

The Relationship Between Hopelessness Level and Occupational Competence and Value and Time Management in University Students- A Cross-Sectional Study

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ABSTRACT

Purpose: The aim of the study is to determine the level of hopelessness of university students and to investigate the relationship between this level of hopelessness and students' occupational competence and value and time management levels.

Methods: The study was conducted with university students aged 18-25 years. After obtaining demographic information, hopelessness was assessed using the Beck Hopelessness Scale (BHS), occupation status using the Occupational Self Assessment (OSA), and time management using the Time Management Inventory (TMI).

Results: A total of 366 healthy university students participated in the study. The mean score on the BHS was 5.37 ± 4.57 (mild level). According to BHS, it was found that there was a statistically significant difference between severe hopelessness and minimal and mild hopelessness, and also between moderate hopelessness and mild and minimal hopelessness in the occupational competence sub-item of the OSA ($X^2=39.186$, $p=0.001$). In addition, according to the TMI, there was a statistically significant difference between those with severe hopelessness and those with minimal and mild hopelessness in the time planning sub-heading ($X^2=22.542$, $p=0.001$). In the time attitudes sub-heading, it was determined that the difference stemmed from those with severe hopelessness and those with minimal hopelessness ($X^2=38.960$, $p=0.001$). The results of the multiple linear regression analysis indicated that hopelessness level, time planning and time management total score variables were statistically significant predictors of students' occupational competence levels.

Conclusion: The level of hopelessness and time management in university students clearly affects their occupational performance and time management.

Keywords: Students, occupational status, time management

ÖZET

Amaç: Çalışmanın amacı üniversite öğrencilerin umutsuzluk düzeylerini belirlemek ve bu umutsuzluk düzeyinin öğrencilerin okupasyonel yeterlilik ve önem ile zaman yönetimi düzeyleriyle ilişkisini araştırmaktır.

Yöntemler: Çalışma 18-25 yaş arası üniversite öğrencisi ile gerçekleştirildi. Bireylerin demografik bilgileri sorgulandıktan sonra umutsuzluk düzeyleri Beck Umutsuzluk Ölçeği (BUÖ) ile, okupasyonel düzeyleri Aktivite Öz Değerlendirme Ölçeği (AÖDÖ) ile ve zaman yönetimleri Zaman Yönetimi Envanteri (ZYE) ile değerlendirildi.

Bulgular: Çalışmaya toplam 366 sağlıklı üniversite öğrencisi katıldı. BUÖ değerlendirmesinde ortalama puanları $5,37 \pm 4,57$ (hafif düzey) olarak belirlendi. BUÖ'ne göre AÖDÖ'nin okupasyonel yeterlilik alt başlığında şiddetli umutsuzluk ile minimal ve hafif umutsuzluk arasında ve ayrıca orta düzeyde umutsuzluk ile hafif ve minimal umutsuzluk arasında istatistiksel olarak anlamlı fark olduğu bulundu ($X^2=39.186$, $p=0.001$). Ayrıca ZYE'ne göre ise zaman planlaması alt başlığında şiddetli umutsuzluk yaşayanlar ile minimal ve hafif umutsuzluk yaşayanlar arasında istatistiksel olarak anlamlı fark olduğu görüldü ($X^2=22.542$, $p=0.001$). Zaman tutumları alt başlığında ise farkın umutsuzluk düzeyi şiddetli olanlar ile minimal düzeyde olanlardan kaynaklandığı belirlendi ($X^2=38.960$, $p=0.001$). Yapılan çoklu doğrusal regresyon analizine göre de umutsuzluk düzeyi, zaman planlaması ve zaman yönetimi toplam puanı değişkenlerinin öğrencilerin okupasyonel yeterlilik düzeyleri için istatistiksel olarak anlamlı yordayıcıları olduğu saptandı.

Sonuç: Üniversite öğrencilerindeki umutsuz düzeyinin ve zaman yönetiminin öğrencilerin okupasyonel performanslarını ve zaman yönetimlerini etkilediği açıkça görülmektedir.

Anahtar Kelimeler: Öğrenciler, okupasyonel durum, zaman yönetimi.

The undergraduate education period represents a sensitive and pivotal stage in an individual's life (1). The acquisition of a university education represents a significant opportunity for individuals to enhance their qualifications and become more qualified members of society (2,3). Nevertheless, as is the case with all young adults, university students must adapt to psychological and psychosocial changes and overcome societal and academic expectations in order to prepare for their professional careers (4). Furthermore, during this period, students may experience a range of anxiety-inducing factors, including concerns about their future roles in life beyond the completion of their university education, the management of various responsibilities, and difficulties in securing employment (1,5). Studies in the literature show that mental health problems such as depression and anxiety are increasing among university students for a variety of reasons (2,5,6).

Mental disorders such as hopelessness and depression are positively associated with loneliness, isolation and lack of social support as well as decreased self-confidence and self-esteem. All these symptoms negatively affect the occupational performance of individuals (7,8). In other words, personal and environmental factors, including the individual's motivation, roles, habits, health status, performance capacity and limitations, affect the individual's occupational participation. Difficulties or problems encountered by the individual during occupational participation are called occupational participation limitations (9). According to the Model of Human Occupation (MOHO), which is one of the occupational therapy models, occupational competence is defined as the degree to which a person can maintain his/her occupational performance. The concept of occupational value is expressed as the individual's perception of which of the occupational performances is important for him/her (10). Occupational self-efficacy, on the other hand, includes the individual's sense of personal competence and satisfaction with the occupation (11).

Also, university students need to create a balance between their daily occupational performance and academic success (12). The key factor for leading a successful life is effective time management in which it is very important to plan the time that everyone has equally. Time management is defined as the organization of one's

time to achieve effective work (13). Time management is important for academic success and it is desirable that every student has the ability to manage their time, which includes prioritizing occupational performance in line with their goals (12). However, lack of time can be challenging and overwhelming. The lack of effective time management, organization and study skills can lead to a sense of distress and dissatisfaction amongst students (14).

A review of the literature shows that there are many studies on levels of hopelessness among university students (2-6). In these studies, it can be seen that the hopelessness of the university students about the future and the effects of this hopelessness in different areas are also being studied. This study differs from similar studies in that it investigated the relationship between university students' hopelessness level and occupational performance and time management. The aim of this study was to determine the level of hopelessness in university students aged 18-25 years and to investigate the relationship between this level of hopelessness and students' time management, occupational competence and value.

Material and Methods

Subjects

The research is cross-sectional. The study was conducted with university students aged between 18 and 25 years. Participants were selected by simple random sampling method. All students who did not have communication problems and who volunteered to participate in the study were included in the study. The exclusion criteria were those with communication problems and those who did not volunteer to participate in the study. Students were asked to sign the consent forms before the application of the questionnaires in the study. Data were collected online using Google Forms. Post hoc power analysis was performed for the sample size of the study.

This study was approved by the decision of Çankırı Karatekin Scientific Research and Publication Ethics Committee dated 29.03.2023, meeting number 06 and verification code f9dc856abf044ba4. The study was conducted based on the Declaration of Helsinki.

Assessment Tools

Firstly, the participants were asked to provide information regarding their age, height, weight, smoking habits and alcohol consumption.

Subsequently, the level of hopelessness was evaluated using the **Beck Hopelessness Scale (BHS)**. The Beck Hopelessness Scale is a psychometric instrument designed to assess an individual's sense of hopelessness. It is intended to measure feelings such as despair, unhappiness and pessimism that are commonly experienced by people. The scale comprises 20 items. In scoring, for questions 1,3,5,6,8,10,13,15,19; yes=0, no=1 and for questions 2,4,7,9,11,12,14,16,17,18,20; yes=1, no=0. Consequently, the following levels of hopelessness were identified: 0-3 indicates minimal, 4-8 indicates mild, 9-14 indicates moderate, and 15 and above indicates severe. The Turkish validity and reliability study of the scale was conducted by Durak et al (15).

In the study, the occupation levels of the individuals were evaluated using the **Occupational Self Assessment (OSA)**. OSA is a scale comprising 21 questions and three sections. Each section is divided into two subsections. In the scale, firstly, the degree of difficulty of the person while performing the occupation is assessed, and in the second section, the value of this occupation for the person is questioned. Each section is scored separately on a 4-point Likert scale. The initial 11 questions of the test pertain to skills, the subsequent 10 questions relate to habits, and the concluding 10 questions concern the individual's desires. A high score on the scale indicates increased occupational competence and value. The scale was developed by Baron et al. and Turkish validity and reliability study was conducted by Pekçetin et al (16).

Finally, the **Time Management Inventory (TMI)** was employed to assess the time management abilities of university students. The time planning questionnaire is an inventory that evaluates how individuals utilise and manage their time. It assesses how they think and live, rather than how they aspire to be. The Time Management Inventory is not a test; the responses are not categorised as 'true' or 'false'. The questions are designed to define the individual in question. The inventory comprises three categories and 27 questions. The first category,

Time Planning, encompasses short- and long-term planning, with 16 questions. The second category, Time Attitudes, comprises seven questions. The third category, Time Wasters, comprises four questions. Responses are provided on a five-point Likert scale, with options including "always," "often," "sometimes," "rarely," and "never." The internal consistency reliability coefficient of the questionnaire was found to be .87. A Turkish validity and reliability study was conducted by Alay et al (17).

Statistical Analysis

A post hoc power analysis was conducted using G*Power version 3.1.9.2 (Heinrich-Heine-Universität Düsseldorf) to determine the required sample size. The minimum sample size was calculated to be 314 participants (effect size: 0.152; probability alpha error: 0.05; power: 0.80; and number of predictors: 5).

The study data were analysed using IBM Statistics SPSS v26.0 (SPSS Inc., Armonk, NY, USA). The Kolmogorov-Smirnov test was employed to ascertain whether the data were normally distributed. Mean, standard deviation, number and percentage values were provided as supplementary statistics. The Kruskal-Wallis test was employed to evaluate the difference between the groups, while the Spearman correlation test was employed for correlation analysis. The correlation analysis results were evaluated according to the absolute value of the correlation coefficient (r). The correlation coefficient was evaluated as exhibiting a very weak relationship ($0.00 \leq r \leq 0.25$), a weak relationship ($0.26 \leq r \leq 0.49$), a moderate relationship ($0.50 \leq r \leq 0.69$), a high relationship ($0.70 \leq r \leq 0.89$) and a very high relationship ($0.90 \leq r \leq 1.00$) (18). The lowest significance levels were set at 0.05 and 0.001.

Results

A total of 366 healthy university students aged between 18 and 25 years, the majority of whom were female (76%), participated in the study. The mean age of the participants was 21.46 ± 2.93 years, and the mean body mass index was 22.74 ± 4.49 . It was determined that very few of the students smoked cigarettes (%24) and used alcohol (%17). Table 1 presents the demographic characteristics of the participants.

Table 1: Sociodemographic characteristics of the individuals

N=366		n (%)	x±SD
Age (year)			21.46±2.93
Height (m)			1.66±0.09
Weight (kg)			63.54±14.36
Body Mass Index (BMI) (kg/m ²)			22.74±4.49
Gender	Female	277(76)	
	Male	89 (24)	
Smoking Status	Smokers	89 (24)	
	Not Smokers	277(76)	
Alcohol	Using	62 (17)	
	Not Use	304 (83)	

The mean score of the participants in the BHS evaluation was 5.37 ± 4.57 . In addition, according to the BHS, it was found that the majority of the participants had minimal hopelessness (40.98%) and mild hopelessness (36.33%).

The results of the participants' OSA indicated that the mean score for the occupational competence sub-parameter was 57.51 ± 15.19 , while the mean score

for the occupational value sub-parameter was 56.33 ± 16.89 .

The mean scores of the participants were found to be 50.57 ± 14.49 in the time planning sub-heading, 22.46 ± 5.03 in the time attitudes sub-heading, 12.09 ± 3.78 in the time wasters sub-heading and 80.2 ± 26.32 in the total score, as indicated in Table 2.

Table 2: Individuals' Hopelessness, Occupational Competence and Value and Time Management Levels

		n (%)	x±SD
Beck Hopelessness Scale	Minimal	150 (40.98)	5.73±4.57
	Mild	133 (36.33)	
	Moderate	58 (15.84)	
	Severe	25 (6.83)	
Occupational Self Assessment	Occupational Competence		57.51±15.19
	Occupational Value		56.33±16.89
Time Management Inventory	Time Planning		50.57±14.49
	Time Attitudes		22.46±5.03
	Time Wasters		12.09±3.78
	Total Score		80.20±26.32

According to the hopelessness levels of the students in the BHS, the differences according to the OSA were examined. As the hopelessness levels of the students increased, it was seen that there was a decrease in both sub-headings of the OSA scores. The difference of this decrease according to the level of hopelessness was found to be statistically significant in the occupational competence sub-heading ($X^2=39,186$, $p=0,001$), but not statistically significant in the occupational value sub-parameter of the OSA ($X^2=6,556$, $p=0,087$).

In the study in which time management was divided into time planning, time attitudes and time wasters and total score, when we compared the individuals according

to their levels of hopelessness, it was seen that time management decreased as the hopelessness levels of the individuals increased in the sub-headings of time planning ($X^2=22.542$, $p=0.001$), time attitudes ($X^2=38.960$, $p=0.001$) and especially in the total score of time management ($X^2=38.273$, $p=0.001$). In the sub-heading of time wasters, which represents a negative expression in terms of meaning, there was no difference according to the hopelessness levels of the individuals, but it was observed that the level of hopelessness was lower in individuals with severe hopelessness compared to other levels of hopelessness ($X^2=3.713$, $p=0.294$). All data are shown in Table 3.

Table 3: Differences in Occupational Competence, Value and Time Management According to Hopelessness Levels

		Beck Hopelessness Scale				Kruskall Wallis Test		
		Minimal (1)	Mild (2)	Moderate (3)	Severe (4)	X ²	p	Post Hoc
Occupational Self Assessment	Occupational Competence	61.12±15.92	57.72±13.02	51.64±16.23	45.63±12.49	39.186	0.001	4<1 4<2 3<1 3<2
	Occupational Value	58.80±16.84	55.50±17.04	54.16±15.48	49.77±21.42	6.556	0.087	
Time Management Inventory	Time Planning	53.40±13.80	49.86±14.45	48.26±15.56	39.63±13.74	22.542	0.001	4<1 4<2
	Time Attitudes	23.85±5.04	21.93±4.80	21.02±5.46	18.90±4.30	38.960	0.001	4<1 4<2 3<1 2<1
	Time Wasters	12.35±4.14	11.74±3.84	12.32±3.33	11.13±2.74	3.713	0.294	
	Total Score	89.64±17.84	78.52±25.56	77.27±26.76	63.68±24.14	38.273	0.001	2<1 3<1 4<1 4<2 4<3

Kruskall Wallis Test, $p<0.05$; $p<0.001$

In the correlation analysis results of the study, it was concluded that the BHS was negatively and weakly correlated with the occupational competence part of the OSA, the time wasters, time attitudes and total score time management ($r = -0.278-0.368$; $p<0.001$) negatively and very weakly correlated with the second part of the OSA, namely the occupational value part ($r = -0.155$; $p<0.001$). There was a positive and weak statistically significant

relationship between the occupational competence part of the OSA and time planning, time attitudes and total score time management ($r = 0.210-0.394$; $p<0.001$). Again, there was a very weak and positive correlation between the occupational value sub-parameter of OSA and time planning, time attitudes and time management total score ($r = 0.149$; $p<0.001$). All data are summarized in Table 4.

Table 4: The Relationship Between Age, Hopelessness Level, Occupational Competence, Value and Time Management

N=366	Beck Hopelessness Scale r (p)	Occupational Competence r (p)	Occupational Value r (p)	Time Planning r (p)	Time Attitudes r (p)	Time Wasters r (p)	Time Management Inventory r (p)
Age	-.030 (.580)	.029 (.598)	.010 (.857)	.060 (.240)	.083 (.126)	-.065 (.236)	0.602 (.245)
Beck Hopelessness Scale		-.368 (.000)**	-.155 (.005)**	-.278 (.000)**	-.348 (.000)**	-.100 (.064)	-.333 (.001)**
Occupational Competence			.394 (.000)**	.255 (.000)**	.210 (.000)**	.018 (.739)	.255 (.001)**
Occupational Value				.149 (.007)**	.149 (.007)**	.099 (.073)	.164 (.003)**
Time Planning					.430 (.000)**	.060 (.269)	.931 (.001)**
Time Attitudes						.218 (.000)**	.614 (.001)**
Time Wasters							.281 (.001)**

Spearman Korelasyon Testi, * $p<0.05$; ** $p<0.001$

In the study, a multiple linear regression analysis was conducted to predict occupational competence levels based on variables including hopelessness level, time planning, time attitudes, time wasters and time management total score. The results of the analysis indicated that the model was statistically significant

($F(4,319) = 12.125, p < 0.001$). The model identified three variables, namely hopelessness level, time planning and time management total score, as statistically significant predictors of students' occupational competences ($p < 0.05$). The results are shown in Table 5.

Table 5: Predictors of Occupational Competence

Occupational Competence	B	%95 CI for B		SE B	β	R2	$\Delta R1$	t	p
		Lower Bound	Upper Bound						
Model						.13	.12		
Constant	50.063	41.066	59.060	4.573					
Beck Hopelessness Scale	-.868	-1.238	-.498	.188	-.255			-4.613	.001*
Time Planning	.175	.046	.303	.065	.166			2.674	.008*
Time Attitudes	.113	-.291	.517	.205	.037			0.548	.584
Time Wasters	.089	-.367	.544	.232	.022			1.383	.702
Time Management Inventory	.175	.046	.303	.065	.218			2.674	.008*
Durbin-Watson = 2.191 $F = 12.125, p < 0.001 R = 0.363, R^2 = 0.132, Adjusted R^2 = 0.121^* = p < 0.05$									

Discussion

The study examined the relationship between the level of hopelessness, occupational competence and value and time management in university students. It was found that the level of hopelessness in university students was at a mild level and was related to students' occupational competences, time planning and time attitudes. The most striking result of the study is that hopelessness level, time planning and time management total score variables are statistically significant predictors of occupational competence level.

Hopelessness can be defined as an individual's expectations of negative events and outcomes for themselves and for the future (19). This state of despondency may result in the individual being unable to fulfil the expectations placed upon them by themselves and society (19). It is possible that university students may have to cope with a number of challenging situations, including academic tasks, assessments, social life, university life and adaptation to the environment (20). Such circumstances have a detrimental impact on the mental health of the affected individuals, leading to feelings of hopelessness (19). In the studies conducted with university students in the literature, it was found that students had mild to moderate levels of hopelessness (4,5,19). The results of the present study indicate that

the majority of students exhibit minimal or mild levels of hopelessness. In comparison to previous literature, the current findings suggest that students' self-perceptions and future outlooks are generally positive, with minimal indications of hopelessness.

The term 'occupational performance' is defined as comprising all occupations that individuals aspire to undertake, are obliged to perform and are expected to complete. This encompasses not only work but also self-care, productivity and leisure time (21). In their study examining the relationship between occupation, health and well-being, Law et al. concluded that occupational performance significantly affects human health and well-being (22). Similarly, Kielhofner emphasised the importance of occupational performance and its impact on health, suggesting that participation in meaningful activities can lead to well-being (23,24).

In contrast, a state of hopelessness has a detrimental impact on an individual's occupational performance. This is because hopelessness prevents the individual from reaching their goal. It can also lead to feelings of unhappiness, pessimism, malaise, ineffective stress management, burnout and depression (4). The results of the present study indicate that there are differences in occupational competence between individuals with high levels of hopelessness and individuals with lower levels of

hopelessness. This result is consistent with the literature, which states that hopelessness affects individuals in this manner (4,22-24). However, the study found no difference between the students participating in the study in the occupational value parameter according to the level of hopelessness. This result is thought to be due to the fact that the concept of occupational value is a complex and subjective concept (25). However, an analysis of the correlation table reveals a correlation between both the occupational competence and occupational value sub-parameters and the level of hopelessness. Furthermore, the finding that the level of hopelessness was identified as a predictor of occupational competence in the study indicates that the results of the study are consistent with those reported in the literature (4,22-24).

Time management can be defined as a form of self-management and control of events, offering individuals the opportunity to structure and control activities (26). Effective time management is associated with enhanced performance in occupations (27). In their study, Alay et al. demonstrated that individuals who employed time management strategies experienced a reduction in stress levels, an increase in productivity, and a greater likelihood of achieving their goals (17). Similarly, a lack of effective time management can result in suboptimal academic performance and psychological distress, particularly among university students (28). In another study, Uysal et al. examined the relationship between life satisfaction and time management in nursing students. As a result of the study, they concluded that there was a significant relationship between the time wasters, time management total score and life satisfaction (29).

The results of the study are consistent with those of previous time management evaluations in the literature. Another evaluation in the study revealed that time planning, time attitudes and time management total score were related to the competence and value of occupational performance, with the exception of the sub-heading of time wasters (19,27). Furthermore, the results of the multiple linear regression analysis indicated that the time planning section and time management total score were a significant predictor of the occupational competence level. These findings are an expected result according to time management studies in the literature (19,27-29).

The limitations of the study include the fact that the number of university students targeted in the study could

not be reached, and that the number of female and male students was not equal in the students reached.

Conclusion

The results of the study indicate that although the levels of hopelessness among university students were relatively mild, there is a clear association between levels of hopelessness and time and occupational management. Consequently, it is proposed that in order to reduce the levels of hopelessness among university students, the factors that contribute to these levels should be investigated and students should be supported in the teaching and implementation of strategies to cope with these factors.

Declarations

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Conflicts of interest/Competing interests

The Authors declare that there is no conflict of interest.

Ethics approval

This study was approved by the decision of Çankırı Karatekin University Scientific Research and Publication Ethics Committee dated 29.03.2023, meeting number 06 and verification code f9dc856abf044ba4. The study was conducted based on the Declaration of Helsinki.

Availability of data and material

Data can be shared if requested.

Author Contributions (Roles)

Conceived and designed the experiments: NŞ, TBF, RB, BS, FNG, AA, HA, MÇ, MBA; **Performed the experiments:** NŞ, TBF, RB, BS, FNG, AA, HA, MÇ, MBA; **Analyzed the data:** NŞ; **Contributed reagents/ materials/ analysis tools:** NŞ, TBF, RB, BS, FNG, AA, HA, MÇ, MBA; **Wrote the manuscript:** NŞ, TBF, RB, BS, FNG, AA, HA, MÇ, MBA, MD; **Final edit of paper:** NŞ.

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