

CAREER CALLING IN THE AGE OF ARTIFICIAL INTELLIGENCE (AI):
EXAMINING AI ANXIETY, USE MOTIVATION, AND DEPENDENCY AMONG
EMERGING ADULTS IN TÜRKİYE

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**CAREER CALLING IN THE AGE OF ARTIFICIAL INTELLIGENCE (AI):
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ABSTRACT

This research explored the effects of AI anxiety, AI use motivation, and AI dependency on the sense of direction, purpose, and active engagement in careers among Turkish emerging adults, referred to as career calling. The study included 308 emerging adults from Türkiye (197 female, 109 male, 2 preferred not to disclose; mean age = 23.9, SD = 3.07), comprising 150 students, 148 employees, and 10 unemployed individuals. Participants completed self-report measures of AI anxiety, AI use motivation, AI dependency, and career calling. All measures, except the AI Anxiety Scale, were translated into Turkish and displayed acceptable levels of reliability. Findings revealed that using AI for escape purposes was associated with lower levels of career calling, including less personal meaning and reduced engagement in career-related activities. However, using AI for instrumental purposes was associated with higher levels of overall career calling sense and personal meaning. While entertainment use was linked with greater career calling, specifically increased other-oriented meaning and active engagement. Moreover, female participants were more likely to associate their careers with contributing to others. Nevertheless, age, social purposes of AI use, any of the AI anxiety subdimensions, and AI dependency were not associated with career calling perspectives. Additionally, career calling perspectives of students and employed emerging adults did not differ significantly. As one of the first studies to investigate AI-related psychological factors and career calling, this research contributes to the literature by highlighting the relations between use motivations, gender, and career calling. These findings suggest that educators, organizations, and career counselors should consider patterns of AI usage to support young adults' career development by promoting instrumental and entertainment-based AI use, while addressing the risks of escapism.

Keywords: Artificial Intelligence (AI); Career Calling; Artificial Intelligence Anxiety; Artificial Intelligence Dependency; Artificial Intelligence Use Motivation

ÖZ

Bu araştırma, Yapay Zeka (YZ) kaygısının, YZ kullanım motivasyonlarının ve YZ bağımlılığının, kariyer çağrısı ya da meslek aşkı olarak adlandırılan, Türkiye'deki genç yetişkinlerin kariyerlerinin yönelimi, amacı ve kariyerleri üzerindeki aktif uğraşları üzerindeki etkilerini araştırmıştır. Çalışmaya Türkiye'den 150'si öğrenci, 148'i çalışan ve 10'u işsiz olmak üzere toplam 308 genç yetişkin (197 kadın, 109 erkek, 2'si belirtmemeyi tercih etti; yaş ortalaması = 23.9, SD = 3.07) katılmıştır. Katılımcılar, özbildirim yoluyla YZ kaygısı, YZ kullanım motivasyonu, YZ bağımlılığı ve kariyer çağrısı ölçeklerini tamamlamışlardır. YZ Kaygısı Ölçeği hariç bütün ölçekler Türkçe'ye çevirilmiştir ve kabul edilebilir düzeyde güvenirlilik göstermiştir. Bulgular, kaçış amacıyla YZ kullanan bireylerin genel kariyerler çağrılarının, işin birey için anlamının ve bireylerin kariyerleriyle alakalı etkinliklere katılım için gösterdiği çabanın daha düşük olduğunu göstermiştir. Buna rağmen, araçsal amaçlarla YZ kullanımının, daha yüksek düzeyde genel kariyer çağrısı duygusuyla ve kişisel anlamla ilişkili olduğu görülmüştür. Eğlence amaçlı kullanımının, kariyer çağrısıyla, özellikle de başkalarına yönelik anlam ve aktif katılımı, daha fazla bağlantılı olduğu görülmüştür. Ayrıca kadınların kariyerlerini, başkalarına katkıda bulunma üzerinden daha çok ilişkilendirdiği görülmüştür. Bunlara karşın yaşın, sosyal amaçlı YZ kullanımının, YZ kaygısı alt boyutlarından herhangi birinin ve YZ bağımlılığının, kariyer çağrısıyla ilişkisi bulunmamıştır. Ek olarak, öğrencilerin ve çalışan genç yetişkinlerin kariyer arayışına ilişkin bakış açıları anlamlı düzeyde farklılaşmamıştır. YZ ile ilgili psikolojik faktörler ve kariyer çağrısını araştıran ilk çalışmalardan biri olan bu araştırma, kullanım motivasyonları, cinsiyet ve kariyer arayışı arasındaki ilişkileri ortaya koyarak literatüre katkı sağlamıştır. Bu bulguları, eğitimcilerin, şirketlerin ve kariyer danışmanlarının, genç yetişkinlerin kariyer gelişimini desteklemek için YZ kullanım motivasyonlarına dikkat etmeleri, araçsal ve eğlence amaçlı YZ kullanımını teşvik ederken, kaçış amaçlı kullanımın kariyer üzerindeki risklerini ele almaları gerektiğini göstermiştir.

Anahtar Kelimeler: Yapay Zeka (YZ); Kariyer Çağrısı; Yapay Zeka Kaygısı; Yapay Zeka Bağımlılığı; Yapay Zeka Kullanım Motivasyonu

This thesis is dedicated to my beloved grandmother, Nural Sayan, and Alan Turing.

To my grandmother, who passed away nearly five years ago, but whose love, belief, and pride in me remain everlasting. She always celebrated my achievements with immense joy and enthusiasm, announcing to everyone around her how proud she was. When I made the honor roll during my undergraduate studies, she proudly shared it with everyone as if it were her accomplishment. I am certain that if she were here today to see me complete my master's degree as the highest-ranked student, her heart would be filled with happiness and pride.

And to Alan Turing, the visionary who laid the foundations of what we now call artificial intelligence. Without his curious mind, filled with extraordinary thoughts, and his courageous contributions, writing a thesis on this very topic might not have been possible. This work stands on the shoulders of his legacy.

Finally, I dedicate this work to all emerging adults who strive to navigate their career callings in the age of artificial intelligence. May they find work that aligns with their core values and identity, serves a greater purpose beyond their individual interests, and inspires them to take meaningful action. I encourage them to use AI as a compass—a tool to grow, create, and contribute—while maintaining their ability to think, dream, and act on their own.

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LIST OF SYMBOLS

M :	Mean (arithmetic average)
SD :	Standard deviation
N :	Sample size
α :	Cronbach's alpha (internal consistency reliability coefficient)
p :	Significance level (probability of Type I error)
χ^2 :	Chi-square value from Bartlett's test of sphericity (assesses deviation from identity matrix)
r :	Pearson correlation coefficient (measures the strength and direction of linear relationship)
B :	Unstandardized regression coefficient
β :	Standardized regression coefficient
$SE B$:	Standard error of the unstandardized regression coefficient
F :	F-test statistic (used in regression analysis)
t :	t-test statistic (used to compare group means)
R^2 :	R-squared (proportion of variance explained in the dependent variable)
d :	Cohen's d (effect size measure for mean differences between two groups)

LIST OF ABBREVIATIONS

AI:	Artificial Intelligence
AIAS:	Artificial Intelligence Anxiety Scale
EFA:	Explanatory Factor Analysis
KMO:	The Kaiser-Meyer-Olkin
SPSS:	Statistical Package for the Social Sciences

INTRODUCTION

Emerging adulthood is a critical period for individuals aged 18 to 29, during which they explore their identities and focus on professional or career development (Arnett, 2000; Arnett et al., 2014). In Türkiye, this transition typically begins at the age of 18, when individuals legally become adults, complete high school education, and take the national university entrance exam (Turkish Penal Code [Türk Ceza Kanunu], 2004; Law on Measurement, Selection and Placement Center Services [Ölçme, Seçme ve Yerleştirme Merkezi Hizmetleri Hakkında Kanun], 2011). Emerging adulthood is considered a critical developmental stage characterized by identity exploration, instability, and broad possibilities for future directions (Arnett, 2015). This phase is one of the turning points in individuals' lives, laying the foundation for their future educational and career decisions. Emerging adults make up approximately 15 percent of the total Turkish population, with nearly all of them—97.5 percent—actively using the Internet (Turkish Statistical Institute [Türkiye İstatistik Kurumu], 2023). Internet access enables them to stay updated on the top current global trends, such as AI, which has the potential to reshape and redefine our existing beliefs, attitudes, and behavior. While almost half of the employees in Türkiye stated that they actively use AI systems in their work and that it increases the quality and productivity of their work and allows them to focus on more fulfilling tasks, it has also been found that AI has a great impact on shaping young people's future career goals and perspectives (Michael Page [MP], 2025; Harvard Business Review Türkiye, 2024).

Career calling is a concept in career development that describes a deep sense of purpose and meaning in one's work, often linked to a desire to contribute to the greater good and personal fulfillment (Praskova et al., 2015). Finding a career calling is not only important for individuals, such as employees, but it also has an organizational impact, which is crucial for career counselors, policymakers, and HR professionals. For instance, Chen et al. (2016) found that the higher an individual's sense of career calling, the more positive the organizational outcomes, such as career and job satisfaction, and the lower their turnover intentions. The presence of a strong career calling not only

facilitates work-related outcomes but can also serve as a protective factor for individuals' mental health. For example, Jin et al. (2022) found that individuals with a well-developed sense of career calling reported lower levels of anxiety and depressive symptoms. While career calling has been associated with various psychological and organizational outcomes, little is known about how technological shifts, such as the integration of AI into the work and personal spaces, might influence one's perceived sense of calling, either by enhancing opportunities for self-discovery or by increasing uncertainty, anxiety, and dependency.

Artificial Intelligence is defined in the literature as the development of computer systems in a way that they become capable of performing tasks and activities that typically require human intelligence, such as decision-making, problem-solving, planning, reasoning, understanding language, interacting, and learning (Yavuz-Aksakal & Ülgen, 2021; Erkutlu et al., 2023). A lot has changed since Alan Turing, considered the father of AI, introduced the concept of machine learning and proposed that such machines may exhibit intelligent behaviors similar to those of humans (Copeland, 2024; Evrim Ağacı, 2011). From personal routines to professional environments, AI technologies have become an indispensable part of our everyday lives (Schepman & Rodway, 2020; Şahin & Yıldırım, 2024). Individuals now frequently use generative AI tools, such as ChatGPT, for a wide variety of purposes, including emotional support, informal therapy-like interactions, career planning, finding purpose, learning a new skill, researching, consulting for technical support, creating or editing content, generating code or ideas, and even socializing and entertainment (Zao-Sanders, 2025). These diverse functions and uses of AI can play a role in shaping individuals' self-perception, career orientation, and engagement with professional development.

The feelings of tension and physical changes like increased blood pressure generally arise from individuals' worried thoughts about the future, and are called anxiety. Unlike fear, which is a short-lived response to a specific threat, anxiety is a long-term response to a broader, future-oriented concern (American Psychological Association, 2018a). If individuals experience this situation when they think about AI and the changes it brings to their personal, social, and work lives, then it is called AI

anxiety (Kaya et al., 2024). One of the most examined anxiety dimensions is job replacement anxiety (Schepman & Rodway, 2020; Uçar et al., 2024). The World Economic Forum (2023) shared expectations for the next five years, which include the adoption of AI-powered systems by 75 percent of companies and a potential shift of up to 23 percent of the labor market. For emerging adults still trying to define their career paths, such anxiety may hinder their ability to envision a meaningful and stable future profession, possibly affecting their sense of career calling.

The concept of AI dependency or addiction is a relatively new area of research in the literature. AI dependency is characterized as the excessive and addictive use of AI technologies that leads to obsessive psychological reliance and can result in negative effects on mental health, interpersonal relationships, and business-related settings and outcomes (Hu et al., 2023; Huang et al., 2024; Zhang et al., 2024). While one study examined the interactions of depression, anxiety, AI dependence, and AI use motivation among adolescents and their influences on mental health (Huang et al., 2024), they didn't examine interactions with career calling, nor did they specifically consider anxiety as AI-related anxiety. Excessive reliance on AI tools may reduce self-directed career exploration intentions or lead to distorted expectations about work life, potentially undermining the intrinsic motivation required to develop a strong sense of career calling.

A meta-analysis conducted by Katz et al. (2019) found a small and positive relationship between age and career commitment; however, this relation is curvilinear and changes with age. Similarly, in another meta-analysis conducted by Zhao et al. (2021), examining age and entrepreneurial career success, it was found that while age did not significantly affect success among males, it had a positive effect among females, suggesting that gender can substantially interact with age in influencing career outcomes. Moreover, in Zhu et al.'s (2020) meta-analysis, age alone was found to be a weak predictor of career commitment, suggesting that the effect size may increase when demographic variables such as age and gender are examined together with other AI-related factors. Therefore, the current study will explore the effects of age and gender by including them as controlling variables in the further analysis to control for potential

confounding demographic effects and to gain a more comprehensive understanding of the factors shaping the career attitudes of emerging adults.

Although still in its infancy, AI has already become a transformative force, reshaping the way we work, learn, and interact with the world (Makridakis, 2017; Wang & Siau, 2019). It is known that technological developments have a significant impact on individuals' career choices and decision-making processes (Porfelli & Vondracek, 2009). Still, AI is a new area of research in literature with limited to no exploration; thus, the potential influence of AI on an individual's career calling perception remains unknown. Kaya et al. (2024) stated that artificial intelligence can create time for individuals to explore themselves, gain experience, and conduct research. Since career callings are highly personal and require extensive self-exploration to find a career goal aligned with one's identity (Hall & Chandler, 2005), AI may support individuals in identifying meaningful career paths and enhancing their quality of life. Despite its growing presence, there is still limited empirical research exploring how AI may influence individuals' career-related meaning-finding processes. Given the inner-directed nature of career calling perception, it is essential to investigate whether and how AI-related psychological factors facilitate or hinder such behaviors. This exploration may also provide insights to help individuals better withstand the negative influences of AI and use it effectively in a way that contributes to their career calling.

To sum up, this exploratory study aims to fill this gap by investigating how emerging adults make sense of their career calling in this new age of AI. Specifically, it examines emotional factors such as AI-related anxiety and behavioral patterns, such as use motivation and dependency. The current study also considers the influences of demographic characteristics (e.g., age, gender, digital literacy, AI familiarity, and current work status) on the career perceptions and attitudes of Turkish emerging adults. Besides this research's contribution to the literature, understanding the connections between social identities, career calling, AI-related anxiety, motives for using these tools, and dependencies might provide valuable insights to career and business professionals and propose possible ways to adapt AI to our daily and work lives efficiently and constructively.

LITERATURE REVIEW

2.1 Career Calling

There is no universally recognized definition of the term career calling; rather, it has been defined in various ways over time (Wrzesniewski, 2012). Dik and Duffy (2009) describe career calling as a guiding force in an individual's life that is deeply embedded in their identity and experienced fulfillment through meaningful contributions to others. This definition aligns with the Other-Oriented Meaning subdimension (Praskova et al., 2015), suggesting that career fulfillment arises not only from personal achievement or recognition but also from positively impacting others and contributing to society. For example, a teacher with a high career calling may feel fulfilled by inspiring students, while a healthcare professional may find purpose in helping patients.

Arbona et al. (2021) found that individuals' intolerance to uncertainty associates negatively with their career decision processes, either directly or indirectly through their anxieties. Similarly, individuals who are highly motivated to serve others through their chosen career report lower levels of career indecision and higher levels of adaptability and optimism (Duffy & Raque-Bogdan, 2010). Building upon these findings, it is possible that uncertainty in work environments brought by AI and the anxiety it triggers may diminish individuals' other-oriented meaning in career calling. However, for those who perceive their careers as service-oriented, hold a calling to help others, and aim to make a positive societal impact, AI might be seen not as a threat but as an opportunity that eases their jobs, allowing them to reach or help more people efficiently. In such cases, this perception might encourage them to interact more with AI, leading to higher AI knowledge and reduced anxiety about learning AI or being replaced by it, which might also ultimately lower their overall AI-related anxiety.

Colozzi and Colozzi (2000) approached career calling from a spiritual perspective, emphasizing its connection to individuals' deepest sense of purpose, like

finding a life purpose or a mission that aligns with their beliefs and values. While this view highlights the personal side of the calling, by referring to an inner sense of purpose, Hall and Chandler (2005) argued that this sense of calling does not need to be associated with a particular religion or religious beliefs. Instead, they describe it as an individual's feeling of being meant to pursue a career path that is meaningful for them. Building upon this view, Praskova et al. (2015) conceptualized the Personal Meaning subdimension of career calling as the alignment between one's career path or perceptions and core personal values, beliefs, and attitudes, resulting in a deep personal sense of satisfaction and meaning obtained from career.

In today's AI-integrated world, individuals' sense of personal alignment with their careers, viewing it as an extension of themselves rather than just a job, can be challenged. For example, individuals in creative or value-driven professions such as writers, designers, content creators, educators, or therapists may feel that AI-generated content devalues their unique voice and personal contributions. As AI becomes capable of performing creative or cognitive tasks, some may experience a gradual loss of personal meaning in their careers. Studies suggest that individuals who continuously rely on AI tools may not only experience skill blunting, such as diminished critical thinking and evaluation abilities, but this dependency may also lead them to become lazy and incapable of generating original ideas over time (Ahmad et al., 2023; Erdoğan & Cakir, 2024; Zhang et al., 2024). For such individuals, dependency on AI may weaken their sense of career purpose and reduce their connection to the meaningful aspects of their work.

Emerging adults may use AI with instrumental motivation and are personally motivated to learn more about it for their career growth, skill development, and better career opportunities (Johnson et al., 2025). Individuals who feel anxious or uncertain about their professional future may begin using AI not only as a tool to improve themselves but also to psychologically escape from those situations or social pressure for immediate comfort. Michael et al. (2020) conceptualized escape motivations as rooted in individuals' personal and social identity needs, such as self-evaluation and social interaction. While the original context of these motivations focused on travel

behaviour, similar underlying psychological needs, such as the desire to escape reality or to connect socially, can also be seen in individuals' motivations to use AI tools. According to behavioral research, people with higher levels of trait anxiety tend to engage in avoidance or escape-motivated behaviors in response to slowly emerging threats (Fung et al., 2019). In the context of Türkiye, where AI technologies and humanoid robots are still not fully integrated into daily life, emerging adults might perceive AI as a slow-moving, distant threat. Consequently, individuals may turn to AI for temporary relief and to avoid confronting deeper questions about purpose or direction, which could weaken their sense of personal meaning in their career calling perspectives by shifting the focus from values-based career exploration to avoidance-based engagement.

The third core component of career calling, as highlighted by Praskova et al. (2015), is active engagement. This dimension reflects the proactive behaviors individuals exhibit to pursue, shape, and advance in their careers through various activities such as skill development, strategic planning, and seeking out opportunities that contribute to their career growth. Career callings are considered highly personal and require emerging adults to engage in extensive self-exploration by actively participating in experiences that shape their career perceptions (Hall & Chandler, 2005). Similarly, Wrzesniewski (2012) suggested that individuals' sense of calling can change over time during their professional lives through personal growth, new experiences, and shifting values. In this regard, emerging adults' active engagement in career-related activities, such as internships, skill-building courses, and early work experiences during their university years and at the beginning of their careers, is essential in shaping their perceptions of career calling perspectives. In line with this, Duffy et al. (2013) found that individuals' views about their career calling aren't enough for them to be satisfied with their lives unless they are actively working toward or on that career path.

Technological advancements are known to impact individuals' career decision-making processes (Porfelli & Vondracek, 2009); similarly, artificial intelligence, a newly emerging technological tool, may influence individuals' career engagement or participation processes depending on how they perceive and interact with such AI

technologies. For instance, individuals with high levels of career engagement may participate in AI-related training programs where they can learn more and enhance their competence in these tools. This may not only increase their AI knowledge but also reduce their overall AI-related anxieties, including subdimensions such as learning anxiety, job replacement anxiety, sociotechnical blindness, and AI configuration anxiety. Supporting this, Kaya et al. (2024) reported that positive attitudes toward AI were associated with greater levels of computer usage and AI knowledge, which in turn negatively correlated with AI anxieties. Similarly, as Johnson et al. (2025) noted, individuals' motivation for professional development and acquiring new skills plays a key role in their adoption of artificial intelligence as a tool. Accordingly, individuals with a high sense of career calling may also be motivated to use AI tools instrumentally for their career development, as they will proactively seek opportunities to advance their careers, which may result in higher levels of career calling sense. However, unquestioned trust and dependency on AI may also present another potential challenge that might negatively impact one's active career participation and their future career success. For example, Zhai et al. (2024) reported that this excessive reliance on AI could undermine essential cognitive skills, such as analytical thinking, critical reasoning, and problem-solving skills, that Yavuz-Aksakal and Ülgen (2021) consider crucial for future employability.

Career researchers also examined more structured frameworks to understand the effects of career calling on professional outcomes. For instance, Duffy et al. (2011) highlight that individuals' sense of calling positively influences their work-related perspectives, such as job satisfaction and organizational commitment, and negatively influences their withdrawal intentions. A study that examined the career calling of teachers found that individuals with a strong sense of calling not only perform better at work and show better commitment to the organizations but are also more likely to experience work-related flow (Çalışkan et al., 2023). However, living a calling is not only associated with work-related outcomes (such as job satisfaction, mediated by work meaning and career commitment) but also has individual-level outcomes (such as life satisfaction and life meaning) (Duffy et al., 2013).

These definitions above emphasize the multidimensional nature of a career calling concept, including its connection with producing results that benefit others, matching with each individual's unique perspective, and expressing an active effort and commitment to their career development. Also suggests exploratory guesses driven by other research that may suggest possible connections with AI-related psychological constructs. In other words, this study takes into account how AI-related anxieties, motives, and dependency might influence each subdimension of Career Calling: Other-Oriented Meaning, Personal Meaning, and Active Engagement.

2.2 AI Anxiety

Wang and Wang (2022) described AI anxiety as a repelling force that causes individuals to avoid interacting with AI tools, and they defined four dimensions: Learning, Job Replacement, Sociotechnical Blindness, and AI Configuration that can serve as the root of their anxieties.

AI learning anxiety refers to individuals' concerns about understanding how AI systems or tools work and mastering the use of these specific AI tools (Wang & Wang, 2022). Noticing this anxiety is essential, as companies and recruiters have expected their potential candidates to develop strong computer skills since the introduction of computers. One of the top competencies that they will soon seek from employees might be AI literacy (Aksu & Sürgevil Dalkılıç, 2019). Some studies suggest that this AI learning anxiety can either hinder individuals' motivation to learn or/and engage with AI (Wang et al., 2024); however, other studies found that it can also serve as a facilitating anxiety that motivates people to invest more time and effort in learning and developing knowledge and skills (Piniel & Csizér, 2013; Wang & Wang, 2022). Individuals' differential motivations to use these technologies can be influenced by their concerns about AI. Additionally, AI knowledge enhances individuals' confidence in work and contributes to their career sustainability, directly and indirectly, through their career perception fit, which can also be referred to as person-job fit or the personal meaning dimension of career calling (Ahmad & Bilal, 2024).

The job replacement dimension assesses individuals' anxiety that arises from concerns that AI may diminish their skills and abilities, leading them to become lazy and dependent, or it may take over some tasks, positions, and sectors currently occupied by humans (Wang & Wang, 2022). Research indicates that the primary concern that individuals have about AI is its impact on their job security (Schepman & Rodway, 2020), and these concerns are likely to intensify with AI's increasing presence in various positions. Many of the researchers highlighted that many occupations, not only blue-collar workers but also white-collar workers in varying sectors, are at risk of automatization or being replaced by robots, leading to an increase in negative emotions among individuals (Brougham & Haar, 2018, p. 2; Kaya et al., 2024; Schepman & Rodway, 2020, p. 2). Similarly, in a study that examined emerging adults, who were university students, AI-related anxieties and their unemployment anxieties were found to be significantly and positively correlated, suggesting that job replacement anxiety predicts individuals' overall AI anxiety (Uçar et al., 2024).

Another reason for this concern is the automation of work and production systems with digital transformation. According to Darko et al. (2020), AI plays a central role in the Fourth Industrial Revolution (Industry 4.0), where it can function as a bridge between the physical and digital worlds. It is suggested that the adoption of AI-powered robotics in industrial settings, like in the form of dark factories, may also cause individuals to experience job replacement anxiety since they can operate without human workers. These factories can save on their lighting and heating costs, and since those robots will not require lunch or day breaks and can work 24/7, this will boost factories' production speed and efficiency. Not surprisingly, many companies and countries, such as Japan, Germany, the United States, and China, have announced that they are either using robotics and AI or are trying to implement dark factories (Blair, 2025; TexSPACE Today, 2025). Although we currently do not have any dark factories in Türkiye, emerging adults who are currently in the workforce might have elevated job replacement anxieties since this information is easily accessible.

Technological advancements in AI, robotics, and automation are today's most transformative business trends that have various influences on jobs, increasing demand

for technology-related skills, and creating new job opportunities in technology-related positions such as AI and Machine Learning Specialists (World Economic Forum, 2025). AI and automation systems have not only changed how work is done but also changed the skills that companies expect from their employees, where analytical and critical thinking skills have become the most critical skills for employees. (Yavuz-Aksakal & Ülgen, 2021; World Economic Forum, 2023 pp.5-6).

A more recent example is the AI-powered chemist robot that examined the samples at a fast pace, which were retrieved from Mars, without requiring human intervention (Zhu et al., 2024). However, it would not be right to consider only AI tools and humanoid robots as something that destroys our work life entirely, as they are integrated into organizations, they are redesigning workflows, and creating new positions (Singla et al., 2025). While AI is eliminating some jobs in today's market, it also enhances companies' workforce efficiency and creates new career opportunities or positions such as prompt engineers and AI and machine learning specialists (Yavuz-Aksakal & Ülgen, 2021; World Economic Forum, 2023, p.6).

AI-related sociotechnical blindness refers to the tendency to view artificial intelligence only as technical software while neglecting the influences of human agency, social institutions, and organizational contexts that create, implement, and assign meaning to these technologies through their interactions and decisions (Johnson & Verdicchio, 2017). They also state that when individuals' sociotechnical blindness is high, they are more likely to consider AI as a distinct feature and perceive it as a potential threat, which increases their fears and can create more chaotic and unrealistic scenarios. These anxieties may be unconsciously reinforced by popular movies such as *The Terminator* (Cameron, 1984) and *Ex Machina* (Garland, 2014), which have been shot throughout the years and follow autonomous AI and robots that threaten humanity or destroy the world.

A striking example of how sociotechnical blindness within organizations can affect individuals can be found in the case of AI-powered recruitment tools. While these systems are considered objective, time and cost-efficient tools that allow companies to make successful hiring decisions (Kılıç-Kırılmaz & Ateş, 2021), their fairness heavily

depends on the quality and how biased the data was used by designers to train those models (Kim, 2021). Kim (2021) also stated that if these AI systems are trained by using biased data, such as past candidate CVs where one particular gender or race is overrepresented, they can increase biases and cause discrimination in the recruitment process rather than eliminate them. For example, the AI recruitment tool, once developed by Amazon, was reported to show a preference for men over women because the system was trained with mainly male CVs from a male-dominated technology sector (Dastin, 2018). Those errors in the design of the technology can lead to unfair hiring practices, reduce individuals' trust in AI, and increase their AI anxiety in general, or more specifically, their sociotechnical blindness anxiety.

Additionally, Schepman and Rodway (2020) found that individuals' ethical considerations, such as privacy concerns, influence their general attitudes toward AI and their comfort in using these technologies, which can raise their anxieties. For example, even though teacher candidates think integrating artificial intelligence into the curriculum would be beneficial, they also have ethical and reliability concerns rooted in the possibility of AI tools giving missing or incorrect information (Erdoğan & Cakir, 2024). Moreover, Pandya and Wang (2024) found that when companies integrate these AI tools into their career development practices, it may cause disturbance among employees, increasing their ethical concerns and negatively affecting their career development.

The AI configuration anxiety reflects individuals' fears of humanoid AI robots, or in other words, robot anxiety (Wang & Wang, 2022; Terzi, 2020). Starting with Honda Motor's first humanoid robot, ASIMO, produced in the 2000s (Honda, 2000), followed by Boston Dynamics's Atlas in 2013 (Cass, 2013), and Tesla's announcement of a general-purpose humanoid robot, Optimus or Tesla Bot, in 2021 (Shead, 2022), humanoids have rapidly developed (Ayhan Tarakcı, 2025).

There are different opinions about the effects of humanoid robots on individuals. In one study that examined how a social robot influences university students' anxiety levels, researchers found that after doing breathing practices with a robot, students' anxiety levels dropped, and they felt a social connection with the robot, like a friendship

(Matheus et al., 2025). Another study conducted by Erebak and Turgut (2020) examined the relationship between social anxiety and attitudes toward interacting with robots. The results showed that students' social anxiety negatively influences their attitudes toward social robots, and this relationship is mediated by their robot anxieties. Although we currently don't encounter humanoid robots in Türkiye, their increased presence on the internet may heighten emerging adults' AI configuration anxiety.

Since humanoid robots evolved from going beyond simple abilities such as climbing stairs, carrying heavy objects, and balancing to becoming capable of dancing, boxing, and doing household chores like cooking and cleaning, it is also suggested that we may start seeing them more frequently in factories, workplaces such as restaurants in the service sector, and on the streets in the coming years (Ayhan Tarakçı, 2025). Yavuz-Aksakal and Ülgen (2021) proposed that with the growing integration of AI into organizational life, human-machine collaboration is expected to become a key feature of future work environments, where these AI-powered systems or humanoid robots may serve as colleagues.

Women were found to have higher concerns about AI than men, but no correlation was found between anxiety levels and other factors such as age or education level (Terzi, 2020). A study that examines the influences of AI on organizations reported that AI increases employees' stress and anxiety levels and decreases their motivation and performance at work, which can also influence their intention to leave (Erkutlu et al., 2023).

2.3 AI Use Motivation

Individuals can easily access artificial intelligence technologies through their smartphones or computers and use them for a variety of reasons. Zao-Sanders (2025) listed the top motivations of individuals to use AI tools. According to this list, people stated that they used AI mostly for therapy and companionship, and also started to use it to organize their lives and for finding purposes. Lee et al. (2019) conducted a study to examine users' motivations for using AI speakers, and they identified four motives:

escaping from daily problems, having social interaction, obtaining information, and entertainment purposes.

Escape motivation is defined as individuals' preference for using AI tools as a means to avoid stress and other problems they face in their lives (Huang et al., 2024). This kind of motivation is linked with psychological constructs such as anxiety, stress, and dependency. For example, a study conducted among Indonesian academicians found that AI configuration anxiety was significantly associated with negative usage interactions. Additionally, they found that when women experience elevated anxiety levels, this leads them to prefer using AI technologies or tools more than males (Christian et al., 2024). Similarly, another study examined escapism motivations among online gamers and highlighted the influence of stress in resulting escapism behavior, where individuals' self-esteem and psychological problems also interacted with the relationship between escapism motives and the experience of negative outcomes (Kardefelt-Winther, 2014). Lastly, Subudhi et al. (2020) reported that digital escapism behaviors through the excessive usage of these technologies cause a shift in individuals' goals and lead to problematic usages, such as dependency.

Social motivation is defined as individuals' preferences for using AI technologies to satisfy their need for interaction and to avoid being alone (Huang et al., 2024). A study conducted among Chinese adolescents reported that self-expression motivation, which can also be considered a social motive, was associated with higher time spent on smartphone usage, which is similar to what has been reported for escapism motivation and has a risk of evolving into overall dependence (Meng et al., 2020). Among the top-listed AI utilization motives, individuals reported their usage of these technologies for therapy and companionship, later followed by organizing their lives and finding purpose (Zao-Sanders, 2025).

Johnson et al. (2025) conducted a study to examine individuals' underlying motives and their perceptions about personal- and career-related gains in participating in an AI training program. They found that the most prominent motivation shared by individuals was to upskill for professional and career development, followed by learning new knowledge and gaining a new skill that contributes to their personal growth. While

this study did not focus specifically on emerging adults, this kind of instrumental motivation in emerging adults might be a predictor of a strong sense of career calling since they actively engage in such learning actions to improve their current skills and to have better career opportunities. It is also found that individuals' comfort level with AI applications is a strong predictor of their general attitudes toward AI rather than their perceived capabilities (Schepman & Rodway, 2020). The instrumental motivations of AI acted as a protective factor on individuals' emotional struggles and have benefits on their future careers through skill and knowledge enhancements. Specifically, individuals with such motivations not only secure their jobs but also improve their chances of obtaining extrinsic rewards, such as organizational status (Xu et al., 2023).

Entertainment motivation is defined as individuals' preferences to use AI for relaxation and amusement (Huang et al., 2024). In the literature, there were limited studies that mentioned this entertainment motivation. For example, Lee et al. (2019) highlight that some characteristics of individuals, like their age and gender, can influence their use motivations and reported that older individuals are more likely to prefer using AI speakers for entertainment purposes. AI tools can also offer personalized meditation practices appropriate for new starters and provide accessible solutions for stress and anxiety (Pardo, 2022). In the online gaming context, which can be considered an entertainment utilization behavior Kardefelt-Winther (2014) reported the risk of dependency development on these technologies.

AI technologies bring a lot of changes into our lives, specifically for emerging adults. Understanding the underlying motives of why and how they use those AI systems is essential for interpreting their broader influences on individuals' psychological and career-related implications. In the context of career development, studies reported that low career calling perception influences important work-related outcomes such as lower job satisfaction, meaning, and engagement, also resulting in a lower sense of organizational commitment and enhancing their leaving intentions (Scroggins, 2008; Xie et al., 2016).

2.4 AI Dependency

There is growing interest in AI, as these technologies have become more accessible to individuals from all age groups and have started to be increasingly integrated into our daily and professional lives. However, this fast integration also brings up concerns regarding individuals' increasing psychological and functional reliance on these technologies (Zhang et al., 2024). In a broader sense based on the concept of dependence, described by the American Psychological Association (2018b), AI dependency can be defined as a psychological state characterized by a reliance on the assistance of AI technologies that can be easily accessed at any time through the internet, such as chatbots and AI-powered tools, which are perceived as reliable and constantly available tools for various emotional, cognitive, and other functional needs of support.

Moreover, many researchers defined AI dependency, referring to a broader concept of technology addiction that contains internet and smartphone addiction (Ahmad et al., 2023; Huang et al., 2024; Zhang et al., 2024). Huang et al. (2024) developed the AI Dependency Scale, drawing on the findings in the technology dependence concept to measure individuals' reliance levels on AI tools. While this scale was derived from the existing concept of technology dependence and shares similarities, they also emphasized a key distinction between them: traditional technologies, such as smartphones and computers, primarily serve as the mediums of human-human interaction, whereas AI technologies can imitate human-like communication, establishing a more genuine human-machine interaction. In addition, some of the question items in Wang and Wang's (2022) AI Anxiety Scale (AIAS) also featured results of AI dependency on individuals' concerns about AI's influence on their skills, such as making them lazy or diminishing their existing skills and abilities.

A key factor that might serve and intensify individuals' dependency on these systems can be their unquestioned trust in AI results. Individuals shared their difficulties differentiating between AI-generated and human-written abstracts (Gao et al., 2022), so their trust in these tools might constrain them from detecting AI hallucinations, biases,

and misinformation produced by AI (Zhai et al., 2024). While students can improve their academic performance by using ChatGPT in the short term (Rahman & Watanobe, 2023), those who are constantly over-relying on these AI tools in their homework can become lazy, contribute to the spreading of misinformation, and face plagiarism issues (Ahmad et al., 2023; Zhai et al., 2024). When individuals or organizations heavily rely on AI-generated information, suggestions, or decisions without questioning their validity or critically evaluating them, this blind trust in them can lead to significant errors and result in poor task performance (Zhai et al., 2024). Therefore, it is necessary for users to consider those tools as facilitators, not as final decision-makers, and they need to learn how to benefit from them without getting over-reliant and evaluate the findings of AI with their judgment and expertise to ensure its quality (Westfall, 2025; Zhai et al., 2024).

While these effects can be manifest in various aspects of life, they are particularly concerning in educational settings, where transition to emerging adulthood begins during university times, and skill development during those times is essential. A study that examined the Turkish teachers' perspective on AI found that their biggest concern is that AI can weaken students' critical thinking skills, making them dependent and incapable of producing original ideas (Erdoğan & Cakir, 2024). Similarly, Zhang et al. (2024) state that students are increasingly using artificial intelligence for their academic tasks, such as assignments or homework, and high dependency on AI tools can restrict their creativity, cause individuals to experience their skills (eg, critical and independent thinking) and abilities (eg, Information-seeking, problem-solving, and information-judgment) becoming blunt. Furthermore, Zhai et al. (2024) examined 14 articles and highlighted that students' overreliance or dependency on these AI dialogue systems can cause serious harm to their cognitive skills, including decision-making, critical thinking, and analytical thinking.

Besides the academic environment, such dependency on AI can also be observed in emerging adults in their work lives, which might potentially affect their job performance and career development. AI tools can offer smart solutions for job seekers, such as creating resumes or writing cover letters with AI, as well as for employees in

the workforce or young entrepreneurs by creating intriguing marketing content, such as social media posts, or easing the administrative workload by preparing proposals. Despite these benefits, individuals need to use AI tools with care, check the information's validity, and personalize these AI-produced answers with their unique perspective to avoid becoming dependent on these tools and remain productive in conversations when AI tools can not be used, for example, in a job interview setting (Westfall, 2025). Since overreliance on AI tools has a negative influence on individuals' cognitive functioning (Zhai et al., 2024), it also has the potential to impact their work lives by diminishing individuals' professional skills and abilities, which can cause them to experience stress when they try to navigate situations without the support of AI (Ahmad et al., 2023).

Researchers also emphasize other potential factors, such as academic stress, social anxiety, and mental health problems, that can intensify individuals' reliance on AI. Zhang et al. (2024) examined the use of conversational AI among university students in South Korea and found that students' academic stresses and their performance expectations mediated the relationship between their confidence in their ability to succeed in school-related tasks (academic self-efficacy) and their dependency levels on AI tools like ChatGPT. In another study, Hu et al. (2023) found that individuals with high levels of social anxiety showed high levels of problematic use of AI, where loneliness and rumination mediated the interaction. When they included mind perception, which is defined as perceiving conversational AI as capable of having human-like mental capacity, into this relationship, the positive influence of social anxiety on AI dependency strengthened, but at the same time, the impact of rumination weakened. Huang et al. (2024) conducted a longitudinal study and found that existing mental health problems, such as anxiety and depression, positively predicted the adolescents' later AI dependency behavior, but this relationship is one-sided, which means AI dependency cannot predict later mental health problems.

AI dependency might impact future employment opportunities, as individuals struggle to develop essential skills such as creativity, analytical thinking, critical thinking, and complex problem-solving. Therefore, the negative influences of AI

dependency are not only critical for individuals' well-being but also can influence emerging adults' long-term career development and their examination of their true career callings. Besides, individuals' over-reliance on these AI tools can lead to both individual and organizational-level problems in the workforce. Emerging adults might experience struggle in finding a job opportunity since they would not match the future desired skills like creativity, analytical and critical thinking, and complex problem solving (Yavuz-Aksakal & Ülgen, 2021). Additionally, reliance on AI might not only adversely affect individuals' selection and future job performance but also organizational performance, as cognitive ability skills are among the most effective evaluation tools in recruitment and can predict an individual's future performance (Ones et al., 2012).

2.5 Current Study and Rationale

Drawing on this literature, the current exploratory study examines how AI-related factors, such as AI anxiety, use motivation, and dependency, affect the sense of career calling among emerging adults in Türkiye. The contributions of this exploration to the literature are listed below.

This study proposes a new integrative framework connecting AI anxiety, AI use motivation, and AI dependency with career calling. Although there was one study that examined the interaction of anxiety, depression, AI use motivation, and AI dependency among Chinese adolescents (Huang et al., 2024), they didn't examine its influences on career calling perspectives, and they also didn't consider anxiety as AI Anxiety. Wang and Wang (2022) believed in the potential of AI for economic enhancements and productivity while acknowledging their potential influences on individuals and, in general, companies' workforces. So this study contributes to the literature by examining this integrative framework.

This study included both students and employees, focusing on emerging adults aged 18 to 29 to provide a more comprehensive understanding of this age group in Türkiye. Praskova et al. (2015) regarded emerging adults as individuals who have not

yet officially entered the workforce and suggested that their career callings may differ from those of adults who are already employed. However, as defined by Arnett and his colleagues (2014), emerging adulthood comprises individuals up to the age of 29, meaning that some young adults may already be working, while others may not. This study follows Arnett et al.'s (2024) age range definition of emerging adults, and explore a broader sample of emerging adults, including both students and employees, considering their varying career perceptions, as Praskova et al. (2025) suggested, and how it is influenced by AI.

This study provides culturally relevant insights from Türkiye, addressing a gap in the literature. Previous research has largely focused on Western samples or general adult populations. This research draws from a culturally diverse context, including participants from Türkiye, where the youth experience rapid technological integration within an evolving labor market. This cultural lens provides new insights into how AI is perceived and adopted across different economic and educational environments.

This study contributes to the Turkish literature by translating and adapting three new scales into Turkish culture and uniquely positions them within the current discourse on industrial and organizational psychology, artificial intelligence, and career development among emerging adults. Unlike prior research that typically examines AI-related constructs such as AI anxiety or career calling in isolation, this study holistically investigates the psychological, behavioral, and career-related impacts of AI. Specifically, it is the first to explore how emerging adults' sense of career calling—defined by purpose, meaning, and proactive career development—is influenced by AI anxiety, dependency, and use motivations.

Research Question 1: What is the relationship between AI-related psychological constructs, such as AI Anxiety, AI Dependency, and AI Use Motivation, and Turkish emerging adults' overall Career Calling perspectives?

Research Question 2: To what extent Turkish emerging adults career calling perspectives in its subdimensions (Other-Oriented Meaning, Personal Meaning, and Active Engagement) are influenced by AI related psychological constructs

subdimensions such Learning, Job Replacement, Sociotechnical Blindness and AI Configuration from AI Anxiety, AI Dependency, and Escape, Social, Instrumental and Entertainment from AI Use Motivation?

Research Question 3: How do Turkish emerging adults' Career Calling and its subdimensions (Other-Oriented Meaning, Personal Meaning, and Active Engagement) differentiate based on their current work status (student and employed)?



METHOD

3.1 Ethics

The ethics approval of this study was received from the Istanbul Bilgi University Human Studies Ethics Board on 03.03.2025 with the approval number 2025-20632-045. The author of this study reported that all procedures and processes were conducted under ethical standards. All the questionnaires used and their items were listed by the researchers of this study and approved by the same university's ethics committee (see Appendix A).

At the beginning of the survey, the informed consent form was presented to all participants, and they were asked to give their consent before moving to the scales. In this form, the aim of the study, its procedural details, potential risks and benefits, information regarding the confidentiality of the answers, the voluntary nature of the participation, and participants' right to withdraw from the study at any time without facing any penalty were explained in detail (see Appendix B for Turkish and Appendix C for English). The researcher declares no conflict of interest or personal relationships with individuals who can benefit from the work reported in this paper. This study didn't receive any kind of financial aid or funding.

3.2 Participants

A total of 322 individuals participated in the study. After the exclusions were made, due to the failure to complete the attention check as desired (see Section 3.5, Attention Checks), the final sample for this study consisted of 308 emerging adults residing in Türkiye. The participants' ages ranged from 18 to 29, with a mean age of 23.90 years ($SD = 3.07$). Females accounted for 64% of the sample ($n = 197$), whereas males accounted for 35.4% ($n = 109$), and 0.6% of the participants ($n = 2$) did not share their gender. Participants' education levels were collected based on the last diploma degree that they received. While there were no participants with a primary school

degree in our sample, there was one doctoral graduate and two secondary school graduates. The majority of the research sample consisted of high school graduates (43.5%) and undergraduate graduates (41.9%), along with candidates who have master's and vocational school degrees. Additionally, emerging adults were selected as the target population of this study because the majority of the participants would be either university or graduate students whose career perspectives are still developing, young employees in the workforce who are at the early stages of their careers and are being exposed to intensive AI technologies, or unemployed individuals who were either trying to figure out their career calling or trying to find employment opportunities in this challenging workforce market that is beginning to be occupied by AI tools. The sample of this study represents 48.7% of students at the time of data collection ($n = 150$) and almost the same number of employed individuals ($n = 148$). However, the representation of unemployed individuals was relatively low, accounting for only 3.2% of the research sample. Employed participants were asked to report their current occupations, and the responses were categorized into various sectors, including healthcare, education, engineering, arts and design, law, and others (see Table 3.1). This categorization aimed to provide a more comprehensive understanding of the participants' professional diversity.

Table 3.1. Participants' Sociodemographic Characteristics (N=308)

Sample Characteristics	n	%	<i>M</i>	<i>SD</i>
Age			23.9	3.07
Gender				
Female	197	64		
Male	109	35.4		
Do not want to share	2	0.6		
Education Level (Last Degree Received)				
Doctorate	1	0.3		
Master's	30	9.7		
Bachelor's	129	41.9		
Vocational School	12	3.9		
High School	134	43.5		

Secondary School	2	0.6
Work Status		
Student	150	48.7
Employed	148	48.1
Healthcare (Doctor, Nurse, Pharmacist, Psychologist, etc.)	14	4.5
Education (Teacher, Academician, Teaching Assistant, etc.)	17	5.5
Engineering (Mechanical, Industrial, Electrical-Electronics, etc.)	28	9.1
Finance and Accounting	5	1.6
Information Technologies and Software	17	5.5
Human Resources	6	1.9
Law (Lawyer, Prosecutor, Judge, etc.)	5	1.6
Arts and Design (Painter, Graphic designer, etc.)	14	4.5
Sales and Marketing	14	4.5
Construction and Architecture	3	1
Public Sector (Government officer)	2	0.6
Logistics and Transportation	3	1
Service Industry (Waiter, Cleaner, Hairdresser, etc.)	9	2.9
Media	5	1.6
Management	3	1
Other (Textile, Instructional designer, etc.)	3	1
Unemployed	10	3.2

3.3 Procedure

Data for this research were collected in March 2025, after ethics approval, through an online survey via Google Forms. The online questionnaire link was shared on social media platforms, such as Instagram, WhatsApp, LinkedIn, and email, and it took around 10 to 15 minutes to complete all of the tests. Convenience and snowball sampling methods were used to recruit participants. Several faculty members from Istanbul Bilgi University were contacted via personal communication and kindly requested to forward the survey link to their students.

The survey began with an informed consent form, requiring participants to read the details presented about the research and voluntarily agree to participate. Afterward,

participants moved to survey questions: the demographic information form, the AI Anxiety Scale (see Appendix D for Turkish and see Appendix E for English), the AI Dependency Scale (see Appendix F for Turkish and see Appendix G for English), the AI Use Motivation Scale (see Appendix H for Turkish and see Appendix I for English), and the Career Calling Scale (see Appendix J for Turkish and see Appendix K for English).

The only scale with a Turkish adaptation study was the AI Anxiety Scale, conducted by Terzi (2020); no prior Turkish adaptation studies were available for the AI Dependency Scale, the AI Use-Motivation Scale, and the Career Calling Scale. The Turkish translations of the other scales were performed by the researchers of this study using the translation and back-translation method as outlined by the *American Psychological Association* (2018c). The Turkish versions of the items, together with the original English versions, were submitted to the ethics committee for approval and received the necessary approval.

During the data collection process, the anonymity of the participants was ensured, and no identifying information was required either for conducting the research or analyzing the results. An optional input area was created in the demographic information part specifically for Bilgi University students who chose to participate in this research in exchange for extra course credit promised by their course instructors, where they could share their student ID numbers and course codes if they were willing. These identifiers were shared only with the relevant course instructors when the data collection period ended, and after that, they were permanently deleted and never stored together with the actual dataset.

Three attention-check questions, which directed participants to select a specific option, were embedded within those questionnaires to ensure the quality of the data collected. Thanks to the useful feature of the online Google surveys, there was no missing data since all the survey question items were defined as mandatory, requiring participants to select an option. However, participants who failed on more than one attention checkpoint were excluded from the dataset. There were no additional

exclusion criteria after the data collection beyond participants' failure to give their consent or complete attention checks as requested.

Once the data collection period ended, the participant responses were exported to Google Sheets, and the online form was deleted to eliminate any potential risk of data leaks. All datasets and analysis files were stored securely on a password-protected external hard drive owned by the primary researcher, with no access granted to third parties. No personally identifying information, specifically student ID, was preserved at any stage of the analysis or reporting process.

3.4 Instruments

This study employed five instruments—the Demographic Information Form, the AI Anxiety Scale, the AI Dependency Scale, the AI Use Motivation Scale, and the Career Calling Scale—as a means of data collection. The Turkish versions of the following instruments were administered to all participants.

The researchers developed the demographic information form following the purpose of this study. The form included questions to identify the participant's age, gender, the latest degree received, and current employment status. Following Kaya et al.'s (2024) study, which found a significant positive relationship between individuals' attitudes toward AI and their computer usage and AI knowledge, this study also included questions about individuals' self-rated computer skills and their AI knowledge. Participant rated their computer usage levels on a 4-point Likert scale, where 1 (*I hardly ever use the computer*) to 4 (*I am an expert computer user*), and their self-reported AI knowledge levels were also scored on 4-point Likert scale, ranging from 1 (*I have no knowledge*) to 4 (*I have detailed information*). The computer usage skills and artificial intelligence knowledge levels of the participants in the overall sample and in each sub-work condition (student, employed, and unemployed) are shared in the table below (see Table 3.2).

Table 3.2. Participants' Computer Usage Skills and AI Knowledge

Sample Characteristics	Student		Employed		Unemployed		Full sample	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Computer Usage Skills								
I am an expert computer user	33	32.0	69	67.0	1	1.0	103	33.4
I am an average computer user	92	54.8	70	41.7	6	3.6	168	54.5
I am a slightly below average computer user	21	70.0	6	20.0	3	10.0	30	9.7
I hardly ever use the computer	4	57.1	3	42.9	0	.0	7	2.3
AI Knowledge								
I have detailed information	12	27.9	30	69.8	1	2.3	43	14
I have enough knowledge	58	48.3	58	48.3	4	3.3	120	39
I have some knowledge	77	56.2	55	40.1	5	3.6	137	44.5
I have no knowledge	3	37.5	5	62.5	0	.0	8	2.6

3.4.1 AI Anxiety Scale

Wang and Wang (2022) developed the original version of the AI Anxiety Scale (AIAS) to assess the levels of anxiety or fears experienced by individuals. The total scale consists of 21 items. Participants rated each item on a 7-point Likert scale, with responses ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Higher scores received from AIAS indicate greater levels of AI-related anxieties. The scale has four subdimensions: *Learning*, *Job Replacement*, *Sociotechnical Blindness*, and *AI Configuration*. The Learning dimension has eight items that reflect individuals' fears and concerns about acquiring knowledge about AI. The Job Replacement dimension has six items that capture individuals' fear of being replaced by AI in their jobs. The Sociotechnical Blindness dimension has four items that evaluate individuals' anxieties that emerged from their tendency to consider AI as a distinct feature, where they neglect the influences of other components, such as humans and institutions, and reflect their concerns regarding the improper use or failure of AI systems. The AI Configuration dimension has three items measuring individuals' discomfort with humanoid robots.

The original developers of the scale (Wang & Wang, 2022) reported excellent reliability scores for the total AIAS ($\alpha = .96$) and for the subdimensions: learning ($\alpha = .97$), job replacement ($\alpha = .92$), sociotechnical blindness ($\alpha = .92$), and AI configuration ($\alpha = .96$). Two different researchers conducted the Turkish adaptation of the scale, both reported good internal consistencies. Terzi (2020), in an adaptation study conducted with teachers, reported the following Cronbach's alpha values: total scale ($\alpha = .96$), learning and sociotechnical blindness ($\alpha = .89$), job replacement and AI configuration ($\alpha = .95$). Akkaya et al. (2021) conducted another adaptation study with participants from higher education institutions. They reported the reliability of the total scale as $\alpha = .94$, for learning and AI configuration dimensions ($\alpha = .95$), job replacement ($\alpha = .90$), and sociotechnical blindness ($\alpha = .88$). Although the learning dimension in Akkaya et al.'s version had slightly higher internal consistency, Terzi's version demonstrated higher overall reliability. Given the similarity in item translation between the two versions and the broader reliability scores, the current study chose to use the version developed by Terzi (2020).

In the current study, the reliability analysis was conducted, and the total AIAS revealed excellent internal consistency ($\alpha = .93$). The subdimensions of the scale also demonstrated high internal consistency: learning ($\alpha = .89$), job replacement ($\alpha = .89$), sociotechnical blindness ($\alpha = .81$), and AI configuration ($\alpha = .93$).

3.4.2 AI Use Motivation Scale

Huang et al. (2024) adjusted the Artificial Intelligence Speaker Use Motivation Scale of Lee et al. (2019) and created the AI Use Motivation Scale to understand the underlying motives of individuals for using these AI tools. The scale they developed consists of 12 items in total and has four subscales: *Escape Motivation*, *Social Motivation*, *Instrumental Motivation*, and *Entertainment Motivation*, where each subscale has three items. Each item was translated into Turkish and rated on a 4-point Likert scale, ranging from 1 (*strongly disagree*) to 4 (*strongly agree*). Higher scores on the scale indicate high AI use motivation, while high scores on the subscales indicate

specific utilization preferences of individuals. The Escape Motivation subscale includes items such as “*I use AI to escape stress and responsibility,*” which focuses on participants’ motivation to escape from daily problems. The Social Motivation subscale is about using AI to have a social connection or to relieve their solitude, for example, “*I use AI because it relieves my loneliness.*” The third subscale is Instrumental Motivation, where individuals use AI to search for information and enhance their abilities, for example, “*I use AI to enhance my learning and knowledge.*” The Entertainment Motivation subscale includes items such as “*I use AI because it provides me with a variety of entertainment activities.*” Since their study was longitudinal, the scale was administered at two different time intervals. At Time 1, the Cronbach’s alpha values for each subscale were escape motivation ($\alpha = .86$), social motivation ($\alpha = .88$), instrumental motivation ($\alpha = .86$), and entertainment motivation ($\alpha = .90$). At Time 2, reliability values were reported slightly higher, where escape motivation ($\alpha = .92$), social motivation ($\alpha = .88$), instrumental motivation ($\alpha = .89$), and entertainment motivation ($\alpha = .94$).

The Turkish-translated version of the scale was used in the data collection. Reliability and validity analyses were performed to ensure the suitability of the scale, using data collected from emerging adults in Türkiye. The results revealed that the total scale established good internal consistency ($\alpha = .87$). All four subscales showed Cronbach’s alpha values exceeding .80: specifically, the escape motivation ($\alpha = .81$), the social motivation ($\alpha = .94$), the instrumental motivation ($\alpha = .82$), and the entertainment motivation ($\alpha = .90$), demonstrated high reliability in measuring emerging adults’ AI use motivations. An explanatory factor analysis (EFA) using principal axis factoring with Direct Oblimin rotation was conducted to examine the underlying structure of *the Turkish version of the AI Use Motivation Scale*. The goal of this analysis was to assess the construct validity of the translated version by identifying the factor structure of the items. Before moving forward to the factor analysis, the suitability of the data was evaluated. The Kaiser-Meyer-Olkin (KMO) measure of sample adequacy was .849, indicating the data is suitable for factor analysis. Bartlett’s Test of Sphericity was significant, $\chi^2(66) = 2600.186$, $p < .001$, supporting the factorability of the correlation matrix. Communalities of the extracted factors ranged from .343 to .853,

suggesting the majority of the items were well explained by the factor structure. Factor extraction was based on eigenvalues greater than 1, the scree plot, and the interpretability of the solution. The analysis revealed three factors (with eigenvalues of 5.347, 2.374, and 1.339, respectively), accounting for 68.11% of the total variance. An oblimin rotation was employed, with the expectation that the factors would correlate, to aid interpretability. The factor correlations ranged from -.517 to .097. Items loaded clearly on three distinct factors, with loadings exceeding .50 magnitude (see Table 3.3 for loadings; only loadings > .40 are shown).

Table 3.3. Factor Loadings for the AI Use Motivation Scale (Pattern Matrix)

Item	Factor loading		
	1	2	3
4. I use AI as a way to avoid being alone.	.935	-	-
6. I use AI because it relieves my loneliness.	.917	-	-
5. I use AI because I need to interaction with someone.	.818	-	-
1. I use AI as a means of escaping from family, friends, or other problems.	.812	-	-
3. I use AI to forget about other things.	.776	-	-
2. I use AI to escape stress and responsibility.	.581	-	-
9. I use AI to enhance my learning and knowledge.	-	.929	-
7. I use AI to search for and obtain the information I need.	-	.732	-
8. I use AI to improve my abilities.	-	.674	-
12. I use AI because it provides me with a variety of entertainment activities.	-	-	-.936
10. I use AI to entertain myself and relax.	-	-	-.811
11. I use AI because it brings me happiness.	-	-	-.797

Note. N = 308. The extraction method was principal axis factoring with direct oblimin rotation. Only loadings > .40 are shown. Turkish items were administered to participants, and English versions were provided in the table for reporting purposes.

Particularly, items originally designed to examine escape motivation (items 1 to 3) and social motivation (items 4 to 6) loaded onto the same factor, suggesting that these two constructs may reflect a broader motivational construct, and overlap among Turkish emerging adults. The instrumental motivation (items 7 to 9) loaded on the second and

the entertainment motivation (items 10 to 12) loaded onto the third factor, consistent with the original scale factor loadings. Additionally, it was observed that the factor loadings of the items belonging to the entertainment motivation dimension were negative; this is only related to factor direction and does not affect the structural interpretation. Overall, the EFA provides preliminary support for the construct validity of the Turkish version of the AI Use Motivation Scale, identifying a three-factor solution that differs from its original structure. Finally, it is important to note that, even though the EFA indicates a three-factor structure for the AI Use Motivation Scale in the Turkish sample, the original four-factor theoretical structure was preserved in the following regression analyses. The rationale behind this choice was to maintain alignment with the initial conceptual frameworks and scoring methods established by the original scale developers (Huang et al., 2024). Although items related to Escape and Social motivations loaded on a single factor in our EFA, the original four-subscale design was theoretically grounded and has been used in prior research, allowing for comparability with prior studies and theoretical coherence. This variation in factor structure is recognized as a significant finding that is culturally and contextually relevant, requiring further exploration in future studies by using confirmatory factor analysis or structural modeling techniques.

3.4.3 AI Dependency Scale

Huang et al.'s (2024) AI Dependency Scale was adapted from the Smartphone Addiction Scales (Kwon et al., 2013; Kim et al., 2014) to measure individuals' reliance on AI tools. Although both scales aim to assess individuals' dependence on technological products, Huang et al. (2024) emphasize that the unique characteristics of AI, compared to other technologies, necessitated the development of this new scale. The scale consists of five items; the examples include "*I feel anxious and upset when I cannot use artificial intelligence,*" and "*I have tried to reduce the amount of time I spend on AI but failed.*" Each item was translated into Turkish, and participants rated on a 4-point Likert scale, ranging from 1 (*strongly disagree*) to 4 (*strongly agree*). The high scores received on the scale indicate high levels of AI reliance.

The scale was administered to adolescents at two different times, and Cronbach's alpha values were reported as $\alpha = .88$ for the first time and $\alpha = .95$ for the second time, indicating high reliability. Reliability analysis was conducted to assess the internal consistency of the Turkish version of the AI dependency scale in this study. The results revealed that the scale had an acceptable internal consistency ($\alpha = .70$) in measuring Turkish emerging adults' AI dependency levels. To assess the construct validity of the Turkish translated version of the scale, an exploratory factor analysis was conducted using principal axis factoring with direct oblimin rotation. Prior to analysis, the suitability of the data for factor analysis was evaluated. The Kaiser-Meyer-Olkin measure of sampling adequacy for *the Turkish AI Dependency Scale* was .695, indicating an acceptable sample for factor analysis. Bartlett's test of sphericity was significant, $\chi^2(10) = 330.826, p < .001$, supporting the factorability of the correlation matrix. Communalities for the extracted factors ranged from .291 to .605, suggesting that the extracted factors sufficiently explained the variance in the items, with almost all values above the .30 threshold. The factor extraction analysis revealed two factors (with eigenvalues of 2.327 and 1.150, respectively), accounting the 49.03% of the total variance. The scree plot also clearly supported a two-factor model, showing an elbow after the second factor. As the factors are expected to be correlated, oblimin rotation was used to improve interpretability. The factor correlation matrix showed that the correlation between the extracted factors was .375, further supporting the use of an oblique rotation. Items are clearly loaded on two distinct factors without showing overlapping (see Table 3.4 for loadings).

Table 3.4. Factor Loadings for the AI Dependency Scale (Pattern Matrix)

Item	Factor loading	
	1	2
3. The use of artificial intelligence has damaged my relationships.	.780	-
5. I have tried to reduce the amount of time I spend on AI but failed.	.699	-
4. I feel anxious and upset when I cannot use artificial intelligence.	.652	-

2. I spend too much time on AI.	-	.718
1. I rely too much on AI.	-	.557

Note. N = 308. The extraction method was principal axis factoring with direct oblimin rotation. Only loadings > .40 are shown. Turkish items were administered to participants, and English versions were provided in the table for reporting purposes.

Overall, the EFA provides preliminary support for the construct validity of the Turkish version of the AI Dependency Scale, identifying a two-factor structure. However, this finding was different from the original scale, which was conceptualized as unidimensional to reflect general dependency on AI technologies. Despite the EFA indicating a two-factor structure for the AI Dependency Scale in the Turkish emerging adult sample, the original theoretical structure of one factor was retained for subsequent regression analyses to preserve consistency with the original conceptual frameworks and scoring protocols developed by the original authors (Huang et al., 2024). This decision to retain the original structure allows for comparability with prior studies and theoretical coherence, but this discrepancy in factor structure is acknowledged as a culturally and contextually important finding that merits further investigation in future research, possibly through confirmatory factor analysis (CFA) or structural modeling.

3.4.4 Career Calling Scale

Praskova et al. (2015) developed the Career Calling Scale to evaluate emerging adults' career calling. The scales consist of 15 items in total and have three subscales addressing the different aspects of calling, with five items in each of those subscales. Each item was translated into Turkish, and participants rated how much they agreed with each statement on a 6-point Likert scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). After the negatively worded items, for instance, the sixth and seventh items were reverse-coded and added, the high scores received from this scale indicate a higher sense of career calling. The Other-Oriented Meaning subscale includes items that reflect the desire to contribute to others and society with their work, such as "*It is more important that my career benefits others, rather than just benefits me.*" The Personal Meaning subscale includes items such as "*Preparing for my career is contributing to my*

personal growth,” which refers to the alignment of a career with individuals’ values, creating meaning and satisfaction. The Active Engagement subscale reflects participants’ motivational drives and enthusiasm for pursuing a fulfilling and meaningful career path, for example, “*I take every opportunity to progress my career goals.*” Praskova et al. (2015) reported that the overall scale demonstrated a high-reliability score ($\alpha = .89$), and good internal consistency for the subscales, other-oriented meaning ($\alpha = .85$), personal meaning ($\alpha = .80$), and active engagement ($\alpha = .81$).

In the present study, each item in the scale was translated into Turkish to use in this study; the reliability and validity analysis were conducted with the data collected from emerging adults. The Cronbach’s alpha value of the total scale was found to be $\alpha = .88$, and for the subscales, other-oriented meaning ($\alpha = .84$), personal meaning ($\alpha = .85$), and active engagement ($\alpha = .81$), indicating high internal reliability. An exploratory factor analysis was conducted using principal axis factoring with direct oblimin rotation to examine the underlying factor structure of *the Turkish Career Calling Scale*. The KMO measure of sampling adequacy for the Career Calling Scale was .877, showing suitability of the data for factor analysis. Bartlett’s test of sphericity was significant, $\chi^2(105) = 2288.851, p < .001$, confirming factorability. Based on eigenvalues greater than 1 and the scree plot, three factors were extracted (with eigenvalues of 5.944, 1.899, and 1.706, respectively), explaining 55.39% of the total variance. The scree plot indicated an elbow after the third factor, further supporting the three-factor solution. Given the expectation that factors would correlate, oblimin rotation was employed, and factor correlations were moderately positive, ranging from .362 to .399. Items loaded clearly on three distinct factors, with loadings above .40 and without significant cross-loadings, as consistent with the original scale’s factor structure (see Table 3.5 for loadings).

Table 3.5. Factor Loadings for the Career Calling Scale (Pattern Matrix)

Items	Factor loading		
	1	2	3
6. I have no clear sense of a future career direction that would be meaningful for me. (R)	.850	-	-
7. I struggle to identify an important career goal that would give me a reason to get up in the morning and do something about it. (R)	.832	-	-
8. I feel a sense of satisfaction because I have chosen a career path that I see as personally meaningful.	.663	-	-
10. I have chosen a career path that will give a real purpose to my life.	.580	-	-
9. Preparing for my career is contributing to my personal growth.	.416	-	-
2. I think of benefiting others through my future chosen career all the time; it is like my calling.	-	.915	-
1. It is my calling to benefit others in my future chosen career.	-	.874	-
3. It is more important that my career benefits others, rather than just benefits me.	-	.686	-
4. I believe that I can make an important contribution to the community in my future chosen career.	-	.573	-
5. I enjoy that my future career will be recognised in the community as important.	-	.486	-
12. I am obsessed about the career I am aiming for to the point that sometimes nothing else interests me.	-	-	.825
14. When it comes to planning for my dream career, I do not waste time; it is like I am on a mission.	-	-	.685
11. All I want to do now is to pursue the career that is inspiring me.	-	-	.636
13. Everything I do to prepare for my career is enjoyable and draws me towards it.	-	-	.602
15. I take every opportunity to progress my career goals.	-	-	.421

Note. N = 308. The extraction method was principal axis factoring with direct oblimin rotation. Only loadings > .40 are shown. Reverse-scored items are marked with an (R). Turkish items were administered to participants, and English versions were provided in the table for reporting purposes.

Overall, the EFA provides preliminary support for the construct validity of the Turkish version of the Career Calling Scale, replicating the expected three-factor structure in the Turkish sample of emerging adults.

3.5 Attention Checks

To ensure the quality of the data collected, researchers embedded three attention checks throughout the questions in each part, as inspired by another research (Schepman & Rodway, 2020). The first attention check appeared within the AI Anxiety Scale, the second was placed in the section containing both the AI Dependency and the AI Use Motivation scales, as the AI Dependency scale is relatively short, with only five items, and the third was embedded in the Career Calling Scale. These attention items directed participants to select a particular response; for example, “*Please select 'I somewhat disagree' as your response to this statement*” to verify their concentration. Fourteen participants who failed more than one of these items were excluded from the final analysis.

3.6 Statistical Analysis

All statistical analyses of this study were conducted using IBM SPSS Statistics Version 28.0 (IBM Corp., 2021). Thanks to the useful feature of Google Forms, all survey items were marked as required by the researchers, and no missing data was observed. As noted earlier, three attention-check questions were embedded into the survey to ensure data quality, and participants who failed two or more were excluded from the final sample (final N = 308).

Gender, education level, and current work status were treated as categorical variables, whereas participants' age was treated as a continuous variable. Descriptive statistics were used to summarize sample characteristics (see Section 3.2, Participants). Pearson correlation coefficients were calculated to examine relationships between main study variables and within their subdimensions. Following Cohen's (1988) guidelines, correlations around .10 were interpreted as small, around .30 as medium, and .50 or higher as large.

To explore the predictive power of AI-related psychological variables on career calling and its subdimensions, four hierarchical multiple regression analyses were

conducted. Independent samples t-tests were also performed to test whether participants' career calling perspectives differed based on current work status (student vs. employee). Given that the sequence of variable entry impacts the results in hierarchical models, details regarding the regression strategy, including the order of the variable entry and the theoretical rationale of this study, are explained below.

In the first step of each regression model, participants' age and gender were included as demographic control variables, which is commonly recommended in psychological research (Zhao et al., 2021). This step enables researchers to interpret the variance explained by basic characteristics and distinguish the unique effects of more complex variables, such as AI-related psychological variables included in later stages for assessing career calling and its subdimensions, by controlling their effects.

In the second step, the four subdimensions of AI Anxiety—Learning, Job Replacement, Sociotechnical Blindness, and AI Configuration—were entered into the regression model. These subdimensions reflect individuals' emotional and cognitive responses to AI, which may shape their attitudes, behaviors, and motivational tendencies toward AI (Wang & Wang, 2022; Zhang et al., 2024; Huang et al., 2024; Kardefelt-Winther, 2014). Thus, it was conceptually appropriate to enter the AI anxiety sub-dimensions into the model after demographic factors to prepare a psychological groundwork for subsequent AI-related factors and to understand how individuals' emotional reactions uniquely influence their career calling perceptions.

The third step, AI Dependency, was added to the model. Although it may conceptually be influenced by AI anxiety and use motivations, it represents a potentially disruptive behavioral reaction that could affect performance or career outcomes (Ahmad et al., 2023; Hu et al., 2023; Zhang et al., 2024; Huang et al., 2024). It was entered before motivational variables to determine whether it explained additional variance in career calling perspectives. Moreover, this order ensured that its effect was not masked by overlapping variance, given its high correlation with AI use motivations ($r = .63$).

In the final step, the four subdimensions of AI Use Motivation—Escape, Social, Instrumental, and Entertainment—were added into the model. These variables reflect

individuals' interaction preferences or, in other words, purpose-driven engagement with AI tools based on their cognitive and emotional reasoning. Their inclusion last allows the model to test whether specific behavioral motivational drivers uniquely contribute incremental variance to career calling after accounting for prior psychological and demographic predictors.



RESULTS

This section presents the results of the statistical analyses conducted to address the research questions. First, the relationships among age, career calling, and AI-related psychological constructs, along with their subdimensions, self-assessed computer skills, and AI knowledge, were examined using Pearson correlation coefficients. The next four hierarchical multiple regression analyses were conducted to determine the predictive power of these constructs on career calling and its subdimensions. Finally, independent samples t-tests were conducted to explore differences in career calling perspectives based on their current work status.

4.1 Total Scales Correlations

Pearson correlation analysis was conducted to examine the relationships among Age, AI Anxiety, AI Dependency, AI Use Motivation, Career Calling, Computer Skills, and AI Knowledge (see Table 4.1).

Table 4.1. Total Scales Correlations With Computer Skills and AI Knowledge (N=308)

Variable	Mean	SD	1	2	3	4	5	6	7
1. Age	23.90	3.07	-						
2. Career Calling	4.25	0.79	-.10	-					
3. AI Anxiety	3.85	1.06	-.26**	.02	-				
4. AI Dependency	1.77	0.44	-.12*	.02	.07	-			
5. AI Use Motivation	2.12	0.51	-.08	.07	.03	.63**	-		
6. Computer Skills	3.19	0.70	.33**	-.02	-.35**	-.09	-.11	-	
7. AI Knowledge	2.64	0.75	.24**	.19**	-.31**	.06	.06	.50**	-

Note. * $p < 0.05$ level, ** $p < 0.01$ level

The results showed that age was negatively correlated with AI Anxiety, $r(306) = -.26, p < .001$, and AI Dependency, $r(306) = -.12, p = .030$ but positively correlated with Computer Skills, $r(306) = .33, p < .001$ and AI Knowledge, $r(306) = .24, p < .001$. Career Calling did not show any significant associations with other constructs, except for a positive association with AI Knowledge, $r(306) = .19, p = .001$. AI Anxiety was negatively associated with Computer Skills, $r(306) = -.35, p < .001$, and AI Knowledge, $r(306) = -.31, p < .001$. A strong positive correlation was observed between AI Dependency and AI Use Motivation, $r(306) = .63, p < .001$. Finally, Computer Skills and AI Knowledge were also strongly and positively correlated, $r(306) = .50, p < .001$.

4.2 Subscales Correlations

A second bivariate correlation analysis was conducted to examine the relationships among age, the subscales of Career Calling Scale (Other-Oriented Meaning, Personal Meaning, Active Engagement), AI Anxiety (Learning, Job Replacement, Sociotechnical Blindness, AI Configuration), AI Dependency, AI Use Motivation (Escape, Social, Instrumental, Entertainment), and self-rated Computer Skills, and AI Knowledge. All correlations and their significance levels are presented in Table 4.2.

Table 4.2. Subscales Correlation With Computer Skills and AI Knowledge

Variables	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Age	23.90	3.07	-														
Career Calling																	
2. Other-Oriented Meaning	4.54	0.93	-.14*	-													
3. Personal Meaning	4.41	1.05	-.02	.42**	-												
4. Active Engagement	3.79	1.04	-.09	.41**	.48**	-											
AI Anxiety																	
5. Learning	2.66	1.15	-.15**	.08	-.07	-.04	-										
6. Job Replacement	4.68	1.36	-.24**	.17**	-.08	-.01	.41**	-									
7. Sociotechnical Blindness	4.81	1.26	-.21**	.17**	-.10	.02	.37**	.72**	-								
8. AI Configuration	4.09	1.75	-.27**	.20**	-.08	-.04	.44**	.63**	.65**	-							
9. AI Dependency	1.77	0.44	-.12*	.03	-.08	.10	.11	.04	.02	.04	-						
AI Use Motivation																	
10. Escape	1.58	0.62	-.15**	.04	-.18**	-.04	.20**	.24**	.19**	.17**	.64**	-					
11. Social	1.50	0.69	-.05	.04	-.14*	0.06	.14*	.11	.11*	.05	.55**	.73**	-				
12. Instrumental	3.21	0.66	-.04	.08	.15**	.16**	-.31**	-.12*	-.08	-.18**	.21**	.08	.10	-			
13. Entertainment	2.21	0.84	-.00	.12*	-.02	.16**	-.05	-.01	.01	-.07	.42**	.44**	.46**	.29**	-		
14. Computer Skills	3.19	0.70	.33**	-.19**	.15**	-.02	-.21**	-.27**	-.31**	-.37**	-.09	-.21**	-.17**	.18**	-.11	-	
15. AI Knowledge	2.64	0.75	.24**	-.02	.24**	.20**	-.27**	-.22**	-.23**	-.30**	.06	-.14*	-.06	.37**	.01	.50**	-

Note. * $p < 0.05$ level, ** $p < 0.01$ level

Results showed that individuals' age was positively associated with their computer usage skills and AI knowledge, $r(306) = .33$ and $r(306) = .24$, respectively, both $p < .001$. Age was also negatively correlated with all subdimensions of AI anxiety, with the strongest correlation observed for AI Configuration ($r = -.27, p < .001$). Additionally, negative associations were found with AI Dependency ($r = -.12, p = .030$) and the Escape Motivation subdimension of AI Use Motivation ($r = -.15, p = .009$).

Within the Career Calling subdimensions, Other-Oriented Meaning was positively correlated with Personal Meaning ($r = .42, p < .001$) and Active Engagement ($r = .41, p < .001$), as well as with several AI Anxiety dimensions, including Job Replacement ($r = .17, p = .003$), Sociotechnical Blindness ($r = .17, p = .002$), and AI Configuration ($r = .20, p = .001$). It also showed a weak positive correlation with Entertainment Motivation ($r = .12, p = .041$) and a negative correlation with Computer Skills ($r = -.19, p = .001$). Personal Meaning was positively associated with Active Engagement ($r = .48, p < .001$), Instrumental Motivation ($r = .15, p = .009$), Computer Skills ($r = .15, p = .010$), and AI Knowledge ($r = .24, p < .001$). It was negatively associated with Escape ($r = -.18, p = .002$), and Social Motivation ($r = -.14, p = .016$). Active Engagement showed positive correlations with Instrumental ($r = .16, p = .005$) and Entertainment Motivation ($r = .16, p = .005$), and with AI Knowledge ($r = .20, p < .001$).

The Learning subscale of AI Anxiety was positively associated with the other AI Anxiety subscales (r values ranging from .37 to .44, all $p < .001$), as well as with Escape ($r = .20, p < .001$) and Social Motivation ($r = .14, p = .015$). It was negatively associated with Instrumental Motivation ($r = -.31, p < .001$), Computer Skills ($r = -.21, p < .001$) and AI Knowledge ($r = -.27, p < .001$). Job Replacement and Sociotechnical Blindness were strongly associated, $r(306) = .72, p < .001$, and both were positively related to AI Configuration Anxiety and Escape Motivation, while negatively associated with Computer Skills and AI Knowledge. Additionally, Job Replacement was negatively associated with Instrumental Motivation ($r = -.12, p = .030$), whereas Sociotechnical Blindness was positively associated with Escape Motivation ($r = .19, p = .001$). AI Configuration was positively correlated with Escape Motivation ($r = .17, p = .002$) and

also negatively with Instrumental Motivation ($r = -.18, p = .001$), Computer Skills ($r = -.37, p < .001$), and AI Knowledge ($r = -.30, p < .001$).

AI Dependency was positively associated with AI Use Motivation subscales, showing strong correlations with Escape ($r = .64$) and Social Motivation ($r = .55$), a moderate correlation with Entertainment ($r = .42$), and a weak correlation with Instrumental Motivation ($r = .21$); all p values lower than .001. However, it showed no significant associations with Career Calling and AI Anxiety subscales, or self-rated Computer Skills and AI Knowledge.

The AI Use Motivation subscales were significantly interrelated. Escape was strongly correlated with Social ($r = .73, p < .001$) and moderately associated with Entertainment ($r = .44, p < .001$). Entertainment was also moderately associated with Social ($r = .46, p < .001$) and weakly with Instrumental Motivation ($r = .29, p < .001$). Finally, Computer Skills were positively correlated with Instrumental Motivation ($r = .18, p = .002$) and AI Knowledge ($r = .50, p < .001$), while negatively associated with Escape ($r = -.21, p < .001$) and Social Motivation ($r = -.17, p = .002$). AI Knowledge also showed a negative correlation with Escape Motivation ($r = -.14, p = .013$) and a moderate positive correlation with Instrumental Motivation ($r = .37, p < .001$).

4.3 Hierarchical Regression Analysis with Career Calling and Its Subdimensions

Hierarchical multiple regression analyses were conducted to examine total Career Calling and its three subdimensions: Other-Oriented Meaning, Personal Meaning, and Active Engagement. Each analysis employed the same four-step hierarchical approach, in which variables were entered in the following order: (1) Demographic variables (Age and Gender), (2) AI Anxiety subdimensions (Learning Anxiety, Job Replacement Anxiety, Sociotechnical Blindness Anxiety, AI Configuration Anxiety), (3) AI Dependency, and (4) AI Use Motivation subdimensions (Escape Motivation, Social Motivation, Instrumental Motivation, Entertainment Motivation).

The first analysis examined the total Career Calling perceptions. Model 1 only included Age and Gender as control variables. This model explained 1.5% of the variance in total Career Calling ($R^2 = .015$), but these variables did not significantly predict total Career Calling, $F(2, 305) = 2.29, p = .103$. In model 2, four AI Anxiety subdimensions (learning, job replacement, sociotechnical blindness, and AI configuration) were added. This step did not significantly contribute to the variance explained in the total Career Calling, $\Delta R^2 = .002, \Delta F(4, 301) = 0.12, p = .974$. The overall model remained non-significant, $F(6, 301) = 0.84, p = .542$. Model 3 added AI Dependency, and this addition did not significantly improve the model, $\Delta R^2 = .000, \Delta F(1, 300) = 0.03, p = .869$. The overall model continued to be non-significant, $F(7, 300) = 0.72, p = .656$. In model 4, all subdimensions of AI Use Motivations (escape, social, instrumental, and entertainment) were added, and this addition significantly improved the model's predictive power, $\Delta R^2 = .063, \Delta F(4, 296) = 5.09, p = .001$. The final model was statistically significant, $F(11, 296) = 2.33, p = .009$, indicating the overall model explained 8.0% of the variance in total Career Calling ($R^2 = .080$). The standardized coefficients (Beta) of the three significant predictors of the total Career Calling were Escape Motivation ($\beta = -.270, p = .004$), Instrumental Motivation ($\beta = .136, p = .032$), and Entertainment Motivation ($\beta = .150, p = .028$). All other variables were non-significant ($p > .05$). These findings suggest that using AI with Escape Motivation was negatively associated, whereas using it with Instrumental and Entertainment Motivation was positively associated with higher levels of total Career Calling perspectives among emerging adults in Türkiye (see Table 4.3).

Table 4.3. Predictors of Total Career Calling

Variable	Model 1			Model 2			Model 3			Model 4		
	B	SE B	β	B	SE B	β	B	SE B	β	B	SE B	β
Age	-.02	.01	-.09	-.03	.02	-.10	-.03	.02	-.10	-.03	.02	-.10
Gender	-.11	.09	-.07	-.12	.10	-.07	-.12	.10	-.07	-.15	.10	-.10
Learning Anxiety				-.02	.05	-.03	-.02	.05	-.03	.03	.05	.04
Job Replacement Anxiety				.01	.05	.01	.01	.05	.01	.03	.05	.06

Sociotechnical Blindness Anxiety	.02	.06	.02	.02	.06	.02	-.00	.06	-.00
AI Configuration Anxiety	-.01	.04	-.03	-.01	.04	-.03	-.00	.04	-.01
AI Dependency				.02	.11	.01	.11	.14	.06
Escape Motivation							-.35	.12	-.27**
Social Motivation							.03	.10	.03
Instrumental Motivation							.16	.08	.14*
Entertainment Motivation							.14	.06	.15*
R ²	.015	.016			.016			.080	
F for change in R ²	2.292	.123			.027			5.093**	

Note. Gender was coded as 1 = Female, 2 = Male, 3 = Preferred not to say. * $p < .05$ level, ** $p < .01$ level

The second analysis focused on the Other-Oriented Meaning subdimension of career calling. Model 1, which included Age and Gender, was statistically significant, $F(2, 305) = 13.88, p < .001$. This model explained 8.3% of the variance in Other-Oriented Meaning ($R^2 = .083$), and Gender was found to be a significant, negative predictor ($\beta = -.257, p < .001$). In model 2, Learning Anxiety, Job Replacement Anxiety, Sociotechnical Blindness Anxiety, and AI Configuration Anxiety were added to the model. While the overall model remained significant, $F(6, 301) = 5.46, p < .001$, this did not significantly contribute to the explained variance in Other-Oriented Meaning, $\Delta R^2 = .015, \Delta F(4, 301) = 1.23, p = .298$. Gender remained a significant negative predictor ($\beta = -.233, p < .001$). Model 3 included AI Dependency, but this addition did not significantly improve the model, $\Delta R^2 = .000, \Delta F(1, 300) = 0.01, p = .942$. The model remained significant, $F(7, 300) = 4.67, p < .001$, with Gender continuing to be a significant predictor ($\beta = -.232, p < .001$). In Model 4, Escape Motivation, Social Motivation, Instrumental Motivation, and Entertainment Motivation were entered into the model, and this addition significantly improved the model's predictive power, $\Delta R^2 = .033, \Delta F(4, 296) = 2.78, p = .027$. The full model was statistically significant, $F(11, 296) = 4.05, p < .001$, accounting for 13.1% of the variance in Other-Oriented Meaning ($R^2 = .131$). The standardized coefficients suggest that Gender ($\beta = -.251, p < .001$) and Entertainment Motivation ($\beta = .174, p = .009$) were significant predictors of the Other-Oriented Meaning. However, all other

predictors (Age, Learning Anxiety, Job Replacement Anxiety, Sociotechnical Blindness Anxiety, AI Configuration Anxiety, AI Dependency, Escape Motivation, Social Motivation, Instrumental Motivation) were not statistically significant ($p > .05$). These results suggest that being female and using AI with Entertainment Motivation were both significantly associated with higher Other-Oriented Meaning among emerging adults in Türkiye (see Table 4.4).

Table 4.4. Predictors of the Other-Oriented Subscale of Career Calling

Variable	Model 1			Model 2			Model 3			Model 4		
	<i>B</i>	<i>SE</i> <i>B</i>	β	<i>B</i>	<i>SE</i> <i>B</i>	β	<i>B</i>	<i>SE</i> <i>B</i>	β	<i>B</i>	<i>SE</i> <i>B</i>	β
Age	-.03	.02	-.10	-.02	.02	-.07	-.02	.02	-.07	-.02	.02	-.07
Gender	-.48	.10	-.26**	-.44	.11	-.23**	-.44	.11	-.23**	-.47	.11	-.25**
Learning Anxiety				.01	.05	.01	.01	.05	.01	.04	.05	.05
Job Replacement Anxiety				.04	.06	.07	.04	.06	.07	.06	.06	.09
Sociotechnical Blindness Anxiety				.03	.06	.04	.03	.06	.04	.01	.06	.02
AI Configuration Anxiety				.02	.04	.04	.02	.04	.04	.03	.04	.06
AI Dependency							.01	.12	.00	.01	.16	.01
Escape Motivation										-.21	.14	-.14
Social Motivation										-.02	.11	-.01
Instrumental Motivation										.08	.09	.06
Entertainment Motivation										.19	.07	.17**
R ²		.083			.098			.098			.131	
<i>F</i> for change in R ²		13.879**			1.231			.005			2.781*	

Note. Gender was coded as 1 = Female, 2 = Male, 3 = Preferred not to say. * $p < .05$ level, ** $p < .01$ level

The third analysis examined the Personal Meaning subscale of the Career Calling. In Model 1, Age and Gender were entered into the model as control variables.

This model explained 0.2% of the variance in Personal Meaning ($R^2 = .002$), but the model was not statistically significant, $F(2, 305) = 0.30, p = .743$. Model 2 added AI Anxiety subdimensions (learning, job replacement, sociotechnical blindness, and AI configuration), and this addition did not significantly improve the variance explained in the model, $\Delta R^2 = .011, \Delta F(4, 301) = 0.84, p = .501$. The overall model remained non-significant, $F(6, 301) = 0.66, p = .684$. In model 3, AI Dependency was added into the model, but no statistically significant contribution was observed in the variance explained, $\Delta R^2 = .006, \Delta F(1, 300) = 1.83, p = .177$. The overall model continued to be non-significant, $F(7, 300) = 0.83, p = .565$. Model 4 added AI Use Motivations (escape, social, instrumental, and entertainment). This addition significantly improved the model's predictive power, $\Delta R^2 = .049, \Delta F(4, 296) = 3.85, p = .005$ and the full model was statistically significant, $F(11, 296) = 1.95, p = .034$, explained 6.7% of the variance in Personal Meaning ($R^2 = .067$). Escape Motivation ($\beta = -.190, p < .05$) was a significant negative predictor of Personal Meaning, while Instrumental Motivation ($\beta = .164, p = .010$) was a positive predictor. All other variables in the model, Age, Gender, Learning Anxiety, Job Replacement Anxiety, Sociotechnical Blindness Anxiety, AI Configuration Anxiety, AI Dependency, Social Motivation, and Entertainment Motivation, were not significant ($p > .05$) in the final model. These results suggest that Turkish emerging adults who use AI with Escape Motivation tend to experience lower levels of Personal Meaning in their careers, whereas those who use AI for Instrumental purposes, such as information acquisition, report a greater sense of Personal Meaning in their careers (see Table 4.5).

Table 4.5. Predictors of the Personal Meaning Subscale of Career Calling

Variable	Model 1			Model 2			Model 3			Model 4		
	<i>B</i>	<i>SE</i> <i>B</i>	β	<i>B</i>	<i>SE</i> <i>B</i>	β	<i>B</i>	<i>SE</i> <i>B</i>	β	<i>B</i>	<i>SE</i> <i>B</i>	β
Age	-.01	.02	-.03	-.02	.02	-.05	-.02	.02	-.06	-.02	.02	-.05
Gender	.08	.12	.04	.04	.13	.02	.03	.13	.02	-.00	.13	.00
Learning Anxiety				-.03	.06	-.04	-.03	.06	-.03	.04	.06	.04
Job Replacement Anxiety				-.01	.07	-.01	-.01	.07	-.01	.02	.07	.03

Sociotechnical Blindness Anxiety									
AI Configuration Anxiety									
AI Dependency									
Escape Motivation									
Social Motivation									
Instrumental Motivation									
Entertainment Motivation									
R ²									
F for change in R ²									

Note. Gender was coded as 1 = Female, 2 = Male, 3 = Preferred not to say. * $p < .05$ level, ** $p < .01$ level

The fourth hierarchical multiple regression analysis examined the Active Engagement subdimension of Career Calling. The first model added Age and Gender as predictors, and this model was not statistically significant, $F(2, 305) = 1.30, p = .273$, and explained 0.8% of the variance in Active Engagement ($R^2 = .008$). The second model included AI Anxiety subdimensions into the model; however, this addition did not significantly improve the variance explained in Active Engagement, $\Delta R^2 = .009$, $\Delta F(4, 301) = 0.67, p = .610$, and the overall model continues to be non-significant, $F(6, 301) = 0.88, p = .508$. In model 3, AI Dependency was added, and this addition did not show significant improvement over the previous model, $\Delta R^2 = .009$, $\Delta F(1, 300) = 2.84, p = .093$. The overall model remained non-significant, $F(7, 300) = 1.17, p = .322$. In model 4, AI Use Motivation subdimensions were added into the model, and the overall model became statistically significant, $F(11, 296) = 2.46, p = .006$. This addition significantly improved the predictive power of the model, $\Delta R^2 = .057$, $\Delta F(4, 296) = 4.63, p = .001$, and the final model explained 8.4% of the variance in Active Engagement ($R^2 = .084$). Final model (Model 4) identified two significant predictors of Active Engagement. The standardized coefficients indicated that Escape Motivation ($\beta = -.302, p = .001$) was negatively associated, while Entertainment Motivation ($\beta = .153, p = .025$) was positively associated with Active Engagement in career-related activities among Turkish emerging adults. All other predictors, including Age, Gender, AI Anxiety subdimensions, AI Dependency, Social Motivation, and Instrumental

Motivation, were not statistically significant ($p > .05$). These results suggest that Turkish emerging adults who use AI to escape from daily issues are less likely to actively engage in their careers, whereas those who use AI for entertainment purposes are more likely to take career-related actions (see Table 4.6).

Table 4.6. Predictors of the Active Engagement Subscale of Career Calling

Variable	Model 1			Model 2			Model 3			Model 4		
	<i>B</i>	<i>SE</i> <i>B</i>	<i>B</i>	<i>B</i>	<i>SE</i> <i>B</i>	β	<i>B</i>	<i>SE</i> <i>B</i>	β	<i>B</i>	<i>SE</i> <i>B</i>	β
Age	-.03	.02	-.09	-.04	.02	-.11	-.03	.02	-.10	-.04	.02	-.10
Gender	.06	.12	.03	.04	.13	.02	.05	.13	.02	.01	.13	.00
Learning Anxiety				-.04	.06	-.04	-.05	.06	-.05	.00	.06	.00
Job Replacement Anxiety				-.02	.07	-.03	-.02	.07	-.03	.01	.07	.02
Sociotechnical Blindness Anxiety				.08	.07	.09	.08	.07	.10	.06	.07	.07
AI Configuration Anxiety				-.05	.05	-.09	-.05	.05	-.09	-.04	.05	-.06
AI Dependency							.23	.14	.10	.32	.18	.13
Escape Motivation										-.51	.16	-.30**
Social Motivation										.17	.13	.11
Instrumental Motivation										.15	.10	.10
Entertainment Motivation										.19	.08	.15*
R ²		.008			.017			.026			.084	
<i>F</i> for change in R ²		1.303			.674			2.841			4.634**	

Note. Gender was coded as 1 = Female, 2 = Male, 3 = Preferred not to say. * $p < .05$ level, ** $p < .01$ level

4.4 Group Differences

Due to the unequal group sizes, independent samples t-tests were conducted to examine potential differences in career calling and its subscales (other-oriented meaning, personal meaning, active engagement) between Turkish students and employed emerging adults. There was no significant difference in the total career calling scores between students and employed participants, $t(296) = 1.10$, $p = .272$. Although the difference in other-oriented meaning scores approached significance,

$t(296) = 1.89, p = .060$, no significant differences were found for personal meaning, $t(296) = 0.06, p = .950$, or active engagement, $t(296) = 0.77, p = .445$. Descriptive and interpretative statistics are presented in Table 4.7.

Table 4.7. Means, Standard Deviations, t-Test Results, and Cohen's *d* for Total Career Calling and Its Subscales by Employment Status

Measure	Student		Employed		$t(296)$	p	Cohen's d
	M	SD	M	SD			
Career Calling	4.300	.857	4.199	.728	1.100	.272	.128
Other-Oriented Meaning	4.632	.978	4.428	.879	1.889	.060	.219
Personal Meaning	4.443	1.046	4.435	1.018	.063	.950	.007
Active Engagement	3.827	1.101	3.734	.990	.766	.445	.089

DISCUSSION

The rapid development of artificial intelligence (AI) and its increasing integration into educational and professional contexts, along with the easy accessibility of these systems (Şahin & Yıldırım, 2024), have raised concerns about the potential psychological and occupational impacts of AI on emerging adults. These individuals, who are still in the process of shaping their career trajectories, may respond to AI in complex and diverse ways. Motivated by this issue, the present study aimed to explore how emerging adults in Türkiye perceive their career calling in relation to various AI-related psychological constructs.

Specifically, this research examined the associations between emerging adults' overall and multidimensional perceptions of career calling and their psychological attitudes toward AI, including AI-related anxiety, dependency, and use motivations. The study addressed three primary research questions: (1) how overall career calling relates to AI anxiety, dependency, and use motivation; (2) to what extent career calling subdimensions – other-oriented meaning, personal meaning, and active engagement – are influenced by specific dimensions of AI anxiety (learning, job replacement, sociotechnical blindness, and AI configuration), AI dependency, and AI use motivations (escape, social, instrumental, and entertainment); and (3) whether career calling perceptions differ based on participants' current work status (student and employed).

To explore these research questions, we conducted a cross-sectional study in March 2025. Data were collected through an online questionnaire shared across various digital platforms, using convenience and snowball sampling methods. A total of 322 Turkish emerging adults, aged 18 to 29, who completed a comprehensive battery of self-report measures, including the AI Anxiety Scale, the AI Dependency Scale, the AI Use Motivation Scale, and the Career Calling Scale, participated in this study. After deductions made based on attention checkpoints, the final sample consisted of 308 Turkish emerging adults. The findings from Pearson correlation analyses, multiple hierarchical regression analyses, and t-test provide valuable insights into the factors that

shape Turkish emerging adults' career orientation, personal meaning, and their active engagement for advancing their careers in this new AI age.

5.1 Research Question 1 and 2: Exploring the Relationships Between AI-Related Psychological Constructs and Career Calling

The present study aimed to explore how Turkish emerging adults' perceptions about Career Calling, both as an overall construct and across its subdimensions (Other-Oriented Meaning, Personal Meaning, and Active Engagement), are shaped by their psychological and behavioral attitudes toward artificial intelligence (AI). In other words, we examined the potential influence of AI Anxiety subdimensions (Learning, Job Replacement, Sociotechnical Blindness, AI Configuration), AI Dependency, and AI Use Motivation subdimensions (Escape, Social, Instrumental, and Entertainment) on participants' Career Calling perceptions. Therefore, research questions one and two are formed to investigate these relationships between AI-related psychological constructs and career calling, and four hierarchical multiple regression analyses were conducted.

All four of the final models in the regression analyses were found to be significant models for predicting career calling and its subdimensions. Regression models also revealed that, among all examined predictors, gender and AI use motivations – particularly escape, instrumental, and entertainment – were significant predictors in explaining Turkish emerging adults' career calling. In the following sections, each predictor is discussed in detail along with its associations with career calling and its subdimensions.

5.1.1 Age

As a result of the regression analyses, age was not found to be a significant predictor either for career calling or for its subdimensions. This finding suggests that the effect of age on career calling perceptions may be limited. Consistent with this result, a longitudinal study conducted with Italian students between 18 and 69 found that the

effect of age on calling is limited, and may change depending on individual life experiences (Vianello et al., 2019). This result may suggest that the career calling perceptions of emerging adults in Türkiye, whether they are students or already employed, are still in development, supporting the idea that age alone is not a predictor of it.

5.1.2 Gender

Our study also found that gender was a significant predictor of the other-oriented meaning dimension of career calling ($\beta = -0.251$). Considering the gender coding we did in our analysis (1 = Female, 2 = Male, 3 = Did not want to share), female participants associated their careers with a purpose of contributing to others and benefiting others, more than males. This finding shows that Turkish emerging adults' career calling can be shaped socially and is sensitive to individuals' gender. This aligns with previous literature findings indicating that women are expected to be obedient and caring (Zhao et al., 2021), more inclined to work in people-oriented jobs (Su et al., 2009; Wicht et al., 2021), and Turkish women in the service sector increased over the years (Baş & Kahveci, 2024). These findings highlight the importance of adopting a gender-sensitive perspective when examining career calling in the age of AI to avoid any kind of acts that might cause gender discrimination.

5.1.3 AI Anxiety Subscales

AI anxiety subdimensions did not emerge as a significant predictor in any of the four regression models of career calling and its subscales. Similarly, another national research reported that total AI anxiety significantly and negatively predicts career determination, while not all of its subdimensions were significant predictors (Gültekin et al., 2022). However, it was still unexpected because this finding was different from what had been reported in other studies. Many studies highlighted anxiety's influence on learning motivation (Wang et al., 2024), escape motivation (Huang et al., 2024), skill

development and career adaptability behaviors (Burhan, 2024), and career exploration behavior (Presbitero & Teng-Calleja, 2022).

Although the final model, including AI anxiety subdimensions, was statistically significant, none of these subdimensions emerged as direct predictors of career calling and its subdimensions. One possible explanation is that AI anxiety subdimensions may have indirect effects on career calling, specifically, by influencing motivational factors such as escape and instrumental use motivations, which are related to career outcomes.

Supporting this interpretation, our correlation analysis revealed that escape motivation was positively correlated with all AI anxiety subdimensions, while instrumental motivation showed significant negative correlations with all anxiety subdimensions, except sociotechnical blindness (showed a negative, but non-significant correlation). This suggests that the lack of significance of AI anxiety subdimensions in the regression models may also be due to overlapping variance with AI use motivations.

Lastly, the survey order effect may be another technical explanation for this issue. Given that AI anxiety questions were presented after the self-rated AI knowledge question, and considering the correlation finding that these two constructs are negatively correlated, participants might have unwittingly adjusted their anxiety ratings based on how knowledgeable they perceived themselves to be. This kind of response pattern may have weakened the predictive power of AI anxiety subdimensions, resulting in them emerging as statistically non-significant in the models.

5.1.4 AI Dependency

Contrary to our expectations, AI dependency did not emerge as a significant predictor of the career calling or any of its subdimensions (other-oriented meaning, personal meaning, and active engagement). This result was especially interesting considering what had been reported in the prior research, even though there are only a few studies that directly examine the link between AI dependency and career calling. While a high career calling sense lowers individuals' anxiety and depression (Jin et al., 2022), high levels of stress and depression elevate escape motivations (Kardefelt-

Winther, 2014), which have been identified as a significant negative predictor of career calling. These psychological disorders are either directly associated with AI dependence (Zhang et al., 2024) or indirectly through the mediation of increased escape motivation (Huang et al., 2024). Additionally, a high search for meaning and a lower presence of meaning in life are associated with higher problematic usage (Fraser et al., 2023).

Although the final regression model, including AI dependency, was statistically significant, in none of the regression analyses did it emerge as a direct predictor of career calling and its subdimensions. One possible explanation is that AI dependency may have indirect effects on career calling by influencing motivational factors that are related to career outcomes. Supporting this explanation, our correlation analysis showed that AI dependency showed significant positive associations with all four AI use motivation subdimensions.

Another possible explanation for AI dependency not emerging as a significant predictor might be related to the scales' structure and understanding among the Turkish emerging adults sample. The original scale developers (Huang et al., 2024) conceptualized AI dependency as a unidimensional construct; however, the exploratory factor analysis conducted in this study revealed a two-factor structure within the current sample of Turkish emerging adults. Despite this two-dimensional structure observed, during regression analysis, AI dependency is treated as a single composite, aligning with the original scale's theoretical foundation. This approach was preferred to maintain consistency with existing literature and to allow comparability of the results across studies. This methodological choice might have concealed or diminished these two factors of AI dependency interaction with career calling and its subscales, contributing to its emergence as a nonsignificant predictor. Therefore, further research focusing on examining the AI dependency construct and its contributions in explaining career calling is suggested.

5.1.5 Escape Motivation

Escape motivation was identified as a strong negative predictor ($\beta = -.27$) of the total career calling construct, indicating that individuals with high escapism motivation are associated with a lower sense of career calling. Moreover, escape motivation showed a positive correlation with all of the anxiety subdimensions. Prior studies highlight the negative impact of AI or technology on individuals' mental health through psychological constructs such as anxiety, stress, and depression, leading individuals to experience high escapism motivation (Huang et al., 2024; Subudhi et al., 2020), resulting in negative outcomes (Kardefelt-Winther, 2014). However, these previous studies didn't examine the direct interaction between escapism motivation and its influence on career calling. Kardefelt-Winther's (2014) results on escapism and negative outcomes were consistent within the gaming scope. Thus, this study's findings provide a unique and beneficial perspective by examining the direct negative impact of escapism motivation of AI utilization on career calling.

We also found that escapism motivation has a medium but negative effect ($\beta = -.19$) on the personal meaning dimension of career calling, suggesting that high escapism motivation diminishes their self-exploration, leading to misalignment with their career and intensifying emerging adults' struggles to find a career that is meaningful to them. Since high escapism leads to low personal meaning, Scroggins (2008) found that low self-concept-job fit, which is similar to the personal meaning of career calling, lowers employees' job satisfaction and meaning in their work, their commitment to the organization, and increases their intention to leave. Additionally, a study conducted with Chinese employees found that a low sense of calling strongly diminishes employees' career satisfaction and work engagement (Xie et al., 2016). Similarly, we found that high levels of escape motivation were strongly ($\beta = -.30$) associated with low engagement in career-related activities, suggesting that those individuals would be less likely to show the necessary effort for their career and not participate in career events.

5.1.6 Social Motivation

Although three of the four subdimensions of AI use motivations significantly predicted the overall career calling construct or some of its subdimensions, social utilization motivation of AI was not observed as a significant predictor in regression analysis. There is a lack of specific research in the literature that directly examines how the use of artificial intelligence for socialization purposes affects career goals and career meaning. Similarly, prior researchers who examine teachers' other-oriented career aspirations, such as making social contributions, improving social equality, and shaping students' futures, also failed to find significant influences of digital changes that AI brings. However, they did not examine the socialization behavior (Martínez-Moreno & Petko, 2024). Another study by Gebremariam et al. (2024) highlighted the positive influences of using social networks on socialization among students in terms of interaction, communication relationship building. However, their research focused on general social media rather than AI tools and did not explore career-related outcomes.

One possible explanation for the non-significance may be due to the nature of social AI use itself. Since social utilization of AI tools focuses more on short-term interaction and communication needs satisfaction, consistent with our results, it may not be strongly related to long-term career goals, meaning, and satisfaction among emerging adults. Additionally, another possible explanation might be related to the exploratory factor analysis results. Escape and Social Motivation may have influenced each other because they were calculated as separate means and included in the regression together. In the original scale, escape and social motivation were conceptualized as distinct dimensions; however, the exploratory factor analysis conducted in this study revealed that these two subscales' items loaded on a single factor. Thus, this might suggest a potential overlap between these motivational factors in the Turkish sample, resulting in social motivation in the regression analysis being a non-significant predictor due to multicollinearity or shared variance with escape motivation.

5.1.7 Instrumental Motivation

Results also revealed that emerging adults who are using AI for instrumental purposes, such as learning or obtaining information, are significantly ($\beta = .14$) associated with a higher career calling perspective. Prior studies have also documented the importance of learning and improving skills to have better career opportunities and career sustainability over person-job fit (Aksu & Sürgevil, 2019; Yavuz-Aksakal & Ülgen, 2021; Ahmad & Bilal, 2024). Additionally, this kind of information or skill acquisition not only improves individuals' job security, income, and organizational status but also prevents their emotional exhaustion (Xu et al., 2023). While these studies explain the findings of this research, they examined the employees' perspective only and didn't examine the direct effects of instrumental AI use motivation on career calling. The present study fills this gap in the literature and highlights this direct relationship among emerging adults who are both students and employees.

Our findings highlight that high instrumental motivation ($\beta = .16$) for using AI significantly predicts a high personal meaning perception of career calling. This was expected since one of the items in the personal meaning subdimension assesses whether emerging adults perceive that getting ready for their career contributes to their growth and improvement or not. Similarly, Johnson et al. (2025) found that individuals who participated in an AI program were motivated by career growth opportunities and perceived it as personally beneficial for upskilling and enhancing their career opportunities. Nevertheless, this study was conducted with employees, where the majority of them worked in information technology. Thus, this current study enlarges the employee sample by adding students' perspectives.

5.1.8 Entertainment Motivation

Our study found that using artificial intelligence for entertainment purposes, like having joy, fun, and relaxing with various activities, was identified as a significant predictor for not only the total career calling construct ($\beta = .15$), but also for its other-oriented meaning ($\beta = .17$), and active engagement ($\beta = .15$) subdimensions but not for

its personal meaning subdimension. This positive association was a little bit unexpected because many studies reported that high entertainment in technologies increases consuming behavior and over-reliance on these tools (Huang et al., 2024; Kardefelt-Winther, 2014; Fraser, 2023; Zhang et al., 2024), and considering our correlation finding that entertainment motivation showed high positive correlations with dependence, we assumed this might cause them to have less time and motivation to take action toward their career-related goals and tasks.

There was no prior research that directly examined the relationship between using AI for high entertainment purposes and experiencing a high sense of calling. One study reported that individuals use AI speakers for listening to music, which they referred to as entertainment-purposed utilization (Lee et al., 2019). However, this paper found this situation for individuals around the age of 30, which is out of the age range of this study, and since the paper is in another language, we could not receive further details besides what had been shared in the abstract. However, individuals who use these tools to listen to music and relax might feel calmer, and that's why they may focus more on their career explorations, resulting in a high sense of career calling.

Another study examined how people are using large language models (LLMs), like ChatGPT, and found that mainly used for therapy and companionship, followed by organizing their lives and finding purpose (Zao-Sanders, 2025). Since it is also known that structuring work, such as planning tasks and setting goals, improves efficiency and reduces distractions, stress, and the possibility of burnout (Chernenko, 2023), building upon these findings, this kind of entertainment utilization of AI might support their active engagement in activities for their career calling. Furthermore, another study that examined users' motivation reported that individuals enjoy interacting with AI tools and their responses, together with their family and friends (Skjuve et al., 2024), which suggests these entertainment purposes might also include social elements. Additionally, some of the social media influencers are using these AI tools to create unique social media content, like music (Beyza Doğuç, 2024). Consequently, these might be the reasons that emerging adults experience a high sense of other-oriented career calling.

5.2 Correlations: AI Knowledge & Computer Skills

This study shows that there is a significant relationship between emerging adults' self-rated computer skills and their self-rated AI knowledge. Specifically, high AI knowledge and computer skills are associated with lower levels of overall AI Anxiety and with its subscales: Learning, Job Replacement, Sociotechnical Blindness, and AI Configuration. These results were similar to previous research that showed that computer usage level and AI knowledge affect individuals' perspectives on AI and have negative relationships with all AI anxieties (Kaya et al., 2024). However, while they only found significant results in the learning and AI configuration subscales, this study further contributed to the existing literature by showing that all AI anxiety subscales have significant negative relationships with AI knowledge and computer usage skills. Our findings also showed that high AI knowledge is significantly associated with low AI anxiety experience (also for its subdimensions), low usage of AI for escape, and high usage of AI for instrumental motivation, which is consistent with the prior research found significant relationships between individuals' AI literacy and their daily utilization behavior and attitudes toward AI technologies (Wang et al., 2022). It was also worth noting that individuals' self-rated computer skills and AI knowledge showed significant negative correlations with escape motivation and significant positive associations with instrumental motivation. Suggesting that individuals with high digital skills, abilities, and knowledge are more likely to have lower AI anxiety and use AI effectively in a way that contributes to their career.

5.3 Research Question 3: How do Turkish Emerging Adults' Career Calling and Its Subdimensions Differ Based on Their Work Status (Student and Employed)?

Praskova et al. (2015) proposed that emerging adults who are currently students would have different career calling perspectives than those who are currently employed. While the original study suggested this possibility, they did not test it with a mixed sample including both students and employees as participants. Therefore, in this study,

we explore the possible differences in Turkish emerging adults' career calling perspectives with including all of its factors. Contrary to Praskova et al.'s (2015) suggestion, our analyses did not find a significant difference in career calling based on employment status. This finding aligns with a recent meta-analysis that examined individual attitudes toward AI, which also reported non-significant differences across adults and students from various regions (Asia, Europe, and America)(Şahin & Yıldırım, 2024). Furthermore, the absence of a significant group difference is consistent in the unemployment group, consistent with the finding indicating that calling is not directly associated with employability (Lysova et al., 2018). One possible explanation of this result might be that individuals in Türkiye are not aware of their career callings, either because this term newly emerging construct in Türkiye, and since career callings are highly complex and require extensive self-exploration, students and employees might be considering the career or chosen career as a calling (Hall & Chandler, 2005).

CONTRIBUTIONS TO LITERATURE

This study makes several significant contributions to both existing national and international literature on career calling, artificial intelligence, emerging adulthood, and organizational psychology. Firstly, this research is uniquely positioned in the literature, since it is the first study that explores the influence of AI on emerging adults' career calling. It included both students and employees, allowing for a more comprehensive understanding and providing a new integrative framework for understanding how emerging AI technologies influence the career perspectives of emerging adults. By examining these complex relationships of AI-related psychological constructs, this study highlighted the direct relationships between AI use motivations, gender, and the career calling construct. Second, this study identified escape motivation for using AI as a negative predictor of career calling, and its subdimensions, including personal meaning and active engagement, present a new theoretical connection between avoidance-type AI consumption behavior and difficulties in bringing into the emerging adults' career calling perspectives and career development processes. Third, the positive influence of instrumental AI use motivation on both overall and personal meaningful dimensions of career calling extends the current understanding of AI as not only a technological tool but also a beneficial resource that can improve emerging adults' career perceptions when used effectively.

Additionally, the unexpected positive association between entertainment motives for AI utilization and career calling dimensions offers a unique and previously unexplored insight. This study contributes to the Turkish literature by translating and adapting three new scales into Turkish culture. Except for the AI Anxiety Scale, all other measures, the AI Dependency Scale, the AI Use Motivation Scale, and the Career Calling Scale, are translated into Turkish in this study. All of the scales showed acceptable reliability and provided preliminary support for construct validity. Moreover, this study highlights the importance of gender-sensitive analysis, enhances the current literature with a Turkish cultural perspective, offers valuable insights from a non-

Western sample, specifically the Middle East and North Africa (MENA) region, and contributes to global examinations on AI, organizational psychology, and emerging adulthood. Finally, contributes to the growing recognition of AI-related topics within the field of industrial and organizational psychology and vice versa.



PRACTICAL AND ORGANIZATIONAL IMPLICATIONS

The findings of this study offer practical implications for career counselors, educators, and organizations' policymakers, such as Human Resources (HR) professionals, Industrial and Organizational (I/O) psychologists, and organizational leaders who want to support emerging adults' career calling perceptions and promote healthy and resilient career development in the age of AI.

Our study findings suggest that emerging adults who use AI technologies and tools to escape from or forget about problems, stress, and responsibility in their daily lives have lower career calling, and personal satisfaction received from their career, and show less effort and commitment to career-related actions. In an organizational context, low career calling can decline an employee's job satisfaction, perceived meaning, and engagement received from work, and commitment to their organization, and elevate quitting intention (Scroggins, 2008; Xie et al., 2016). Given the potential of escapism and employees' leaving intentions to create a vicious cycle, the presence of one might influence the possibility of the other. It is necessary to inform individuals about the negative influences of this type of utilization motive on their careers. Organizations and educational institutions should develop AI escape motivation intervention programs to recognize unhealthy AI use patterns, such as social disconnection from colleagues and excessive technology usage or reliance (since artificial intelligence tools work with an internet connection), promoting mindful AI utilization, stress management techniques, and meaning-oriented career explorations.

Our study found that instrumental AI usage, such as for learning, knowledge, and skill acquisition, is associated with higher career calling perceptions. This result suggests that educators and organizations should include, and create AI knowledge development training programs that inform and teach proactive AI utilization, such as instrumental motives, in a way that supports their career development. Workers and students should be taught how to benefit from these AI technologies or tools to learn new skills or enhance their current ones, suggesting personalized actions to explore their

self and career perceptions to promote career security, person-job fit, and job satisfaction in this AI age. Additionally, many online courses are available for individuals who wish to improve their AI knowledge and skills, offered by companies such as Microsoft and Google (Randstad, 2024).

In our study, gender emerged as a significant predictor of other-focused meaning, implying that female emerging adults are more likely to associate their careers with benefiting others and society in a broader sense. During the design of career development programs and career mentoring services, organizations and educational institutions should consider these gender differences to prevent gender discrimination and create inclusive career paths for all individuals.

LIMITATIONS AND FUTURE RESEARCH SUGGESTIONS

Although this research provides valuable findings to both international and national literature, it also has some limitations. Firstly, the data of this study was collected with convenience sampling and snowball sampling methods that allow researchers to collect data quickly from participants who are easily accessible to researchers. This type of sampling method can cause sampling biases and systematic errors and might limit the meaningful interpretation of the p-value (Golzar et al., 2022).

Secondly, this study targeted only a specific developmental population in a particular country, which was emerging adults aged 18-29 living in Türkiye. The generalizability of these study findings to other age groups in Türkiye, and also to other emerging adults in other cultures, might be limited (Bornstein et al., 2013). Thirdly, this study collected data through self-report measures. Researchers instructed participants at the beginning of each scale section that there were no right or wrong answers to the questions and to select the best answer that represented their opinion, to prevent social desirability response bias (Podsakoff et al., 2003).

Additionally, the anonymity that online data collection tools provide may have also prevented this bias; however, it may also cause another type of sampling bias, as it allows only individuals with internet access and technology skills to access this survey (Bethlehem, 2010). Another limitation was the small number of unemployed individuals in the sample, but still, the demographics of the participants displayed that this study almost equally represented emerging adults from both genders (female and male) and emerging adults who are working and who are students. Further research with alternative data collection methods is strongly suggested, since they may provide more insights about the complex interactions of AI-related constructs and career calling.

This study has made significant contributions to the understanding of emerging adults' perceptions of career calling in this AI age. However, it also highlighted many new research opportunities for future research. Some future research suggestions are

shared below that we believe are necessary to enhance our understanding of AI and career calling constructs.

Firstly, in our study, we found an unexpected positive effect of entertainment motivation of AI use on career calling. Therefore, further examining AI use motivation in detail, such as how and through which mechanisms entertainment motivations influence the career calling construct, can provide a comprehensive understanding. Additionally, in the exploratory factor analysis conducted, we noticed that items of escape and social motivation were loaded on the same factor; also, social motivation did not emerge as a significant predictor of career calling or any of its subdimensions. Further examination of the factor structure might provide a more detailed understanding of the AI use motivations' influence on career calling, and other career-related constructs can be beneficial.

Secondly, examining the potential indirect effects of AI anxiety and AI dependency along with the construct structure can provide useful insights. Although the AI anxiety subscales and AI dependency did not emerge as significant predictors of career calling in this study, it is noteworthy that the final regression models were significant. Given the findings of prior studies (Huang et al., 2024; Jin et al., 2022; Kardefelt-Winther, 2014), this may suggest that the unique contributions of these constructs may be limited by their shared presence in the model. AI anxieties may indirectly shape career calling by influencing AI use motivations, which may lead to AI dependency. Future research examining these potential indirect relationships, through moderation and mediation analyses, may provide valuable insights.

Thirdly, this study specifically targeted emerging adults in Türkiye. Given that perspectives on AI technologies and individuals' career perceptions are influenced by cultural context, examining these interactions in other cultures and with different demographic groups, such as other age groups or generational studies, occupation-specific examinations, and socioeconomic situations. Conducting similar studies in other countries, especially from the MENA region, may improve overall understanding by revealing regional differences and highlighting universal commonalities.

Lastly, other research methodologies can be used to further investigate AI-related constructs and their influences on career calling are essential in this new AI age. Qualitative research methods, such as in-depth interviews and focus group studies, can be used to enhance a deeper understanding of complex relationships between AI use motivation and career calling. The findings of this qualitative research can also be combined with quantitative data to have an enriched contextual understanding. The current study employed a cross-sectional design, which prevents us from determining the causal relationships between AI use motivations and the career calling constructs. Future longitudinal studies could reveal how different AI utilization motives affect career calling perspectives, other-oriented meaning, personal-oriented meaning, and active engagement, over time.

REFERENCES

- Ahmad, B., & Bilal, S. (2024). Knowledge of AI as a future work skill for career sustainability. *Journal of Career Development*, 52(2), 134-152.
<https://doi.org/10.1177/08948453241307384>
- Ahmad, S. F., Han, H., Alam, M. M., Rehmat M. K., Irshad, M., Arraño-Muñoz, M., & Ariza-Montes, A. (2023). Impact of artificial intelligence on human loss in decision making, laziness and safety in education. *Humanities and Social Sciences Communications*, 10(1), 311. <https://doi.org/10.1057/s41599-023-01787-8>
- Akkaya, B., Özkan, A., & Özkan, H. (2021). Artificial intelligence anxiety (AIA) scale adaption to Turkish, validity and reliability study. *Alanya Academic Review Journal*, 5(2), 1125-1146. <https://doi.org/10.29023/alanyaakademik.833668>
- Aksu, S. G., & Sürgevil, O. (2019). Dijital çağın yetkinlikleri: Çalışanlar, insan kaynakları uzmanları ve yöneticiler çerçevesinden bakış [Competencies of the digital age: A view from the framework of employees, human resources specialists and managers]. *Journal of Business in the Digital Age*, 2(2), 54-68.
<https://dergipark.org.tr/en/pub/jobda/issue/51540/582625>
- American Psychological Association. (2018a, April 19). *Anxiety*. APA Dictionary of Psychology. <https://dictionary.apa.org/anxiety>
- American Psychological Association. (2018b, April 19). *Dependence*. APA Dictionary of Psychology. <https://dictionary.apa.org/dependence>
- American Psychological Association. (2018c, April 19). *Translation and back-translation*. APA Dictionary of Psychology.
<https://dictionary.apa.org/translation-and-back-translation>
- Arbona, C., Fan, W., Phang, A., Olvera, N., & Dios, M. (2021). Intolerance of uncertainty, anxiety, and career indecision: A mediation model. *Journal of*

- Career Assessment*, 29(4), 699-716.
<https://doi.org/10.1177/10690727211002564>
- Arnett, J. J. (2000). Emerging adulthood: A theory of development from the late teens through the twenties. *American Psychologist*, 55(5), 469-480.
<https://doi.org/10.1037//0003-066X.55.5.469>
- Arnett, J. J. (2015). Identity development from adolescence to emerging adulthood: What we know and (especially) don't know. In K. C. McLean & M. Syed (Eds.), *The Oxford Handbook of Identity Development* (pp.53-64). Oxford University Press. [10.1093/oxfordhb/9780199936564.013.009](https://doi.org/10.1093/oxfordhb/9780199936564.013.009)
- Arnett, J. J., Žukauskienė, R., & Sugimura, K. (2014). The new life stage of emerging adulthood at ages 18-29 years: implications for mental health. *The Lancet Psychiatry*, 1(7), 569–576. [https://doi.org/10.1016/S2215-0366\(14\)00080-7](https://doi.org/10.1016/S2215-0366(14)00080-7)
- Ayhan Tarakcı (2025, May 15). *Humanoidlerin çağı başladı! [The era of humanoids has begun!]* [Video]. YouTube. https://youtu.be/n5PYMz6jPbI?si=t1-fG_c2TZWC2-w
- Badet, J. (2021). AI, automation and new jobs. *Open Journal of Business and Management*, 9(5), 2452-2463. <https://doi.org/10.4236/ojbm.2021.95132>
- Baş, M., & Kahveci, M. (2024). Türkiye’de çalışma hayatında kadın ve genç istihdamı: 1993-2023 yılları arası tarihsel bir analiz [Employment of women and youth in working life in Turkey: A historical analysis between 1993-2023]. *21. Yüzyılda Eğitim ve Toplum*, 13(39), 507-524. <https://dergipark.org.tr/tr/download/article-file/3828064>
- Bethlehem, J. (2010). Selection bias in web surveys. *International Statistical Review*, 78(2), 161–188. <https://doi.org/10.1111/j.1751-5823.2010.00112.x>
- Beyza Doğuç (2024, September 21). *Yapay zekayla kpop starı olmak [Becoming a kpop star with artificial intelligence]* [Video]. YouTube.
<https://youtu.be/oPT7BZvz3eQ?si=vXF0pKc5CdKpTTE3>
- Blair, A. (2025, March 16). *Chinese company’s ‘dark factory’ will no human workers soon be the norm*. News.com.au.

<https://www.news.com.au/finance/business/manufacturing/chinese-companys-dark-factory-will-no-human-workers-soon-be-the-norm/news-story/9468c5bc380108deba4e55a95d6c28d4>

- Bornstein, M. H., Jager, J., & Putnick, D. L. (2013). Sampling in developmental science: Situations, shortcomings, solutions, and standards. *Developmental Review*, 33(4), 357–370. <https://doi.org/10.1016/j.dr.2013.08.003>
- Brougham, D., & Haar, J. (2018). Smart technology, artificial intelligence, robotics, and algorithms (STARA): Employees' perceptions of our future workplace. *Journal of Management & Organization*, 24(2), 239–257. <https://doi.org/10.1017/jmo.2016.55>
- Bryman, A., & Cramer, D. (2001). *Quantitative analysis with SPSS release 10 for Windows: A guide for social scientists* (1st ed.). Routledge. <https://doi.org/10.4324/9780203471548>
- Burhan, Q.-U.-A. (2024). Unraveling the AI enigma: How perceptions of artificial intelligence forge career adaptability through the crucible of career insecurity and skill development. *Management Research Review*, 48(3), 470-488. <https://doi.org/10.1108/mrr-01-2024-0022>.
- Cameron, J. (Director). (1984). *The Terminator* [Film]. Orion Pictures.
- Chernenko, M. (2023). Work time organization. In *The rational software engineer*. Apress, 19-40. https://doi.org/10.1007/978-1-4842-9795-7_2
- Cass, S. (2013, July 11). *DARPA unveils Atlas DRC Robot. This is the version of ATLAS that we'll see competing in the DRC trials in December*. IEEE Spectrum. <https://spectrum.ieee.org/darpa-unveils-atlas-drc-robot>
- Chen, J., May, D. R., Schwoerer, C. E., & Augelli, B. (2016). Exploring the boundaries of career calling: The moderating roles of procedural justice and psychological safety. *Journal of Career Development*, 45(2), 103-116. <https://doi.org/10.1177/0894845316671214>

- China enters new era of 'dark factories' with no lights, no workers. (2025, March 13). *TexSPACE Today*. Retrieved March 18, 2025, from <https://www.texspacetoday.com/china-enters-new-era-of-dark-factories-with-no-lights-no-workers/>
- Christian, M., Pardede, R., Yulita, H., Dewi, Y. K., Wibowo, S., & Sunarno, S. (2024, October 17-18). *Anxiety-Related AI configuration and AI usage behavior among lecturers: Gender's moderating role*. 2024 IEEE International Conference on Control & Automation, Electronics, Robotics, Internet of Things, and Artificial Intelligence (CERIA), Bandung, Indonesia (pp. 1-6). IEEE. <https://doi.org/10.1109/CERIA64726.2024.10914840>
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Lawrence Erlbaum Associates. <https://utstat.utoronto.ca/brunner/oldclass/378f16/readings/CohenPower.pdf>
- Colozzi, E. A., & Colozzi, L. C. (2000). College students' callings and careers: An intergrated values-oriented perspective. In D. A. Luzzo (Ed.), *Career counseling of college students: An empirical guide to strategies that work* (pp. 63–91). American Psychological Association. <https://doi.org/10.1037/10362-004>
- Copeland, B. J. (2024, November). Alan Turing. *Encyclopedia Britannica*. <https://www.britannica.com/biography/Alan-Turing>
- Çalışkan, Y., Kılınçarslan, Ö., & Efeoğlu, İ. E. (2023). The relationship between teachers' calling, job performance, and organizational commitment: The mediating role of work-related flow experience. *İşletme Araştırmaları Dergisi*, 15(2), 848–864. <https://doi.org/10.20491/isarder.2023.1622>
- Darko, A., Chan, A. P., Adabre, M. A., Edwards, D. J., Hosseini, M. R., & Ameyaw, E. E. (2020). Artificial intelligence in the AEC industry: Scientometric analysis and visualization of research activities. *Automation in Construction*, 112, 103081. <https://doi.org/10.1016/j.autcon.2020.103081>

- Dastin, J. (2018, October 11). *Insight - Amazon scraps secret AI recruiting tool that showed bias against women*. Reuters.
<https://www.reuters.com/article/idUSKCN1MK0AG/>
- Dik, B. J., & Duffy, R. D. (2009). Calling and vocation at work: Definitions and prospects for research and practice. *The Counseling Psychologist*, 37(3), 424–450. <https://doi.org/10.1177/0011000008316430>
- Duffy, R. D., Allan, B. A., Autin, K. L., & Bott, E. M. (2013). Calling and life satisfaction: It's not about having it, it's about living it. *Journal of Counseling Psychology*, 60(1), 42–52. <https://doi.org/10.1037/a0030635>
- Duffy, R. D., Dik, B. J., & Steger, M. F. (2011). Calling and work-related outcomes: Career commitment as a mediator. *Journal of Vocational Behavior*, 78(2), 210–218. <https://doi.org/10.1016/j.jvb.2010.09.013>
- Duffy, R. D., & Raque-Bogdan, T. L. (2010). The motivation to serve others: Exploring relations to career development. *Journal of Career Assessment*, 18(3), 250-265. <https://doi.org/10.1177/1069072710364791>
- Erdoğan, F., & Cakir, O. (2024). Öğretmen adaylarının yapay zekâ okuryazarlıklarının ve yapay zekâyâ ilişkin algılarının belirlenmesi [Determining teacher candidates' artificial intelligence literacy and their perceptions of artificial intelligence.]. *Uluslararası Türk Kültür Coğrafyasında Sosyal Bilimler Dergisi*, 9(2), 63-95. <https://doi.org/10.55107/turksosbilder.1594635>
- Erebak, S., & Turgut, T. (2020). The mediator role of robot anxiety on the relationship between social anxiety and the attitude toward interaction with robots. *AI & SOCIETY*, 35, 1047-1053. <https://doi.org/10.1007/s00146-019-00933-8>
- Erkutlu, H., Erdemir Ergün, E., Köseoğlu, İ., & Vurgun, T. (2023). Yapay zeka ve örgütsel davranış. *Nevşehir Hacı Bektaş Veli Üniversitesi SBE Dergisi*, 13(3), 1403-1417. <https://doi.org/10.30783/nevsosbilen.1246678>
- Evrin Ağacı. (2011, Nisan 15). Katledilmiş deha: Bilgisayar ve yapay zekanın fikir babası Alan Turing [Slained genius: Alan Turing, the father of computing and

artificial intelligence]. *Evrin Ağacı*. <https://evrimagaci.org/katledilmis-deha-bilgisayar-ve-yapay-zekanin-fikir-babasi-alan-turing-27>

Fraser, R., Slattery, J., & Yakovenko, I. (2023). Escaping through video games: Using your avatar to find meaning in life. *Computer in Human Behavior*, 144, 107756. <https://doi.org/10.1016/j.chb.2023.107756>

Fung, B. J., Qi, S., Hassabis, D., Daw, N., & Mobbs, D. (2019). Slow escape decisions are swayed by trait anxiety. *Nature Human Behavior*, 3, 702-708. <https://doi.org/10.1038/s41562-019-0595-5>

Gao, C. A., Howard, F. M., Markov, N. S., Dyer, E. C., Ramesh, S., Luo, Y., & Pearson, A. T. (2022). Comparing scientific abstracts generated by ChatGPT to original abstracts using an artificial intelligence output detector, plagiarism detector, and blinded human reviewers. *npj Digital Medicine*, 6(1). <https://doi.org/10.1038/s41746-023-00819-6>

Garland, A. (Director). (2014). *Ex Machina* [Film]. Universal Pictures.

Gebremariam, H. T., Dea, P., & Gonta, M. (2024). Digital socialization: Insights into interpersonal communication motives for socialization in social networks among undergraduate students. *Heliyon*, 10(20), e39507. <https://doi.org/10.1016/j.heliyon.2024.e39507>

Golzar, J., Tajik, O., & Noor, S. (2022). Convenience Sampling. *International Journal of Education & Language Studies*, 1(2), 72–77. <https://doi.org/10.22034/ijels.2022.162981>

Gültekin, Z., Urgan, S., & Ak, M. (2022). Yapay zeka kaygısının kariyer kararlılığı etkisine yönelik bir araştırma: Ondokuz mayıs üniversitesi öğrencileri örneği [A research on the effect of artificial intelligence anxiety on career decidedness: A case of ondokuz mayis university students.]. *Süleyman Demirel Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi*, 27(3), 477-481. https://www.researchgate.net/publication/362426602_Yapay_Zeka_Kaygisinin

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- Hall, D. T., & Chandler, D. E. (2005). Psychological success: When the career is a calling. *Journal of Organizational Behavior*, 26(2), 155–176. <https://doi.org/10.1002/job.301>
- Harvard Business Review Türkiye. (2024, November). Yapay zeka gençlerin kariyer planlarını dönüştürüyor [Artificial intelligence is transforming young people's career plans.]. *Harvard Business Review Türkiye*. <https://hbrturkiye.com/dergi/yapay-zeka-genclerin-kariyer-planlarini-donusturuyor>
- Honda (2000, November 20). *Honda debuts new humanoid robot "ASIMO"*. Honda. <https://global.honda/en/newsroom/news/2000/c001120b-eng.html>
- Hu, B., Mao, Y., & Kim, K. J. (2023). How social anxiety leads to problematic use of conversational AI: The roles of loneliness, rumination, and mind perception. *Computers in Human Behavior*, 145, 1007760. <https://doi.org/10.1016/j.chb.2023.107760>
- Huang, S., Lai, X., Ke, L., Li, Y., Wang, H., Zhao, X., Dai, X., & Wang, Y. (2024). AI technology panic—is AI dependence bad for mental health? A cross-lagged panel model and the mediating roles of motivations for AI use among adolescents. *Psychology Research and Behavior Management*, 17, 1087–1102. <https://doi.org/10.2147/prbm.s440889>
- IBM Corp. (2021). *IBM SPSS Statistics for Windows, Version 28.0* [Computer software]. IBM Corp. <https://www.ibm.com/products/spss-statistics>
- Jin, W., Miao, J., & Zhan, Y. (2022). Be called and be healthier: How does calling influence employees' anxiety and depression in the workplace? *International Journal of Mental Health Promotion*, 24(1), 1-12. <https://doi.org/10.32604/IJMHP.2022.018624>

- Johnson, C. C., Harold, S., Chestnut, J., Glover, K., & Walton, J. B. (2025). Addressing the AI talent gap: Outcomes of the first U.S. nationally-registered AI apprenticeship program. *Education Sciences*, 15(3), 324. <https://doi.org/10.3390/educsci15030324>
- Johnson, D. G., & Verdicchio, M. (2017). AI anxiety. *Journal of the Association for Information Science and Technology*, 68(9), 2267-2270. <https://doi.org/10.1002/asi.23867>
- Kardefelt-Winther, D. (2014). The moderating role of psychosocial well-being on the relationship between escapism and excessive online gaming. *Computers in Human Behavior*, 38, 68-74. <https://doi.org/10.1016/j.chb.2014.05.020>
- Katz, I. M., Rudolph, C. W., & Zacher, H. (2019). Age and career commitment: Meta-analytic tests of competing linear versus curvilinear relationships. *Journal of Vocational Behavior*, 112, 396-416. <https://doi.org/10.1016/j.jvb.2019.03.001>
- Kaya, F., Aydın F., Schepman, A., Rodway, P., Yetişensoy, O., & Demir Kaya, M. (2024). The roles of personality traits, AI anxiety, and demographic factors in attitudes toward Artificial Intelligence. *International Journal of Human-Computer Interaction*, 40(2), 497–514. <https://doi.org/10.1080/10447318.2022.2151730>
- Kılıç-Kırılmaz, S., & Ateş, Ç. (2021). İşe alımlarda yapay zekâ kullanımı: Kavramsal bir değerlendirme. *Journal of Business and Trade*, 2(1), 37-48. <https://dergipark.org.tr/tr/pub/joinbat/issue/64526/984391>
- Kim, D., Lee, Y., Lee, J., Nam, J. K., & Chung, Y. (2014). Development of Korean smartphone addiction proneness scale for youth. *PLOS ONE*, 9(5), e97920. <https://doi.org/10.1371/journal.pone.0097920>
- Kim, P. (2021). AI and inequality. *Washington University in St. Louis Legal Studies Research Paper No. 21-09-03*. SSRN. <https://ssrn.com/abstract=3938578>

- Kwon, M., Kim, D.-J., Cho, H., & Yang, S. (2013). The smartphone addiction scale: development and validation of a short version for adolescents. *PLOS ONE*, 8(12), e83558. <https://doi.org/10.1371/journal.pone.0083558>
- Law on Measurement, Selection and Placement Center Services [Ölçme, Seçme ve Yerleştirme Merkezi Hizmetleri Hakkında Kanun], Law No. 6114, enacted March 3, 2011, Official Gazette No. 27863. <https://www.mevzuat.gov.tr/mevzuat?MevzuatNo=6114&MevzuatTur=1&MevzuatTertip=5>
- Lee, H., Cho, C.-H., Lee, S.-Y., & Keel, Y.-H. (2019). A study on consumers' perception of and use motivation of AI speaker [Abstract]. *The Journal of the Korea Contents Association*, 19(3), 138-154. <https://doi.org/10.5392/jkca.2019.19.03.138>
- Lysova, E. I., Jansen, P. G. W., Khapova, S. N., Plomp, J., & Tims, M. (2018). Examining calling as a double-edged sword for employability. *Journal of Vocational Behavior*, 104, 261-272. <https://doi.org/10.1016/j.jvb.2017.11.006>
- Makridakis, S. (2017). The forthcoming AI revolution: Its impact on society and firms. *Futures*, 90, 46-60. <https://doi.org/10.1016/j.futures.2017.03.006>
- Martínez-Moreno, J., & Petko, D. (2024). What motivates future teachers? The influence of Artificial Intelligence on student teachers' career choice. *Computers and Education: Artificial Intelligence*, 7(4), 100296. <https://doi.org/10.1016/j.caeai.2024.100296>
- Matheus, K., Vázquez, M., & Scassellati, B. (2025). Ommie: The design and development of a social robot for anxiety reduction. *ACM Transactions on Human-Robot Interaction*, 14(2), 1-34. <https://doi.org/10.1145/3706122>
- Meng, H., Cao, H., Hao, R., Zhou, N., Liang, Y., Wu, L., Jiang, L., Ma, R., Li, B., Deng, L., Lin, Z., Lin, X., & Zhang J. (2020). Smartphone use motivation and problematic smartphone use in a national representative sample of Chinese adolescents: The mediating roles of smartphone use time for various activities.

Journal of Behavioral Addictions, 9(1), 163-174.

<https://doi.org/10.1556/2006.2020.00004>

Michael, N., Nyadzayo, M. W., Michael, I., & Balasubramanian, S. (2020). Differential roles of push and pull factors on escape for travel: Personal and social identity perspectives. *International Journal of Tourism Research*, 22(4), 464-478.

<https://doi.org/10.1002/jtr.2349>

Michael Page. (2025). *Talent trends 2025: Türkiye raporu*.

<https://www.michaelpage.com.tr/sites/michaelpage.com.tr/files/protected-documents/2025-05/MichaelPage-TalentTrends-2025-Turkish.pdf>

Montgomery, B. (2024, October 23). *Mother says AI chatbot led her son to kill himself in lawsuit against its maker*. The Guardian.

<https://www.theguardian.com/technology/2024/oct/23/character-ai-chatbot-sewell-setzer-death>

Ones, D. S., Dilchert, S., & Viswesvaran, C. (2012). Cognitive abilities. In N. Schmitt (Eds.), *The Oxford Handbook of Personnel Assessment and Selection* (pp. 179-224). Oxford University Press.

<https://doi.org/10.1093/oxfordhb/9780199732579.013.0010>

Pandya, S. S., & Wang, J. (2024). Artificial intelligence in career development: a scoping review. *Human Resource Development International*, 27(3), 324-344.

<https://doi.org/10.1080/13678868.2024.2336881>

Pardo, M. (2022, May 18). *Meditation & AI: Creating a customized relaxation experience*. Appen. <https://www.appen.com/blog/meditation-and-artificial-intelligence>

Piniel, K., & Csizér, K. (2013). L2 motivation, anxiety and self-efficacy: The interrelationship of individual variables in the secondary school context. *Studies in Second Language Learning and Teaching*, 3(4), 523-550.

<https://doi.org/10.14746/ssllt.2013.3.4.5>

- Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review. *Journal of Applied Psychology*, 88(5), 879–903. <https://doi.org/10.1037/0021-9010.88.5.879>
- Porfelli, E. J., & Vondracek, F. W. (2009). Career development, work and occupational success. In M. C. Smith & N. DeFrates-Densch (Eds.), *Handbook of research on adult learning and development* (pp. 412–435). Routledge/Taylor & Francis Group.
- Praskova, A., Creed, P. A., & Hood, M. (2015). The development and initial validation of a career calling scale for emerging adults. *Journal of Career Assessment*, 23(1), 91-106. <https://doi.org/10.1177/1069072714523089>
- Presbitero, A., & Teng-Calleja, M. (2022). Job attitudes and career behaviors relating to employees' perceived incorporation of artificial intelligence in the workplace: a career self-management perspective. *Personnel Review*, 52(4), 1169-1187. <https://doi.org/10.1108/pr-02-2021-0103>
- Rahman, M. M., & Watanobe, Y. (2023). ChatGPT for education and research: Opportunities, threats, and strategies. *Applied Sciences*, 13(9), 5783. <https://doi.org/10.3390/app13095783>
- Randstad. (2024, November 4). *How learning AI skills can elevate your career*. <https://www.randstad.ca/job-seeker/career-resources/job-search-tips/how-learning-ai-skills-can-elevate-your-career/>
- Ruzsa, C. R. (2018). Expected impacts of artificial intelligence solutions in the labour market—new jobs and jobs to be eliminated. *Taylor*, 10(4), 81-90. <https://ojs.bibl.u-szeged.hu/index.php/taylor/article/view/21978>.
- Shead, S. (2022, April 8). *Elon Musk says production of Tesla's robot could start next year, but A.I. experts have their doubts*. CNBC. <http://cnbc.com/2022/04/08/elon-musk-says-tesla-is-aiming-to-start-production-on-optimus-next-year.html>

- Schepman, A., & Rodway, P. (2020). Initial validation of the general attitudes towards Artificial Intelligence Scale. *Computers in Human Behavior Reports*, 1, 100014. <https://doi.org/10.1016/j.chbr.2020.100014>
- Scroggins, W. A. (2008). Antecedents and outcomes of experienced meaningful work: A person-job fit perspective. *The Journal of Business Inquiry*, 7(1), 68-78. <https://journals.uvu.edu/index.php/jbi/article/download/167/141>
- Singla, A., Sukharevsky, A., Yee, L., Chui, M., & Hall, B. (2025, March 12). *The state of AI: How organizations are rewiring to capture value*. McKinsey & Company. <https://www.mckinsey.com/capabilities/quantumblack/our-insights/the-state-of-ai#/>
- Skjuve, M. B., Brandtzaeg, P. B., & Følstad, A. (2024). Why do people use ChatGPT? Exploring user motivations for generative conversational AI. *First Monday*, 29(1). <https://doi.org/10.5210/fm.v29i1.13541>
- Souza, J., Avelino, R., & da Silveira, S. A. (2023). Artificial intelligence: Dependency, coloniality and technological subordination in Brazil. In M. Findlay, L. M. Ong & W. Zhang (Eds.), *Elgar Companion to Regulating AI and Big Data in Emerging Economies*, (pp. 228-244). Edward Elgar Publishing. <https://doi.org/10.4337/9781785362408.00020>
- Su, R., Rounds, J., & Armstrong, P. I. (2009). Men and things, women and people: A meta-analysis of sex differences in interests. *Psychological Bulletin*, 135(6), 859–884. <https://doi.org/10.1037/a0017364>
- Subudhi, R., Das, S., & Sahu, S. (2020). Digital escapism. *Horizon Journal of Humanities and Social Sciences Research*, 2(3), 37-44. <https://doi.org/10.37534/bp.jhssr.2020.v2.nS.id1071.p37>
- Şahin, M. G., & Yıldırım, Y. (2024). The general attitudes towards artificial intelligence (GAAIS): A meta-analytic reliability generalization study. *International Journal of Assessment Tools in Education*, 11(2), 303-319. <https://doi.org/10.21449/ijate.1369023>

- Terzi, R. (2020). An adaptation of artificial intelligence anxiety scale into Turkish: Reliability and validity study. *International Online Journal of Education and Teaching (IOJET)*, 7(4), 1501-1515.
<https://iojet.org/index.php/IOJET/article/view/1031>
- Turkish Penal Code [Türk Ceza Kanunu], Law No. 5237, enacted October 12, 2004, Official Gazette No. 25611.
<https://www.mevzuat.gov.tr/mevzuat?MevzuatNo=5237&MevzuatTur=1&MevzuatTertip=5>
- Turkish Statistical Institute [Türkiye İstatistik Kurumu]. (2024, May 17). İstatistiklerle gençlik, 2023 [Youth in statistics, 2023] (TÜİK Publication No. 53677).
<https://data.tuik.gov.tr/Bulten/Index?p=İstatistiklerle-Genclik-2023-53677>
- Uçar, M., Çapuk, H., & Yiğit, M. F. (2024). The relationship between artificial intelligence anxiety and unemployment anxiety among university students. *Work: A Journal of Prevention, Assessment & Rehabilitation*, 80(2), 701-710.
<https://doi.org/10.1177/10519815241290648>
- Uzunbacak, H. H., Akçakanat, T., & Erhan, T. (2019). Meslek aşkı ve mutluluk ilişkisi: İşin anlamının rolü [The relationship between carrier calling and happiness: The role of the meaning of work]. *Avrasya Uluslararası Araştırmalar Dergisi*, 7(19), 294-317. <https://doi.org/10.33692/avasyad.628307>
- Vianello, M., Galliani, E. M., Rosa, A. D., & Anselmi, P. (2019). The developmental trajectories of calling: Predictors and outcomes. *Journal of Career Assessment*, 28(1), 128-146. <https://doi.org/10.1177/1069072719831276>
- Wang, B., Rau, P. L. P., & Yuan, T. (2022). Measuring user competence in using artificial intelligence: Validity and reliability of artificial intelligence literacy scale. *Behaviour & Information Technology*, 42(9), 1324-1337.
<https://doi.org/10.1080/0144929X.2022.2072768>
- Wang, W., & Siau, K. (2019). Artificial intelligence, machine learning, automation, robotics, future of work and future of humanity: A review and research agenda.

- Journal of Database Management*, 30(1), 61-79.
<https://doi.org/10.4018/JDM.2019010104>
- Wang, Y.-M., Wei, C.-L., Lin, H.-H., Wang, S.-C., & Wang, Y.-S. (2024). What drives students' AI learning behavior: A perspective of AI anxiety. *Interactive Learning Environments*, 32(6), 2584-2600.
<https://doi.org/10.1080/10494820.2022.2153147>
- Wang, Y.-Y., & Wang, Y.-S. (2022). Development and validation of an artificial intelligence anxiety scale: An initial application in predicting motivated learning behavior. *Interactive Learning Environments*, 30(4), 619–634.
<https://doi.org/10.1080/10494820.2019.1674887>
- Westfall, C. (2025, January 13). *How to avoid ChatGPT dependency: Are we over-reliant on AI?* Forbes.
<https://www.forbes.com/sites/chriswestfall/2025/01/13/how-to-avoid-chatgpt-dependency-are-we-over-reliant-on-ai/>
- Wicht, A., Miyamoto, A., & Lechner, C. M. (2021). Are girls more ambitious than boys? Vocational interests partly explain gender differences in occupational aspirations. *Journal of Career Development*, 49(3), 551-568.
<https://doi.org/10.1177/0894845321991665>
- World Economic Forum. (2023, May 1). *The future of jobs report 2023*.
https://www3.weforum.org/docs/WEF_Future_of_Jobs_2023.pdf
- World Economic Forum (2025, January 8). *The future of jobs report 2025*.
https://reports.weforum.org/docs/WEF_Future_of_Jobs_Report_2025.pdf
- Wrzesniewski, A. (2012). Callings. In G. M. Spreitzer & K. S. Cameron (Eds.), *The Oxford Handbook of Positive Organizational Scholarship* (pp. 45-55). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199734610.013.0004>
- Xie, B., Mian, X., Xin, X., & Zhou, W. (2016). Linking calling to work engagement and subjective career success: The perspective of career construction theory. *Journal of Vocational Behavior*, 94, 70-78. <https://doi.org/10.1016/j.jvb.2016.02.011>

- Xu, G., Xue, M., & Zhao, J. (2023). The association between artificial intelligence awareness and employee depression: The mediating role of emotional exhaustion and the moderating role of perceived organizational support. *International Journal of Environmental Research and Public Health*, 20(6), 5147. <https://doi.org/10.3390/ijerph20065147>
- Yavuz-Aksakal, N., & Ülgen, B. (2021). Yapay zekâ ve geleceğin meslekleri. *TRT Akademi*, 6(13), 834-853. <https://doi.org/10.37679/trta.969285>
- Zao-Sanders, M. (2025, April 9). *How people are really using gen AI in 2025*. HRB. <https://hbr.org/2025/04/how-people-are-really-using-gen-ai-in-2025>
- Zhai, C., Wibowo, S., & Li, L. D. (2024). The effects of over-reliance on AI dialogue systems on students' cognitive abilities: a systematic review. *Smart Learning Environments*, 11. <https://doi.org/10.1186/s40561-024-00316-7>
- Zhang, S., Zhao, X., Zhou, T., & Kim, J. H. (2024). Do you have AI dependency? The roles of academic self-efficacy, academic stress, and performance expectations on problematic AI usage behavior. *International Journal of Educational Technology in Higher Education*, 21(1), 34-47. <https://doi.org/10.1186/s41239-024-00467-0>
- Zhao, H., O'Connor, G., Wu, J., & Lumpkin, G. T. (2021). Age and entrepreneurial career success: A review and a meta-analysis. *Journal of Business Venturing*, 36(1), 106007. <https://doi.org/10.1016/j.jbusvent.2020.106007>
- Zhu, D., Kim, P. B., Milne, S., & Park, I.-J. (2020). A meta-analysis of the antecedents of career commitment. *Journal of Career Assessment*, 29(3), 502-524. <https://doi.org/10.1177/1069072720956983>
- Zhu, Q., Huang, Y., Zhou, D., Zhao, L., Guo, L., Yang, R., Sun, Z., Luo, M., Zhang, F., Xiao, H., Tang, X., Zhang, X., Song, T., Li, X., Chong, B., Zhou, J., Zhang, Y., Zhang, B., Cao, J., ... Luo, Y. (2024). Automated synthesis of oxygen-producing catalysts from Martian meteorites by a robotic AI chemist. *Nature Synthesis*, 3, 319-328. <https://doi.org/10.1038/s44160-023-00424-1>

APPENDICES

Appendix A. Result of the Evaluation by the Ethics Committee

The Ethics Committee approval is available in the printed version of the thesis.



Appendix B. Informed Consent Form (Turkish)

Değerli Katılımcı,

Sizi, Bilgi Üniversitesi Endüstriyel ve Örgütsel Psikoloji bölümü öğrencisi Öykü Hazal Balkıs tarafından, Dr. Ryan Macey Wise danışmanlığında yürütülen yüksek lisans tezi kapsamında gerçekleştirilen “Yapay Zeka Çağında Kariyer Arzusu: Genç Yetişkinlerde Yapay Zeka Kaygısı, Bağımlılığı ve Kullanım Motivasyonlarının İncelenmesi ” başlıklı araştırmaya katılmaya davet ediyoruz. Bu form, araştırma hakkında sizi bilgilendirmek ve onayınızı almak amacıyla hazırlanmıştır.

Araştırmanın Amacı: Bu araştırmanın amacı, 18 – 29 yaş aralığındaki genç yetişkinlerde yapay zeka kaygısı, bağımlılığının ve kullanım motivasyonlarının kariyer arzusu kavramıyla ilişkilerini incelemektir.

Prosedür: Bu araştırmaya katılmayı kabul ederseniz, yapay zekaya yönelik endişeleriniz, bu uygulamalara bağımlılığınız, kullanım motivasyonunuz ve kariyer arzularınız ile ilgili sorulardan oluşan anket seti doldurmanız istenecektir. Anket setinin tamamlanması yaklaşık 10 – 15 dakikanızı alacaktır. Çalışmanın hedeflenen amaçlarına ulaşabilmesi için bütün soruları eksiksiz ve samimiyetle yanıtlamanız beklenmektedir. Yanıtlarınız gizli tutulacak ve yalnızca araştırma amacıyla kullanılacaktır.

Riskler ve Faydalar: Bu çalışmaya katılmanın bilinen bir riski bulunmamaktadır. Ancak, bazı sorular yapay zekayla ilgili kişisel duygu ve deneyimlerinizi çağrıştıracaktır. Katılımınız, yapay zeka çağında genç yetişkinlerin bu faktörlerden nasıl etkilendiğini anlamamıza ve çalışanların kariyer gelişimlerini destekleyecek bilimsel bilgi sağlamamıza yardımcı olacaktır.

Gizlilik: Bu çalışmada toplanan tüm bilgiler anonim bir şekilde toplanacak ve gizli tutulacaktır. Araştırmadan kaynaklanan herhangi bir bilimsel yayında kimliğinizi tanımlayacak bir bilgi paylaşılmayacaktır. Toplanan verilere yalnızca araştırma ekibi erişebilecek ve yasal saklanma süresi olan 5 yılın ardından silinecektir.

Gönüllü Katılım: Bu çalışmaya katılmak tamamen gönüllülük esasına dayanmaktadır. Bu formu okuyup, onaylamanız araştırmaya katılmayı kabul ettiğiniz anlamına

gelecektir. Çalışmaya katılmama veya katıldıktan sonra herhangi bir aşamada, hiç bir sonuçla karşılaşmadan ayrılma hakkına sahiptir.

İletişim Bilgileri: Araştırma hakkında herhangi bir sorunuz veya katılımcı olarak haklarınızla ilgili endişeleriniz varsa, lütfen Ryan Macey Wise ve Öykü Hazal Balkıs ile iletişime geçin.

Bu çalışmaya gönüllü olarak katılıyorum ve herhangi bir sonuçla karşılaşmadan istediğim zaman çalışmadan ayrılabileceğimi anlıyorum. Verdiğim bilgilerin yalnızca bilimsel amaçlı araştırma ve yayınlarda kullanılacağını anlıyor ve araştırmaya katılmayı kabul ediyorum

Appendix C. Informed Consent Form (English)

Dear Participant,

We invite you to participate in the research titled “Career Calling in the Age of Artificial Intelligence: Examining AI Anxiety, Use Motivation and Dependency Among Emerging Adults”. This part of the form has been prepared to inform you about the research and to obtain your consent.

Purpose of the Research: This study aims to examine the relationship between AI anxiety, dependency, and motivations for use and the concept of career calling in emerging adults between the ages of 18 – 29.

Procedure: If you agree to participate in this research, you will be asked to fill out a set of questionnaires that include questions related to your concerns about AI, your dependency on these applications, your motivation for using them, and your career calling. The questionnaire set will take approximately 10 – 15 minutes to complete. For the study to achieve its objectives, you are expected to answer all questions completely and sincerely. Your answers will be kept confidential and will only be used for research purposes.

Risks and Benefits: There are no known risks of participating in this study. However, some questions may evoke your personal feelings and experiences about AI. Your participation will contribute to the understanding of how emerging adults are affected by these factors in the artificial intelligence age and provide scientific knowledge to support individuals’ career development.

Confidentiality: All information collected in this study will be collected anonymously and kept confidential. No identifying information will be shared in any scientific research or publication resulting from this study. The collected data will only be accessible by the research team and will be deleted after the legal retention period of 5 years.

Voluntary Participation: Participation in this study is completely voluntary. Reading and approving this form will mean that you agree to participate in this study. However,

you have the right not to participate in the study or to withdraw at any stage after participation without facing any consequences.

Contact Information: If you have any questions about the research or concerns about your rights as a participant, please contact Ryan Macey Wise and Öykü Hazal Balkıs.

I am participating in this study voluntarily, and I understand that I can leave the study at any time without having any consequences. I understand that the information I provide will only be used for scientific research and publications, and I agree to participate in the study.

Appendix D. AI Anxiety Scale Items (Turkish)

Değerli katılımcı, sizden istediğimiz aşağıdaki ifadelere ne ölçüde katıldığınızı (1 = Kesinlikle Katılmıyorum, 7 = Kesinlikle Katılıyorum) belirtmeniz. İfadelerin doğru ya da yanlış yanıtları yoktur. Bu nedenle sizden ricamız ne düşünüyorsanız, samimi olarak içinizden geldiği gibi ifade etmeniz. Lütfen her bir maddeyi dikkatle okuyarak size en uygun seçeneği işaretleyin.

Öğrenme:

- 1) Bir yapay zeka tekniğiyle/ürünüyle ilişkili tüm özel işlevleri anlamayı öğrenmek beni endişelendiriyor.
- 2) Yapay zeka tekniklerini/ürünlerini kullanmayı öğrenmek beni endişelendiriyor.
- 3) Bir yapay zeka tekniğinin/ürününün belirli işlevlerini kullanmayı öğrenmek beni endişelendiriyor.
- 4) Bir yapay zeka tekniğinin nasıl çalıştığını (veya ürününün ne işe yaradığını) öğrenmek beni endişelendiriyor.
- 5) Bir yapay zeka tekniği/ürünü ile etkileşim kurmayı öğrenmek beni endişelendiriyor.
- 6) Yapay zeka tekniklerinin/ürünlerinin geliştirilmesi hakkında ders almak beni endişelendiriyor.
- 7) Bir yapay zeka tekniğinin/ürününün kılavuzunu okumak beni endişelendiriyor.
- 8) Yapay zeka teknikleriyle/ürünleriyle ilişkili gelişmelere ayak uyduramamak beni endişelendiriyor.

İş Değiştirme:

- 9) Bir yapay zeka tekniğinin/ürününün bizi bağımlı kılabileceğinden korkuyorum.
- 10) Bir yapay zeka tekniğinin/ürününün bizi daha da tembelleştirebileceğinden korkuyorum.

- 11) Bir yapay zeka tekniğinin/ürününün insanların yerini alabileceğinden korkuyorum.
- 12) İnsansı robotların yaygın kullanımının, insanların işlerini elinden alacağından korkuyorum.
- 13) Yapay zeka tekniklerini/ürünlerini kullanmaya başlarsam onlara bağımlı olacağımdan ve akıl yürütme becerilerimi kaybedeceğimden korkuyorum.
- 14) Yapay zeka tekniklerinin/ürünlerinin kişilerin işlerini elinden alacağından korkuyorum.

Sosyoteknik Körlük:

- 15) Bir yapay zeka tekniğinin/ürününün kötü amaçlı kullanılabileceğinden korkuyorum.
- 16) Bir yapay zeka tekniğiyle/ürünüyle potansiyel olarak ilişkili çeşitli sorunlardan korkuyorum.
- 17) Bir yapay zeka tekniğinin/ürününün kontrolden çıkabilir ve arızalanabilir olacağından korkuyorum.
- 18) Bir yapay zeka tekniğinin/ürününün robot özerkliğine yol açabileceğinden korkuyorum.

AI Yapılandırması:

- 19) İnsansı yapay zeka tekniklerini/ürünlerini (örneğin insansı robotları) ürkütücü buluyorum.
- 20) İnsansı yapay zeka tekniklerini/ürünlerini (örneğin insansı robotları) tehditkar buluyorum.
- 21) Nedenini bilmiyorum, fakat insansı yapay zeka teknikleri/ürünleri (örneğin insansı robotlar) beni korkutuyor.

Appendix E. AI Anxiety Scale Items (English)

Dear participant, we would like you to indicate the extent to which you agree (1 = Strongly Disagree, 7 = Strongly Agree) with the following statements. There are no right or wrong answers to the statements. Therefore, we kindly ask that you express your thoughts sincerely as you feel them. Please read each item carefully and select the most appropriate option for you.

Learning:

- 1) Learning to understand all of the special functions associated with an AI technique/product makes me anxious.
- 2) Learning to use AI techniques/products makes me anxious.
- 3) Learning to use specific functions of an AI technique/product makes me anxious.
- 4) Learning how an AI technique/product works makes me anxious.
- 5) Learning to interact with an AI technique/product makes me anxious.
- 6) Taking a class about the development of AI techniques/products makes me anxious.
- 7) Reading an AI technique/product manual makes me anxious.
- 8) Being unable to keep up with the advances associated with AI techniques/products makes me anxious.

Job Replacement:

- 9) I am afraid that an AI technique/product may make us dependent.
- 10) I am afraid that an AI technique/product may make us even lazier.
- 11) I am afraid that an AI technique/product may replace humans.
- 12) I am afraid that widespread use of humanoid robots will take jobs away from people.
- 13) I am afraid that if I begin to use AI techniques/products I will become dependent upon them and lose some of my reasoning skills.
- 14) I am afraid that AI techniques/products will replace someone's job.

Sociotechnical Blindness:

- 15) I am afraid that an AI technique/product may be misused.
- 16) I am afraid of various problems potentially associated with an AI technique/product.
- 17) I am afraid that an AI technique/product may get out of control and malfunction.
- 18) I am afraid that an AI technique/product may lead to robot autonomy.

AI Configuration:

- 19) I find humanoid AI techniques/products (e.g., humanoid robots) scary.
- 20) I find humanoid AI techniques/products (e.g., humanoid robots) intimidating.
- 21) I don't know why, but humanoid AI techniques/products (e.g., humanoid robots) scare me.

Appendix F. AI Dependency Scale Items (Turkish)

Değerli katılımcı, aşağıda yapay zeka kullanımınızla ilişkili bazı ifadeler sıralanmıştır. Sizden istediğimiz aşağıdaki ifadelere ne ölçüde katıldığınızı (1 = Kesinlikle Katılmıyorum, 4 = Kesinlikle Katılıyorum) belirtmeniz. İfadelerin doğru ya da yanlış yanıtları yoktur. Bu nedenle sizden ricamız ne düşünüyorsanız, samimi olarak içinizden geldiği gibi ifade etmeniz. Lütfen her bir maddeyi dikkatle okuyarak size en uygun seçeneği işaretleyin.

- 1) Yapay zekaya çok fazla güveniyorum.
- 2) Yapay zekaya çok fazla zaman harcıyorum.
- 3) Yapay zeka kullanımı ilişkilerime zarar verdi.
- 4) Yapay zeka kullanmadığımda endişeli ve üzgün hissediyorum.
- 5) Yapay zeka için harcadığım zamanı azaltmaya çalıştım ama başarısız oldum.

Appendix G. AI Dependency Scale Items (English)

Dear Participant, below are some statements related to your use of artificial intelligence. We ask you to indicate to what extent you agree (1 = Strongly Disagree, 4 = Strongly Agree) with the following statements. There are no right or wrong answers to the statements. Therefore, we kindly ask you to express your thoughts sincerely as you feel them. Please read each item carefully and select the option that best suits you.

- 1) I rely too much on AI.
- 2) I spend too much time on AI.
- 3) The use of artificial intelligence has damaged my relationships.
- 4) I feel anxious and upset when I cannot use artificial intelligence.
- 5) I have tried to reduce the amount of time I spend on AI but failed.

Appendix H. AI Use Motivation Scale Items (Turkish)

Değerli katılımcı, aşağıda yapay zeka kullanımınızla ilişkili bazı ifadeler sıralanmıştır. Sizden istediğimiz aşağıdaki ifadelere ne ölçüde katıldığınızı (1 = Kesinlikle katılmıyorum, 4 = Kesinlikle Katılıyorum) belirtmeniz. İfadelerin doğru ya da yanlış yanıtları yoktur. Bu nedenle sizden ricamız ne düşünüyorsanız, samimi olarak içinizden geldiği gibi ifade etmeniz. Lütfen her bir maddeyi dikkatle okuyarak size en uygun seçeneği işaretleyin.

Kaçış:

- 1) Yapay zekayı ailemden, arkadaşlarımdan veya diğer sorunlardan kaçmak için bir araç olarak kullanıyorum.
- 2) Yapay zekayı stress ve sorumluluktan kaçmak için kullanıyorum.
- 3) Yapay zekayı diğer şeyleri unutmak için kullanıyorum.

Sosyal:

- 4) Yapay zekayı yalnız kalmaktan kaçmak için kullanıyorum.
- 5) Yapay zeka kullanıyorum çünkü biriyle etkileşim kurmam gerekiyor.
- 6) Yapay zeka kullanıyorum çünkü yalnızlığımı gideriyor.

Araçsal:

- 7) İhtiyacım olan bilgiyi aramak ve elde etmek için yapay zeka kullanıyorum.
- 8) Yapay zekayı yeteneklerimi geliştirmek için kullanıyorum.
- 9) Yapay zekayı öğrenme ve bilgimi geliştirmek için kullanıyorum.

Eğlence:

- 10) Yapay zekayı kendimi eğlendirmek ve rahatlamak için kullanıyorum.
- 11) Yapay zeka kullanıyorum çünkü bana mutluluk veriyor.
- 12) Yapay zekayı kullanıyorum çünkü bana çeşitli eğlence aktiviteleri sağlıyor.

Appendix I. AI Use Motivation Scale Items (English)

Dear Participant, below are some statements related to your use of artificial intelligence. We ask you to indicate to what extent you agree (1 = Strongly Disagree, 4 = Strongly Agree) with the following statements. There are no right or wrong answers to the statements. Therefore, we kindly ask you to express your thoughts sincerely as you feel them. Please read each item carefully and select the option that best suits you.

Escape:

- 1) I use AI as a means of escaping from family, friends, or other problems.
- 2) I use AI to escape stress and responsibility.
- 3) I use AI to forget about other things.

Social:

- 4) I use AI as a way to avoid being alone.
- 5) I use AI because I need to interaction with someone.
- 6) I use AI because it relieves my loneliness.

Instrumental:

- 7) I use AI to search for and obtain the information I need.
- 8) I use AI to improve my abilities.
- 9) I use AI to enhance my learning and knowledge.

Entertainment:

- 10) I use AI to entertain myself and relax.
- 11) I use AI because it brings me happiness.
- 12) I use AI because it provides me with a variety of entertainment activities.

Appendix J. Career Calling Scale Items (Turkish)

Değerli katılımcı, aşağıda bireylerin kariyer çağrısı ya da meslek aşkı olarak adlandırılan, bireyin bir amaç uğruna yaptığı işten büyük haz ve tatmin alması olarak tanımlanan kavramla ilişkili bazı ifadeler sıralanmıştır. Sizden istediğimiz, aşağıdaki ifadelere ne ölçüde katıldığınızı (1 = Kesinlikle Katılmıyorum, 5 = Kesinlikle Katılıyorum) belirtmenizdir. İfadelerin doğru ya da yanlış yanıtları yoktur. Bu nedenle sizden ricamız, ne düşünüyorsanız samimi bir şekilde ifade etmenizdir. Lütfen her bir maddeyi dikkatle okuyarak size en uygun seçeneği işaretleyin.

Başkası-Odaklı Anlam:

- 1) Gelecekte seçeceğim kariyerimde başkalarına fayda sağlamak benim için bir görevdir.
- 2) Gelecekte seçeceğim kariyerim aracılığıyla başkalarına fayda sağlamayı her zaman düşünürüm; bu benim çağrım gibi.
- 3) Kariyerimin sadece bana fayda sağlamasından ziyade başkalarına fayda sağlaması daha önemlidir.
- 4) Gelecekte seçeceğim kariyerde topluma önemli bir katkıda bulunabileceğime inanıyorum.
- 5) Gelecekteki kariyerimin toplumda önemli olarak tanınmasından keyif alıyorum.

Kişisel Anlam:

- 6) Gelecekte benim için anlamlı olacak bir kariyer yönü hakkında net bir fikrim yok.
- 7) Sabahları kalkıp bir şeyler yapmam için bana bir neden verecek önemli bir kariyer hedefi belirlemede zorlanıyorum.
- 8) Kişisel olarak anlamlı gördüğüm bir kariyer yolu seçtiğim için tatmin duygusu hissediyorum.
- 9) Kariyerime hazırlanmak kişisel gelişimime katkıda bulunuyor.
- 10) Hayatıma gerçek bir amaç kazandıracak bir kariyer yolu seçtim.

Aktif Katılım:

- 11) Şu anda yapmak istediğim tek şey bana ilham veren kariyerimin peşinden gitmek.
- 12) Hedeflediğim kariyer konusunda o kadar takıntılıyım ki bazen başka hiçbir şey ilgimi çekmiyor.
- 13) Kariyerime hazırlanmak için yaptığım her şey zevkli ve beni ona doğru çekiyor.
- 14) Hayalimdeki kariyer için planlama yapmak söz konusu olduğunda zaman kaybetmem; sanki bir görevdeymişim gibi.
- 15) Kariyer hedeflerimi ilerletmek için her fırsatı değerlendiririm.

Appendix K. Career Calling Scale Items (English)

Dear participant, below are some statements related to the career-calling concept, which is defined as an individual feeling great pleasure, satisfaction, and purpose from their work. We ask you to indicate the extent to which you agree (1 = Strongly Disagree, 5 = Strongly Agree) with the following statements. There are no right or wrong answers to the statements. Therefore, we kindly ask you to express your thoughts sincerely as you feel them. Please read each item carefully and select the most appropriate option for you.

Other-Oriented Meaning:

- 1) It is my calling to benefit others in my future chosen career.
- 2) I think of benefiting others through my future chosen career all the time; it is like my calling.
- 3) It is more important that my career benefits others, rather than just benefits me.
- 4) I believe that I can make an important contribution to the community in my future chosen career.
- 5) I enjoy that my future career will be recognised in the community as important.

Personal Meaning:

- 6) I have no clear sense of a future career direction that would be meaningful for me. (Reverse item)
- 7) I struggle to identify an important career goal that would give me a reason to get up in the morning and do something about it. (Reverse item)
- 8) I feel a sense of satisfaction because I have chosen a career path that I see as personally meaningful.
- 9) Preparing for my career is contributing to my personal growth.
- 10) I have chosen a career path that will give a real purpose to my life.

Active Engagement:

- 11) All I want to do now is to pursue the career that is inspiring me.

- 12) I am obsessed about the career I am aiming for to the point that sometimes nothing else interests me.
- 13) Everything I do to prepare for my career is enjoyable and draws me towards it.
- 14) When it comes to planning for my dream career, I do not waste time; it is like I am on a mission.
- 15) I take every opportunity to progress my career goals.

