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AUTHORS: Burak Bahar,Üstün Özen

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Research on the Motivational Factors of Information Technologies Department Employees in the Context of Abraham Harold Maslow's Hierarchy of Needs

Bilgi Teknolojileri Departmanı Çalışanlarını Motive Eden Etmenlerin Abraham Harold Maslow'un İhtiyaçlar Hiyerarşisi Bağlamında İncelenmesi

Burak BAHAR¹

¹Atatürk University, Graduate School of Social Sciences, Department of Management Information Systems, Erzurum, Turkey

Üstün ÖZEN²

²Atatürk University, Faculty of Economics and Administrative Sciences, Department of Management Information Systems, Erzurum, Turkey



ABSTRACT

The objective of this study is to evaluate the degree to which information technology department employees meet the stages of needs outlined in Abraham Harold Maslow's Hierarchy of Needs theory. The researchers identified eight variables and formulated eight hypotheses related to these variables. To test these hypotheses, data from an online survey completed by 401 active information technology employees in Turkey, representing the study population, was utilized. The convenience sampling method, which is one of the non-probabilistic sampling methods due to time and budget constraints, was utilized. The statistical analysis revealed a noteworthy correlation between the variables, particularly in terms of income status and motivation, across all sub-dimensions of Abraham Harold Maslow's Hierarchy of Needs theory. While variations in the perceived level of deprivation by sub-dimensions were identified in other hypotheses, these variances did not reach statistical significance across all sub-dimensions.

JEL Codes: C1, M1, M5, Y1, Y4

Keywords: Management Information Systems, Abraham Harold Maslow, Hierarchy of Needs Theory, The Five Need Satisfaction Measures, Information Technologies Department, Motivation

ÖZ

Bu çalışmanın amacı, bilgi teknolojileri departmanı çalışanlarının, Abraham Harold Maslow'un ihtiyaçlar Hiyerarşisi teorisinde belirtilen ihtiyaç aşamalarını ne derece karşılayabildiklerini açıklamaktır. Bu amaç doğrultusunda araştırmacılar tarafından sekiz adet değişken belirlenmiş ve bu değişkenler ile ilintili sekiz adet hipotez öne sürülmüştür. Öne sürülen hipotezler, çalışmanın evrenini oluşturan Türkiye'deki 401 faal bilgi teknolojileri departmanı çalışanından çevrim içi bir anket formu vasıtasıyla elde edilen veriler ile test edilmiştir. Örneklem yöntemleri içerisinde zaman ve bütçe kısıtlarından dolayı olasılığa dayalı olmayan örneklem yöntemlerinden biri olan kolayda örneklem yöntemi kullanılmıştır. İstatistiksel analiz sürecinde değişkenler ile Abraham Harold Maslow'un ihtiyaçlar Hiyerarşisi teorisinin sırasıyla Fizyolojik ihtiyaçlar, Güvenlik ihtiyaçları, Ait Olma ve Sevgi ihtiyaçları, Saygı ihtiyaçları ve Kendini Gerçekleştirme ihtiyaçları alt boyutları arasında sadece gelir durumu değişkeni ile motivasyon arasında anlamlı bir ilişki olduğunu öngören hipotez tüm alt boyutlarda kabul edilmiştir. Diğer hipotezlerde, alt boyut algılarının yarattığı yoksunluk seviyesinin farklılaştığı ancak bu farklılaşmanın, tüm alt boyutlarda istatistiksel olarak anlamlılık oluşturabilecek bir seviyede olmadığı tespit edilmiştir.

JEL Kodları: C1, M1, M5, Y1, Y4

Anahtar Kelimeler: Yönetim Bilişim Sistemleri, Abraham Harold Maslow, İhtiyaçlar Hiyerarşisi Teorisi, 5 Aşamalı Memnuniyet Ölçeği, Bilgi Teknolojiler Departmanı, Motivasyon

Introduction

Being esteemed in society stands out as a paramount value for individuals. In pursuit of this, individuals engage in endeavors within their organizations, aiming to attain both material and moral rewards associated with respect. Despite persistent efforts, some individuals may encounter discouragement, leaving their goals unfulfilled. Conversely, others, driven by material and moral incentives, successfully achieve their objectives. The pivotal factor in this process is motivation (Altımurat et al., 2021). Essentially, anything whose absence is palpable constitutes a need, and motivation, stemming from individual needs, encompasses the set of needs propelling individuals towards specific objectives (Murray, 1964). Motivation can be described as the force, behavior, or even a subtle inclination that impels individuals to fulfill their desires (Yorks, 1976, p. 21; Kast & Rosenzweig, 1970, p. 296).

According to Maslow (1943), motivation represents the aggregate of forces driving individuals to behave, considering the individual as motivated as a whole rather than in parts. Educators and psychologists define motivation as the processes initiating and sustaining individuals' behaviors (McMillan & Forsyth, 1991, p. 39). Additionally, motivation is identified as the rationale behind actions taken to alter an existing situation. Analogous to an algorithm with a clear start and end, it shapes an individual's overall attitude toward initiating, continuing, and completing an action. Employees who are successfully motivated, gaining positive momentum in their general attitude, are regarded as a key element in an organization's path to success (Gheitani et al., 2019).

**This study is derived from the master thesis titled "Research on the Motivational Factors of Information Technologies Department Employees in the Context of Abraham Harold Maslow's Hierarchy of Needs" conducted at Atatürk University Social Sciences Institute, under the supervision of Prof. Dr. Ustun OZEN.*

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Sorumlu Yazar/Corresponding author:

E-mail: burak.bahar20@ogr.atauni.edu.tr

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The triumph of an organization hinges on motivated employees consistently utilizing their knowledge in alignment with organizational goals. To achieve this, employees must have the motivation to learn and produce knowledge consistently in line with the organization's objectives. Learning motivation pertains to individuals' desire to acquire new knowledge, fostering creativity and innovation and enabling them to actively participate in the processes of producing and applying useful knowledge. Motivated individuals consistently perceive challenging tasks as opportunities for growth and development (Afsar & Umrani, 2020).

Creating a dynamic organization is a critical responsibility of a manager, and this can be achieved through motivated employees. Without employees making voluntary efforts to fulfill their responsibilities, managerial activities cannot yield results. At this juncture, the role of motivation is to ensure that employees demonstrate a sustained willingness to achieve the organization's goals (Afsar & Umrani, 2020).

Maslow's Hierarchy of Needs theory is employed to elucidate motivation, a complex internal factor that emerged in the 1940s (Gorman, 2010). The theory delineates five stages guiding individuals' behavior, starting with physiological needs, followed by safety needs, social needs (including belonging, loving, and being loved), esteem needs (encompassing recognition by others), and culminating in self-actualization needs, representing an individual's maximum potential. According to Maslow, individuals perpetually experience a sense of deficiency, and this feeling is unceasing. An individual's desires are shaped by their current possessions. In the Hierarchy of Needs theory, there is a distinction between individuals' efforts to alleviate deprivation in the lower stages and their endeavors to eliminate deprivation in the upper stages, with age emerging as a significant factor in this context (Parilti, 1999).

In our research, we assess the factors motivating employees in the Information Technology department using Taormina and Gao (2013)'s "5-Stage Needs Satisfaction Scale", comprising 72 statements grouped into five stages based on Abraham Harold Maslow's Hierarchy of Needs theory. The research encompasses demographic variables such as age, gender, marital status, educational status, unit, title, income status, and years of work experience.

Literature

Tampoe (1993) identified a gap in previous motivation research, which predominantly focused on managers and factory workers, neglecting knowledge workers. To address this, he designed a specialized survey to collect comprehensive data from R&D, Engineering, and related sectors in the UK. The findings led to the proposal of a new model aimed at enhancing the motivation and performance of information technology department managers and employees.

Lord (2004) aimed to elucidate the relationship between traditional motivation theories, working conditions, and the attitudes of older information technology employees. The study indicated that older knowledge workers exhibit loyalty, a readiness to take responsibility, openness to learning, and a willingness to contribute to organizational development. These observations align with most traditional theories of motivation, providing support for the relationship between working conditions and the attitudes of older knowledge workers.

Padayachy (2004) conducted a study to reveal the needs of knowledge workers and determine the alignment of the organization's reward system with these needs. The research identified factors motivating knowledge workers, emphasizing both material and non-material rewards. Scientists particularly valued material rewards such

as salary raises, incentives for quality publications, and patents, while also expressing a preference for non-monetary rewards like career opportunities and advanced technical support. Suggestions for improvements in performance management, profit-sharing, and innovation-centered rewards were also provided.

Petroni and Colacino (2008) conducted a study to determine the methods used to motivate knowledge workers and assess their effectiveness. Despite the prevalent use of standard motivation and reward systems, the researchers found that knowledge workers are motivated by factors beyond the commonly emphasized ones.

Sun's (2008) study aimed to evaluate the motivation of knowledge workers in knowledge-based companies. While acknowledging the awareness of companies regarding the importance of knowledge workers, the study highlighted obstacles to effectively motivating these employees, emphasizing the necessity for companies to adopt systematic and science-based motivation systems and strategies.

Li (2009) explored the relationship between the motivation of knowledge workers and organizational innovation performance in China. The study identified a positive relationship between the motivation of knowledge workers and organizational innovation performance, underscoring the significant role of employee motivation in enhancing innovation performance.

Lin (2009) delved into the issue of motivation based on the needs of knowledge workers. The study identified the dominant needs of employees, including financial reward, leadership, personal development, justice, environmental support, interpersonal communication, and job stability.

Steyn and Du Toit's (2009) study provided a different perspective on the efforts of knowledge workers toward the progress of the business. The researchers emphasized the need to focus on more than just motivation to fully harness the abilities of knowledge workers for accessing existing information and producing new information.

Todericiu et al. (2013) aimed to identify strategies used to motivate knowledge workers in the Sibiu region of Romania and suggest modern ideas to advance these strategies. The study, based on a literature review, identified problems encountered in motivating knowledge workers and offered recommendations. These recommendations emphasized the continuous use of motivating factors, the indispensability of human resources management for organizations prioritizing progress, the need for alternative ways despite the value of financial resources, and the importance of management levels focusing on notable talents and creating rewards that motivate each employee.

Cevher and Aksaraylı (2014) conducted a study to determine the factors affecting the motivation levels of employees in data processing centers. The study found that factors such as long-term projects, incorrect work, technical difficulties, years of work experience, and hardware differences negatively affected the motivation levels of technical employees. On the positive side, creating an independent environment had a favorable impact.

Vanthournout et al.'s (2014) study identified individual differences in the learning processes of knowledge workers and aimed to evaluate how motivation to participate in learning and workplace climate affected the quality of learning. According to their conclusion, the workplace environment and motivation directly influenced the learning processes of knowledge workers, emphasizing the importance of offering knowledge workers balanced autonomy along with a healthy workplace environment.

MLádková et al. (2015) sought to reveal factors that positively motivate knowledge workers as well as factors that demotivate them. Motivating factors were grouped under four headings: achieving goals,

satisfaction, work character, and freedom. Demotivating factors included the misuse of knowledge workers' desires and efforts and weak moral qualifications of management levels.

Ong et al.'s (2016) study aimed to examine how knowledge workers employed to meet the demands of the local industry in Malaysia could be retained. The study argued that knowledge workers in Malaysia can be retained, at least at the local level, as long as they can be motivated by existing job descriptions.

Yurduseven and Koç's (2017) study determined the perception levels of motivation tools of employees in the information technologies sector. The top 3 motivation tools that had the greatest impact on information technologies employees were listed as wage security, job security, and training opportunities.

Ferraro et al. (2018) conducted a study on knowledge workers in Portugal and Brazil. They found that psychological capital has an effect on the connection between "decent work" and motivation, and that decent work triggers autonomous work motivation with the support of psychological capital.

Nientied and Toska (2019) revealed in their study on knowledge workers in the Western Balkans that intrinsic motivation is more important than extrinsic motivation. It was also observed that emotional commitment, the main factor of organizational commitment, is quite high. When the motivation factors and organizational commitment findings were evaluated, it was concluded that organizations should pay attention to the relationship between motivation and productivity, which is gaining value day by day.

Arreguin and Macias (2022) aimed to evaluate the current motivation of knowledge workers and the factors affecting their permanence in their current location. The study indicated that knowledge workers are generally motivated by tasks with high levels of difficulty. Additionally, factors such as autonomy, organizational atmosphere, and ensuring work-life balance were highlighted in making working conditions attractive for full-time knowledge workers. Considering processes such as globalization, the pace of technological advancement, generational differences, and workforce changes, organizations were advised to create a team that is prone to motivation.

Material and Methods

Purpose and Importance of the Research

This research seeks to evaluate the correlation between the needs of information technology department employees and Abraham Harold Maslow's Hierarchy of Needs theory. Motivation and information technologies have been subjects of extensive interdisciplinary studies over time. However, the overarching frameworks established by these studies in both academic and popular literature have now reached a saturation point. Consequently, there is a pressing need to shift focus towards more specific aspects of these concepts. Anchored in Abraham Harold Maslow's Hierarchy of Needs theory, this study aims to pinpoint the motivating factors for information technology employees, thus addressing this existing gap. While some literature reviews provide a broad discussion on employees, others lack a theoretical basis when elucidating motivation levels or factors influencing employees.

Population and Sample

The population of the study consists of all information technology department employees actively working in both public and private sectors in Turkey. In 2021, the information technology sector employed around 260.000 people, with approximately 150.000 working for companies and organizations representing 90% of the market (Ünal, 2022). The sample size representing the population of the study was determined with a 95% confidence interval using the values in Table 1. Considering time and budget constraints, the convenience sampling method, a non-probability approach, was chosen for its practicality,

speed, and cost-effectiveness in collecting data from the study population (Haşiloğlu et al. 2015, p. 20). A total of 401 information technology department employees participated, providing feedback by responding to all statements, including demographic information, in the "Personal Information Form".

Table 1. Error Tolerance Based Sample Size (Erdoğan & Yazıcıoğlu, 2004)

// Population Size	// $\pm .05$ Margin of Error (d); $p, q = .5$
100.000	383

Data Collection Method and Tools

Participation in the survey was entirely voluntary and extended to information technology departments in Turkey through an access link, email, and private messages on professional social business networks. The introduction to the survey, comprising six sections, provides a concise descriptive explanation, written informed consent and the "Personal Information Form". This section requests demographic information such as Age, Gender, Marital Status, Educational Status, Working Unit, Income Status, and Years of Work Experience. Aligned with the organizational structure of information technology departments, employee human resources titles (Shelly & Rosenblatt, 2011) were chosen for inclusivity. Employing the reliability and validity analyses presented by Taormina and Gao (2013), the researcher categorized the analyses based on the five stages in Maslow's Hierarchy of Needs theory, resulting in the creation of the "5-Stage Needs Satisfaction Scale". Comprising 72 statements, this scale aligns with Maslow's Hierarchy of Needs theory and is divided into five stages: 1. Physiological Needs (Section 2, 15); 2. Safety Needs (Section 3, 15); 3. Love and Belongingness Needs (Section 4, 15); 4. Esteem Needs (Section 5, 15*); 5. Self-Actualization Needs (Section 6, 12). The initial eight expressions of the 15 esteem needs represent the low form, indicating external respect, while the subsequent expressions signify the high form, expressing self-respect. The first four stages, termed Deficiency Needs (D-needs), employ a Likert scale (1. Strongly Disagree; 2. Disagree; 3. Undecided; 4. Agree; 5. Strongly Agree). The last stage, identified as Being Needs (B-needs), also adopts a Likert scale (1. Strongly Disagree; 2. Disagree; 3. Undecided; 4. Agree; 5. Strongly Agree). Permission was received for the research from Atatürk University Social and Human Sciences Ethics Committee (Decision Date: 06.08.2024, Decision Number: E.88656144-000-2400255910).

Prior to initiating the data management and analysis processes, responses gathered through an online survey form (Google Forms) were downloaded in CSV format. No missing data were identified during the filtering process, and the dataset from 401 surveys was seamlessly integrated into the analysis, subsequently transferred to the IBM SPSS Statistics 23. Utilizing the program, we obtained sample mean, standard deviation, F, P, and T values, along with ANOVA results. In instances of significance, Tukey test outputs were also derived. Subsequent to the reliability analysis within the same program, the IBM SPSS AMOS program was employed for "Confirmatory Factor Analysis" (CFA).

Hypotheses of the Research

H1: There is a significant difference between the age variable and motivation.

H2: There is a significant difference between the gender variable and motivation.

H3: There is a significant difference between the marital status variable and motivation.

H4: There is a significant difference between the education level variable and motivation.

H5: There is a significant difference between the department variable and motivation.

H6: There is a significant difference between the job title variable

and motivation.

H7: There is a significant difference between the income level variable and motivation.

H8: There is a significant difference between the years of work experience variable and motivation.

Reliability Analysis & Normality Test

When employing a Likert-type scale, it is crucial to calculate and report the Cronbach's Alpha value for assessing the reliability of the scale or subscale in use. Otherwise, the reliability of the items within the scale or subscale may be deemed low at best. A high Cronbach's Alpha value signifies that the internal consistency of the items in the scale is robust (Gliem & Gliem, 2003). To attain acceptable internal consistency, the first criterion the scale must meet is a value of $\geq .7$ (Nunnally & Bernstein, 1994). The boundaries of the normal distribution are between +1.0 and -1.0 (Hair et al., 2013). As illustrated in Table 2, the 5-Stage Needs Satisfaction Scale exhibits impeccable reliability across all its sub-dimensions in accordance with the fundamental principles of Cronbach's Alpha value (George & Mallery, 2003).

Table 2. Reliability & Normality of the 5-Stage Needs Satisfaction Scale

// Section	// Num. of Items	// Reliability	// Normality (Ske. Kur.)
1	15	.977	-.394 -.182
2	15	.916	-.46 -.579
3	15	.930	-.738 .473
4	15	.942	-.598 .240
5	12	.952	-.387 -.595

Confirmatory Factor Analysis (CFA)

While Creswell (2015, p. 409) characterizes "validity" as the realistic nature of research findings, Silverman (2013, p. 534) interprets it as the minimum level of acceptance for the researcher's insights. Emphasizing the importance of explainability, Goodman (2008) underscores that the researcher's interpretations should be readily understandable. Confirmatory Factor Analysis (CFA) stands out as a widely employed analytical method across different cultures due to its significant convenience in adapting and developing measurement tools that have attained validity. The IBM SPSS AMOS program was employed for Confirmatory Factor Analysis (CFA) to assess the appropriateness of the provided data from the sample and to evaluate the 5-Stage Needs Satisfaction Scale. The Chi-Square value serves as the fundamental metric for testing general suitability. CMIN/DF (χ^2/df) is a technique that reduces the dependence of Chi-Square on sample size and is derived from the degrees of freedom of Chi-Square. A value of 5 or lower is considered adequate for accepting the test (Karagöz, 2019).

Table 3. 5-Stage Satisfaction Scale - First Level Confirmatory Factor Analysis Goodness-of-Fit Coefficients

// Fit Measure	// Acceptable Fit	// Good Fit	// Model
Δ_x^2/sd	$2 \leq x^2/sd \leq 3$	$0 \leq x^2/sd \leq 2$	3.11
GFI	.85-.89	$\geq .90$	.86
CFI	$\geq .95$	$\geq .97$	.72
RMSEA	.06-.08	$\geq .05$	.08

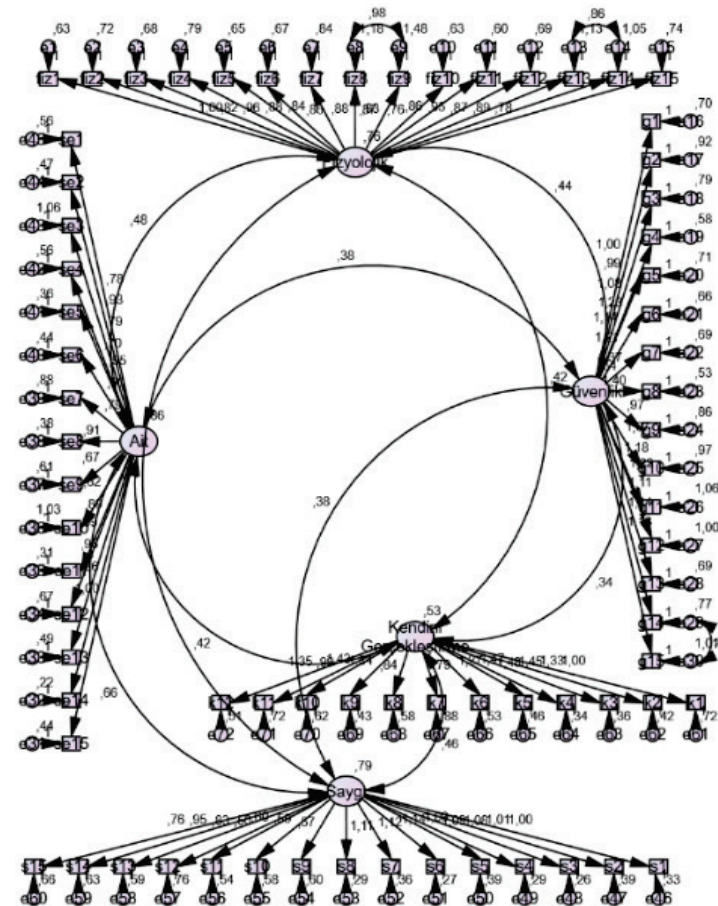


Figure 1. 5-Stage Satisfaction Scale - First Level Confirmatory Factor Analysis

Table 4. Demographic Profile of Participants

// Age	// N (401)	// %
20-30 31-40	157 155	39.15 38.65
41-50 +51	63 26	15.71 6.48
// Gender	// N (401)	// %
Male Woman	292 109	72.81 27.18
// Marital Status	// N (401)	// %
Married Single	216 185	53.86 46.13
// Educational Status	// N (401)	// %
A. D. B's D. M's D. Doctorate	137 205 46 13	34.16 51.12 11.47 3.24
// Department	// N (401)	// %
Application Development	92	22.94
System Support & Security	85	21.19
User Support	86	21.44
Database Management	39	9.72
Network Management	43	10.72
Web Design	56	13.96
// Title	// N (401)	// %
Director	43	10.72
System Support	49	12.21
Network Management	26	6.48
Software	55	13.71
Visual Design	28	6.98
Information Security	18	4.48
Database Specialist	19	4.73
Cloud Comp. & Virtualization	22	5.48
Computer Technician	59	14.71
Help Desk	42	10.47
Other	40	9.97
// Income Status	// N (401)	// %
0-₺5.500 ₺5.501-₺10.000	34 142	8.47 35.41
₺10.001-₺15.000	140	34.91
₺15.001-₺20.000 +₺20.001	53 32	13.21 7.98
// Years of Work Experience	// N (401)	// %
0-5 6-10 11-20 +21	152 131 77 41	37.90 32.66 19.20 10.22

Within the surveyed participants from the Information Technologies department, it was observed that 39.15% fell within the 20-30 age group, 38.65% in the 31-40 age range, 15.71% in the 41-50 category, and 6.48% were 51 years old and above. In terms of gender distribution, 72.81% were male, and 27.18% were woman. Regarding marital status, 53.86% reported being married, while 46.13% were single. Analyzing their educational backgrounds revealed that 34.16% held an associate degree, 51.12% had a bachelor's degree, 11.47% attained a master's degree, and 3.24% obtained a doctorate degree. Examining their work units, the breakdown was as follows: 22.94% in Application Development, 21.19% in System Support and Security, 21.44% in User Support, 9.72% in Database Management, 10.72% in Network Management, and 13.96% in Web Design. Looking at job titles, 10.72% held the position of Director, 12.21% were System Support

Specialists, 6.48% were Network Management Specialists, 13.71% were Software Specialists, 6.98% were Visual Design Specialists, 4.48% were Information Security Specialists, 4.73% were Database Specialists, 5.48% were Cloud Computing and Virtualization Specialists, 14.71% were Computer Technicians, and 10.47% were Help Desk Specialists. The remaining 9.97% who did not fit into the defined titles selected the "Other" option. When categorized by income, 8.47% earned between 0-₺5.500, 35.41% between ₺5.501-₺10.000, 34.91% between ₺10.001-₺15.000, and 13.21% earned between ₺15.001-₺20.000. Additionally, 7.98% reported an income of ₺20.000 and above. Exploring the years of work experience revealed that 37.90% had been working for 0-5 years, 32.66% for 6-10 years, 19.20% for 11-20 years, and 10.22% for 21 years or more.

Table 5. Distribution of Motivation According to Target Variables

// Significant Sections	// H7: Income Status (5/5)		// $\bar{X}$		// F	// Tukey
Physiological Needs	0₺-5.500₺		2.8118		4.741	1-4 2-3 2-4
	5.501₺-10.000₺		2.9423			
	10.001₺-15.000₺		3.2252			
	15.001₺-20.000₺		3.3535			
	+20.001₺		3.1292			
Safety Needs	0₺-5.500₺		2.4020		7.856	1-3 1-4 1-5 2-3 2-4
	5.501₺-10.000₺		2.7887			
	10.001₺-15.000₺		3.0886			
	15.001₺-20.000₺		3.2528			
	+20.001₺		3.1396			
Love & Belonging Needs	0₺-5.500₺		3.2235		3.560	1-4
	5.501₺-10.000₺		3.3887			
	10.001₺-15.000₺		3.5638			
	15.001₺-20.000₺		3.7283			
	+20.001₺		3.7125			
Esteem Needs	0₺-5.500₺		3.1824		5.611	1-3 1-4 1-5 2-4
	5.501₺-10.000₺		3.3920			
	10.001₺-15.000₺		3.6414			
	15.001₺-20.000₺		3.8101			
	+20.001₺		3.7750			
Self-Actualization Needs	0₺-5.500₺		2.5147		9.930	1-3 1-4 1-5 2-3 2-4
	5.501₺-10.000₺		2.9284			
	10.001₺-15.000₺		3.3560			
	15.001₺-20.000₺		3.3664			
	+20.001₺		3.3958			
// Significant Sections	// H8: Years of Work Exp. (4/5)		// $\bar{X}$		// F	// Tukey
Physiological Needs	0-5		2.8987		6.389	1-2 1-4
	6-10		3.2509			
	11-20		3.0944			
	+21		3.3675			
Safety Needs	0-5		2.7303		5.863	1-2 1-3 1-4
	6-10		3.0514			
	11-20		3.0554			
	+21		3.2423			
Esteem Needs	0-5		3.4154		3.793	1-4
	6-10		3.5654			
	11-20		3.5965			
	+21		3.8846			
Self-Actualization Needs	0-5		2.9479		3.972	1-3 1-4
	6-10		3.1997			
	11-20		3.2781			
	+21		3.3801			
// Significant Sections	// H1: Age (3/5)		// $\bar{X}$		// F	// Tukey
Safety Needs	20-30		2.7312		6.253	1-2 1-3 1-4
	31-40		3.0335			
	41-50		3.1651			
	51+		3.2513			
Esteem Needs	20-30		3.4123		4.238	1-4
	31-40		3.5609			
	41-50		3.6794			
	51+		3.9590			
Self-Actualization Needs	20-30		2.8954		6.625	1-2 1-3 1-4
	31-40		3.2473			
	41-50		3.3492			
	51+		3.4359			
H1	.066	.000	.278	.006	.000	X
H2	.629	.467	.181	.051	.868	X
H3	.184	.228	.275	.052	.001	X
H4	.831	.674	.830	.057	.317	X
H5	.230	.919	.923	.742	.885	X
H6	.514	.494	.390	.332	.797	X
H7	.001	.000	.007	.000	.000	✓
H8	.000	.001	.291	.011	.008	X

The study, being the only accepted hypothesis in all sub-dimensions of Abraham Harold Maslow's Hierarchy of Needs theory, highlights the variable of income level. In the Physiological Needs sub-dimension, it was found that the fourth income group (15.001₺-20.000₺) exhibited higher motivation compared to the first income group (0₺-5.500₺), and both the fourth (15.001₺-20.000₺) and third (10.001₺-15.000₺) income groups showed higher motivation than the second income group (5.501₺-10.000₺). In the Safety Needs and Self-Actualization Needs sub-dimensions, the fifth (+20.001₺), fourth (15.001₺-20.000₺), and third (10.001₺-15.000₺) income groups exhibited higher motivation compared to the first income group (0₺-5.500₺), and the fourth (15.001₺-20.000₺) and third (10.001₺-15.000₺) income groups also showed higher motivation than the second income group (5.501₺-10.000₺). In the Belongingness and Love Needs sub-dimension, only the fourth income group (15.001₺-20.000₺) showed higher motivation compared to the first income group (0₺-5.500₺). In the Esteem Needs sub-dimension, the fifth (+20.001₺), fourth (15.001₺-20.000₺), and third (10.001₺-15.000₺) income groups exhibited higher motivation compared to the first income group (0₺-5.500₺), and the fourth income group (15.001₺-20.000₺) showed higher motivation than the second income group (5.501₺-10.000₺).

Upon reviewing the provided values (refer to Table 5), significant distinctions emerge concerning the age variable, particularly in the dimensions of Safety Needs, Esteem Needs, and Self-Actualization Needs. A comparable distinction is evident between the marital status variable and Self-Actualization Needs. The income status variable, due to its comprehensive nature, induces noteworthy differences across all sub-dimensions. Analysis of the years of work experience variable suggests substantial variations in the sub-dimensions of Physiological Needs, Safety Needs, Esteem Needs, and Self-Actualization Needs. In the evaluation of Gender, Educational Status, Unit, and Title variables, it becomes apparent that they do not contribute to a statistically significant difference within the sub-dimensions of Physiological, Safety, Belonging and Love, Esteem, and Self-Actualization Needs.

Discussion, Conclusions & Recommendations

Despite the remarkable scientific advancements in the 21st century, our understanding of human beings—complex entities with intricate psychological, sociological, and biological features—remains incomplete (Mak & Sockel, 2001, p. 266; Barlı & Özen, 2008, p. 440; Lapointe & Perreault, 2013). The thoughts and behaviors that underlie an individual's actions are multi-dimensional and dynamic, shaped by various influencing factors. Therefore, comprehending individuals requires a holistic perspective. The mechanical perspective, rooted in the behaviorist school, isolated human behavior from consciousness, reducing it to a stimulus-response scheme. This approach gave way to humanist psychology in the mid-20th century, led by psychologists like Abraham Harold Maslow, Gordon Allport, Carl Rogers, Rollo May, and Henry Murray, who established the theoretical foundations of a humanistic understanding of psychology focused on the individual (DeCarvalho, 1991).

The concept of time, a subject encompassed by both Physics and Social Sciences with various sub-dimensions, plays a crucial role in individuals' considerations when planning their future. An individual's subjective feelings toward the future significantly influence motivation levels, prompting extensive studies for more than half a century (Gagné & Deci, 2005, p. 331-332; Carstensen, 2006).

In the latter half of the 20th century, prominent psychologists such as Maslow (1954), Vroom (1964), Herzberg (1966), Porter and Lawler (1968), and Alderfer (1972) proposed models based on intrinsic and extrinsic motivation concepts. The theories of Maslow (1954), Herzberg (1966), and Alderfer (1972), differentiating from Vroom (1964) and Porter and Lawler (1968), gained prominence in organizational

behavior. In the hierarchy of needs by Maslow (1954) and Alderfer (1972), physiological and safety needs take precedence in importance and urgency, with higher-level needs such as self-actualization following them (Gagné & Deci, 2005, p. 331-343; Carstensen, 2006).

Income Status has a direct impact on motivation. In the management model he proposed for knowledge workers in his study, Tampoe (1993, p. 51-52) based one of the four basic motivation sources on the income obtained from the wealth created. While Cevher and Aksaraylı (2014) reported in their study that there is a direct connection between the income status of employees and motivation, similarly, Yurduseven and Koç (2017) found in their study that income status is one of the most effective variables on motivation. In a sample of 92 participants, Putri et al. (2019) examined the relationship between the income status variable and the performance of employees, taking into account the concept of motivation. As a result of the study, it was determined that motivation support supports the income status variable in increasing the performance of employees. Arreguin and Macias (2022) found in their study that knowledge workers are more easily motivated to work with a high level of difficulty, and that full-time knowledge workers attach a higher value to financial support such as salary, office and technological equipments. In different studies conducted by Petroni and Colacino (2008), Alien and Katz (1986) and Hesketh, Gardner and Lissner (1992), it was determined that financial issues should be improved in order to get full efficiency from employees.

Years of work experience directly affects four sub-dimensions, excluding family and social dimensions, aligning with traditional motivation theories. Results from Putri et al.'s (2019) study support the positive impact of self-efficacy and competence on employee performance. Olomolaiye and Egbu (2004, p. 137) and Nientied and Toska (2019) affirm that intrinsic motivation positively influences the performance of information technology employees. Findings from Yurduseven and Koç (2017) and Kooij et al. (2011) emphasize the complex nature of age-related differences in work motivation. Kuyubaşı's (2019) results show that motivation levels tend to decrease with age, contrary to the study conducted by Nientied and Toska (2019). Marital status significantly influences only the self-actualization sub-dimension, with findings differing across studies. While Güven and Aslan (2020) suggest higher motivation among married individuals, Kuyubaşı (2019) reports an opposite finding. However, these differences are not statistically significant. Gender, educational status, unit, and title variables do not exhibit significant effects on any dimension of motivation.

To date, motivation and information technologies have been subjects of interdisciplinary studies separately, resulting in substantial literature on each. However, a comprehensive exploration of these two concepts together remains insufficient. Existing literature, supported by studies like Padayachy (2004), Petroni and Colacino (2008), Vanthournout et al. (2014) and Ong et al. (2016), provides valuable insights. Several suggestions can enhance the study's scope and findings:

1. Replicate the study in different countries and cultures since motivation practices vary.
2. Strengthen the study by considering other motivation theorists like Victor Harold Vroom, Frederick Herzberg, Clayton Alderfer, and Douglas McGregor.
3. Conduct future studies with different scales, variables, and sample perspectives, enhancing external validity.
4. Investigate the intricate relationship between income status and motivation, considering the multifaceted perspectives presented in various studies.

Statement of Research and Publication Ethics: This study has been prepared in accordance with the rules of scientific research and publication ethics. Ethics Committee approval of the research was received by the decision of Atatürk University Social and Human Sciences Ethics Committee Presidency dated 06.08.2024 and numbered E.88656144-000-2400255910.

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Genişletilmiş Özet

Amaç: Bu çalışmanın amacı; bilgi teknolojileri departmanı çalışanlarının, Abraham Harold Maslow'un İhtiyaçlar Hiyerarşisi teorisinde belirtilen ihtiyaç aşamalarını ne derece karşılayabildiklerini açıklamaktır.

Yöntem: Veri toplamak için anket yöntemi kullanılmıştır. Kantitatif araştırmalarda sıklıkla tercih edilen anket yöntemi bu çalışmada zaman, bütçe, iş gücü kaynaklarının sınırlılıkları ve katılımcılardan toplanması hedeflenen ifade yanıtlarının sayısı nedeniyle tercih edilmiştir. Örneklem yöntemleri içerisinde ise zaman ve bütçe kısıtlarından dolayı olasılığa dayalı olmayan örneklem yöntemlerinden biri olan kolayda örneklem yöntemi kullanılmıştır. Ankete katılım gönüllülük esasına dayalı olup erişim bağlantısı; elektronik posta ve profesyonel sosyal iş ağlarındaki özel mesaj kanalı vasıtasıyla Türkiye'deki faal bilgi teknolojileri departmanı çalışanlarına iletilmiştir. Kişisel Bilgi Formu içerisindeki demografik ifadeler de dahil olmak üzere bütün ifadelerin yanıtlanması zorunlu kılınmış olup toplam 401 bilgi teknolojileri departmanı çalışanından geri dönüş alınmıştır. Elde edilen veriler, istatistiksel işlemlere tabi tutulmadan önce çözümleme için elverişli hale getirilmiştir.

Bulgular: Gelir Durumu, motivasyon üzerinde doğrudan etkilidir. Sonuçlar; Fizyolojik İhtiyaçlar, Güvenlik İhtiyaçları, Ait Olma ve Sevgi İhtiyaçları, Saygı İhtiyaçları ve Kendini Gerçekleştirme İhtiyaçları alt boyut algılarının yarattığı yoksunluk seviyesinin farklılaştığını ve bu farklılaşmanın, tüm alt boyutlarda istatistiksel olarak anlamlılık oluşturabilecek bir seviyede olduğunu açıklamaktadır.

Kıdem, motivasyon üzerinde ailevi ve sosyal boyut dışında doğrudan etkilidir. Sonuçlar; Fizyolojik İhtiyaçlar, Güvenlik İhtiyaçları, Ait Olma ve Sevgi İhtiyaçları, Saygı İhtiyaçları ve Kendini Gerçekleştirme İhtiyaçları alt boyut algılarının yarattığı yoksunluk seviyesinin farklılaştığını ve bu farklılaşmanın, Ait Olma ve Sevgi İhtiyaçları dışında istatistiksel olarak anlamlılık oluşturabilecek bir seviyede olduğunu açıklamaktadır.

Yaş, motivasyon üzerinde kısmen etkilidir. Sonuçlar; Fizyolojik İhtiyaçlar, Güvenlik İhtiyaçları, Ait Olma ve Sevgi İhtiyaçları, Saygı İhtiyaçları ve Kendini Gerçekleştirme İhtiyaçları alt boyut algılarının yarattığı yoksunluk seviyesinin farklılaştığını ancak bu farklılaşmanın, Güvenlik İhtiyaçları, Saygı İhtiyaçları ve Kendini Gerçekleştirme İhtiyaçları dışında istatistiksel olarak anlamlılık oluşturabilecek bir seviyede olmadığını açıklamaktadır.

Medeni Durum, motivasyonun canlanma ve aydınlanma gibi duyguları harekete geçiren varlık boyutunda etkilidir. Sonuçlar; Fizyolojik İhtiyaçlar, Güvenlik İhtiyaçları, Ait Olma ve Sevgi İhtiyaçları, Saygı İhtiyaçları ve Kendini Gerçekleştirme İhtiyaçları alt boyut algılarının yarattığı yoksunluk seviyesinin farklılaştığını ancak bu farklılaşmanın, Kendini Gerçekleştirme İhtiyaçları dışında istatistiksel olarak anlamlılık oluşturabilecek bir seviyede olmadığını açıklamaktadır.

Cinsiyet, Eğitim Durumu, Birim ve Unvan ise motivasyonun hiçbir boyutunda etkili değildir. Sonuçlar; Fizyolojik İhtiyaçlar, Güvenlik İhtiyaçları, Ait Olma ve Sevgi İhtiyaçları, Saygı İhtiyaçları ve Kendini Gerçekleştirme İhtiyaçları alt boyut algılarının yarattığı yoksunluk seviyesinin farklılaştığını ancak bu farklılaşmanın, istatistiksel olarak anlamlılık oluşturabilecek bir seviyede olmadığını açıklamaktadır.