effects, females exhibited stronger responses to nocebo treatment compared to males. Specifically, in instances of nocebo hyperalgesia, where negative expectations of pain or discomfort increase the actual perception of pain, females demonstrated more pronounced effects. This response is suggested to be influenced by higher levels of stress and anxiety observed in females compared to males. Additionally, the study highlights that males generally have stronger placebo responses, whereas females show stronger responses to nocebo effects (Vambheim & Flaten, 2017).

Placebo-controlled trials are regarded as the gold standard in clinical research, essential for establishing the efficacy of new treatments. These trials are double-blind and randomized. In a double-blind, randomized, placebo-controlled trial, participants are divided into two groups through a process known as randomization, which ensures that each participant has an equal chance of being assigned to either the treatment group or the placebo group. Participants are randomly assigned to either the treatment group or a placebo group, which receives an inert substance. The hallmark of this study design is its 'double-blind' nature, wherein neither the participants nor the healthcare providers administering the treatments are aware of which participants are receiving the active drug and which are receiving a placebo. This blinding is crucial to prevent the expectations of patients and doctors from influencing the results, thereby providing a more accurate assessment of the treatment's effect (Kirsch, 2019).

In the double-blind study by Kobak, fluoxetine’s efficacy in treating social phobia was compared to a placebo. Despite improvements observed in both the fluoxetine and placebo groups, there was no significant difference in the magnitude of change on the Liebowitz Social Anxiety Scale (LSAS). This outcome indicates that fluoxetine did not offer a substantial advantage over placebo in this particular setting, suggesting limited efficacy of fluoxetine for social phobia within the parameters of this study (Kobak, Greist, Jefferson, & Katzelnick, 2002).

1.5 Comparative Studies on the Effectiveness of Psychotherapy and Psychopharmacology for Phobias

1.5.1 Efficacy and limitations of psychotherapy and pharmacotherapy in phobia treatment

This chapter delves into comparative analyses between psychotherapy and psychopharmacology in treating phobias. The text reviews various studies where both treatment modalities were applied either separately or in combination. Much of the research indicates that although medication may provide quick relief in certain situations, psychotherapy- especially cognitive-behavioral therapy (CBT), tends to have superior long-term advantages. Also CBT is considered highly effective among various psychotherapy methods, especially for treating social phobia (Ito, Roso, Tiwari, Kendall & Asbahr, 2008).

In exploring the effectiveness of psychotherapy versus psychopharmacology for phobias, recent studies have provided detailed insights into cognitive and behavioral approaches. Clark et al. demonstrated that a cognitive therapy (CT) program significantly improved outcomes in social phobic patients compared to a combination of exposure and relaxation techniques. Their research showed a total remission of symptoms in 62 patients after treatment, with 84% of the CT group no longer meeting diagnostic criteria at one-year follow-up, compared to just 42% in the exposure and relaxation group (Clark et al, 2006).

Further comparative analysis by Clark et al. assessed CT against both fluoxetine/self-exposure and placebo/self-exposure, highlighting the efficacy of CT over these treatments (Clark et al, 2003). Additionally, studies by Stangier et al. and Mörtberg et al. compared individual cognitive behavioral therapy (ICBT) with group cognitive behavioral therapy (GCBT) (Stangier, Heidenreich, Peitz, Lauterbach, Clark, 2003). The findings consistently showed CT as superior to exposure methods, and ICBT provided better outcomes than GCBT, especially in follow-up assessments where ICBT patients fared better than those receiving GCBT. These studies collectively underscore the superior efficacy of cognitive therapies over exposure techniques and pharmacological treatments for managing phobias .

According to Mitte (2005) a meta-analysis of 124 studies assessed the effectiveness of cognitive behavioral therapy (CBT) and pharmacological treatments for anxiety and its associated depressive symptoms. The results showed that CBT outperformed no-treatment and placebo controls. Although adding cognitive elements did not enhance efficacy for anxiety alone, it was beneficial for depressive symptoms. Pharmacotherapy was more effective than placebo but did not show superiority among drugs of different classes (Mitte, 2005).

According to Stein, Vythilingum & Seedat (2004), there are notable treatments and effectiveness of pharmacotherapy for various phobias. In their article "Pharmacotherapy of Phobias," they compare medication effects of several therapeutic strategies on patients with social phobia, agoraphobia, and specific phobia (Stein, Vythilingum & Seedat, 2004).

- Social Phobia. For social phobia, Selective Serotonin Reuptake Inhibitors (SSRIs) such as escitalopram, fluoxetine, fluvoxamine, paroxetine, and sertraline are highlighted as significantly effective. These medications not only reduce the symptoms of social anxiety but also enhance the overall quality of life and functionality of the patients. Long-term treatment with SSRIs is advocated, often extending to at least one year, to maintain symptom improvement and prevent relapse. Despite the prevalence of side effects like gastrointestinal disturbances, insomnia, and sexual dysfunction, the benefits of SSRIs generally outweigh these issues, supporting their broad use in clinical practice.
- Agoraphobia. In treating agoraphobia, the effectiveness of tricyclic antidepressants (TCAs) and high-potency benzodiazepines, including clonazepam and alprazolam, is acknowledged, especially when concurrent with panic disorder. These medications are effective in diminishing panic attacks and the avoidance behaviors characteristic of agoraphobia. However, SSRIs remain the preferred first-line treatment due to their favorable safety and tolerability profiles. The necessity for higher dosages in treating agoraphobia suggests a more severe or complex condition, reinforcing the need for tailored pharmacological strategies to achieve optimal results.
- Specific Phobia. The treatment of specific phobias primarily centers around cognitive-behavioral therapy (CBT), with a focus on exposure therapy. Pharmacological approaches, specifically SSRIs, have shown some potential; however, the evidence is limited, and further research is required to confirm their effectiveness. The integration of pharmacotherapy with CBT may offer enhanced outcomes for patients with severe anxiety or inadequate response to psychotherapy alone, suggesting an area for future study to establish effective combination treatment protocols.
- Other phobias such as: school phobia, taijin-kyofusho (TKS) or anthropophobia, illness phobia, choking phobia, body dysmorphic disorder, dental phobia. School phobia includes conditions such as separation anxiety disorder and social phobia. Early studies on benzodiazepines and tricyclic antidepressants (TCAs) indicated potential effectiveness, with more recent research supporting the efficacy of SSRIs for related conditions in children. Taijin-kyofusho (TKS) or anthropophobia, prevalent in Eastern cultures, involves a fear of offending others more than self-embarrassment. Preliminary

studies suggest that TKS, which often overlaps with social phobia, may respond to treatments like clomipramine or fluvoxamine. Illness phobia responds to serotonin reuptake inhibitors, with other agents also potentially useful but less studied. Choking phobia, which can develop after a choking incident, shares characteristics with panic disorder's suffocation fears and may benefit from anti-panic medications.

Cottraux's studies highlight that combining cognitive-behavioral therapy (CBT) with medications such as imipramine and the SSRI paroxetine has been critically evaluated. The findings suggest that while these combined treatments might be more effective than pharmacotherapy alone in the short term, psychotherapy-either alone or paired with placebos-consistently provides better long-term results. (Cottraux, 2004).

Several extensive randomized controlled clinical trials have confirmed the efficacy of selective serotonin reuptake inhibitors (SSRIs) in managing various types of anxiety disorders. While detailed comparative effectiveness data among different SSRIs is limited, it is generally believed that these drugs are similarly effective. The effectiveness of exposure therapy for anxiety and related disorders has been demonstrated by numerous clinical studies. The study on the effectiveness of REBT as a form of CBT by Moloudi et al. (2022) examined the impact of Rational Emotive Behavior Therapy (REBT), a type of Cognitive-Behavioral Therapy (CBT), on reducing irrational beliefs and anxiety in adolescent girls with social anxiety. Published in Preventive Counseling, this research findings confirmed that REBT is highly effective in alleviating symptoms, aligning with prior research by Wilhelm et al. (2019), Habibi et al. (2021), and Schenk et al. (2020).

Supporting study by David et al. (2018) further illustrate that decreases in anxiety and improvements in quality of life correlate with reductions in irrational beliefs, especially low frustration tolerance and awfulizing. Additionally, Popa and Predatu (2019) found that diminishing low frustration tolerance during REBT significantly boosts emotional stability.

A meta-analysis conducted in 1993 of 28 controlled studies assessing the effectiveness of rational-emotive therapy (RET) found that RET outperformed placebos and no treatment options, while performing comparably to other therapies like combination therapies and systematic desensitization. The analysis, reported by Engels et al (1993), did not support the idea that RET focusing primarily on behavioral techniques was more effective than RET predominantly using cognitive approaches. (Engels, Garnefski, & Diekstra, 1993).

In conclusion, pharmacological interventions can play a role in the management of phobias, especially in conjunction with psychotherapy.

CHAPTER II METHODS AND METHODOLOGIES OF RESEARCH

2.1 Organization and conduct of research

The empirical data collection for this dissertation was systematically organized and conducted in alignment with the defined research goals and objectives. The research design is presented as a comparative analysis of phobias treated with psychotherapy and psychopharmacology.

According to the main purpose of the research, the structure is as follows:

1. To collect and analyze demographic information of the participants such as gender, age, marital status, employment status, and education level.
2. To identify patients with a diagnosis of anxiety disorder participating in the study.
3. To determine the presence of phobias in patients diagnosed with anxiety disorder.
4. To determine the allocation of participants to either the combination therapy (psychotherapy + psychopharmacology) group or the psychopharmacology only group.
5. To investigate the anxiety symptoms of the patients participating in the study after the treatment.
6. To compare the efficacy of combination therapy versus psychopharmacology alone in reducing anxiety symptoms after treatment and improving patients' quality of life.
7. To perform statistical analysis on the collected data to evaluate treatment outcomes.
8. To determine the statistical significance of the observed differences between treatment outcomes and discuss the clinical relevance of these findings.

This study was conducted at the Medi Art Clinic (Mental Health center) in Baku, Azerbaijan between April 2023 – March 2024. The clinic provided an ideal environment for conducting this study. The study included 100 individuals diagnosed with an anxiety disorder at the Medi Art Clinic, and these diagnoses were confirmed by psychiatrists using the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), and the International Classification of Diseases, Eleventh Revision (ICD-11) criteria. Participants for the study were divided into two groups based on the treatment modality:

1) Combination Group: Participants in this group received a dual approach to treatment, involving both psychotherapeutic interventions and pharmacological

methods. The psychotherapeutic component included Cognitive Behavioral Therapy (CBT), which is well-documented for its efficacy in treating phobic disorders by modifying dysfunctional thoughts and behaviors. Concurrently, participants were administered medications as part of their treatment regimen.

2) Psychopharmacological Group: This group received exclusively pharmacological treatment. The psychiatrist prescribed medications for the participants that were tailored to their specific diagnosed phobias. The choice of drugs was in accordance with the most modern clinical protocols for the treatment of anxiety and phobias. The focus was on selecting medications with proven efficacy and a favorable safety profile, ensuring that pharmacological treatment was not only effective in reducing phobic symptoms but also well tolerated by patients.

There are three (one main and two auxiliary) hypotheses in the research study:

Main hypothesis:

- Hypothesis 1 (Effectiveness of Treatment Modalities Hypothesis): Patients treated with a combination of psychotherapy and psychopharmacology exhibit fewer symptoms of anxiety disorders compared to those treated with pharmacotherapy alone. This hypothesis tests the idea that a multimodal approach, integrating both psychological and pharmacological strategies, yields better therapeutic outcomes than treatment using a single modality.

Auxiliary hypotheses:

- Hypothesis 2 (Age Differences in Treatment Efficacy Hypothesis): The efficacy of both combined psychotherapy and psychopharmacology treatment, as well as medication-only treatment, varies with age; older adults experience a less pronounced reduction in anxiety symptoms post-treatment.
- Hypothesis 3 (Marital Status and Treatment Efficacy Hypothesis): Compared to married and divorced patients, single patients exhibit a more significant reduction in anxiety symptoms when treated with either a combination of psychotherapy and psychopharmacology or with medication-only treatments.

2.2 Data collection

The following methods were presented in the studied patients:

- "Demographic questionnaire" (prepared by the author).
- “Hamilton Anxiety Rating Scale” (HAM-A).

A specially designed demographic questionnaire was used to collect essential personal and socio-economic information from each participant. The questionnaire included their gender, age, marital status, employment status, educational level, the presence and treatment type of phobias (Appendix, 1). This tool was critical for gathering a comprehensive dataset that facilitated the analysis of demographic variables, which might influence the treatment outcomes.

The Hamilton Anxiety Rating Scale (HAM-A) was among the earliest rating scales created by Max Hamilton in 1959, to measure the intensity of anxiety symptoms and continues to be extensively used in both clinical practice and research contexts. This scale includes 14 items (anxious mood**,** tension, fears, sleep problems, intellectual problems, depressed mood, somatic muscle problems, somatic sensory problems, cardiovascular problems, somatic respiratory problems, gastrointestinal problems, genitourinary problems, autonomic problems and behavior at interview), each defined to a set of symptoms, and it evaluates both psychic anxiety (mental unrest and psychological distress) and somatic anxiety (physical symptoms associated with anxiety). This method determines the level of anxiety (low, medium, high). Each item is scored on a scale of 0 (not present) to 4 (severe), with a total score range of 0–56, where <17 indicates mild severity, 18–24 mild to moderate severity and 25–30 moderate to severe (Hamilton,1959).

HAM-A is widely considered reliable for clinical and research purposes. It demonstrates stong internal consistency, meaning that its various items tend to measure the same general construct of anxiety. Test-retest reliability is also strong, indicating that the scale can produce stable results over time when the level of anxiety doesn’t change (Thompson, 2015).

The validity of the HAM-A is well-supported by various studies:

- Content Validity: It covers a broad range of anxiety symptoms, from mood and fears to physical complaints, which are commonly experienced by anxious individuals.
- Criterion Validity: There is a good correlation between HAM-A scores and those from other anxiety assessment tools, affirming its effectiveness in measuring anxiety.
- Construct Validity: The scale’s ability to differentiate between anxiety and other psychiatric conditions, such as depression, supports its construct validity, although some overlap with depressive symptoms is noted.

The HAM-A continues to be a valuable tool for both clinical settings and research studies focusing on anxiety disorders.

Maier et al. also evaluated the reliability and validity of the HAM-A in two groups comprising 97 individuals with anxiety and 101 with depression. They found that the HAM-A and its subscales demonstrated adequate reliability and concurrent validity, including fair inter-rater reliability and strong one-week retest reliability (Maier, Buller, Philipp, & Heuser, 1988).

Hamilton anxiety rating scale method was adapted to our country by the "Public Health and Reforms" center of the Ministry of Health of the Republic of Azerbaijan (Aliyev, Mammadova, & Sultanov, 2009).

In the table, the mean values of anxiety symptoms are presented for males, females, and the total sample (Table 2.1).

Table 2.1. Description of anxiety symptoms by gender indicators.

ANXIETY SYMPTOMS	M		
	Total	Male (N=49)	Female (N=51)
Anxious mood	2.13	2.08	2.17
Tension	2.07	2.02	2.11
Fears	2.12	2.16	2.07
Sleep problems (insomnia)	1.98	1.77	2.17
Intellectual problems	2.04	1.83	2.23
Depressed mood	2.02	2	2.03
Somatic muscle problems	1.98	2.04	1.92
Somatic sensory problems	1.86	2	1.72
Cardiovascular problems	1.92	1.93	1.90
Somatic Respiratory symptoms	2.04	1.87	2.19
Gastrointestinal problems	2.25	2.24	2.25
Genitourinary problems	1.8	1.81	1.78
Autonomic problems	1.77	1.73	1.80
Behavior at interview	2.13	1.93	2.31

According to the table, we observe that certain symptoms are more prevalent than others. Anxious mood (2.17), tension (2.11), sleep problems (2.17), intellectual problems (2.23), depressed mood (2.03), somatic respiratory symptoms (2.19), cardiovascular problems (1.93). and autonomic problems (1.80) are higher in females than in males. Fears (2.16), somatic muscle problems (2.04), somatic sensory problems (2.00), and genitourinary problems (1.81) are higher in males. Gastrointestinal problems are equal in both males (2.24) and females (2.25). Behavior at interview shows more pronounced issues in girls (2.31) compared to boys (1.93).

2.3 Data Analysis

The study conducted a thorough analysis covering both qualitative and quantitative methodologies to evaluate the data collected through the developed methods. This process involved careful statistical testing to determine the significance of the results. For this purpose, the study used IBM Statistical Package for the Social Sciences (SPSS) software, specifically version 29.0, which facilitated the selection of appropriate measurement criteria for statistical analysis.

To evaluate the distribution of data obtained using the implemented methods, the study used two well-known normality tests: the Kolmogorov-Smirnov test and the Shapiro-Wilk test. The results of these tests indicated whether the data followed a normal distribution. Based on these results, it was decided that nonparametric tests were more appropriate given the nature of the data distribution.

To analyze the main trends in the data, the Compare Means function in SPSS was used to accurately calculate means. Additionally, the Mann-Whitney U test was used to assess differences between the study groups. This test is especially useful for comparing two independent samples when the data does not necessarily follow a normal distribution. In addition, Spearman's rank correlation test was used to understand the relationship between different variables. This test allowed us to understand the monotonic relationships between variables, adding depth to the analysis of group indicators.

Through these analytical techniques and statistical tests, the study was able to effectively measure and interpret the complex data collected, providing a strong basis for the conclusions drawn from the study.

CHAPTER III RESULTS INTERPRETATION

3.1 Statistic analysis of study

The study included 100 participants, whose ages ranged from 15 to 60 years, with a mean age of 33.02 and a standard deviation of 11.061. There are peaks around ages 20 and 32, indicating higher frequencies of individuals around these ages. The close values of mean and median suggest that while the distribution is slightly right skewed, it is relatively symmetric around the center. Frequency and statistics of age described in tables (3.1) (3.2) and figure (3.1)

Table 3.1. Frequency of age

Average_age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	16.00	1	1.0	1.0	1.0
	17.00	4	4.0	4.0	5.0
	18.00	3	3.0	3.0	8.0
	19.00	4	4.0	4.0	12.0
	20.00	7	7.0	7.0	19.0
	21.00	3	3.0	3.0	22.0
	22.00	1	1.0	1.0	23.0
	23.00	2	2.0	2.0	25.0
	24.00	3	3.0	3.0	28.0
	25.00	2	2.0	2.0	30.0
	26.00	2	2.0	2.0	32.0
	27.00	4	4.0	4.0	36.0
	28.00	1	1.0	1.0	37.0
	29.00	4	4.0	4.0	41.0
	30.00	4	4.0	4.0	45.0
	31.00	4	4.0	4.0	49.0
	32.00	6	6.0	6.0	55.0
	33.00	2	2.0	2.0	57.0
	34.00	1	1.0	1.0	58.0
	35.00	3	3.0	3.0	61.0
	37.00	3	3.0	3.0	64.0
	38.00	4	4.0	4.0	68.0
	39.00	2	2.0	2.0	70.0
	40.00	2	2.0	2.0	72.0
	41.00	2	2.0	2.0	74.0
	42.00	2	2.0	2.0	76.0
	43.00	1	1.0	1.0	77.0
	44.00	2	2.0	2.0	79.0
	45.00	3	3.0	3.0	82.0
	46.00	1	1.0	1.0	83.0
	47.00	4	4.0	4.0	87.0
	48.00	2	2.0	2.0	89.0
	49.00	3	3.0	3.0	92.0
	50.00	2	2.0	2.0	94.0
	51.00	2	2.0	2.0	96.0
	53.00	1	1.0	1.0	97.0
	55.00	3	3.0	3.0	100.0
	Total	100	100.0	100.0	

Table 3.2 Statistics of age

Statistics

age

N	Valid	100
	Missing	0
Mean		33.02
Median		32.00
Std. Deviation		11.061
Range		39
Minimum		16
Maximum		55

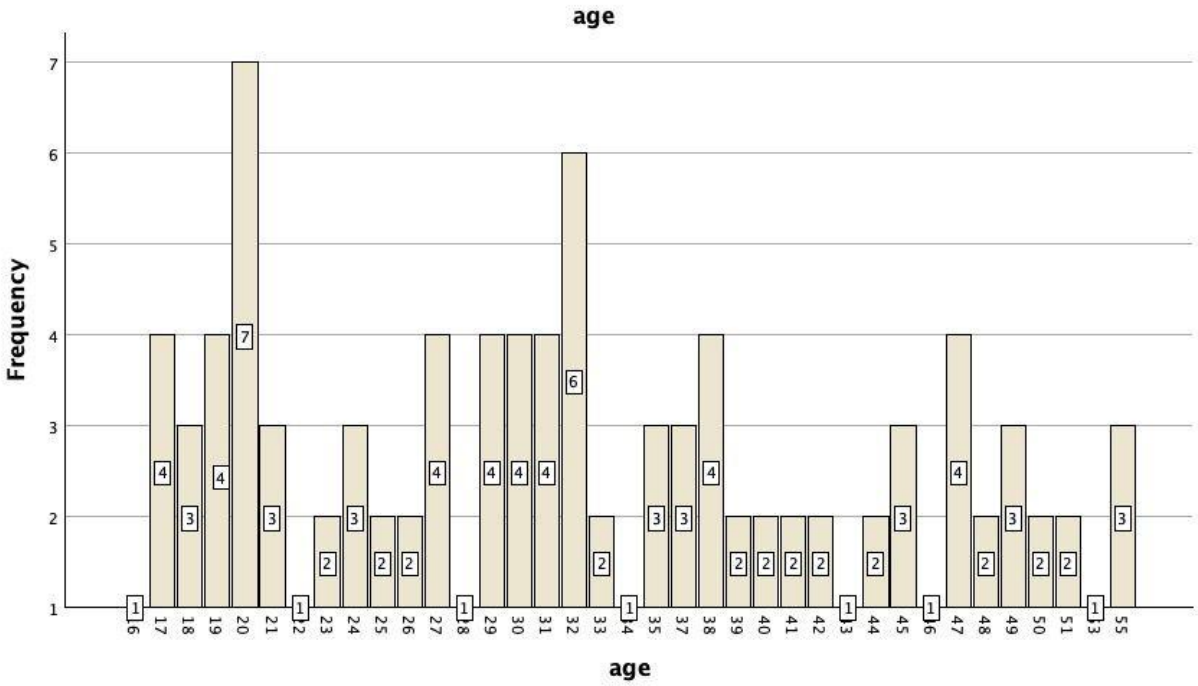

Figure 3.1. Frequency of age

During the research, the respondents were initially presented with a demographic questionnaire prepared by the author to determine their gender, age, marital status, employment status, educational level, the presence and treatment type of phobias. Based on the survey, we can note that 49 people (49%) of those studied are men, 51 people (51%) of those studied are women (Figure 3.2).

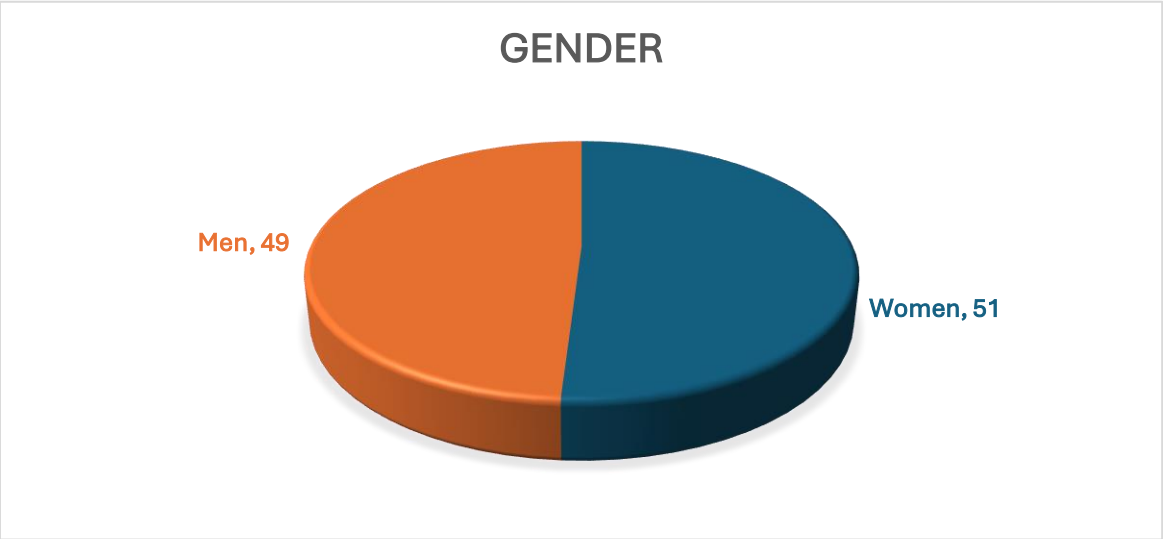

Figure 3.2. Description of gender indicators of the studied patients

Participants for the study were divided into two groups based on the treatment type: combination group (N=50) and medication only group (N=50) (Figure 3.3).

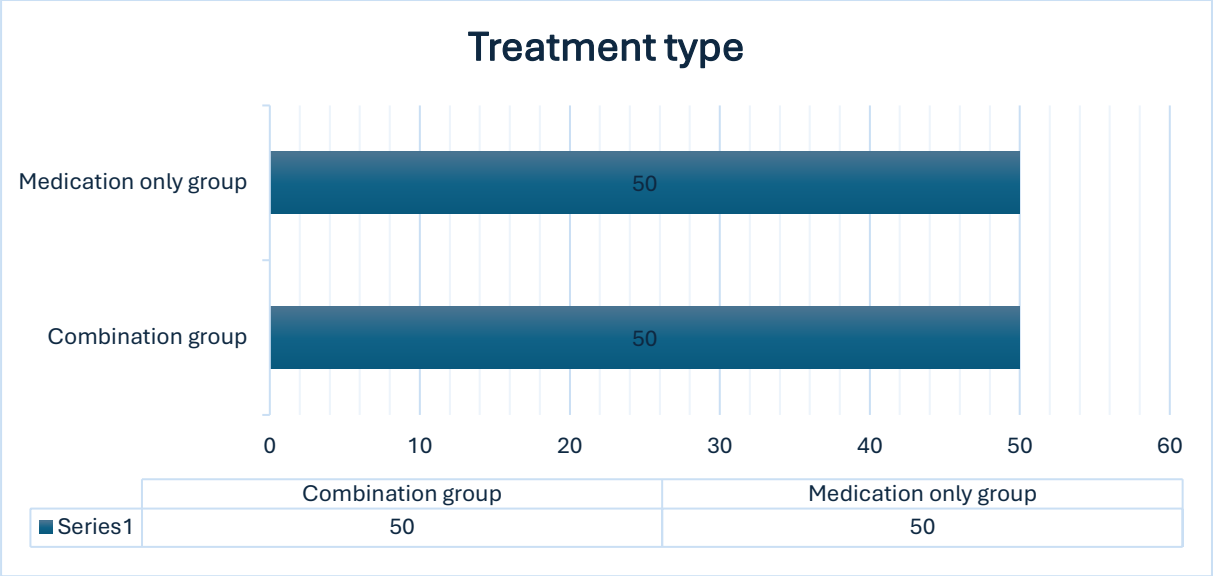

Figure 3.3. Distribution of Participants by treatment type

In the study, the marital status of the participants was categorized into four groups: single, in a relationship, married, and divorced. The frequency distribution of these categories among the 100 participants was as follows: 30 participants (30%) were single, 14 participants (14%) were in a relationship, 39 participants (39%) were married, and 17 participants (17%) were

divorced (Table 3.3 and Figure 3.4). This categorization aids in analyzing the treatment efficacy across different marital statuses, which is one of the hypotheses being tested in this research.

Table 3.3. Frequency and Percentage Distribution of Marital Status

maritalstatus

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	single	30	30.0	30.0	30.0
	in relationship	14	14.0	14.0	44.0
	married	39	39.0	39.0	83.0
	divorced	17	17.0	17.0	100.0
	Total	100	100.0	100.0	

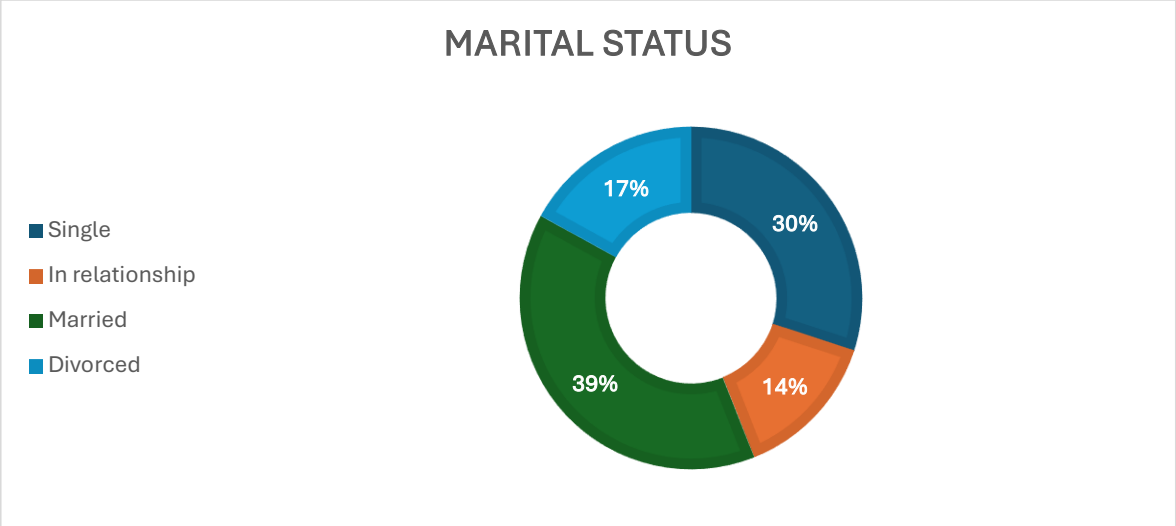

Figure 3.4. Distribution of Marital Status Among Participants

In the study, the educational qualifications of 100 participants, was categorized into four groups: secondary education – 27 participants (27%), bachelor's degree – 42 participants (42%), master's degree – 19 participants (19%), other -12 participants (12%) (Figure 3.5).

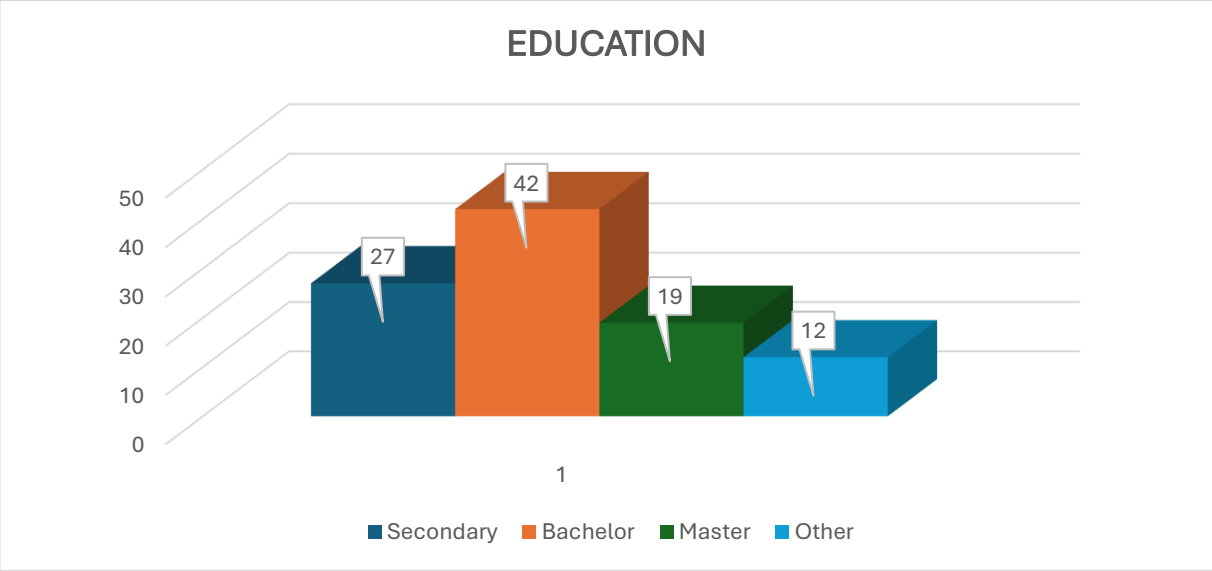

Figure 3.5. Distibution of educational qualifications among participants

Also, in the study, the employment status of the participants was categorized into four groups: pensioner, student, worked, unemployed. The frequency distribution of these categories among the 100 participants was as follows: pensioners – 6 participants (6%), students – 16 participants (16%), worked – 54 participants (54%), and unemployed – 24 participants (24%) (Figure 3.6).

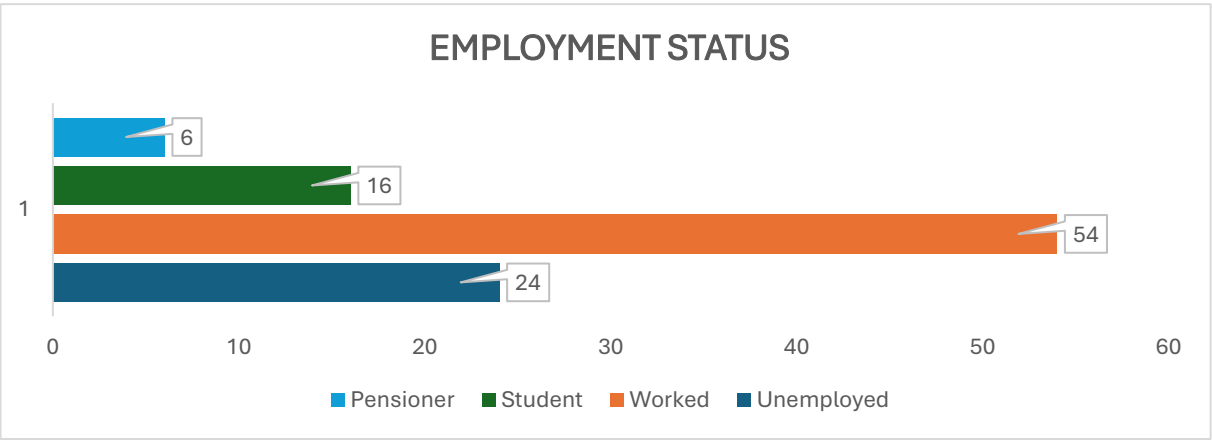

Figure 3.6. Distibution of employment status among participants

The study assessed the level of anxiety among 100 participants, categorizing the severity into mild, moderate, and severe. The severity of anxiety symptoms was measured using the Hamilton Anxiety Rating Scale" (HAM-A). The frequency distribution of these categories is

summarized in Table 3.5. The analysis revealed that a small portion of the sample (11%) reported mild anxiety, characterized by minor, infrequent anxiety symptoms that do not significantly interfere with daily functioning. The majority of the sample exhibited higher levels of anxiety, with 41% of participants reporting moderate anxiety symptoms that are distressing and somewhat limiting and 48% experiencing severe anxiety, where symptoms are pervasive and significantly impair daily activities (Figure 3.7).

Table 3.4 Frequency distribution of anxiety categories

anxiety_category

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	mild	11	11.0	11.0	11.0
	moderate	41	41.0	41.0	52.0
	severe	48	48.0	48.0	100.0
	Total	100	100.0	100.0	

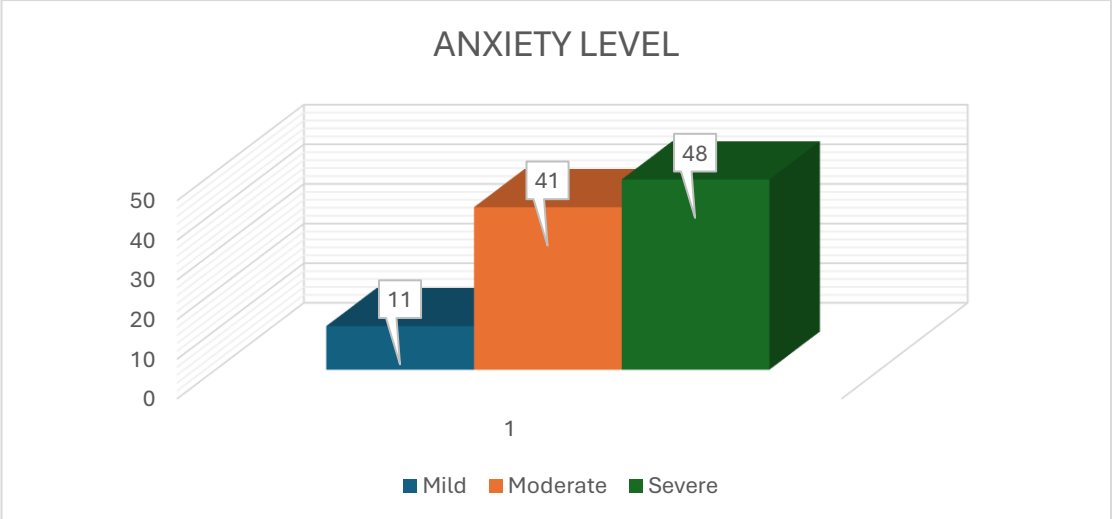

Figure 3.7. Frequency of Anxiety Levels

The normality of the data obtained from the various methods used during the study was assessed using both the Shapiro-Wilk test and the Kolmogorov-Smirnov test. These tests were chosen due to their reliability in handling small to moderate sample sizes. The results from the Shapiro-Wilk and Kolmogorov-Smirnov tests indicated that the data were not normally distributed, as evidenced by significant results ($p < 0.05$), presented in Tables 3.5. and 3.6.

Table 3.5 Descriptive statistics for post anxiety level

Descriptives

			Statistic	Std. Error
post_anxiety_level	Mean		28.1100	1.09128
	95% Confidence Interval for Mean	Lower Bound	25.9447	
		Upper Bound	30.2753	
	5% Trimmed Mean		27.4889	
	Median		24.0000	
	Variance		119.089	
	Std. Deviation		10.91278	
	Minimum		14.00	
	Maximum		54.00	
	Range		40.00	
	Interquartile Range		14.75	
	Skewness		.936	.241
	Kurtosis		-.237	.478

Table 3.6 Test of Normality for post anxiety level

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
post_anxiety_level	.167	100	<.001	.883	100	<.001

a. Lilliefors Significance Correction

Both the Kolmogorov-Smirnov and Shapiro-Wilk tests significantly reject the null hypothesis of normality ($p < .001$ for both). This implies that the distribution of post-anxiety levels does not follow a normal distribution. Given the non-normal distribution of the data, non-parametric tests were deemed more suitable for subsequent analyses. These non-parametric tests do not require the assumption of a normal distribution and are typically based on ranks rather than data values. Consequently, tests such as the Mann-Whitney U test and Spearman's rank correlation were selected to explore the relationships and differences within the data.

There are one dependent and two independent variables (Table 3.7):

- Hamilton anxiety scale (score) – dependent variable
- Combination group, medication only group – independent variables.

Table 3.7. Types of variables

Variables	Types of variables
Hamilton anxiety scale (score)	**Dependent variable**
Combination group	**Independent variable**
Medication only group	**Independent variable**

To test Hypothesis 1 (Effectiveness of Treatment methods Hypothesis), the Mann-Whitney U Test was used to determine whether the level of anxiety in patients differed significantly according to the treatment method. Accordingly, patients participating in the study diagnosed with anxiety disorders, were divided into two groups based on the treatment method: the combination group and the medication-only group, when the dependent variable is not normally distributed. The results obtained are presented in Table:

Table 3.8. Descriptive statistics

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
post_anxiety_level	100	28.1100	10.91278	14.00	54.00
groupmembership	100	1.5000	.50252	1.00	2.00

Mean (average) post-treatment anxiety level is 28.1100 with a standard deviation of (St.d=10.9128), indicating the typical variation in anxiety scores around the mean. The range of anxiety levels is from 14 to 54, suggesting a wide variation in patient responses. Values 1 and 2, representing two different treatment groups, where 1 represents “combination group (psychotherapy and psychopharmacology) and 2 represents “medication only group” (pharmacotherapy alone). The equal mean of 1.5000 and low standard deviation (St.d=0.50252) indicates a balanced sample size between the two groups, which is ideal for comparative analysis (Table 3.8).

The “Ranks” table shows the results from the Mann-Whitney U test, which compares the distribution of post-treatment anxiety levels between two different groups: the combination treatment group and the medication-only treatment group (Table 3.9 and Figure 3.7).

Table 3.9. Ranks for post-treatment anxiety levels by group membership

Ranks

	groupmembership	N	Mean Rank	Sum of Ranks
post_anxiety_level	combintion	50	26.76	1338.00
	medication	50	74.24	3712.00
	Total	100		

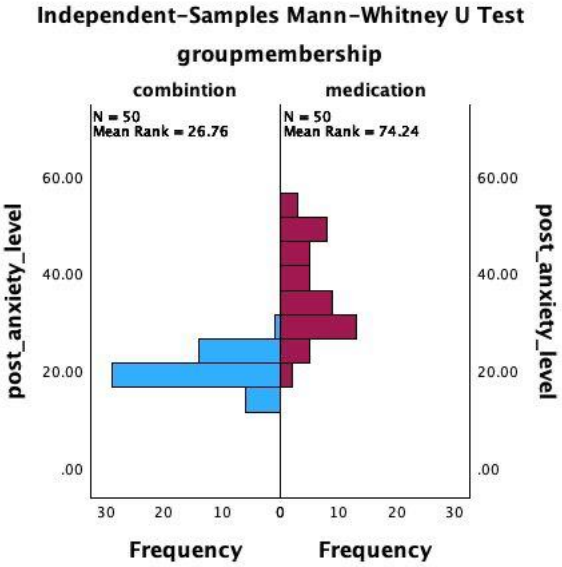

Figure 3.8. Distribution of post-treatment anxiety levels by group membership

Both treatment groups, have equal sample sizes (N=50). This balanced design enhances the reliability of the test results. The mean rank of combination group is 26.76, indicating that, on average, participants in this group have lower ranks for post-treatment anxiety scores. The mean rank of medication only group is significantly higher at 74.24, suggesting that participants in this group generally have higher post-treatment anxiety scores. Lower Mean Rank for Combination Group indicates that patients in the combination group tend to have lower post-treatment anxiety levels compared to those in the medication-only group. The sum of ranks for the combination group is 1338.00, while the sum of ranks for the medication-only group is

3712.00. The lower sum of ranks in the combination group indicates that patients in this group tend to have lower post-treatment anxiety levels compared to those in the medication-only group. Conversely, the higher sum of ranks in the medication-only group supports the observation that participants in this group generally have higher post-treatment anxiety scores.

The histogram shows a clear distinction between the two groups, with the combination group having lower post-anxiety levels more frequently, while the medication-only group has higher post-anxiety levels more frequently. This visual representation reinforces the conclusion that the combination group tends to have lower post-treatment anxiety levels compared to the medication-only group.

The "Test Statistics" table provides extensive information from the Mann-Whitney U test (Table 3.10).

Table 3.10 Test statistics for Mann-Whitney U Test on post-treatment anxiety levels

Test Statistics[a]

	post_anxiety_level
Mann-Whitney U	63.000
Wilcoxon W	1338.000
Z	-8.193
Asymp. Sig. (2-tailed)	<.001

a. Grouping Variable: groupmembership

The Sig. (2-tailed) value is less than (<.001). When the p-value is less than 0.05, it indicates that the observed difference between the groups is statistically significant. A lower U value (63.000) of the Mann-Whitney U test typically indicates that the ranks of one group are systematically higher or lower than the other. The negative Z value (-8.193) indicates the direction of the difference, suggesting that one group has significantly lower ranks compared to the other.

The results ($U = 63.000$, $Z = -8.193$, $p < .001$) leads us to reject the null hypothesis, which states that the distribution of post_anxiety_level is the same across the treatment groups and accept our main hypothesis. Specifically, the combination therapy group demonstrated significantly lower post-treatment anxiety levels compared to the pharmacotherapy-only group.

These findings support the hypothesis that a combined treatment approach is more effective in reducing anxiety symptoms than pharmacotherapy alone (Table 3.11).

Table 3.11 Hypothesis Test Summary

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.[a,b]	Decision
1	The distribution of post_anxiety_level is the same across categories of groupmembership.	Independent-Samples Mann-Whitney U Test	<.001	Reject the null hypothesis.

a. The significance level is .050.

b. Asymptotic significance is displayed.

To test Hypothesis 2 (Age Differences in Treatment Efficacy), Spearman's rank correlation coefficient was employed. This statistical test is particularly suited for our analysis because it does not require the data to be normally distributed and is capable of identifying monotonic relationships between two ordinal or continuous variables.

Table 3.12 Spearman's Correlation between Age and Post-Treatment Anxiety Levels

Correlations

			age	post_anxiety_level
Spearman's rho	age	Correlation Coefficient	1.000	.583*
		Sig. (2-tailed)	.	.017
		N	100	100
	post_anxiety_level	Correlation Coefficient	.583*	1.000
		Sig. (2-tailed)	.017	.
		N	100	100

*. Correlation is significant at the 0.05 level (2-tailed).

The results from Spearman's rho correlation analysis show a correlation coefficient of (=.583) between age and post-treatment anxiety levels, with a significance level (p-value) of (p=.017) (Table 3.12). This indicates a moderate positive correlation between age and the level of anxiety after treatment, meaning that as age increases, so does the post-treatment anxiety level. The sample size for the correlation calculation is 100 participants. Since the p-value (p= 0.017) is below the commonly used threshold of 0.05, this correlation is statistically significant.

The scatter plot shows the relationship between age and post-treatment anxiety levels. The trend line indicates a positive slope, supporting the positive correlation observed in the correlation table. As age increases, post-treatment anxiety levels tend to increase as well (Figure 3.9).

These findings suggest that older adults experience higher post-treatment anxiety levels compared to younger adults. Therefore, it is essential to consider age as a factor when evaluating treatment efficacy for anxiety. Further research may explore targeted interventions for different age groups to enhance treatment outcomes and reduce anxiety symptoms effectively.

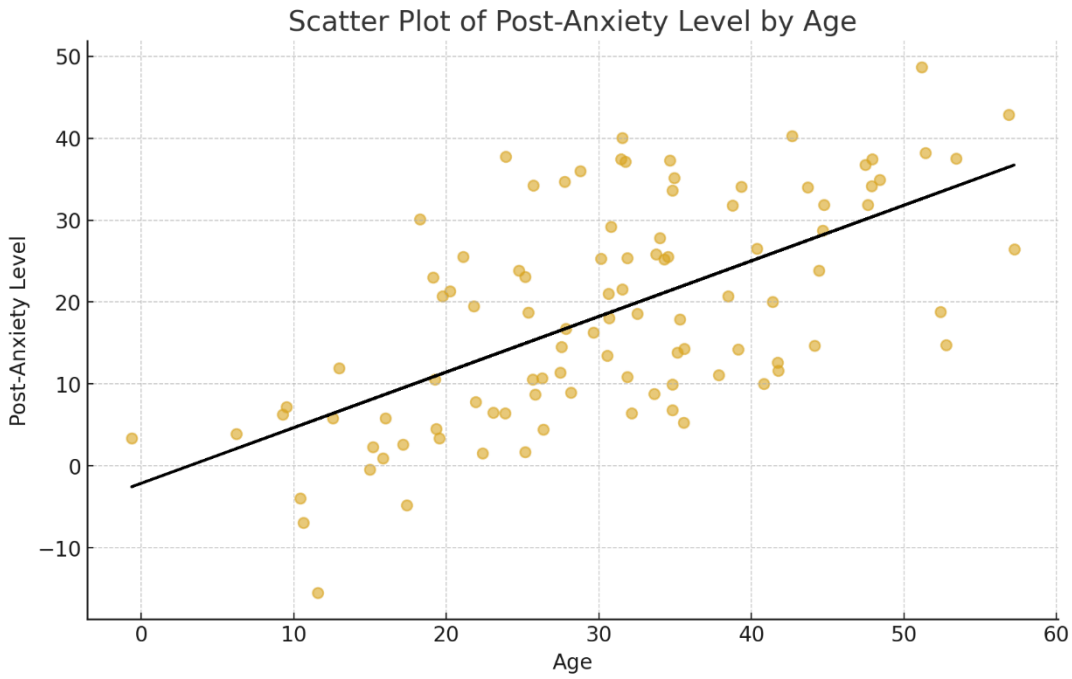

Figure 3.9. Scatter Plot of Post-Anxiety Level by Age

The statistically significant moderate positive correlation and scatter plot ($r = 0.583$, $p = 0.017$) suggests that older adults experience higher post-treatment anxiety levels compared to younger adults and so we accept our second hypothesis where treatment efficacy in reducing anxiety symptoms is less pronounced in older adults.

For Hypothesis 3 (Marital Status and Treatment Efficacy Hypothesis), a Mann-Whitney U Test was again employed to assess whether marital status influenced the reduction in anxiety symptoms post-treatment. Patients in marital status group were categorized into two groups: ‘married and divorced’ (grouped as 1) and ‘single’ (grouped as 2).

Table 3.13. Descriptive statistics for post-anxiety level and grouped marital status

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
post_anxiety_level	86	28.9884	11.14450	14.00	54.00
grouped_maritalstatus (FILTER)	86	1.35	.479	1	2

The mean (average) post-treatment anxiety level is 28.9884 with a standard deviation of (St.d=11.14450), indicating the typical variation in anxiety scores around the mean. As we mentioned the range of anxiety levels is from 14 to 54, suggesting a wide variation in patient responses (Table 3.13). The values 1 and 2 represent two different marital status groups, where 1 represents the first group and 2 represents the second group. The mean for grouped marital status is 1.35 with a standard deviation of (St.d=0.479). This indicates some variation in the distribution of marital status among the participants. The sample size for both post-treatment anxiety levels and grouped marital status is N=86, ensuring a balanced and focused analysis of the data.

The results are shown in the table below, highlighting the mean rank and sum of ranks for post-treatment anxiety levels across these groups (Table 3.14).

Table 3.14. Ranks for post-treatment anxiety levels by grouped marital status

Ranks

	grouped marital status	N	Mean Rank	Sum of Ranks
post_anxiety_level	1.00	56	46.09	2581.00
	2.00	30	38.67	1160.00
	Total	86		

Grouped marital status have different sample sizes. Group 1 (N=56) have a larger sample size compared to Group 2 (N=30). The mean rank for Group 1 is 46.09, indicating that participants in this group have higher ranks for post-treatment anxiety scores on average. In contrast, Group 2 has a lower mean rank of 38.67, suggesting that participants in this group generally have lower post-treatment anxiety scores. The lower mean rank for Group 2 indicates that patients in this group tend to have lower post-treatment anxiety levels compared to those in Group 1. The sum of ranks for Group 1 is 2581.00, while the sum of ranks for Group 2 is 1160.00. This indicates that the overall ranking of post-treatment anxiety levels is higher in

Group 1 compared to Group 2. The higher sum of ranks in Group 1 further supports the observation that participants in this group tend to have higher post-treatment anxiety scores. Conversely, the lower sum of ranks in Group 2 reinforces that participants in this group generally have lower post-treatment anxiety levels. The sum of ranks for Group 1 is 2581.00, while the sum of ranks for Group 2 is 1160.00. This indicates that the overall ranking of post-treatment anxiety levels is higher in Group 1 compared to Group 2. The higher sum of ranks in roup 1 further supports the observation that participants in this group tend to have higher post-treatment anxiety scores. Conversely, the lower sum of ranks in Group 2 reinforces that participants in this group generally have lower post-treatment anxiety levels.

The histogram visually confirms these results, showing a distinct distribution of post-treatment anxiety levels between the two groups. Group 1 displays higher post-anxiety levels more frequently, whereas Group 2 shows a higher frequency of lower post-anxiety levels. This visual representation reinforces the conclusion that Group 2 tends to have lower post-treatment anxiety levels compared to Group 1 (Figure 3.10).

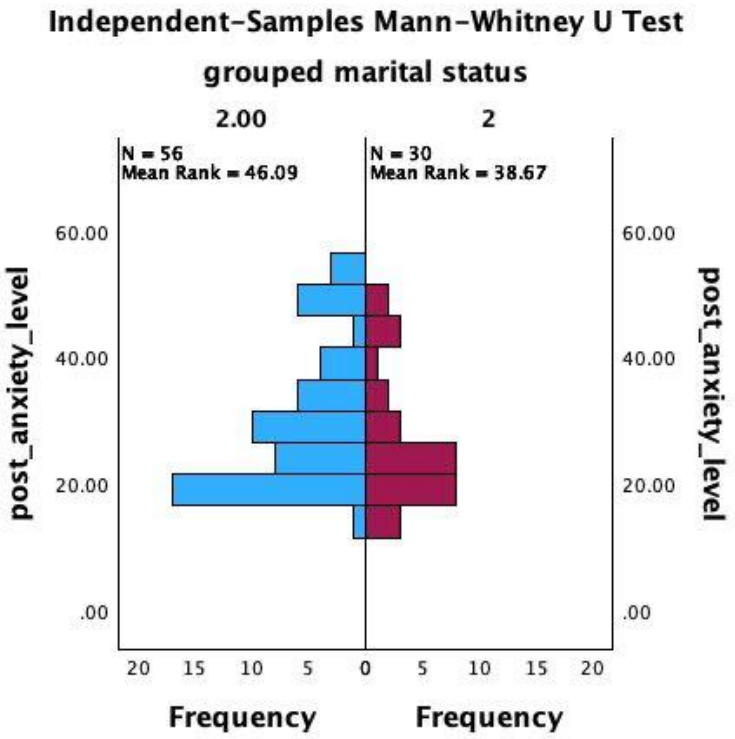

Figure 3.10. Independent-Samples Mann-Whitney U Test for Grouped Marital Status

The “Test Statistics” table provides extensive information from the Mann-Whitney U test (Table 3.15).

Table 3.15. Test statistics for Mann-Whitney U Test

Test Statistics[a]

	post_anxiety_level
Mann-Whitney U	695.000
Wilcoxon W	1160.000
Z	-1.315
Asymp. Sig. (2-tailed)	.188

a. Grouping Variable: grouped marital status

The Mann-Whitney U value is 695.000, and the Z value is -1.315. The Sig. (2-tailed) value is .188. Based on the p-value (p=0.188), there is no statistically significant difference in post-anxiety levels between the two grouped marital statuses. When the p-value is greater than 0.05, it indicates that the observed difference between the groups is not statistically significant.

The results (U = 695.000, Z = -1.315, p = .188) lead us to retain the null hypothesis, which states that the distribution of post_anxiety_level is the same across the grouped marital status categories. Specifically, there is no significant difference in post-treatment anxiety levels between the two marital status groups.

These findings suggest that marital status does not significantly impact post-treatment anxiety levels, and thus, the hypothesis that marital status influences anxiety outcomes is not supported by the data.

CONCLUSION

In conclusion, this dissertation has provided a comprehensive overview of phobias, detailing their types, history, and etiology, as well as the available psychotherapeutic and psychopharmacological interventions. The main goal was to determine which treatment is more effective in reducing symptoms and improving the quality of life of patients suffering from phobias.

Hypothesis 1 (Treatment Efficacy Hypothesis): The analysis indicates that the combination therapy group has significantly lower post-treatment anxiety levels compared to the medication-only group. The mean rank for the combination group is 26.76, while for the medication-only group, it is 74.24, showing a notable difference. The sum of ranks also supports this, with the combination group at 1338.00 and the medication-only group at 3712.00. The Mann-Whitney U test results ($U = 63.000$, $Z = -8.193$, $p < .001$) confirm that the combination therapy group has significantly lower anxiety levels post-treatment, leading to the rejection of the null hypothesis and acceptance of the main hypothesis. Data analysis showed that patients in the combination therapy group experienced significantly fewer anxiety symptoms after treatment compared to those who received pharmacotherapy alone. The results of the Mann-Whitney U test confirmed that this difference was statistically significant ($p < 0.001$), supporting the hypothesis that a combination treatment approach is more effective than a medication only treatment in reducing anxiety symptoms.

Hypothesis 2 (Age Differences in Treatment Effectiveness Hypothesis): The results from Spearman's rho correlation analysis show a moderate positive correlation ($r = 0.583$, $p = 0.017$) between age and post-treatment anxiety levels, indicating that as age increases, post-treatment anxiety levels also increase. This correlation is statistically significant with a p-value below 0.05 ($p=0.017$). The scatter plot supports this finding, showing a positive trend line between age and post-treatment anxiety levels. These results suggest that older adults experience higher post-treatment anxiety levels compared to younger adults, confirming the hypothesis that treatment efficacy in reducing anxiety symptoms is less pronounced in older adults. This indicates that older adults tend to experience smaller reductions in anxiety symptoms following treatment compared to younger adults, supporting the hypothesis that treatment effectiveness varies with age.

Hypothesis 3 (Marital Status and Treatment Effectiveness Hypothesis): Group 1 ($N=56$) has a higher mean rank of 46.09, indicating higher post-treatment anxiety scores, while Group 2 ($N=30$) has a lower mean rank of 38.67, indicating lower scores. The sum of ranks further supports this, with Group 1 at 2581.00 and Group 2 at 1160.00. The histogram visually confirms

these differences, showing Group 1 with higher anxiety levels more frequently. The Mann-Whitney U test results (U = 695.000, Z = -1.315, p = 0.188) indicate no statistically significant difference in post-treatment anxiety levels between the two marital status groups. Thus, we retain the null hypothesis, stating that there is no significant difference in post-treatment anxiety levels based on marital status.

The study accept the main hypothesis that the combination of psychotherapy and psychopharmacology produces better results than pharmacotherapy alone. Patients receiving the combination treatment had fewer symptoms of anxiety disorders compared to those receiving medication alone. This finding highlights the significant benefits of integrating psychological interventions with pharmacological treatments for phobias.

In addition, one of the auxiliary hypothesis of the study were confirmed. The effectiveness of both combination and drug treatment alone varied by age, with older adults experiencing less significant reduction in anxiety symptoms. This emphasizes the importance of considering age as a critical factor in tailoring treatment plans for phobias.

Consistent with my hypothesis, according to Bandelow et al. (2014), the limited studies available on cognitive-behavioral therapy (CBT) in individuals over the age of 65 have demonstrated a lower degree of efficacy compared to adults aged 18 to 65 (Bandelow, Lichte, Rudolf, Wiltink, & Beutel, 2014).

However, the second auxiliary hypothesis, which stated that single patients would experience greater reductions in anxiety symptoms compared with married and divorced patients when treated with either a combination of psychotherapy and psychopharmacology or medication alone, was not supported by the results. . This suggests that marital status may not play as significant a role in treatment effectiveness.

In the context of treating anxiety disorders, especially phobias, the efficacy of combined treatments (medications and psychotherapy) has been a focus of various studies. Comparative research on medication versus cognitive-behavioral therapy (CBT) indicates that medications might offer more immediate symptom relief, whereas CBT tends to provide more sustained long-term benefits. The rationale for combined treatments is to leverage the short-term benefits of medication with the long-term advantages of CBT, aiming to optimize overall treatment outcomes.

According to the Dalrymple, (2014), the effectiveness of combined treatments (medications and psychotherapy) for anxiety disorders shows mixed results, which vary depending on the specific anxiety disorder being treated. Medications tend to provide short-term symptom relief, while cognitive-behavioral therapy (CBT) offers more substantial long-

term benefits. The article notes that combining these treatments could potentially optimize overall outcomes by leveraging the immediate benefits of medication with the sustained effects of psychotherapy. However, in follow-up periods, CBT alone tends to outperform combined treatments, suggesting its longer-lasting benefits. Similar findings have been reported for social anxiety disorder, where combined treatments show better outcomes in the short term, but CBT alone is superior in long-term follow-ups (Dalrymple, 2014).

The paper by Ganasen et al. (2010) explores the efficacy of integrating cognitive behavioral therapy (CBT) with pharmacotherapy, with a particular focus on anxiety disorders and the role of D-cycloserine (DCS) in enhancing CBT outcomes. The combination of CBT and pharmacotherapy has been shown to be more effective than either treatment alone in specific populations. DCS, which acts as a facilitator of the fear extinction process—a fundamental element of CBT for treating anxiety—demonstrates potential in augmenting CBT, particularly for anxiety disorders. The augmentation is most effective when DCS is administered shortly before therapy sessions. Evidence supports the use of DCS in conjunction with exposure therapies to improve symptoms of general social anxiety. Specifically, DCS has facilitated improvements in CBT for specific phobias, such as acrophobia (fear of heights). Overall, the paper indicates that while the combination of CBT with pharmacotherapy-especially with agents like DCS-offers promising results, the effectiveness of such treatments is critically dependent on specific conditions and patient characteristics (Ganasen, Ipser, & Stein, 2010).

According to the Canton (2012) combining medication with CBT can be more effective than either treatment alone, especially with certain drug classes. Optimal treatment for social phobia involves a combination of SSRIs or SNRIs with CBT. For patients not responding to these, MAOIs can be considered as a second-line treatment despite their side effect profile. Long-term support and treatment are necessary due to the chronic nature of social phobia (Canton, Scott, & Glue, 2012).

Also research by Cottraux (2004) highlights the benefits of combining CBT with medications like imipramine and SSRIs, suggesting that psychotherapy might provide better long-term outcomes than pharmacotherapy alone. Stein, Vythilingum, & Seedat (2004) discuss the pharmacotherapy of phobias, noting the effectiveness of SSRIs for social phobia and the role of tricyclic antidepressants and benzodiazepines in treating agoraphobia and specific phobias. Lastly, studies by Moloudi et al. (2022), David et al. (2018), and Engels et al. (1993) further underscore the effectiveness of rational-emotive behavior therapy (REBT) and other

cognitive-behavioral approaches, showing their capability to reduce irrational beliefs and anxiety, thereby enhancing emotional stability and quality of life.

In conclusion, the comprehensive analysis conducted throughout this dissertation indicates that the combination of psychotherapy and psychopharmacology is more effective in treating anxiety symptoms than pharmacotherapy alone. The results highlight the significant influence of age on treatment outcomes, indicating that older adults may require tailored treatment approaches to achieve optimal results. Despite initial hypotheses, marital status does not significantly influence the effectiveness of these treatments. These findings have critical implications for clinicians and suggest the need to develop personalized treatment plans that take into account individual demographic and psychological profiles to improve the effectiveness and feasibility of interventions for phobic disorders.

Here are some potential limitations that could be relevant for your research on the comparative analysis of phobias treated with psychotherapy and psychopharmacology:

- Sample Size: If the sample size is relatively small or not diverse, it could limit the strength and reliability of the conclusions drawn. The sample size for this thesis is 100, which is a limitation.
- Treatment Variability: Variations in how psychotherapy and psychopharmacology are administered (e.g., different therapists, treatment settings, or medication dosages) could introduce inconsistencies and affect the outcomes.
- Long-term Effects: The study focus primarily on short-term outcomes without addressing the long-term efficacy and side effects of the treatments, which could provide a limited view of their effectiveness over time.
- Variability in Session Numbers: The number of therapy sessions varied among participants, with some receiving as few as four sessions and others receiving up to eleven. This inconsistency can significantly influence the outcomes of the treatment, as more sessions might lead to better management of phobias. Due to time constraints, a detailed analysis of the effects of session count on treatment efficacy was not feasible, posing a limitation to the study’s conclusions.

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APPENDICES

Appendix 1

1. Cins:

- Kişi
- Qadın
- Digər

2. Yaş:

3. Ailə vəziyyəti:

- Subay
- Münasibətdə
- Evli
- Boşanmış
- Digər

4. Təhsil səviyyəsi:

- Orta təhsil
- Natamam ali təhsil (bakalavr dərəcəsi)
- Ali təhsil (magistr dərəcəsi)
- Digər

5. Məşğulluq vəziyyəti:

- İşləyən
- İşsiz
- Tələbə
- Pensiyoner

6. Hansı növ fobiyalarla qarşılaşmısınız və ya indi də qarşılaşırsınız?

- Sosial fobiyalar
- Aqorafobiya
- Spesifik fobiyaları (heyvan fobiyaları, yüksəklik, aerofobiya, tibbi prosedurlar)

7. Psixoterapiya və ya psixofarmakoloji müalicə almısınızmı? (Bəli /Xeyr)

8. Fobiyanızı müalicə etmək üçün istifadə etdiyiniz vasitələr:

- Psixoterapiya
- Psixofarmakologiya (dərman müalicəsi)
- Özümü müalicə

Appendix 2

Item	Symptoms	Score (0-4)
1. Anxious Mood	Feelings of nervousness, tension, fear, panic, apprehension	0 1 2 3 4
2. Tension	Fatigability, startle response, moved to tears easily, restlessness, trembling	0 1 2 3 4
3. Fears	Fear of the dark, strangers, being left alone, animals, traffic, crowds	0 1 2 3 4
4. Insomnia	Difficulty falling asleep, interrupted sleep, unsatisfying sleep, fatigue on waking	0 1 2 3 4
5. Cognitive Function	Impaired concentration, memory issues, confusion, disorientation	0 1 2 3 4
6. Depressed Mood	Loss of interest, lack of pleasure in usual activities, sadness, hopelessness, pessimism	0 1 2 3 4
7. Somatic (Muscular)	Muscular pain, twitching, stiffness, myoclonic jerks	0 1 2 3 4
8. Somatic (Sensory)	Tinnitus, blurring of vision, hot and cold flushes, feelings of weakness	0 1 2 3 4
9. Cardiovascular Symptoms	Palpitations, heart pounding or racing, chest pain or discomfort	0 1 2 3 4
10. Respiratory Symptoms	Difficulty breathing, feeling of choking, sighing, hyperventilation	0 1 2 3 4
11. Gastrointestinal Symptoms	Dry mouth, dysphagia, nausea, vomiting, abdominal pain, burning sensations, abdominal fullness, flatulence, borborygmi, diarrhea, constipation	0 1 2 3 4
12. Genitourinary Symptoms	Urinary frequency, urgency, menorrhagia, amenorrhea, development of frigidity, loss of libido, premature ejaculation, impotence	0 1 2 3 4
13. Autonomic Symptoms	Dry mouth, flushing, pallor, sweating, tendency to faint, dizziness, headache, increased frequency of micturition, discomfort or feeling of fullness in the abdomen	0 1 2 3 4
14. Behavior at Interview	Fidgeting, restlessness, pacing, wringing hands, sighing, tremors, furrowed brow, strained face, voice changes	0 1 2 3 4

Appendix 3

Comparative analysis of phobias treated with psychotherapy and psychopharmacology

Abstract

This dissertation is a comparative analysis of phobias treated with psychotherapy and psychopharmacology. The dissertation include introduction, 3 chapters, as well as sub-chapters included in each chapter, conclusion, references and appendices.

In the introductory part include: relevance of the research, the subject of the research, the object of the research, the goals and tasks of the research, the hypotheses of the research, the research methods, the practical importance of the research, the novelty of the research and the structure of the research.

The first chapter of the dissertation called " Overview of anxiety disorders. Treatment of anxiety disorders using psychotherapy and psychopharmacology" and consists of four sub-chapters. This chapters provides a comprehensive exploration of anxiety disorders with a focus on phobias. It explores various treatment approaches, including psychotherapy and psychopharmacology, discussing their mechanisms and effectiveness in comparative terms. The sub-chapter "Comparative studies on the effectiveness of psychotherapy vs psychopharmacology for phobias" examines and compares the effectiveness of psychotherapy versus psychopharmacology in the treatment of phobias. It assesses various studies and clinical trials to evaluate the efficacy, benefits, limitations, and patient outcomes associated with each treatment method.

The second chapter of the dissertation is called “Methods and methodologies of research”. In the first half of the second chapter, the organization and conduct of the research are discussed. In the data collection subchapter of the dissertation, the methodology for gathering relevant patient information and assessing anxiety levels is detailed. This subchapter includes the use of two primary tools: the “Demographic Data Questionnaire” developed by the author and the “Hamilton Anxiety Rating Scale (HAM-A)”, a method established in 1959 by Max Hamilton, to assess anxiety levels in patients aged 15-60 years”.

The third chapter of the dissertation is called “Results interpretation”. For the data analysis, were selected within the IBM Statistical Package for the Social Sciences (SPSS) software (version 29.0).

To the results obtained from the study patients treated with a combination of psychotherapy and psychopharmacology exhibit fewer symptoms of anxiety disorders compared to those treated with pharmacotherapy alone. Also acording to the results the efficacy of both combined

psychotherapy and psychopharmacology treatment, as well as medication-only treatment, varies with age; older adults experience a less pronounced reduction in anxiety symptoms post-treatment. The dissertation is finished with the conclusion and references.

Keywords: anxiety disorder, phobia, treatment, psychotherapy, psychopharmacology

Appendix 4

Psixoterapiya və psixofarmakologiya ilə müalicə olunan fobiyaların müqayisəli təhlili

Xülasə

Bu dissertasiya psixoterapiya və psixofarmakologiya ilə müalicə olunan fobiyaların müqayisəli təhlilindən ibarətdir. Dissertasiya giriş, 3 fəsil, həmçinin hər bir fəsildə yer alan alt fəsillər, nəticə, istinadlar və əlavələrdən ibarətdir.

Giriş hissəsində: tədqiqatın aktuallığı, tədqiqatın mövzusu, tədqiqatın obyekti, tədqiqatın məqsəd və vəzifələri, tədqiqatın fərziyyələri, tədqiqat metodları, tədqiqatın praktiki əhəmiyyəti, yeniliyi tədqiqatın strukturu və strukturu.

Dissertasiyanın birinci fəsli "Təşviş pozuntularına ümumi baxış. Təşviş pozğunluqlarının psixoterapiya və psixofarmakologiyadan ilə müalicəsi" adlanır və 5 yarım fəsildən və 7 alt fəsildən ibarətdir. Bu fəsillər fobiyalara diqqət yetirməklə təşviş pozuntularını hərtərəfli araşdırılmasını təmin edir. O, müxtəlif müalicə yanaşmalarını, o cümlədən psixoterapiya və psixofarmakologiyanı araşdırır, onların mexanizmlərini və effektivliyini müqayisəli şəkildə müzakirə edir. "Fobiyalar üçün psixoterapiya ilə psixofarmakologiyanın effektivliyinə dair müqayisəli tədqiqatlar" yarımfəslində, fobiyaların müalicəsində psixoterapiya ilə psixofarmakologiyanın effektivliyi araşdırılır və müqayisə edilir. O, hər bir müalicə metodu ilə əlaqəli effektivliyi, faydaları, məhdudiyyətləri və xəstə nəticələrini qiymətləndirmək üçün müxtəlif tədqiqatları və klinik sınaqları qiymətləndirir.

Dissertasiyanın ikinci fəsli fəsli "Tədqiqatın metodları və metodologiyaları" adlanır. Ikinci fəslin birinci yarısında tədqiqatın təşkili və aparılmasından bəhs edilir. Dissertasiyanın məlumatların toplanması alt bölməsində pasiyent haqqında müvafiq məlumatların toplanması və təşviş səviyyələrinin qiymətləndirilməsi metodologiyası ətraflı təsvir edilmişdir. Bu alt fəsildə iki əsas metoddan istifadə edilmişdir: müəllif tərəfindən hazırlanmış "Demoqrafik Məlumat Sorğusu" və 1959-cu ildə Maks Hamilton tərəfindən yaşlı pasiyentlərdə təşviş səviyyələrini qiymətləndirmək üçün yaradılmış "Hamilton Anksiyete Qiymətləndirmə Şkalası (HAM-A)" metodu. 15-60 yaş".

Dissertasiyanın üçüncü fəsli "Nəticələrin təhlili" adlanır. Bu fəsil bir yarım fəsildən ibarətdir. Məlumatların təhlili üçün IBM Statistical Package for the Social Sciences (SPSS) proqramı (versiya 29.0) çərçivəsində seçilmişdir.

Tədqiqatın nəticələrinə görə, psixoterapiya və psixofarmakologiyanın kombinasiyası ilə müalicə olunan xəstələr, tək farmakoterapiya ilə müalicə olunanlara nisbətən daha az narahatlıq pozğunluğu əlamətləri nümayiş etdirirlər. Həmçinin nəticələrə əsasən, həm kombinə edilmiş psixoterapiya və psixofarmakoloji müalicənin, həm də yalnız dərmanla müalicənin effektivliyi

yaşa görə dəyişir; yaşlı yetkinlərdə müalicədən sonra narahatlıq simptomlarında daha az nəzərə çarpan azalma müşahidə olunur. Dissertasiya nəticə və istinadlarla tamamlanır.

Açar sözlər: narahatlıq pozğunluğu, fobiya, müalicə, psixoterapiya, psixofarmakologiya

Appendix 5

Figure and Table