IBN HALDUN UNIVERSITY
SCHOOL OF GRADUATE STUDIES
DEPARTMENT OF COUNSELING PSYCHOLOGY

MASTER'S THESIS

INTOLERANCE OF UNCERTAINTY AND TIME MANAGEMENT SKILLS OF INDIVIDUALS WITH ATTENTION DEFICIT HYPERACTIVITY DISORDER SYMPTOMS

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ISTANBUL, 2025

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by
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A thesis submitted to the School of Graduate Studies in partial fulfillment of the requirements for the degree of Master of Arts in Counseling Psychology

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ACADEMIC HONESTY ATTESTATION

I hereby declare that all information in this document has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all material and results that are not original to this work.

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ÖZ

DİKKAT EKSİKLİĞİ VE HİPERAKTİVİTE BOZUKLUĞU SEMPTOMU OLAN BİREYLERDE BELİRSİZLİĞE TAHAMMÜLSÜZLÜK VE ZAMAN YÖNETİMİ BECERİLERİ

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Dikkat Eksikliği Hiperaktivite Bozukluğu (DEHB), çocuklukta ortaya çıkan ve yetişkinlikte de devam eden hiperaktivite, dikkatsizlik ve dürtüsellik ile karakterize bir durumdur. Belirsizliğe tahammülsüzlük, belirsiz durumlarla başa çıkmada zorluk çekmeyi ifade ederken; zaman yönetimi, bireylerin planlama yapma ve zamanlarını etkili bir şekilde kullanma becerisi olarak tanımlanmaktadır. DEHB'li yetişkinler günlük yaşamda birçok sorunla mücadele eder. DEHB'li bireyler sıklıkla zaman yönetiminde sorun yaşarlar ve belirsizliğe tahammülsüzlüğü deneyimleyebilirler. Ancak bu alandaki güncel araştırmalar sınırlıdır; bu nedenle, bu çalışma DEHB semptomları olan 18-45 yaş arası yetişkinlerde belirsizliğe tahammülsüzlük ve zaman yönetimi becerilerinin incelenmesi amaçlanmıştır. Araştırma nicel bir çalışmadır. Katılımcılardan veri toplamak için genel tarama modeli kullanılmıştır. Tüm anketler katılımcılara çevrimiçi olarak iletilmiştir. Ankette “Kişisel Bilgi Formu”, “Dikkat Eksikliği ve Hiperaktivite Kendi Bildirim Ölçeği (ASRS; Doğan et al., 2009)”, “Belirsizliğe Tahammülsüzlük Ölçeği (IUS-12; Sarıçam et al., 2014)” ve “Zaman Yönetimi Ölçeği (TMQ; Alay & Koçak, 2002)” kullanılmıştır. Online anket kullanılarak 738 katılımcıya ulaşılmıştır. Katılımcılardan 433’ü araştırmaya dahil edilme kriterlerini sağlamıştır. Katılımcıların 385’i kadınlardan, 48’i erkeklerden oluşmaktadır ve katılımcıların %50.1’i DEHB tanısına sahipken %49.9’u tanısı olmayan ancak DEHB belirtisi gösteren bireylerden oluşmaktadır. Data analizinde

tanımlayıcı istatistikler, Pearson korelasyon analizi ve çoklu doğrusal regresyon analizi kullanılmıştır. Bulgular katılımcıların zaman yönetimi ve belirsizliğe tahammülsüzlük puanlarının ortalamanın üstünde olduğunu göstermektedir. Belirsizliğe tahammülsüzlük ve zaman yönetimi arasında istatistiksel olarak anlamlı bir ilişki bulunmamıştır. Ayrıca dikkatsizlik ve hiperaktivite/ dürtüsellik alt boyutlarının zaman yönetimini ve belirsizliğe tahammülsüzlüğü nasıl yordadığı incelenmiş ve dikkatsizlik alt ölçeğinin zaman yönetimini negatif yönde yordadığı bulunmuştur. Hiperaktivite/ dürtüsellik boyutunun ise zaman yönetimini pozitif yönde yordamıştır. Her iki alt ölçek (dikkatsizlik ve hiperaktivite/ dürtüsellik) belirsizliğe tahammülsüzlüğü pozitif yönde yordamıştır. Elde edilen sonuçlar doğrultusunda bulgular literatürdeki bilgilerle tartışılmış ve gelecek araştırmalar için önerilerde bulunulmuştur.

Anahtar Kelimeler: Belirsizliğe Tahammülsüzlük,, Dikkat Eksikliği ve Hiperaktivite Bozukluğu **,** Zaman Yönetimi.

ABSTRACT

INTOLERANCE OF UNCERTAINTY AND TIME MANAGEMENT SKILLS OF INDIVIDUALS WITH ATTENTION DEFICIT HYPERACTIVITY DISORDER SYMPTOMS

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Attention Deficit Hyperactivity Disorder (ADHD) is characterized by hyperactivity, inattention, and impulsivity, emerging in childhood and persisting into adulthood. Intolerance of uncertainty refers to difficulties in coping with uncertain situations, whereas time management is defined as the ability of individuals to plan and use their time effectively. Adults who have ADHD struggle with several problems in daily life. Individuals with ADHD often have problems in time management, and they can also experience intolerance of uncertainty. However, current research in this area is limited; thus, this study aims to fill this gap by examining intolerance of uncertainty and time management skills in adults aged 18-45 with ADHD symptoms. The research was a quantitative study. Data was collected from respondents using survey research method. All surveys were delivered to participants online. “Personal Information Form”, “The Turkish Version of the Attention Deficit and Hyperactivity Self-Report Scale (ASRS)”, adapted by Doğan et al. (2009), “The Turkish Version of Short Version of Intolerance of Uncertainty Scale (IUS-12)” adapted by Sarıçam et al. (2014), and “Time Management Scale (TMQ)” adapted by Alay & Koçak. (2002) were used in the survey. 738 participants were reached using the online survey. 433 of the participants met the inclusion criteria for the study. 385 of the participants were female, 48 were male, and 50.1% of the participants had an ADHD diagnosis, and 49.9% did not have ADHD diagnosis but had ADHD symptoms.

Descriptive statistics, Pearson correlation, and multiple linear regression analyses were used in data analysis. The findings show that the participants' time management and intolerance of uncertainty scores were above average. There is no statistically significant relationship between intolerance of uncertainty and time management. In addition, the predictive roles of the inattention and hyperactivity/impulsivity subscales on time management and intolerance of uncertainty were examined. The results showed that the inattention subscale negatively predicted time management. The hyperactivity/impulsivity dimension positively predicted time management. All subscales (inattention and hyperactivity/ impulsivity) positively predicted intolerance of uncertainty. In line with the results obtained, the findings were discussed with information in the literature, and suggestions were made for future research.

Keywords: Attention Deficit Hyperactivity Disorder**,** Intolerance of Uncertainty, Time Management.

DEDICATION

This thesis is dedicated to the honorable and brave people of Gaza, whose genocide we witness every day, who I take as an example in every sense, who are teachers to all humanity, who show us good morals, patience, and resistance with their actions and attitudes. This thesis is also dedicated to my future daughter, who has not yet opened her eyes to the world, who I believe will teach me many things throughout my life.

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I hope that this research will be beneficial for people who have struggles with ADHD symptoms and open new horizons in the field.

Rabia SELAMET
İSTANBUL, 2025

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LIST OF SYMBOLS AND ABBREVIATIONS

ADHD	Attention Deficit Hyperactivity Disorder
IU	Intolerance of Uncertainty
IUS	Intolerance of Uncertainty Scale
TM	Time Management
TMQ	Time Management Questionnaire
ASRS	Adult ADHD Self-Report Scale

CHAPTER I

INTRODUCTION

1.1. Statement of the Problem

"Attention Deficit/ Hyperactivity Disorder, or ADHD, is a developmental disorder of self-control. The disorder consists of obvious problems with attention span, impulse control, and activity level" (Barkley, 2013). ADHD is described by symptoms of inattention, hyperactivity, and impulsivity (Adler et al., 2002). Connected to these diagnostic symptoms, ADHD also coexists with several functional problems, which are deficits in time perspective, organization, and planning (Carelli & Wiberg, 2012). Problems regarding time management, planning, or attention deficit, based on these functional problems, cause various difficulties in many areas, such as at school performance, in family life, and work productivity; thus, the quality of life of individuals with ADHD symptoms can be affected in a negatively.

While time management is not such a big problem for individuals who do not experience time management problems frequently in daily life and can complete their work in line with the flow of time, individuals with ADHD symptoms may experience hard times. When we put aside ADHD symptoms and look at the general population, most people may complain about the time passing by and not having enough time to complete things. Thereby, the common problem of almost every person, every society, every manager, or every company is a lack of time (Gürbüz & Aydın, 2012). According to Adair and Allen (2004), time is the most valuable natural resource human beings have. Once time is spent, it cannot be replaced, nor can it be returned. Therefore, the concept of time management is essential in life.

Time management (TM) has recently gained more attention due to people facing by different demands on their time due to the rapid changes in modern living. Time management is the process of implementing the management tasks of planning,

organizing, directing, coordinating, and controlling an individual's activities to achieve their targets effectively and productively both in private and business life (Erdem, 1999). On the other hand, poor time planning (TP) leads to reduced availability of time for social and personal activities, which lowers personal satisfaction and raises stress levels (Tecer et al., 2021; Maden, 2024). People who make an effort to manage their time can accomplish their goals more successfully and efficiently. In the study by Sibley et al. (2016), the concept of time management was addressed as a factor that affects the academic success of adolescents with ADHD, and the role of parental interventions was discussed. The development of time management skills was determined as an important target to improve the academic performance of adolescents. Resnick (2005) states that ADHD in youth and adults are more often represented by several problems associated with executive function problems, which can cause significant hardship in daily management of life. Also, emotion dysregulation is a basic component of ADHD; thus, individuals with ADHD may show impairments in functioning and inabilities in completing difficult tasks caused by feelings of uncertainty. It is also predicted that impulsivity, which is a symptom of attention deficit and hyperactivity disorder, may has an impact on low tolerance for uncertainty.

Uncertainty is with us at every moment of life as a general law of life. We cannot know what will happen a year from now, a month from now, a week from now, a day from now, or even a second from now. Although we humans have adapted to uncertainty, sometimes it can be much more difficult to wait and exhibit patience in the situation of uncertainty. Uncertainty refers to situations where the knowledge held by individuals is vague and cannot be understood by a probability (Epstein, 1999). Uncertainty is unavoidable, and every day, individuals may be exposed to some uncertainties. Having a certain amount of tolerance toward uncertainty is crucial in many aspects of life. The term IU is defined as the disposition of reacting behaviorally, cognitively, and emotionally negatively to uncertain situations (Buhr & Dugas, 2002). Freeston et al. (1994) stated that IU is related to the trait, even if mood changes were under control. Dugas et al. (1997) also demonstrated that IU has a private contribution to worry regardless of personal and mood factors. While previous studies (Moradi Siah Afshadi et al., 2024; Solanto et al., 2010; Wennberg et al., 2018; Fabio & Capri, 2017)

have explored the challenges of time management, in individuals with ADHD, limited research has examined the role of IU in this context

When literature is examined, Moradi Siah Afshadi et al. (2024) explored in their research that there was a significant correlation between time management and ADHD symptoms of inattention, hyperactivity, and impulsivity. Wennberg et al. (2018) conducted an experimental study that measured the effect of multimodal interventions on youngsters' time processing skills and daily time management. The result indicated that only educational intervention is not enough to improve daily time management and time processing ability in youngsters with ADHD. Similar to the study of Wennberg et al. (2018), Nakashima et al. (2021) conducted an experimental study to evaluate the effectiveness of a newly sophisticated program, which centers on time management designed as group Cognitive Behavior Therapy (gCBT) for individuals with ADHD. The gCBT exhibited significant improvement compared to the control group; thus, the result provided a new understanding that the time management interventions were not merely effective in children but also in adults. As a non-experimental study, an interview was conducted with university students regarding ADHD symptoms and impairments by Gray et al. (2016). According to thematic analysis, some responses fell under the theme of time management and psychological distress. Students reported significant impairments in daily executive functions. ASRS scores correlated significantly with psychopathology and psychological distress, suggesting that students with ADHD bear with significant mental health difficulties in conjunction with their ADHD symptoms.

Substantial efforts have been made to examine IU; however, it has been studied as a single factor in recent research. For instance, Geçgin & Sahranç (2017) examined the relationship between IU and psychological well-being. In a recent study, Sagone & Indiana (2022) studied the effect of IU and decision-making types on procrastination during the COVID-19 pandemic. Further, Yang et al. (2021) studied whether self-control is a mediator, a moderator, or both between future time perspective (FTP) and IU. The study revealed that self-control has a significant role in the relation between FTP and IU; nevertheless, self-control had a mediating function rather than a moderator effect. Maden (2024) explored the relationship between TM and IU in a different condition, Generalized Anxiety Disorder (GAD). Results indicated that there

was a positive relationship between IU and TM, and anxiety and depression symptoms had a positive correlation with TM skills in the patient group. In addition, Gramszlo et al. (2018) aimed to investigate levels of IU in an externalizing clinical population, ADHD, that is also known for emotion regulation difficulties. Results showed that kids with ADHD and anxiety disorders demonstrated higher levels of IU. However, based on the literature, there has been no research that examined both variables of time management and intolerance of uncertainty in adults with ADHD. Thus, it remains crucial to search for intolerance of uncertainty and time management skills of individuals with ADHD symptoms.

1.2. Purpose of the Study and Research Questions

The purpose of this research is to investigate intolerance of uncertainty and time management skills in individuals with ADHD symptoms.

R.Q.1. What is the level of intolerance of uncertainty of individuals with ADHD symptoms?

R.Q.2. What is the level of time management skills of individuals with ADHD symptoms?

R.Q.3.What is the relationship between intolerance of uncertainty and time management of individuals with ADHD symptoms?

R.Q.4. Do ADHD symptoms of inattention and hyperactivity/ impulsivity predict time management skills?

R.Q.5 Do ADHD symptoms of inattention and hyperactivity/ impulsivity predict intolerance of uncertainty?

1.3. Significance of the Study

Individuals with ADHD often have problems in time management, and it is considered that they may also experience difficulties with intolerance of uncertainty. However, current research in this area is limited; thus, this study aims to fill this gap by examining intolerance of uncertainty and time management skills in adults aged 18-45 with ADHD symptoms. Since intolerance of uncertainty is investigated in internalizing disorders such as anxiety by Carleton et al. (2012), major depressive disorder by Gentes & Ruscio (2011), obsessive compulsive disorder by Tolin et al.

(2003), and posttraumatic stress disorder by Fetzner et al. (2013), it is also significant to investigate it in ADHD, which is one of the externalizing disorders that have comorbidities with internalizing disorders (Sevincok et al., 2020). This study is intended to be an original study since these two variables regarding ADHD have not been examined in the literature together with adults. The findings are expected to provide valuable insights into how these factors interact in ADHD and a better understanding of ADHD in adulthood. The study not only contributes to a deeper understanding of ADHD's impact on daily functioning but also paves the way for more targeted interventions. These findings will emphasize the need for personalized strategies that can address both cognitive and affective sides of ADHD, ultimately fostering better outcomes for individuals affected by the disorder.

1.4. Key Concepts and Definitions

- **Attention Deficit Hyperactivity Disorder:** "ADHD is a neurodevelopmental disorder defined by impairing levels of inattention, disorganization, and/or hyperactivity-impulsivity" (American Psychiatric Association [APA], 2022, p.36).

- **Intolerance of Uncertainty:** Intolerance of uncertainty is defined as the disposition of reacting behaviorally, cognitively, and emotionally negatively to uncertain situations (Buhr & Dugas, 2002).

- **Time Management Skills:** Using time efficiently and cost effectively in particular activities (Claessens et al., 2007).

CHAPTER II

LITERATURE REVIEW

2.1. Conceptual Framework

2.1.2. Attention Deficit and Hyperactivity Disorder Definition

“ADHD is a neurodevelopmental disorder defined by impairing levels of inattention, disorganization, and/or hyperactivity-impulsivity” (APA, 2022, p.36). Symptoms appear earlier in life in childhood and are quite permanent throughout the person's life (Adamou et al., 2013). According to APA (2022), preliminary characteristics of ADHD are inattention, hyperactivity and impulsivity in different stages. Symptoms come along with other deficits such as low management of emotion, and motivation, disruption in fine motor coordination, lower time management, frequent disruptive behaviors, irregular sleep habits, lower academic achievements, and impaired life quality (Fenollar-Cortes & Fuentes, 2016).

2.1.3. Causes of ADHD

ADHD has not been connected to a single cause, and there have been different hypotheses regarding it (Spencer et al., 2002). Initially, scientists had hypothesized that ADHD is caused by some brain injuries. They have realized that children with ADHD and individuals who had injury in the prefrontal region, which is the area of the brain just behind the forehead, had remarkably similar behavioral issues (Barkley, 2013). Both children and adults with prefrontal injuries display deficits in sustaining attention and the capacity of organizing behavior over time and impairments in emotion regulation, motivation, and inhibition (Barkley, 2006).

Experts have discovered that if one twin displays ADHD symptoms, the risk for the other twin displaying the symptoms is nearly 75-90% (Barkley, 2013). A review from

1991 to 2004 regarding molecular genetic studies of ADHD stated that there are vital connections on four genes in ADHD, which are D4 and D5 receptors, dopamine, and transporters of serotonin and dopamine (Bobb et al., 2006; Tripp & Wickens, 2009).

Apart from genetic factors, some environmental factors have been pointed out. According to Mick et al. (2002), exposure to alcohol or cigarettes during pregnancy is a cause for ADHD. Regarding the association of during pregnancy and increased risk of hyperactivity and inattention, Barkley (2013) emphasizes that the existence of two situations together is not evidence that one causes the other, so it is simply suggestive. Also, experimental evidence suggests that exposure to lead may be related to a greater risk of hyperactive and inattentive behaviors (Barkley, 2013).

2.1.4. Diagnostic Criteria of ADHD in Adults

In adulthood, to be diagnosed with ADHD, there must be persistent and present ADHD symptoms that began in childhood (Biederman et al., 1991; Millstein et al., 1997; Wilens et al., 2002). Whilst ADHD was primarily described as a disorder of overactivity, now inattention and hyperactivity are underlined as significant fundamental components of ADHD. According to DSM-5-TR (2022), ADHD diagnostic criteria are the continuing presence of inattention and hyperactivity-impulsivity, which interfere with functioning or development, as described by inattention or hyperactivity and impulsivity (APA, 2022). For inattention, six or more of the following symptoms should continue for at least 6 months to a degree that is inconsistent with developmental level and negatively impacts social, occupational, or academic activities (APA, 2022).

For older youth and adults (age 17 and older), at least five symptoms are requisite according to DSM-5-TR:

a. Often fails to give close attention to details or makes careless mistakes in schoolwork, at work, or during other activities (e.g., overlooks or misses details, work is inaccurate).
b. Often has difficulty sustaining attention in tasks or play activities (e.g., has difficulty remaining focused during lectures, conversations, or lengthy reading).
c. Often does not seem to listen when spoken to directly (e.g., mind seems elsewhere, even in the absence of any obvious distraction).
d. Often does not follow through on instructions and fails to finish schoolwork, chores, or duties in the workplace (e.g., starts tasks but quickly loses focus and is easily sidetracked).

e. Often has difficulty organizing tasks and activities.
f. Often avoids, dislikes, or is reluctant to engage in tasks that require sustained mental effort (e.g., schoolwork or homework; for older adolescents and adults, preparing reports, completing forms, reviewing lengthy papers).
g. Often loses things necessary for tasks or activities (e.g., school materials, pencils, books, tools, wallets, keys, paperwork, eyeglasses, mobile telephones).
h. Is often distracted by extraneous stimuli (for older adolescents and adults, may include unrelated thoughts).
i. Is often forgetful in daily activities (e.g., doing chores, running errands; for older adolescents and adults, returning calls, paying bills, keeping appointments) (APA, 2022, pp.68-69).

For hyperactivity and impulsivity: six or more of the following symptoms should be maintained for at least 6 months to a degree that is inconsistent with developmental level and that negatively impacts social, occupational, or academic activities (APA, 2022).

For older youth and adults (age 17 and older), at least five symptoms are requisite according to DSM-5-TR:

a. Often fidgets with or taps hands, or feet, or squirms in seat.
b. Often leaves the seat in situations when remaining seated is expected (e.g., leaves his or her place in the classroom, in the office or other workplace, or in other situations that require remaining in place).
c. Often runs about or climbs in situations where it is inappropriate. (**Note:** In adolescents or adults, may be limited to feeling restless.)
d. Often unable to play or engage in leisure activities quietly.
e. Is often "on the go," acting as if "driven by a motor" (e.g., is unable to be or uncomfortable being still for extended time, as in restaurants, meetings; may be experienced by others as being restless or difficult to keep up with).
f. Often talks excessively.
g. Often blurts out an answer before a question has been completed (e.g., completes people's sentences; cannot wait for turn in conversation).
h. Often has difficulty waiting his or her turn (e.g., while waiting in line).
i. Often interrupts or intrudes on others (APA, 2022, p.69).

2.1.5. ADHD in Adults

Till the 1970s, there was a common consensus that ADHD was overcome during adolescence, and in 1990s results of several longitudinal studies demonstrated that approximately half to two-thirds of kids with ADHD continue to exhibit symptoms into adolescence and adulthood (Resnick, 2005; Green & Rabiner, 2012). Thus, over the past few decades, greater attention has been paid to the persistence of ADHD into adulthood (Post & Kurlansik, 2012). Resnick (2005) underlines that hyperactivity symptoms decrease in adulthood. In contrast, impulsivity and remaining symptoms connected with executive functions become more prominent as age progresses, and the

desire for self-sufficiency increases. Likewise, youth with ADHD, adults with ADHD have a propensity to have cognitive deficits, especially executive functioning deficits which contain difficulties in encoding and manipulating information, driving, and problems with organization and time management (Barkley, 1997; Wilens et al., 2004).

Individuals who have a diagnosis of ADHD are at risk of experiencing academic, social, and emotional difficulties (Weyandt & Dupaul, 2008). Adult ADHD is associated with challenges in carrying out daily tasks, such as trouble organizing, planning, and wrapping up tasks (Barkley, 2007). Further, adults with ADHD had greater incidence of motor vehicle accidents, ongoing social impairments, and dysfunctions in occupational and vocational performance (Spencer et al., 2002). Adults with ADHD have a higher chance of being discharged from employment and often work in several jobs before finding a job in which they can thrive (Harpin, 2005). It is acknowledged that they face impairment in searching for a job or in job interviews. In employment, their attention problems lead to preventing boring tasks or missing out on materials (Adamou et al., 2013). Adults with ADHD experience more interpersonal difficulties with bosses and colleagues. Additionally, problems are caused by delay, discontinuity, excessive mistakes, and an inability to fulfill workloads. Furthermore, Barkley et al. (2006) stated a vigorous relationship between ADHD symptoms, and work impairment, as reported by the employer in various workplaces, including relationships with colleagues, supervisors, and customers; completing the appointments; punctuality and nonattendance; and managing responsibilities.

At home, relationship difficulties and separations are more common. Among the adults with persistent ADHD symptoms, there is significantly increased risk of substance abuse and drug (Biederman et al., 1998; Harpin, 2005). Lensing et al. (2015) stated significantly more moderate to severe problems in each area of life quality (i.e., self-care, instability, usual activity, restlessness, and anxiety/depression problems) compared to older adults with ADHD, compared to population norms. Brod et al. (2005) described how symptoms of inattention in adults with ADHD may result in poor time management, incapacity to complete a task, and disorganization or procrastination, all of which have an adverse effect on work production and everyday functioning. Along with this statement, several studies have found a relationship

between the severity of ADHD symptoms and a lower quality of life during childhood (Danckaerts et al., 2010), early and middle adulthood (Mick et al., 2008), and later in life (Lensing et al., 2015). Prior research regarding ADHD in younger adults has demonstrated that impairments of executive functioning are at the core of the disorder; thus, ADHD symptoms are seen as the result of executive functioning defects (Boonstra et al., 2005; Thorell et al., 2019).

2.1.5.1. Executive Functioning

In the case of ADHD, the term executive function refers to a broad variety of main cognitive tasks that have a critical role for all human beings in managing various daily life tasks. A model of executive functions (EF) contains the six groups of cognitive functions, which are likely to be disrupted in individuals with ADHD: focus, effort, activation, memory, emotion, and action (Brown, 2009). In youth and adults, ADHD is specified by plenty of problems connected with executive function difficulties, which result in struggles in the management of daily life (Resnick, 2005). Barkley (1997) suggested a concept of executive dysfunctions, which is in the prefrontal cortex, that explains the cognitive and behavioral impairments related to ADHD. According to Barkley's model, there are five main executive functions that facilitate individuals to recognize and control their actions to accomplish a goal: response inhibition, verbal and nonverbal working memory, reconstitution, self-regulation of motivation and mood (Barkley 1997; Spencer et al., 2002). Barkley has claimed that among these five executive functions, response inhibition is the most clearly impaired one, which may result in deficits in social and psychological skills related to other executive functions (Barkley, 1997). According to prominent hypotheses on ADHD, underlying deficiencies in the attentional components of alerting, orienting, and executive control may be the cause of impulsivity, hyperactivity, and inattention (Posner & Raichle, 1994; Barkley, 1997; Swanson et al, 1998). Woods et al. (2002) evaluated research measuring EFs in individuals with ADHD, and concluded, “that adults with ADHD demonstrate subtle impairments on select measures of attention and executive functions, auditory-verbal list learning and complex information processing speed relative to normal controls” (p.12). Many individuals with ADHD emphasize considerable chronic difficulties in at least some parts of each of the six clusters in the table below that were identified by Brown. Corruptions in these groups of cognitive functions tend to appear together and seem clinically associated with each other (Brown, 2008).

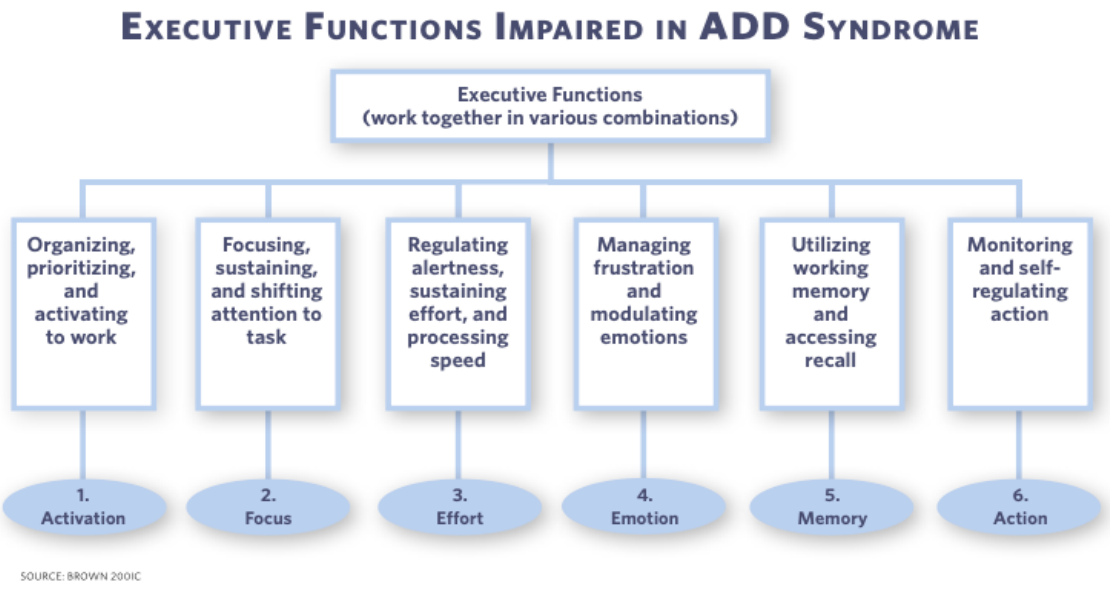


Figure 2.1. ADD: The Unfocused Mind in Children and Adults

Reference: Brown, 2008

2.1.6. Intolerance of Uncertainty

Uncertainty is unavoidable, and coping with uncertainty is part of daily life. Real life consists of lots of uncertainty, and it is necessary to accept some uncertainties to pursue psychological functioning (Yang et al., 2021). The term IU has been used interchangeably for many years since it is based on the concept of intolerance of ambiguity (Grenier et al. 2005). Currently, IU is considered a cognitive bias that affects the perception, interpretation, and response of individuals to uncertain situations cognitively, behaviorally, and emotionally (Dugas et al., 2005). IU is the disposition to evaluate ambiguous situations as threats and lead to negative consequences, resulting in anxiety and hardship (Garami et al., 2017). In another definition, IU is defined as the tendency to evaluate uncertainty as threatening (cognitive), causing worry, anxiety, and discomfort (affective), and as a situation that should be avoided or rejected (behavioral), even though the probability of its occurrence is low (Geçgin & Sahranç, 2017). Thus, individuals with IU tend to have a negative reaction to uncertain situations and the absence of information (Yang et al., 2021).

IU has been associated with anxiety disorders, and anxiety in the situation of uncertainty can result in nonadaptive behaviors, including impulsive decision-making

(Garami et al., 2017). Dugas and colleagues (2005) stated that people with high intolerance for uncertainty are sensitive to uncertainty. In addition, Jensen and colleagues (2014) claim that people with high levels of intolerance for uncertainty have less confidence in decision making in various situations. According to Ladouceur, Talbot, and Dugas (1997), individuals with high sensitivity to intolerance of uncertainty require additional information before making a choice. This circumstance can be seen as evidence of a lack of self-confidence and of maintaining those decisions over time (Jensen et al., 2014; Yıldız & Eldeleklioğlu, 2020). Research revealed that high intolerance of uncertainty in the decision-making process may be best explained with an increase in emotional reactivity and anxiety both during and after the decision-making process, rather than characterized by visible and behavioral observations (Jacoby et al., 2014; Yıldız & Eldeleklioğlu, 2020).

There is a small amount of research that examines impulsivity and IU. Anxiety and impulsivity have been formed as reverse constructs, and the risk aversion hypothesis proposes that being anxious or having a tendency to anxiety leads to making less risky decisions to prevent possible negative outcomes (Garami et al.,2017). Also, there is proof linking anxiety to heightened impulsivity. When exposed to disturbing visuals, highly impulsive participants have been shown to exhibit a reduced startle reaction, as a measure of the fight/flight response. According to research on anxiety disorders, people with social anxiety and obsessive-compulsive disorder tend to be risk-takers and novelty-seekers. Additionally, impulsivity significantly predicted the diagnosis of GAD and it is connected to the severity of GAD. Furthermore, there is proof that IU might encourage impulsive actions. Increased psychophysiological sensitivity and heightened startle reflexes in anticipation of an unforeseen unpleasant event have been linked to fear of uncertain future events (Garami et al, 2017). IU is associated with cognitive “myopia,” as stated by impulsive decision-making, which is acknowledged as delay discounting. To exemplify, individuals who exhibit high IU tend to choose small and prompt rewards over large and postponed ones, because waiting in a situation of uncertainty can have a torturous effect on them (Luhmann et al., 2011; Yang et al., 2021). Moreover, according to a study, impulsive people may be primarily driven by a desire for instant gratification, even if it means accepting the uncertainty of a lottery, which leads them to pick minor and prompt benefits over bigger and postponed ones (Bialaszek et al., 2015).

Most of the research examining IU has focused on the cognitive aspect of the construct, such as underlying worry; however, several definitions of IU demonstrate that not only cognitively, but the construct is also characterized by behavioral reactions to uncertain situations (Thibodeau et al., 2013). A study that looked at the relationship between IU and performance on a writing task, a complex activity that involves motor, visual, and sensory coordination, found that writing performance was correlated with accuracy (i.e., words per 100 words) and speed (i.e., words written per minute). Study results show that IU is linked to noticeably worse typing task performance. Although the association between IU and other typical behaviors requires further investigation, IU may contribute to behavioral patterns that may have unfavorable outcomes (e.g., lower work performance under time constraints) (Thibodeau et al., 2013).

2.1.6.1. Intolerance of Uncertainty of Individuals with ADHD

IU has been dominantly searched in internalizing disorders. Carleton et al. (2012) investigated IU with individuals with anxiety disorders. Also, IU has been studied in other emotional disorders, such as obsessive-compulsive disorder, posttraumatic stress disorder, and major depressive disorder (Tolin et al., 2003; Gentes and Ruscio, 2011; Fetzner et al., 2013). However, there is a minority of research that examines IU in externalizing disorders. ADHD is considered an externalizing disorder, which is usually associated with the occurrence of emotional struggles (Gramszlo, 2018). Considering the relationship between IU and emotion dysregulation emerged with internalizing disorders, due to incapacity in management and coping of intense, and frequent negative emotions, youngsters with ADHD may also show impairment in IU (Gramszlo, 2018).

Studies regarding neuroimaging ensure that brain regions which are involved in executive functioning and cognitive control tasks are activated by ambiguity, namely the prefrontal cortex, the post-parietal cortex, and the anterior cingulate cortex (Volz et al., 2003; Huettel et al., 2005; Stern et al., 2010; Gramszlo, 2018). It is underlined that people may solve uncertainty in two ways, which are through increase in emotion and control of the emotion cognitively. Emotion dysregulation is seen as a basic component of ADHD; thus, individuals with ADHD may show impairment in functioning and inability in completing complex tasks due to uncertainty feelings

(Gramszlo et al., 2018). The recent results suggest that IU is connected to emotion dysregulation in general rather than being a risk factor for developing a specific disorder. Similar deficits in emotional regulation and control are central to the diagnosis of ADHD (Shaw et al., 2014; Gramszlo et al., 2018). The current study supports that IU occurs among children experiencing emotion dysregulation, regardless of whether symptoms are mainly internalizing or externalizing (Gramszlo et al., 2018).

2.1.7. Time Management Skills

Throughout human history, time has been stressed as a phenomenon that moves continuously from beginning to end. Numerous scientists have described this phenomenon. According to Boslough (1990), Einstein described time as a dimension that gives events meaning and arranges them according to their occurrence, and Newton defined it as a phenomenon that moves constantly in one direction. Time is “a process which goes on continuously without the control of people and through which events occur from the past to the present and follow each other toward the future” (Smith, 1998, p. 24). According to the Turkish Language Association, time is "the duration in which a task or a being passes or will pass" (TLA, 2021). The Prophet of Islam, Hz. Mohammed, who was ranked first among the world's most important persons (Hart, 1978), highlighted the value of time by saying, "He whose two days are equal, is a loser." Making the most of your time is therefore the most crucial thing to do (Scoot, 1997).

The proper use of time is a significant variable for individuals working in different fields to reach their aims. The necessity for people to learn how to efficiently and successfully manage their time gave rise to the concept of "time management” (Tanrıöğen & Işcan, 2009). Edward Hall (1959) states that the concepts of time, time perception, and time management are dependent on the culture which we belong to. Thus, there is no absolute definition of time management. The literature review shows that the descriptions of time management are not clear, even though several different versions of the concept have been formed; in each study, the researchers create their own explanation of time management (Alvarez Sainz et al., 2019). Time management is the daily implementation of programs and plans by incorporating them into day-to-

day activities (Cüceloglu, 1995). Britton and Tesser (1991) suggest a time-use model that includes three domains, which are short-term planning, long-term planning, and time management attitude. McKenzie (1997) points out that it is related to the control of the highest level of anxiety and stress. Individuals first identify their requirements and goals before prioritizing them, according to Lakein's (1973) explanation of time management. Specific activities include prioritizing the tasks required to meet requirements or wants and establishing goals to achieve them. In line with Lakein's approach, Macan, Shahani, Dipboye, and Phillips (1990) identified three time management factors: goal and priority setting; time management mechanisms (such as creating lists); and a predisposition for organization.

2.1.7.1. Time Management Skills of Individuals with ADHD

Individuals with ADHD generally report difficulties in time management. This problem can affect the treatment of ADHD. To exemplify, delay, negligence, or failure could arise. Time management is stated by Claessens et al. (2007) as behavior that uses time efficiently and cost-effectively in particular activities. Thereby, time management is closely linked to work, job satisfaction, academic achievement, and to stress in ADHD (Claessens et al., 2007; Mette, 2023). Individuals with ADHD experience under-estimation or over-estimation of time, which results in temporal myopia. Performing well in time impasse is associated with working memory and future prediction, which results in obtaining goal-oriented behavior (Barkley, 2011). The cognitive energetic approach is another statement for time management deficits in ADHD individuals, which defends that impaired self-regulation is a reason for deficient time processing (Jonkman 2005; Moradi Siah Afshadi, 2023). According to Wiersema et al. (2005), this deficiency can be explained as a mismatch between the arousal of individuals and the stimulation that the task offers. Overall, professionals identify that individuals with ADHD have further problems in self-awareness and monitoring, working memory, considering the future outcomes of their actions, planning, problem solving, time management, following rules and instructions, and self-regulation of emotion and motivation. All these symptoms are classified under executive functioning, which refers to the cognitive abilities people require for self-regulation (Barkley, 2013).

2.2. Previous Research Studies and Key Findings

This part outlines the studies on intolerance of uncertainty and time management skills of adults. Several experimental studies have been presented to examine the research findings in the field. Some of the studies only examined time management with individuals with ADHD. For instance, Moradi Siah Afshadi et al. (2024) examined the structure of executive functions, including time management of university students with ADHD in Iran. One thousands three hundred sixty-eight students participated in the screening of ADHD symptoms based on the ADHD scales of DIVA-2 Diagnostic Interview for ADHD in adults (DIVA; Kooij & Francken, 2010) and Barkley Adult ADHD Rating Scale—IV (BAARS-IV; Barkley, 2011). Finally, 211 college students participated in the study. Barkley Deficits in Executive Function Scale (BDEFS; Barkley, 2011) was implemented to evaluate time-management, problem-solving, and behavioral inhibition. Results indicated that not all EF factors contribute equally to ADHD. In ADHD students, intrinsic motivation and emotion regulation had much more significant and direct effects on problem solving, behavioral inhibition, and time management. Between time management and ADHD symptoms of attention, hyperactivity, and impulsivity, a significant correlation was found with the values of 0.84, 0.82, and 0.74. Consequently, results indicated that as attention deficit, and hyperactivity/ impulsivity symptoms increase, the time management deficit also increases.

In another study, Fabio & Capri (2017) assessed the executive functions of adults with and without ADHD by using measurements of attention, response inhibition, and organization & planning. The sample of the study included 46 participants with ADHD (n=23) and without ADHD (n=23). The Stroop Test, Tower of Hanoi, and d2 Attention tests assessed attention, response inhibition, and planning, and organizing. Following their expectation, when compared with the control group, in the "incongruent condition" of Stroop Test, the ADHD-C group indicated significantly lower scores. There was also a significant effect for the "time of execution" parameter. While the ADHD group exhibited significantly higher scores than the control group, in the "number of moves" parameter, in the "violations of the rule" parameter, result was not significant. As a result, the ADHD group demonstrated impairment in performance of

response inhibition and disorganization and planning tasks. In the Tower of Hanoi, a statistically significant difference was observed from the beginning. Findings indicate that individuals with ADHD face difficulties in representing the task mentally and in developing a strategy for resolution. It is also stated that in the Stroop test, individuals with ADHD displayed impaired performance. Even though the ADHD group performed more poorly than the TD group, results revealed no significant effects in the d2 Attention Test. As it was expected and consistent with previous studies, which examine adults with and without ADHD, especially in response inhibition and disorganization/planning tasks, individuals with ADHD showed impaired EF.

Wennberg et al. (2018) conducted an experimental study regarding how time processing skills training (TPA) and time assistive devices (TAD) as a multimodal intervention influence TPA and daily time management (DTM) of 38 youngsters in Sweden who have time difficulties and ADHD, in comparison to solely educational interventions. To assess time management, time orientation, and time perception, the Kid for assessing time-processing ability (KaTid-Child) was implemented. To measure parents' reports on kids' DTM, the Time-Parent scale questionnaire was designed, and the Time-Self-rating scale was implemented to understand children's experiences with DTM. According to TPA results, all children exhibited improvement; however, in the intervention group, the improvement was more significant than in the control group ($p=0.019$). In time perception metrics, the intervention group showed significant improvement ($p = 0.046$), whereas the score of children in the control group decreased. In time orientation, all kids showed an increase. An increase in the intervention group was significantly larger than in the control group ($p = 0.010$). In terms of time management, both groups increased slightly, and youngsters in the intervention group increased more than the control group, but not in a significant way. According to parental ratings, in both groups, DTM has increased. However, parents of the intervention group reported significantly more improvement ($p=0.011$) when compared to the control group. This study shows that only educational intervention is insufficient to improve daily time management and time processing ability in children with ADHD. Children who struggle in DTM, despite medication, likely require training and compensation by using TAD, as well as interventions that aim to address time and planning difficulties in a more specific way. Likewise, the study of Wennberg et al. (2018), Nakashima et al. (2021) conducted an experimental study to investigate

the effectiveness of a recent sophisticated program, which centers on time management designed as gCBT for adults with ADHD. It is hypothesized that the CBT group (n=19) would represent significant improvement compared to the TAU group (n=19). To assess the improvement, the Conners' Adult ADHD Rating Scale (CAARS) inattention memory scale of both self- reported and family-reported (CAARS-Ob-IN; Conners et al., 1999; Erhardt et al., 1999) were utilized. The Clinical Global Impression assessment of illness severity (CGI-S; Guy, 1976) was utilized to assess participants' time management skills at the pre-treatment level. In the control group, both pharmacological and non-pharmacological treatments were given to participants, and 120-minute group sessions were held once a week. A clinical psychologist directed every session as a group leader with co-leaders of nurses and social workers. The program was structured in three stages. In the first stage, the goal was to improve time management skills by discussing why people with ADHD struggle in managing time and the necessary skills to manage time in an effective way. In the second stage, discussions expanded and were detailed by including management of a whole day. Lastly, the goal was overcoming procrastination and gaining overall time management skills such as scheduling. According to the intervention results, significant improvements were observed in inattention (CAARS-Self-IN and CAARS-Ob-IN) and symptom severity (CGI-S) after the intervention. On the CAARS-Self-IN and CAARS-Ob-IN, a significant effect was observed in the gCBT program. The gCBT program showed a significant effect on the CGI-S and Sheehan Disability Scale as well. Considering the effect size of the gCBT program, it showed moderate to large effects on symptom severity and functioning. All in all, the effects of gCBT on inattentive/ memory and work performance were clinically significant with Cohen's d > 0.20. Additionally, in gCBT, the score of inattentive /memory was significantly lower than that of TAU. Improvement in the functionality level of the gCBT program was greater than that of TAU. This study provided a new understanding that time management interventions were effective for adults. In another study, Solanto et al. (2010) searched the effectiveness of meta-cognitive therapy in developing planning, organization, and time management with 88 individuals with ADHD. In the diagnosis process, Conners Adult ADHD Diagnostic Interview of DSM-IV (CAADID; Conners et al., 2001) was utilized. Before and after the treatment, the On Time Management Organization and Planning Scale (Solanto et al., 2010), as well as other scales in line with the study concept, were administered. On the Brown and the Time Management

Organization and Planning scale, significant change was observed from pre to post treatment assessments for both supportive and meta-cognitive therapy groups; however, the change score difference between groups was either not significant in Brown scales or was marginally significant in Time Management Organization and Planning scale. All in all, the results of this study show that metacognitive therapy ensures significant efficacy for ADHD patients in terms of inattention symptoms, which reflects tasks of planning, organization, and time management.

Consistent with the current research purpose, a few studies focused on time management and intolerance of uncertainty as a primary focus. For instance, Yang et al. (2021) investigated whether self-control serves as a mediator, a moderator, or both between future time perspective and intolerance of uncertainty. 677 (514 women and 163 men) Chinese students completed a paper-and-pencil test. The Chinese version of the General Future Time Perspective Scale was developed by Song (2004) to assess the future time perspective. To measure the Intolerance of uncertainty, the Chinese version of Intolerance of Uncertainty Scale was composed by Dai et al. (2013). According to results, consistent with what they predicted, FTP has a negative and significant correlation with IU, whereas it had a positive and substantial association with self-control. Results revealed that high FTP was related to greater self-control, which predicts lower IU. However, there was no significant and direct effect between IU and FTP. This study reveals that self-control has a major role in the relationship between FTP and IU; however, results indicated that self-control has a mediating function rather than a moderator effect.

Maden (2024) aimed to evaluate the relationship between time management and intolerance of uncertainty in a different condition, Generalized Anxiety Disorder (GAD). 131 people who have a diagnosis of GAD and 120 people who are CG were joined to study. Intolerance of Uncertainty Scale (IUS; Sarı & Dağ, 2009) and Time Management Inventory (TMI) were applied. In the GAD group, when compared to the control group, IUS total score and its subdimensions were significant and higher (t values vary between 8.809 and 5.473). It shows that the GAD group has a lower tolerance for uncertainty and that uncertainty situations were more challenging for these individuals. Moreover, the GAD group exhibited higher scores than the control group in the TM total score and its subdimensions (TP, TA, TW) (t values vary

between 5.637 and 1.344). This finding suggests that individuals in the GAD group may have more problems with time management or that their attitudes towards time may be more problematic. High t values on all scales indicated that the difference between groups was significant. All comparisons were important at the $p<0.05$ level. The correlation coefficient of IU total and TM scores was $r= 0.248$, $p<0.01$, so indicating a positive relationship, but the relationship is weak. Overall, in this study, interestingly, anxiety and depression symptoms had a positive correlation with TM skills in the PG, and it is commented that this may arise due to partial savings of the antidepressants' effects taken by individuals with GAD.

Similarly, IU had also been measured in children with ADHD as well as generalized anxiety disorder. In their study, Gramszlo et al. (2018) aimed to investigate levels of IU in ADHD, which is known with emotion regulation difficulties. Ninety-three children participated in the survey. Participants were 36 anxiety disorders, 28 ADHD, and 29 unaffected children. Sample 1 included 36 children with anxiety diagnoses and 15 children without anxiety or ADHD. Children completed the Intolerance of Uncertainty Scale (IUS; Freeston et al., 1994) to assess their feelings of IU. It was hypothesized that children with anxiety disorders or ADHD would exhibit higher levels of total IU, prospective IU, and inhibitory IU in comparison to kids who are not affected; and it is thought that because anxiety disorders are anticipatory, their prospective IU will be significantly higher than that of children with ADHD. Compared to children who were not affected, children with ADHD and anxiety disorders demonstrated higher levels of IU, and youngsters with ADHD exhibited similar levels of inhibitory IU as youngsters with anxiety disorders.

Powell et al. (2023) investigated the relationship between low levels of tactual perception, anxiety, IU, and sensory reactivity in children who have autism with ADHD diagnosis and without ADHD diagnosis. In the study, 38 children between the ages of 8 and 12 were included. Of them, 27 children also had ADHD, and 11 children just had autism. To measure IU, the Intolerance of Uncertainty Scale of Children (IUSC), which was developed by Comer et al. (2009), was administered. Correlation analysis demonstrated that child-reported IU and parent-reported anxiety were positively related with sensory reactivity (parent-reported) ($R = .40$; $p=.013$). Also, between IU and anxiety, a positive correlation was found ($R=.48$; $p=.002$). Mediation

analyses showed that between parent-reported sensory reactivity and anxiety, child-reported IU had significant and complete mediation effects (p = .02). In addition to that, between IU and sensory reactivity, a partial mediation effect of anxiety was found (p= .02). All in all, results revealed that children who have autism, sensory reactivity influence on anxiety seemed to be exactly mediated by IU. High anxiety also contributed to high IU. The findings demonstrated that in the presence of increased sensory reactivity, anxiety and IU may have mutually reinforcing factors. The indirect effect was maintained significantly; thus, it pointed out that ADHD symptoms did not affect anxiety and sensory reactivity. The study revealed that in children who have autism (with or without ADHD), sensory reactivity had a fully mediating role on the association between tactual perceptual alterations and anxiety, and between tactual perceptual alterations and IU.

Moreover, Garami et al. (2017) analyzed the relation between impulsivity, IU, and anxiety in individuals who are dependent on opioids. It was supposed that individuals who are rely on opioids would display higher IU when compared to the comparison group, and anxiety would have a mediating role between IU and impulsivity. In the study, 183 participants were included (114 patients, 69 healthy individuals). Patients who were getting treatment for heroin addiction by using opioid medication were recruited from a hospital in Australia. Opioid dependency was verified based on urinalysis and the criteria of DSM-IV. The comparison group participants were recruited among students from the Sydney community with advertisements and snowball sampling methods. Intolerance of Uncertainty Scale (IUS; Buhr & Dugas, 2002) used in the study. It was discovered that anxiety had a mediating role between IU and impulsivity; it indicates that negative beliefs about uncertainty may not have a major role in impulsivity. Only in the patient group, a significant and positive correlation was found between impulsivity and IU. It demonstrates private interaction between impulsivity and IU in individuals who are dependent on opioids. IU and impulsivity may be combined in an additive way to develop risk for addiction to opioids.

In another study, Probert-Lindström et al. (2023) investigated the relationship between total scores on self-report measures of distress tolerance, anxiety sensitivity, intolerance of uncertainty, and symptom severity in adults. All newly admitted and

recently registered patients at the Lund Polyclinic who spoke Swedish fluently were invited to participate. All 91 people who approved the study were included. Participants consisted of 51 men and 40 women aged 18 to 76 years. In addition to the other scales in line with the research purpose, the Intolerance of Uncertainty Scale (IUS-12; Carleton et al., 2007) was used in the assessment process. Between total scores and ages, there was no significant correlation (DTS: r=0.04; ASI-3 r=-0.09; IUS-Short Form r=-0.15). There was no significant difference between men and women in the IUS. Overall, there were no significant differences in the IUS between the participants, whether they were currently receiving or had received or had not received previously, any form of medication, or psychotherapy, or not. Findings demonstrate that low tolerance for uncertainty, high levels of anxiety sensitivity, and low levels of distress tolerance were each related with higher levels of symptom severity, and largely irrespective of whether they have current diagnostic situation of any depression, anxiety, ADHD, bipolar or any personality disorder or not, in patients who are recruited from routine psychiatric care.

Moreover, Sagone & Indiana (2022) investigated the influence of intolerance of uncertainty and decision-making types on procrastination during the COVID-19 pandemic. 209 Sicilian students from Catania University in Italy were included in the study. The Intolerance of Uncertainty Scale (IUS-12; Bottesi et al., 2015) was applied to participants. First-year students showed high levels of prospective IU (M=19.02, SD=5.8) and inhibitory IU (M=12.8, SD=5.1). This meant that even if freshmen were likely to procrastinate their decisions and display low tolerance of the uncertainty, most of them avoided transferring to others their choices and carrying out tasks or academic activities. When samples were divided using a split method according to DMS, it was found that 54.1% of them were low procrastinators and 45.9% of them were high procrastinators. Results indicated that procrastination was positively related to prospective (r=.390) and inhibitory (r=.515) IU. Thus, the more they procrastinate in their decision making, the more they exhibit high IU. The DMS and two components of IU were significantly correlated with each other. In the context of the general hypothesis, multiple regression analysis showed that doubtfulness, and inhibitory IU had a positive effect on decisional procrastination ($p<.001$). To conclude, this study revealed that first-year students with high scores in the IU procrastinate in their decisions more. When compared to others, it shows that the more the first-year

students were involved in undesirable, threatening, or doubtful situations, whether the possibility of a negative event happening, the more they tend to delay their decisions about events, courses, or activities.

Geçgin & Sahranç (2017) examined the correlation of psychological well-being and intolerance of uncertainty with 426 undergraduates. Gender differences, income status, and perceived parental attitudes were also investigated. Intolerance of Uncertainty Scale (IUS-12; Sarıçam et al., 2014) and Personal Information Form were used during the process. According to the results, a significant and negative relationship was found between well-being and intolerance of uncertainty (p=-.247). There were no significant differences in the IU scale in terms of gender differences ($p > .05$). There was no significant difference between perceived income status and mean IU scores ($p>.05$). Between students' total IU and perceived parental attitudes, statistically significant differences were found. Students who had thought their parental attitudes were protective exhibited higher IU scores than those who perceived parental attitudes as democratic. The results indicated that as IU score increases, the score of psychological well-being in six sub dimensions (self-determination, environmental mastery, self-acceptance, positive social relationships, purpose in life, and individual development) decreases. In accordance with that, students with high IU total scores have low psychological well-being scores as well; thus, a negative relationship was found between IU and psychological well-being.

To conclude, when previous studies are examined about time management and intolerance of uncertainty in the literature, it is striking that intolerance of uncertainty has been extensively studied in the context of anxiety, particularly because it is associated with anxiety (Garami et al., 2017; Powell et al., 2023; Probert-Lindström et al., 2023). It has been examined in the context of psychological well-being by Geçgin & Sahranç (2017) and in the context of decision-making and procrastination by Sagone & Indiana (2022). In the context of ADHD, IU has been investigated in kids in the study of Gramszlo et al. (2018). When previous studies are examined regarding time management, there have been some studies that included time management under the executive functioning title, which are the studies of Fabio & Capri (2017) and Moradi Siah Afshadi et al. (2024). There are also some experimental studies by Wennberg et al. (2018) and Solanto et al. (2010), which focused on time management. Consistent

with the purpose of this study, a few studies focused on time management and intolerance of uncertainty, which are the studies by Yang et al. (2021) and Maden (2024). In short, while there are many studies on ADHD regarding time management, there is a paucity of research regarding the ADHD population in the context of intolerance of uncertainty.

CHAPTER III

METHODOLOGY AND IMPLEMENTATION

3.1. Research Design

The research was a quantitative study. The survey research method was used to collect data from the respondents. All surveys were delivered to participants online. Because it is hard to reach the population, a snowball sampling method is used. Inclusion criteria are being a volunteer, an age range of 18-45, and having an ADHD diagnosis or exhibiting symptoms. Exclusion criterion is being under 18 or above 45 years of age, exhibiting low ASRS scores, and giving wrong answers to control questions (etc. Please answer “always” in this question).

3.2. Variables

For this study, the predictor variable was ADHD symptoms, which are inattention and hyperactivity/ impulsivity symptoms. Outcome variables were time management skills and intolerance of uncertainty.

3.3. Sampling Techniques and Participant

As a non-probability sampling method, a snowball sampling was used. Snowballing is the most advantageous sampling method when it is hard to recruit the required participants (Gay et al., 2012). Since it would be difficult to reach the population, the participants were determined by announcing it to the close circle and by letting people spread their circle. Table 1 included the sociodemographic characteristics of the participants. Age, gender, marital status, profession, and the history of ADHD diagnosis were included.

Table 3.1. Sociodemographic Information of the Sample

	N	%
Age		
18-24	169	39.0
25-34	215	49.7
35-45	49	11.3
Total	433	100
Gender		
Female	385	88.9
Male	48	11.1
Total	433	100
Marital Status		
Married	84	19.4
Single	349	80.6
Total	433	100

During the data collection process, 738 participants were reached. Of them, between an age range of 18 and 45, 434 individuals were included in the study. When the age distribution of participants was analyzed, 39.03% of the participants (n = 169) were in the 18-24 age group. Most of the participants, 49.65% (n = 215), were in the 25-34 age group. The minority of the participants, 11.32% (n = 49), were between the ages of 35 and 45. When the gender distribution is analyzed, 88.9% (n = 385) were female participants and 11.1% (n = 48) were male participants. When the marital status distribution is analyzed, 19.40% (n = 84) of the participants were married, and 80.60% (n=349) were single participants.

3.4. Data Collection Procedures and Tools

In the data collection procedure, a survey research method was used. Personal information form, the Turkish Version of Adult ADHD Self-Report Scale (ASRS; Doğan et al. 2009), Turkish version of short version of the Intolerance of Uncertainty Scale (IUS-12; Sarıçam et al. 2014), and Time Management Questionnaire (TMQ; Alay & Koçak 2002) were included in the study. An informed consent form was included at the beginning of the survey. The Personal Information form was created by the researcher, and the researcher asked about age, gender, marital status, educational level, profession, and the history of ADHD and anxiety diagnosis. All

participants joined voluntarily, and any procedures were applied that would violate the participants' privacy. Study procedures were approved by the Institutional Review Board of Ibn Haldun University with a decision number of 2025/05-04. The researcher created a Google Form for data collection. The data collection process took 13 days. The survey was also shared on various social media platforms and attracted great attention. In total, 738 participants filled out the survey. Participants under 18 and above 45, participants who do not exhibit ADHD symptoms, and who respond falsely to control questions (such as "Please answer the option of 'rarely' in this question) were excluded from the study sample. Finally, 433 people who exhibit ADHD symptoms were included in the analysis process. All statistics were made using the SPSS program.

3.4.1. Personal Information Form

The personal information form was developed by the researcher to determine the sociodemographic characteristics of the participants. Name of the participants was not required to protect the privacy of the respondents. Age, gender, education level, marital status, professional status, history of ADHD diagnosis, and anxiety diagnosis were asked in the personal information form.

3.4.2. Adult Attention Deficit and Hyperactivity Self-Report Scale (ASRS)

The ASRS is a four-dimensional scale consisting of 18 items developed by Kessler et al. (2004) and adopted into Turkish by Doğan et al. (2009). The scale consists of two subscales, which are "attention deficit" and "hyperactivity/ impulsivity", and each subscale comprised of 9 questions. Questions are intended to determine the frequency of symptoms in the last 6 months. Answers range from 0 to 4 with the following representations: 0 =never, 1 = rarely, 2 = sometimes, 3 = usually, 4 = very often. Six questions are in part A of the scale, and the remaining twelve questions are in part B of the scale. Those who score 24 points or more from any of the two subscales are considered "high probability with ADHD"; those with 17-23 points are considered "possibly ADHD" (Doğan et al., 2009). It was stated that those who scored 0-16 points did not have ADHD (Doğan et al., 2009). Among the assessments for ADHD, the World Health Organization (WHO) considers the Adult ADHD Self-Report Scale

(ASRS) to be more useful because it includes questions assessing 18 symptoms based on DSM-IV (Kessler et al., 2005; Kessler et al., 2008; Adler et al., 2006). Thus, this scale was found appropriate to use in this study. The Cronbach's alpha internal consistency coefficient of the scale is 0.88. Calculated for subscales, Cronbach's alpha values are 0.82 for "attention deficit" and 0.78 for "hyperactivity/ impulsivity" (Doğan et al., 2009). For the current study, the Cronbach's alpha internal consistency coefficient of the total scale, attention deficit, and hyperactivity/ impulsivity were 0.84, 0.78, and 0.80, respectively.

3.4.3. Intolerance of Uncertainty Scale (IUS)

IUS consists of 12 items developed originally by Carleton, Norton, & Asmundson (2007) and adopted into Turkish (Belirsizliğe Tahammülsüzlük Ölçeği-BTÖ) by Sarıçam et al. (2014). The psychometric properties of the scale were examined using test-retest, internal consistency, explanatory and confirmatory factor analysis, and criterion-related validity methods (Sarıçam et al., 2014). The items contain two subscales, which are "anticipatory anxiety (from 1 to 7 items)" and "inhibitory anxiety (from 8 to 12 items)". There are no reverse-coded items in the scale (Sarıçam et al. 2014). The scales both give subscale score and total scores. The scores range from 12 to 60. The increased scores represent a high level of intolerance to uncertainty. The Cronbach's alpha internal consistency coefficient of the total scale is 0.88 (Sarıçam et al., 2014), whereas it was 0.84 for "anticipatory anxiety" and the score was 0.77 for "inhibitory anxiety" (Sarıçam et al., 2014). For the current study, the Cronbach's alpha internal consistency coefficient of the total scale was 0.92.

3.4.4. Time Management Questionnaire (TMQ)

The TMQ consists of 27 items and was adopted into Turkish by Alay & Koçak (2002). The original inventory had 35 items. During the adaptation process into Turkish, some items were unsuitable for our country due to cultural differences, and the number was reduced to 27 items by Alay and Koçak (2002). Validity of the survey is determined by internal and structural validity (Alay & Koçak, 2002). The questionnaire is a 5-point Likert scale. Responses under each item includes the options of always = 5, frequently = 4, sometimes = 3, infrequently = 2 and never = 1 (Alay & Koçak, 2002).

Higher values on the TMQ matched with better time management practices. TMQ has three subscales, which are “Time Planning”, “Time Attitudes”, and “Time Wasters” (Alay & Koçak, 2002). The Cronbach alpha internal consistency coefficient of the total scale was 0.87 (Alay & Koçak, 2002). For the current study, the Cronbach alpha internal consistency coefficient of the total scale was 0.83.

3.5. Data Analysis Procedures

For the data analysis, the SPSS program was used. Before starting the data analysis procedures, all data were examined in a detailed way and necessary exclusions were made. Participants who were out of the age range, those with low ADHD symptoms, and those who gave incorrect answers to control questions (such as “Please answer the option of ‘rarely’ in this question) were excluded from the study sample. The skewness and kurtosis values of the variables were between -2 and +2, which supports the normal distribution. Pearson’s correlation was used in the correlation analysis. To answer the first and the second research questions (What is the level of intolerance of uncertainty of individuals with ADHD symptoms? & What is the level of time management skills of individuals with ADHD symptoms?), mean, standard deviation, minimum, and maximum values were assessed. To answer the third research question (What is the relationship between intolerance of uncertainty and time management of individuals with ADHD symptoms?), Pearson correlation analysis was used. To answer the fourth and fifth question (Do ADHD symptoms of inattention and hyperactivity/ impulsivity predict time management skills of individuals? & Do ADHD symptoms of inattention and hyperactivity/ impulsivity predict intolerance of uncertainty of individuals?), multiple linear regression analysis was used.

CHAPTER IV

FINDINGS

In this section, which includes the study's findings, analysis results conducted by SPSS are given. Initially, sociodemographic information of the sample is provided. Descriptive statistics including the age, gender, marital status, and the scales' scores of the participants are presented. Then, Pearson Correlation and multiple linear regression analysis results were given, which assessed the main research questions of the study.

4.1. Descriptive Statistics

Table 4.1. Descriptive Statistics of Scale Scores

Scales	N	Mean	SD	Min	Max	Skewness	Kurtosis
ASRS	433	46.36	10.312	22	71	.100	-.731
ASRS_1	433	24.40	5.788	5	36	-.268	-.173
ASRS_2	433	21.95	6.401	6	36	.020	-.455
IUS	433	45.99	10.084	15	60	-.666	-.092
TMQ	433	76.41	15.004	39	118	.068	-.281

ASRS: Adult ADHD Self-Report Scale
ASRS_1: ASRS Inattention Subscale
ASRS_2: ASRS Hyperactivity & Impulsivity Subscale
IUS: Intolerance of Uncertainty Scale
TMQ: Time Management Questionnaire

When the score obtained from the ASRS scale is examined, the ASRS score was relatively high (*M* = 46.36, *SD* = 10.312), ranging from (Min. = 22 to Max. = 71). When data distribution was examined, the skewness value was .100 and the kurtosis value was -.731. The values show that data has a symmetrical and it is close to normal distribution. Thus, parametric tests are applicable for this variable. When the score obtained from the ASRS_1 is examined, the score of ASRS_1 was relatively high (*M*

= 24.40, *SD* = 5.788), ranging from (Min = 5 to Max = 36). When data distribution was examined, the skewness value was -.268, and the kurtosis value was -.173. The distribution of variables was approximately normal. The values show a slightly left-skewed, and mildly platykurtic distribution and assume normality. When the score of ASRS_2 is examined, the score of ASRS_2 was slightly high (*M* = 21.95, *SD* = 6.401), ranging from (Min = 6 to Max = 36). When data distribution was examined, the skewness value was .020, the kurtosis value was -455. These values show that data is normally distributed, symmetrical and somewhat platykurtic. When the score obtained from IUS is examined, the score of IUS was relatively high (*M* = 45.99, *SD* = 10.084), ranging from (Min = 15 to Max = 60). When data distribution was examined, the skewness value was -.666, and the kurtosis value was -.092. These values show that the distribution is approximately normal, somewhat left skewed and very close to kurtosis. When the score obtained from TMQ is examined, the score of TMQ was high (*M* = 76.41, *SD* = 15.004), ranging from (Min = 39 to Max = 118). When data distribution was examined, the skewness value was found to be .068, and the kurtosis value was found to be -.281 indicating that the distribution is very close to normal distribution. According to George & Mallery (2010), if the skewness and kurtosis values are between -2 and +2, it is accepted as a normal distribution. Because the data is normally distributed according to skewness and kurtosis values, Pearson correlation was used in the correlation analysis for the third research question.

Table 4.2. Descriptive Statistics of Gender

Scales	Female (n = 385, 88.9%)		Male (n = 48, 11.1%)	
	M	*SD*	*M*	*SD*
ASRS	46.68	10.422	43.81	9.078
ASRS_1	24.62	5.684	22.68	6.368
ASRS_2	22.06	6.568	21.12	4.831
IUS	46.60	9.764	41.08	11.322
TMQ	76.75	15.327	73.64	11.883

When the data is analyzed according to descriptive statistics of gender variables, the ASRS score was higher in female participants (*M* = 46.68, *SD* = 10.422) than in male participants (*M* = 43.81, *SD* = 9.078). When the score obtained from ASRS_1 is

analyzed, the score of ASRS_1 was higher in female participants (*M* = 24.62, *SD* = 5.684) than in male participants (*M* = 22.68, *SD* = 6.368). When the score obtained from ASRS_2 is analyzed, the score of ASRS_2 was higher in female participants (*M* = 22.06, *SD* = 6.568) than in male participants (*M* = 21.12, *SD* = 4.831). When the score obtained from IUS is analyzed, the score of IUS indicates higher scores in female participants (*M* = 46.60, *SD* = 9.764) than in male participants (*M* = 41.08, *SD* = 11.322). When the score obtained from TMQ is analyzed, the score of TMQ indicates higher scores in female participants (*M* = 76.75, *SD* = 15.337) than in male participants (*M* = 73.64, *SD* = 11.883).

Table 4.3. Descriptive Statistics of Marital Status

Scales	Married (n = 84, 19.4%)		Single (n = 349, 80.6%)	
	M	*SD*	*M*	*SD*
ASRS	42.02	10.380	47.41	10.033
ASRS_1	22.05	5.938	24.97	5.615
ASRS_2	19.96	6.363	22.43	6.325
IUS	42.07	11.234	46.93	9.568
TMQ	79.20	12.923	75.73	15.405

When the data is analyzed according to descriptive statistics of marital status, 19.4% (n = 84) were married, and 80.6% (n = 349) were single participants. When the score obtained from the ASRS scale is analyzed, the score was higher in single participants (*M* = 47.41, *SD* = 10.033), compared to married participants (*M* = 42.02, *SD* = 10.380). When the score obtained from the ASRS_1 (inattention) subscale is analyzed, the score was higher in single participants (*M* = 24.97, *SD* = 5.615), compared to married participants (*M* = 22.02, *SD* = 5.938). When the score obtained from the ASRS_2 (hyperactivity/impulsivity) subscale is analyzed, the score was higher in single participants (*M* = 22.43, *SD* = 6.325), compared to married participants (*M* = 19.96, *SD* = 6.363). When the score obtained from the IUS is analyzed, the score was higher in single participants (*M* = 46.93, *SD* = 9.568), compared to married participants (*M* = 42.07, *SD* = 11.234). When the score obtained from the TMQ is analyzed, the scores are very close but slightly higher in single participants (*M* = 75.73, *SD* = 15.405), compared to married participants (*M* = 79.20, *SD* = 12.923). Overall, the mean of single individuals was higher in all scales, but it was not tested whether the difference was statistically significant.

Table 4.4. Descriptive Statistics of ADHD Diagnosis

Scales	Yes (n = 217, 50.1%)		No (n = 216, 49.9%)	
	M	*SD*	*M*	*SD*
ASRS	50.83	8.796	41.87	9.771
ASRS_1	26.64	4.944	22.16	5.718
ASRS_2	24.19	5.816	19.70	6.180
IUS	48.05	9.549	43.92	10.205
TMQ	75.73	15.310	77.09	14.695

When the data is analyzed according to descriptive statistics of ADHD diagnosis, 50.1% of the participants (n = 217) had a diagnosis, and 49.9% (n = 216) of the participants did not have an ADHD diagnosis. When the data is analyzed, the ASRS score was higher in participants with ADHD diagnosis (*M* = 50.83, *SD* = 8.796) than in participants with no ADHD diagnosis (*M* = 41.87, *SD* = 9.771). The score of ASRS_1 (inattention) was higher in participants with ADHD diagnosis (*M* = 26.64, *SD* = 4.944) than in participants with no ADHD diagnosis (*M* = 22.16, *SD* = 5.718). The score of ASRS_2 (hyperactivity/impulsivity) was higher in participants with ADHD diagnosis (*M* = 24.19, *SD* = 5.816) than in participants with no ADHD diagnosis (*M* = 19.70, *SD* = 6.180). The score of IUS was higher in participants with ADHD diagnosis (*M* = 48.05, *SD* = 9.549) than in participants with no ADHD diagnosis (*M* = 43.92, *SD* = 10.205). The score of TMQ was higher in participants with ADHD diagnosis (*M* = 75.73, *SD* = 15.310) than in participants with no ADHD diagnosis (*M* = 77.09, *SD* = 14.695). Overall, except for the TMQ score, in participants with ADHD diagnosis, mean scores were higher when compared to participants with no ADHD diagnosis.

4.2. Findings of Research Questions 1 and 2

Table 4.5. Descriptive Statistics of Intolerance of Uncertainty and Time Management Scores

	N	Mean	SD	Min	Max
IUS	433	45.99	10.08	15	60
TMQ	433	76.41	15.00	39	118

When descriptive statistics of IUS and TMQ are analyzed, in the IUS, (*M* = 45.99, *SD*=10.08), ranging from (Min = 15, Max = 60). In the TMQ score, (*M* = 76.41, *SD* = 15.00), ranging from (Min = 39, Max = 118).

4.3. Finding of Research Question 3

Table 4.6. Correlation Analysis of Intolerance of Uncertainty and Time Management

	IUS	TMQ
IUS	1	.068
TMQ	.068	1

$p \geq 0.05$

According to the Pearson correlation analysis, there was no statistically significant relationship between IUS and TMQ (r = .068, $p \geq 0.05$).

4.4. Finding of Research Question 4

Table 4.7. Multiple Linear Regression Analysis of Time Management

	Unstandardized Coefficients		Standardized Coefficients		
	B	*SE*	*Beta*	*t*	*p*
ASRS_1	-1.030	.129	-.397	-7.993	.000
ASRS_2	.560	.117	.239	4.801	.000

Outcome Variable: TMQ

According to multiple linear regression analysis, the inattention subscale (ASRS_1) significantly and negatively predicts time management skills (B = -1.030, SE = .129, β = -.397, t = -7.993, p = .000). This result shows that as the inattention level increases, the time management score decreases. The hyperactivity/ impulsivity subscale (ASRS_2) significantly and positively predicts time management skills (B = .560, SE = .117, β = .239, t = 4.801, p = .000). This result shows that as the hyperactivity/impulsivity level increases, time management scores increase.

4.5. Finding of Research Question 5

Table 4.8. Multiple Linear Regression Analysis of Intolerance of Uncertainty

	Unstandardized Coefficients		Standardized Coefficients		
	B	*SE*	*Beta*	*t*	*p*
ASRS_1	.465	.084	.267	5.521	.000
ASRS_2	.369	.076	.234	4.838	.000

Outcome Variable: IUS

According to multiple linear regression analysis, the inattention subscale (ASRS_1) significantly and positively predicted the level of intolerance of uncertainty (B = .465, SE = .084, β = .267, t = 5.521, p = .000) indicating that as inattention increases, intolerance of uncertainty level also increases. The hyperactivity/ impulsivity subscale (ASRS_2) significantly and positively predicted the level of intolerance of uncertainty (B = .369, SE = .076, β = .234, t = 4.838, p = .000) indicating that as hyperactivity & impulsivity level increases, intolerance of uncertainty level also increases.

CHAPTER V

CONCLUSIONS AND DISCUSSIONS

5.1. Discussion

This study examined the time management skills and intolerance of uncertainty of individuals with ADHD symptoms. The findings generally showed that the participants had high levels of time management and relatively high levels of intolerance of uncertainty. Correlation analyses revealed no relationship between time management and intolerance of uncertainty. In multiple linear regression analyses, the inattention subscale predicted time management negatively, while the hyperactivity subscale predicted positively. On the other hand, both inattention and hyperactivity subscales significantly and positively predicted intolerance of uncertainty. In this section, the findings will be compared with the literature, the expected and unexpected aspects of the findings are explained, and possible reasons are discussed. Findings of the current research will be compared with the findings of similar studies in the literature. The main findings of this study demonstrate remarkable similarities and differences with other studies in the literature.

When descriptive statistics of IUS and TMQ are analyzed, the mean of IUS is (M = 45.99, SD = 10.08), ranging from 15 to 60. In addition, the mean of TMQ is (M= 76.41, SD = 15.00), ranging from 39 to 118, which shows high levels of TM and IU. In the study of Gramszlo et al. (2018), which evaluated levels of IU in ADHD kids, it was discovered that kids with ADHD symptoms exhibited high IU. Correspondingly, in this study, when the score obtained from IUS is examined, the score of IUS was relatively high; thus, the mean score revealed a high score in the adult population with ADHD symptoms. In the study of Maden (2024), both variables were also examined in participants with generalized anxiety disorder by using a more comprehensive scale of the intolerance of uncertainty, consisting of 27 questions and four subscales. When the means are analyzed, the intolerance of uncertainty levels of the generalized anxiety

patients (*M* = 90.16, *SD* = 21.13) were relatively high, and the mean of the IUS score with ADHD symptoms in this study was relatively high (*M* = 45.99, *SD* =10.08). The same scale of TMQ was used to measure time management as in this study. According to the mean score of the time management scale, the mean was higher in the individuals with generalized anxiety disorder (86.98, SD=15.99) in comparison to individuals with ADHD symptoms (*M*= 76.41, *SD* = 15.00) in this study. This may be due to ADHD being more closely related to executive function deficits. Thus, looking at the averages, it is expected that individuals with ADHD symptoms exhibit lower time management skills when compared with patients with GAD. In other words, the underlying characteristics of the disorders appear to be the determining factor here, and show the necessity of improvement in time management skills. In the studies of Wennberg et al. (2018) and Nakashima et al. (2021), the need to improve time management in individuals with ADHD with multimodal interventions and sophisticated programs was emphasized, implying that individuals with ADHD need to be supported in time management.

With the correlation analysis, this study examined the relationship between time management skills and intolerance of uncertainty in individuals with ADHD symptoms; however, contrary to expectations, the study found no statistically significant relationship. This finding contradicts the results of a previous study, which was done in a different condition. When the correlation analysis of this study was examined and compared with the literature, Maden (2024), who also studied both variables of IU and TM in Generalized Anxiety Disorder (GAD), discovered a positive correlation between IU and TM levels in patients with GAD. What was obtained in this study was that there was no statistically significant relationship between IU and TM skills in individuals with ADHD symptoms. There may be several possible reasons for the result obtained in this study. There may be individual or environmental differences among the individuals participating in the study that may have prevented the existence of a potential relationship between intolerance of uncertainty and time management skills. Factors such as age group, education level, type of ADHD (predominantly inattentive, predominantly hyperactive, or combined), and whether they have been officially diagnosed or not, may have weakened this relationship. Not all individuals with ADHD symptoms exhibit the same level of time management difficulties and intolerance of uncertainty. Some individuals may be able to manage

these two areas independently. Furthermore, some individuals may have developed support mechanisms or coping strategies. Additionally, conceptual differences may also be a factor in this result. Time management skills are more closely related to executive functions such as planning, problem solving, and monitoring (Barkley, 2013), while intolerance of uncertainty is more closely related to some psychological disorders such as generalized anxiety disorder (Dugas et al., 1998) and decision-making process (Jensen et al., 2014). Thus, two areas may be related to different neuropsychological processes and may not directly interact with each other in individuals with ADHD.

According to multiple linear regression analyses, the inattention subscale, negatively predicted time management, while the hyperactivity subscale, positively predicted time management. In support of the findings of this study, time management problems (i.e., difficulties organizing tasks and activities) are also mentioned for the inattention subtype according to DSM-5 criteria (APA, 2022). Since time management problems appear very often with individuals with inattention symptoms, it is possible to conclude that time management problems are related to the inattentive rather than the hyperactive/ impulsive type in this study. Moreover, in the study of Kofler et al. (2018) about organizational skills of children with ADHD, it is revealed that poorer organizational skills were predicted by attention issues. Hyperactivity appeared to be a facilitator, directly and concerning improved working memory, whereas attention issues were detrimental to task planning. Apart from those, in a recent study, Moradi Siah Afshadi et al. (2024) found a significant correlation between time management and ADHD symptoms of attention, hyperactivity, and impulsivity. As attention deficit, hyperactivity, and impulsivity symptoms increased, the time management deficit also increased. Unlike this study, which found that time management deficits did not increase with each symptom, on the contrary, hyperactivity/ impulsivity was seen as a factor that improved time management skills.

According to multiple linear regression analysis, both inattention subscale (ASRS_1), and hyperactivity/ impulsivity subscale (ASRS_2), significantly and positively predicted the level of intolerance of uncertainty. Since both inattention and hyperactivity/impulsivity sub-dimensions positively predicted intolerance of uncertainty, it suggests that ADHD individuals may experience increased feelings of

discomfort in uncertain situations. As a result, it is parallel to the findings in the literature, which show the fact of comorbidity of ADHD with anxiety disorders (Katzman et al., 2017).

5.2. Implications for Research and Practice

This research contributes to the literature in the field of ADHD, and it provides a basis for new research in this field since there exists a high level of intolerance to uncertainty in the study, and ADHD symptoms positively predicted intolerance of uncertainty. The study highlights the importance of raising awareness in reducing the intolerance of uncertainty level in individuals with ADHD symptoms. An intervention program for ADHD individuals could consider that time management problems are experienced by inattentive type rather than hyperactive type; thus, executive function training programs specific to inattentive type would be beneficial. Educators can also develop coaching and workshop facilities in school and work settings. An implication for therapists is that therapists or counselors can adopt different therapy techniques and strategies to decrease the intolerance of uncertainty level of individuals and develop empathic understanding. As a recommendation, future studies with similar samples can be conducted comparatively.

5.4. Recommendations for Future Research and Practice

In this study, the IU level was higher, showing the necessity of interventions. Therapy (CBT) techniques aimed at increasing individuals' skills in coping with uncertainty can be effective in reducing intolerance of uncertainty levels and supporting time management, especially for individuals with inattentive type. Future research could examine how these relationships change across different age groups, such as adolescents or older adults. Qualitative studies are also recommended to understand how individuals cope with uncertainty and structure their perception of time. Studies with larger and more homogeneous samples could reveal the relationship between these two variables more clearly. Also, more detailed analyses can be conducted by examining the sub-dimensions of the time management and intolerance of uncertainty variables separately.

5.5. Limitation

As limitations, most of the participants were women. A more balanced distribution would have been better in terms of gender comparison. Since the researcher used only quantitative methods, the reasons behind the participants' opinions could not be examined in detail. Another limitation is that it was conducted by reaching the participants via an online survey. However, the researcher reached a vast and diverse population; thus, it increased the reliability and generalizability of the research. In addition, control questions within the survey, tested whether the participants filled it out seriously, hence becoming a factor that increased reliability.

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APPENDICES

APPENDIX A

PERSONAL INFORMATION FORM

Age:

Gender:

Female

Male

Education Level:

Primary school

Middle school

High school

University

Master's degree

Doctorate

Profession:

Marital Status:

Married

Single

Have you been diagnosed with Attention Deficit Hyperactivity?

Yes

No

Do you have any other diagnosis?

Do you have an anxiety diagnosis?

Figure A.1. Personal Information Form

APPENDIX B

ADULT ADHD SELF-REPORT SCALE

Ek 1. Erişkin Dikkat Eksikliği ve Hiperaktivite Bozukluğu Kendi Bildirim Ölçeği (ASRS)

Sayfanın sağında gösterilen açıklamalara göre, kendinizi değerlendirip aşağıdaki soruları yanıtlayınız. Soruları yanıtlarken son 6 ay içinde nasıl hissettiğiniz ve nasıl davrandığınız konusunda sizi en iyi tanımlayan kutuya (X) işareti koyunuz.

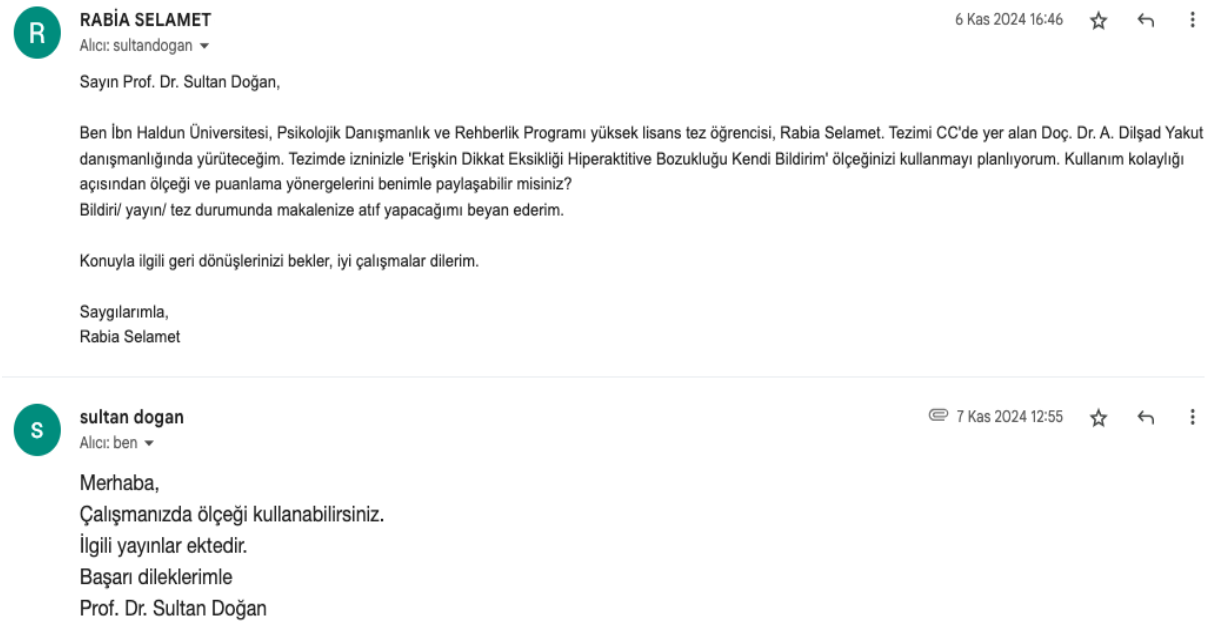
İsim:
Tarih:

	Asla	Nadiem	Bazen	Sık	Çok sık
[redacted]					
[redacted]					
[redacted]					
[redacted]					
[redacted]					
6. Ne sıklıkla kendinizi aşırı aktif ve sanki motor takılmış gibi bir şeyler yapmak zorunda hissedersiniz?					
A BÖLÜMÜ					
[redacted]					
[redacted]					
[redacted]					
[redacted]					
[redacted]					
[redacted]					
13. Ne sıklıkla kendinizi huzursuz, kıpır kıpır hissedersiniz?					
[redacted]					
[redacted]					
[redacted]					

Figure B.1. Adult ADHD Self-Report Scale

APPENDIX C

ADULT ADHD SELF-REPORT SCALE USE PERMISSION



RABİA SELAMET 6 Kas 2024 16:46

Alıcı: sultandogan

Sayın Prof. Dr. Sultan Doğan,

Ben İbn Haldun Üniversitesi, Psikolojik Danışmanlık ve Rehberlik Programı yüksek lisans tez öğrencisi, Rabia Selamet. Tezimi CC'de yer alan Doç. Dr. A. Dilşad Yakut danışmanlığında yürüteceğim. Tezimde izninizle 'Erişkin Dikkat Eksikliği Hiperaktitive Bozukluğu Kendi Bildirim' ölçeğinizi kullanmayı planlıyorum. Kullanım kolaylığı açısından ölçeği ve puanlama yönergelerini benimle paylaşabilir misiniz?
Bildiri/ yayın/ tez durumunda makalenize atıf yapacağımı beyan ederim.

Konuyla ilgili geri dönüşlerinizi bekler, iyi çalışmalar dilerim.

Saygılarımla,
Rabia Selamet

sultan dogan 7 Kas 2024 12:55

Alıcı: ben

Merhaba,
Çalışmanızda ölçeği kullanabilirsiniz.
İlgili yayınlar ektedir.
Başarı dileklerimle
Prof. Dr. Sultan Doğan

Figure C.1. Adult ADHD Self-Report Scale Use Permission

APPENDIX D

INTOLERANCE OF UNCERTAINTY SCALE

Belirsizliğe Tahammülsüzlük Ölçeği (BTÖ-12)-maddeler

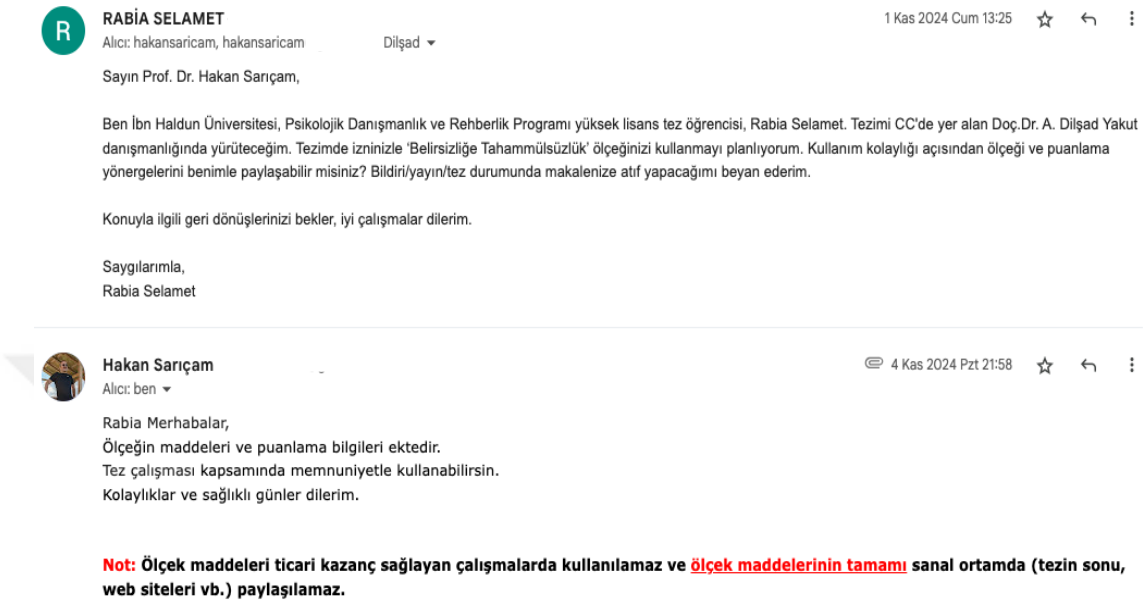
Lütfen aşağıdaki maddelerin karşısında bulunan ve maddelere ne kadar katıldığınızı gösteren sayılardan size en uygun olanını işaretleyiniz. **(1) Bana hiç uygun değil, (2) Bana çok az uygun, (3) Bana biraz uygun, (4) Bana çok uygun ve (5) Bana tamamen uygun** anlamına gelmektedir.

1. Beklenmedik olaylar canımı çok sıkar.	1	2	3	4	5
[redacted]					
[redacted]					
[redacted]					
[redacted]					
[redacted]					
[redacted]					
[redacted]					
[redacted]					
[redacted]					
12. Tüm belirsiz durumlardan uzak durmak zorundayım.	1	2	3	4	5

Figure D.1. Intolerance of Uncertainty Scale

APPENDIX E

INTOLERANCE OF UNCERTAINTY SCALE USE PERMISSION



RABİA SELAMET 1 Kas 2024 Cum 13:25

Alıcı: hakansaricam, hakansaricam Dilşad

Sayın Prof. Dr. Hakan Sarıçam,

Ben İbn Haldun Üniversitesi, Psikolojik Danışmanlık ve Rehberlik Programı yüksek lisans tez öğrencisi, Rabia Selamet. Tezimi CC'de yer alan Doç.Dr. A. Dilşad Yakut danışmanlığında yürüteceğim. Tezimde izninizle 'Belirsizliğe Tahammülsüzlük' ölçeğinizi kullanmayı planlıyorum. Kullanım kolaylığı açısından ölçeği ve puanlama yönergelerini benimle paylaşabilir misiniz? Bildiri/yayın/tez durumunda makalenize atıf yapacağımı beyan ederim.

Konuyla ilgili geri dönüşlerinizi bekler, iyi çalışmalar dilerim.

Saygılarımla,
Rabia Selamet

Hakan Sarıçam 4 Kas 2024 Pzt 21:58

Alıcı: ben

Rabia Merhabalar,
Ölçeğin maddeleri ve puanlama bilgileri ektedir.
Tez çalışması kapsamında memnuniyetle kullanabilirsin.
Kolaylıklar ve sağlıklı günler dilerim.

Not: Ölçek maddeleri ticari kazanç sağlayan çalışmalarda kullanılamaz ve ölçek maddelerinin tamamı sanal ortamda (tezin sonu, web siteleri vb.) paylaşılamaz.

Figure E.1. Intolerance of Uncertainty Scale Use Permission

APPENDIX F

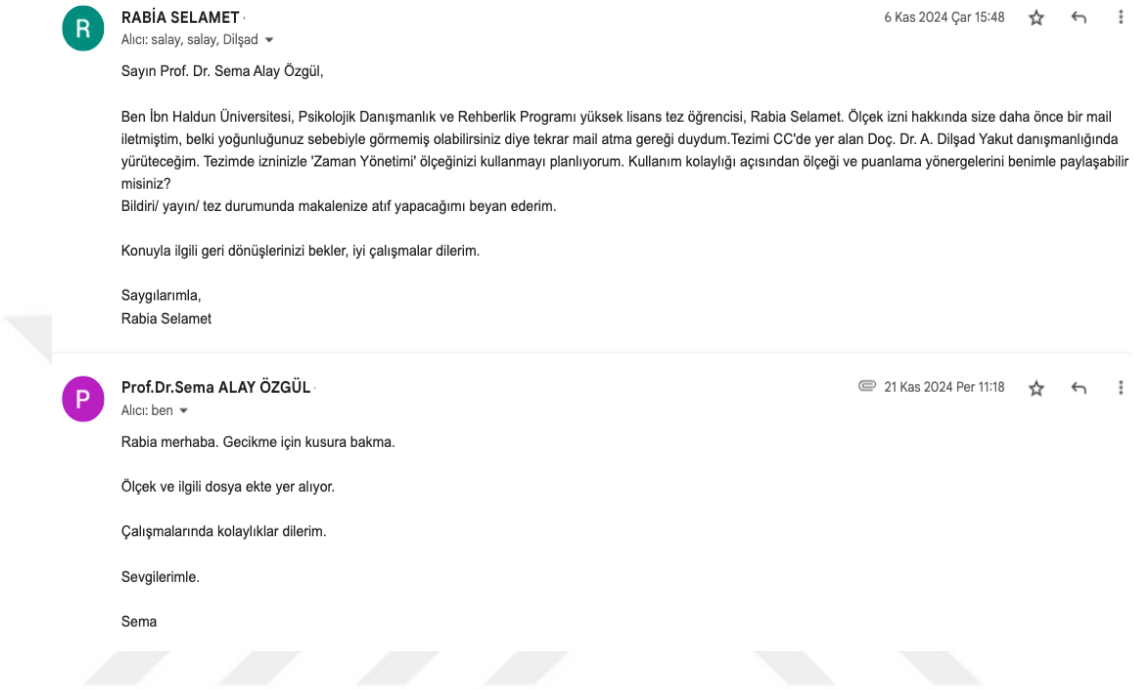
TIME MANAGEMENT QUESTIONNAIRE

Zaman Planlaması (Kısa ve Uzun Vadeli Planlama)	Her zaman	Sık sık	Bazan	Nadiren	Hiç
1. Güne başlamadan önce gününüzü planlar mısınız?	()	()	()	()	()
[redacted]	()	()	()	()	()
[redacted]	()	()	()	()	()
[redacted]	()	()	()	()	()
[redacted]	()	()	()	()	()
[redacted]	()	()	()	()	()
[redacted]	()	()	()	()	()
[redacted]	()	()	()	()	()
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[redacted]	()	()	()	()	()
[redacted]	()	()	()	()	()
[redacted]	()	()	()	()	()
[redacted]	()	()	()	()	()
[redacted]	()	()	()	()	()
[redacted]	()	()	()	()	()
[redacted]	()	()	()	()	()
Zaman Tutumları					
[redacted]	()	()	()	()	()
[redacted]	()	()	()	()	()
[redacted]	()	()	()	()	()
[redacted]	()	()	()	()	()
[redacted]	()	()	()	()	()
[redacted]	()	()	()	()	()
7. Yapacak bir şeyiniz olmadan kendinizi uzun süre bekliyor durumda bulur musunuz?[a]	()	()	()	()	()
Zaman Harcattırıcılar					
[redacted]	()	()	()	()	()
2. Fayda sağlamayan alışkanlıklara veya aktivitelere devam eder misiniz?[a]	()	()	()	()	()
[redacted]	()	()	()	()	()
[redacted]	()	()	()	()	()

Figure F.1. Time Management Questionnaire

APPENDIX G

TIME MANAGEMENT QUESTIONNAIRE USE PERMISSION



RABİA SELAMET 6 Kas 2024 Çar 15:48

Alıcı: salay, salay, Dilşad

Sayın Prof. Dr. Sema Alay Özgül,

Ben İbn Haldun Üniversitesi, Psikolojik Danışmanlık ve Rehberlik Programı yüksek lisans tez öğrencisi, Rabia Selamet. Ölçek izni hakkında size daha önce bir mail iletmiştim, belki yoğunluğunuz sebebiyle görmemiş olabilirsiniz diye tekrar mail atma gereği duydum.Tezimi CC'de yer alan Doç. Dr. A. Dilşad Yakut danışmanlığında yürüteceğim. Tezimde izninizle 'Zaman Yönetimi' ölçeğinizi kullanmayı planlıyorum. Kullanım kolaylığı açısından ölçeği ve puanlama yönergelerini benimle paylaşabilir misiniz?
Bildiri/ yayın/ tez durumunda makalenize atıf yapacağımı beyan ederim.

Konuyla ilgili geri dönüşlerinizi bekler, iyi çalışmalar dilerim.

Saygılarımla,
Rabia Selamet

Prof.Dr.Sema ALAY ÖZGÜL 21 Kas 2024 Per 11:18

Alıcı: ben

Rabia merhaba. Gecikme için kusura bakma.

Ölçek ve ilgili dosya ekte yer alıyor.

Çalışmalarında kolaylıklar dilerim.

Sevgilerimle.

Sema

Figure G.1. Time Management Questionnaire Use Permission

APPENDIX H

ETHICS COMMITTEE PERMISSION

Evrak Tarih ve Sayısı: 07.05.2025-56993

T.C.
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Sosyal ve Beşeri Bilimler Bilimsel Araştırma ve Yayın Etiği
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Sayı : E-71395021-050.04-56993 07.05.2025
Konu : Etik Kurul Kararı - Rabia SELAMET

İLGİLİ MAKAMA

Kurulumuza başvuran Rabia SELAMET'in, "Intolerance of Uncertainty and Time Management Skills of Individuals with Attention Deficit Hyperactivity Disorder Symptoms" isimli projesi; amaç, araştırma türü, veri toplama araçları, süreç ve işlemler, veri analizleri dikkate alınmak suretiyle 25.04.2025 tarihinde değerlendirilerek 2025/05-04 karar numarası ile etik açıdan uygun bulunmaktadır.

Bilgilerini ve gereğini arz/rica ederim.

Prof. Dr. Alev ERKİLET
Başkan

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Unvanı: Sekreter

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