The Mediating Role of Life Satisfaction in the Relationship between Time Management and Communication Skills

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Abstract

This study was conducted as a descriptive correlational research with the purpose of examining the mediator role of life satisfaction in the relationship between time management and communication skills of graduate students attending to master's and PhD programs in higher education. The study sample included 591 students (348 males and 243 females; and age range = 22 to 56). The data were collected using data collection instruments such as The Free Time Management Scale (FTMS), Communication Skills Scale (CSS), and Higher Education Life Satisfaction Scale (HELSS). SPSS and AMOS programs were used for data analysis. The data were analyzed using Pearson' correlation, confirmatory factor analysis (CFA), mediation analysis. The findings of the study showed that life satisfaction was a partial mediator in the relationship between time management and communication skills of master's and PhD students. As the numbers of studies examining the relationship among graduate students' time management, communication skills and life satisfaction in master's and PhD programs are quite rare, this research is aimed to make contributions to literature for such matter.

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Introduction

Managing time effectively and efficiently is one of the factors that positively affect people's life. Individuals, who are good at what they do are those with substantial planning and time management skills. It is an important fact to consider that the importance of time is undeniable for many people. Especially for persons in educational institutions where change and development are continuing, this importance is much greater (Gürkan, Oktay & Unutkan, 2005). Considering that education is a process and the most critical element in this process is the "human" element, it is an important consideration to use time effectively and efficiently in educational institutions (Sarpkaya, 2010). In that sense, students and teachers in educational settings need to know how to use their time efficiently during the process of teaching and learning as such processes might turn into positive and meaningful outcomes for all.

Although many researchers have studied the concept of time, they differently define it. Bayramlı (2017) explained that time is not perceived by people as it has dimensions in philosophy, sociology, and psychology. Smith (2000) said that time is an uninterrupted process coming from past and moving to the future. Aydın and Gürbüz (2012) stressed that time includes human perceptions, which are based on the occasions that consecutively occur. Time is abstract (Kıngır, 2007) and its management includes a sincere and goal-oriented planning for desired educational outcomes (Üstün, Kalkavan & Demirel, 2016). Time management involves controlling and planning activities in order to reach personal goals (Wilkinson & Hansen, 2006). Managing time requires skills such as recognizing priorities, being effective in planning, and being able to shorten the duration of workload (Uluşahin, 1999). Because people wisely using their time are the ones, who know how to plan, act, and be productive in their daily tasks. Ağduman (2014) claimed that knowing the real value of time is the key to have a balance in life with satisfaction, work, produce, create opportunities for socialization, and thus improve personal relations due to constant currents of effective communication among peers.

It is considered to be a crucial skill to be able to use time effectively during learning, teaching, or engaging with friends (Kelly, 2002). In many aspects of life, individuals are given a certain period of time to comply with deadlines. In schools, students are provided with a specific amount of time to complete their work. In this study, in terms of time management, Harnessing the River of Time Theory was employed. This framework considers time as a river that has no banks. However, based on this theory, there are people, who can harness the river of time and use it wisely to reach their goals (Kelly, 2002). In academic environments, students are given a time limit to learn, engage, and complete

assignments. So, students are required to plan ahead in order to meet deadlines and obtain favourable outcomes. For that matter, they would need to have effective communication skills to ask the right questions to their teachers for learning and collaborate with friends as a team player. However, inefficient use of time might result in adverse outcomes such as having low grades and psychological stress, which will diminish the level of life satisfaction of the students (Macan, Shahani, Dipboye & Phillips, 1990). So, a person who is really successful in time management knows how to control stress and pressure while working on specific tasks (Çardak, 2002; İşcan, 2008) and this situation would end up with an increased level of engagement with friends (Avcı, 2017) and enjoyment in life (Aydın & Gürbüz, 2012; Kocabaş & Erdem, 2003). As a result, this theory creates a fundamental basis for the association between time management, communication skills, and life satisfaction of the students.

According to Zelinski (2004), individuals with effective time management skills would be able to create environments to achieve the necessary things in life. Such environments may include but are not limited to social settings that are consisted of students and teachers within the schools. In that sense, meaningful teaching and learning must be one of the most important obligations of educators. One of the aspects that affect the active learning and teaching is the level of communication between students and teachers. Dökmen (1994) defined communication as a process in which the participants convey information and symbols produced to each other and make understanding and interpretation about what is conveyed. According to Karakuş (2010), communication is the form of a system of relations where there is an exchange of information between individuals. People with effective communication skills may easily interact with and have their behaviors well received by others (Erözkan, 2007). Individuals may have higher levels of communication skills when they are satisfied with the circumstances they are in for the moment (Cüceloğlu, 1997; Schimmack, Diener & Oishi, 2002). In addition to this, communication skills can be positively affected when individuals have substantial skills in time management (Godbey, 1999). Researchers have reported that there was a relationship between time management and communication skills (Akgül & Karaküçük, 2015; Jones, 2000). Nevertheless, there might be indirect effects on the relationship between time management and communication skills (Tezcan, 1994). Life satisfaction which includes affirmative domains such as good moods and emotions (Pavot & Diener, 2008) might have a mediating role in this relationship. Moreover, it is positively correlated with time management (Demir & Demir, 2006) and communication skills (Bayhan & Işıtan, 2010).

Life satisfaction of the students may be considered as an important indicator showing the fulfillment of their needs in terms of interacting and communicating with their friends or teachers (Reeve & Lee, 2018). Researchers have different opinions on the definition of life satisfaction. Dilmaç and Halil (2008) claimed that life satisfaction is associated with the ability of people in realizing their dre-

ams and accomplishments. It has relations with positive moods and feelings of people (Pavot & Diener, 2008). Yılmaz and Altınok (2009) stressed that life satisfaction has strong ties with the expectations of individuals about life and their level of fulfillment. Basically, life satisfaction includes expectations that would eventually have personal goals get accomplished based on intentionally planned tasks. With this approach, one may claim that there is a relationship between life satisfaction and time management (Wang, 2019), which involves planning and organizing time, and prioritizing tasks in order to efficiently move towards our goals and honor the success obtained afterwards (Demir & Demir, 2006; Hickerson & Beggs, 2007). As the other indication of the relationship between time management and life satisfaction, in their study, Shaikh and Deschamps (2006) found that individuals, who know how to manage their time wisely would not be easily bored and feel satisfied with their life. Besides, researchers found that being effective in time management requires positive moods, attitudes, and strategies to tackle factors that prevent us from achieving our goals (Goll, Charlesworth, Scior & Stott, 2015; Mannell & Kleiber, 1997).

This research includes a unique value based on its originality. It should be taken into account that the numbers of studies examining the relationship among graduate students' time management, communication skills and life satisfaction in master's and PhD programs are quite rare. It is important to indicate that time management, communication skills and life satisfaction of graduate students may have an immense impact on students' well-being, interaction, and schools' climate (Eryilmaz, 2010; Özer, 2009). An imbalance among these factors may deteriorate students' social engagement, academic success, and time management (Eryılmaz & Ercan, 2011). Therefore, the outcomes of this study may be used by the stakeholders in education to seriously comply with their responsibilities and address students' educational needs for the sake of a quality education (Caplan, 2005; Gülnar & Balcı, 2011). The findings from this research may also help educators to detect unwanted situations that would create interruption for students' learning in the classroom (Biolcati, Mancini & Trombini, 2018; Caldwell, Baldwin, Walls & Smith, 2004; Hickerson & Beggs, 2007; Weybright, Caldwell, Ram, Smith & Wegner, 2015). That way, such educators would seek for a remedy to enhance students' learning in such meaningful contexts (Gül, 2017; Karabulut, 2014; Kurt, 2014; Sü Eröz, 2011). As mentioned previously, the current literature shows some indications of the mediating effects of life satisfaction in the relationship between time management and communication skills of the students. So, this study is aimed to find out the mediating role of life satisfaction of graduate students as it has not been tested yet. In line with this, this research was conducted to examine the mediating role of life satisfaction in the relationship time management and communication skills. By such approach, it would be possible to reveal new information about generalizability of a new model and make contributions to the current literature.

Method

Research Design

This study was designed as a descriptive correlational research. It aimed to examine the mediator role of life satisfaction in the relationship between time management and communication skills of graduate students attending to master's and PhD (Doctor of Philosophy) programs in higher education.
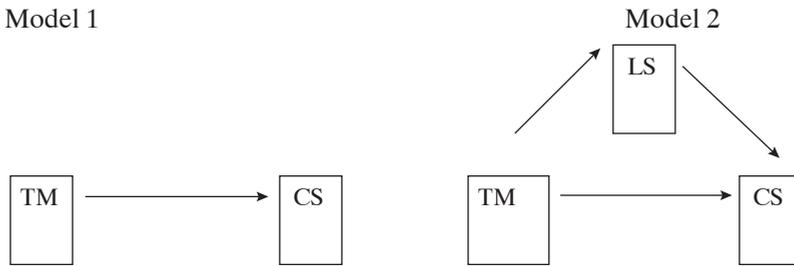
Figure 1 represents the models in the study.

Figure 1. *Research Models*

Note. TM: Time Management; CS: Communication Skills; LS: Life Satisfaction.

Research Sample

The study data were collected from a total of 591 graduate students in master's and PhD programs in three universities located in the western part of Turkey. The participants included 348 males (%58.8) and 243 females (%41.2). There were 546 (%92.3) graduate students in master's programs and 45 (%7.7) graduate students in PhD programs. The age range of the participants was from 22 to 56.

Data Collection Tools

The Free Time Management Scale (FTMS)

The original instrument was first developed by Wei-Ching Wang, Chin-Hsung Kao, Tzung-Cheng Huan, Chung-Chi Wu (2011). Akgül and Karaküçük (2015) then adapted FTMS to Turkish language. This construct includes 15 items with four subscales; free time attitude (six items), scheduling (six items), goal setting and technique (six items), and evaluating (three items). This 5-point Likert scale (from 1 = absolutely disagree to 5 = absolutely agree) was measured for its reliability coefficients. The reliability coefficients for the overall instrument was as .83. They also found the internal consistency coefficients as $\alpha=81$, $\alpha=.79$,

$\alpha=.73$, and $\alpha=.71$ for goal setting and technique, free time attitude, scheduling, and evaluating respectively. For the current research, alpha internal consistency reliability coefficients were found to be .79 for the total scale and .77 for goal setting and technique, .78 for free time attitude, .80 for scheduling, and .80 for evaluating subscales. For this study, Confirmatory Factor Analysis (CFA) was carried out as well to confirm the structure of FTMS. CFA results confirmed structure of the scale ($x^2= 194.139$, sd= 82, x^2/sd= 2.367, GFI= .92, AGFI= .90, RMSEA= .079, CFI=.91, SRMR= .03, TLI= .92).

Communication Skills Scale (CSS)

This scale was developed by Karagöz and Kösterelioğlu (2008) to measure the communication skills of the students in graduate programs. CSS was a 5-point Likert (from 1 = absolutely disagree to 5 = absolutely agree) construct. It had 25 items along with six subscales. The subscales of CSS were respect (five items), ability of expression (five items), desire (four items), democratic attitude (three items), value (four items), and obstacles (four items). In their study, Karagöz and Kösterelioğlu (2008) found the internal consistency coefficient for the overall scale as .88. As for the current study, the internal consistency coefficients were $\alpha=.92$ for overall CSS. As for its subscales, the internal consistency coefficients respectively were $\alpha=88$, $\alpha=.93$, $\alpha=86$, $\alpha=.90$, $\alpha=.89$, and $\alpha=.88$ for respect, ability of expression, desire, democratic attitude, value, and obstacles. Also, CFA was carried out for this research group as well and it was seen that structure of the scale was confirmed for this research ($x^2= 639.538$, sd= 214, x^2/sd= 2.988, GFI= .91, AGFI= .90, RMSEA= .065, CFI=.90, SRMR= .042, TLI= .92).

Higher Education Life Satisfaction Scale (HELSS)

The original construct was first developed by Diener, Emmons, Larsen and Griffin (1985). The adaptation of HELSS to Turkish language was done by Erol and Yıldırım (2016). This 5-point Likert scale (from 1 = absolutely disagree to 5 = absolutely agree) includes 29 items and five subscales: General University Satisfaction (GUS, 13 items), Satisfaction from Instructors (GI, five items), Satisfaction from University Social Services (SUSS, four items), Satisfaction from University Facilities (SUF, four items), and Satisfaction from University Administration (SUA, three items). The researchers found the reliability coefficients of the overall instrument as .93. Alpha internal consistency reliability coefficients were also found to be .92 for GUS, .81 for GI, .73 for SUSS, .69 for SUF, and .81 for SUA. In the present study, the reliability coefficient of overall HELSS was .81. Alpha internal consistency reliability coefficients were found to be .82 for GUS, .80 for GI, .77 for SUSS, .76 for SUF, and .80 for SUA. In addition, CFA was carried out and it was seen that the structure of the scale was confirmed for this study ($x^2= 354.827$, sd= 115, x^2/sd= 3.085, GFI= .90, AGFI= .90, RMSEA= .071, CFI=.91, SRMR= .039, TLI= .90).

Procedure

Before collecting any data, necessary information was provided for the participants to obtain their permission for this study. Then appointments were made with the institutions in order to gather data from the graduate students. Prestudy folders were formed to collect information about the participants' identification numbers, ages, and their programs of study. The participants were told about the main goal of this study. They were explained about the voluntary basis of research and also ensured about the confidentiality of the study. The research was conducted in a paper-and-pencil format and took about 37 minutes to obtain data from the participants.

Data Analysis

During the analysis phase of the data, it was first examined whether the data met the assumptions required for structural equation modelling. For this purpose, outliers were examined for z value. Values which were not in the range of -3 to +3 were excluded from the analysis. Along with such analysis and the results obtained from Mahalanobis distance, 21 cases were removed from the data set and that with the data of the remaining 591 participants, the skewness and kurtosis values of the total scores of the scales were examined (Preacher & Hayes, 2008). As it was observed that these values were between -1.5 and +1.5, it was concluded that the data set showed a normal distribution (Tabachnick & Fidell, 2013). In analyzing the data of this study, Pearson Moments Product Correlation and CFA were used. Also, Structural Equation Modeling was used for mediation analysis. Within the scope of this research, bootstrap coefficient and confidence intervals were created by performing bootstrapping. In order to decide that the indirect effect is significant, the lower and upper limit of the confidence interval formed in the process should be different from zero (Preacher & Hayes, 2008).

In the research, SPSS 22.00 program was used for descriptive statistics, and AMOS 22 program was used for confirmatory factor analysis (CFA) and structural equation modelling (SEM). The compatibility of the model was examined through the values obtained from chi-square, $\chi2/sd$, Goodness of Fit Index (GFI), Root Mean Square Error of Approximation (RMSEA), the Comparative Fit Index (CFI), Standardized Root Mean Square Residual (SRMR), and Tucker Lewis Index (TLI). In examining the reference values for $\chi2/sd$, the values below 2 are accepted as good fit; those, which are up to 5 are accepted as acceptable fit. GFI value of .90 and above is a good fit, while it is acceptable to have this value between .85 and .90. While CFI is a good fit between .95 and 1.00, its value between .90 and .95 indicates acceptable fit (Kline, 2011; Schumacker & Lomax, 2010; Wang & Wang, 2012). On the other hand, RMSEA and SRMR being smaller than .05 show a good fit, and values up to .08 are considered as acceptable fit (Browne & Cudeck, 1993; Schermelleh-Engel, Moosbrugger & Müller, 2003). Finally, TLI indices between .95 and 1.00 are considered as good fit, and its value between .90 and .95 is known as acceptable fit (Baumgartner & Homburg, 1996; Marsh, Hau, Artelt, Baumert, & Peschar, 2006). It is also important to indicate that the error margin of this study was accepted as 0.01.

Findings

Confirmatory Factor Analysis (CFA) was conducted for each measurement to examine the fit indices before applying to Structural Equation Modeling analysis. The results of CFA indicated that good fit and factor structures were obtained at acceptable levels for the scales used in the study. Respectively, the findings from Descriptive Statistics, Correlations, and model test results are presented.

Findings Regarding the Relation between Time Management, Life Satisfaction, and Communication Skills

The interrelationships among time management, life satisfaction, and communication skills were determined after the calculated means, standard deviation, and Pearson correlations coefficient were computed. In addition, kurtosis and skewness values were presented as well (Table 1).

Table 1.

Descriptive Statistics and Correlations among Major Study Variables

	M	**SD**	**TM**	**CS**	**LS**	**Skewness**	**Kurtosis**
TM	3.42	.51	1			-.074	.145
CS	3.70	.56	.235**	1		-.269	.178
LS	3.04	.44	.152**	.430**	1	.526	.336

Note. TM: Time Management; CS: Communication Skills; LS: Life Satisfaction.

**p<.01.

Table 1 showed that all variables were positively correlated with each other. In that sense, the relationship between time management and communication skills (r= .24, p<. 01), time management and life satisfaction (r= .15, p<. 01), and communication skills and life satisfaction (r= .43, p<. 01) was positive and meaningful.

Model 1: Examining the Relationship of Time Management with Communication Skills

Structural Equation Modeling for Model 1 and Model 2 was created within the scope of the study. Analysis results related to the models are shown in Figure 2 and Figure 3, respectively.

In this study, the approach proposed by Baron and Kenny (1986) was used to examine the mediating effect of life satisfaction in the relationship between time management and communication skills. According to this approach, one of the most important premises for mediation analysis is the existence of a significant relationship between the dependent variable and the independent variable. For such matter, in order to test the mediation effect in Model 2, Model 1 was primarily tested (Figure 2).
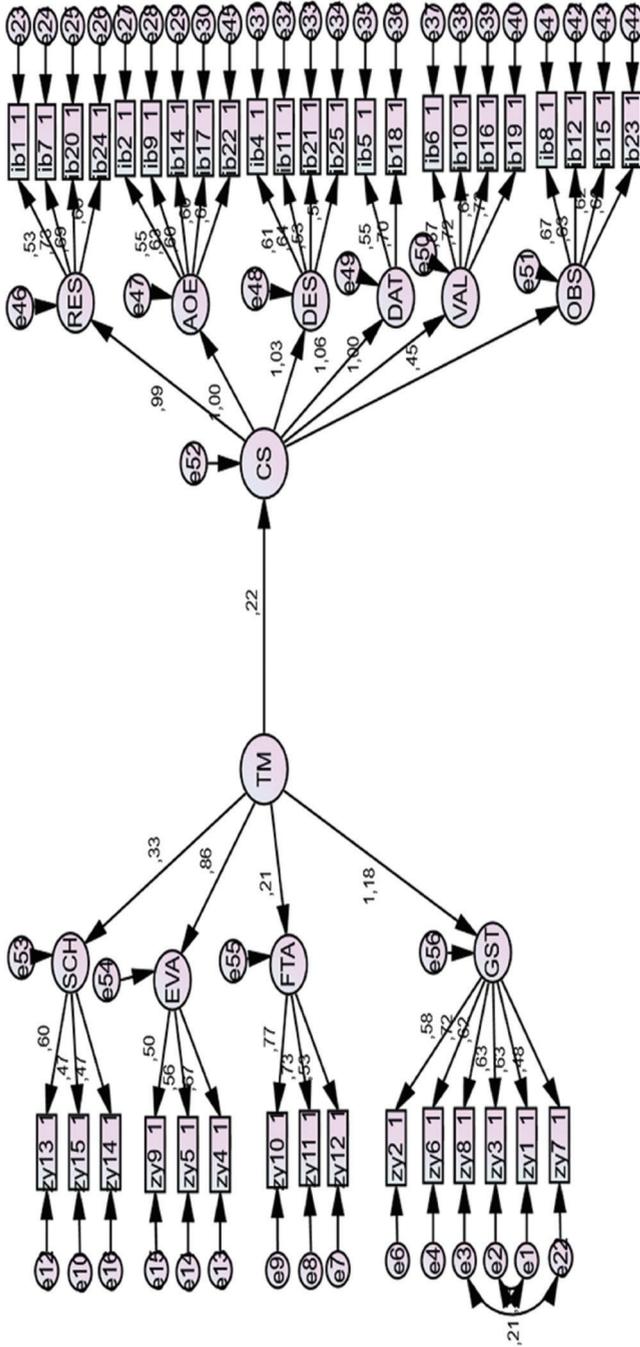
Figure 2. *Model 1: Reflecting Predicting Power of Time Management in Communication Skills*

Note. TM: Time Management; CS: Communication Skills; LS: Life Satisfaction.

As seen in Figure 2, when the fit indices of the model 1 are examined, the model is verified by showing acceptable fit (χ^2 = 1753,552, χ^2 / sd = 2,689, GFI = .89, AGFI = .88, RMSEA = .054, CFI = .90, SRMR = .045, TLI = .90). In the model, the result shows that time management predicts communication skill by .22.

Model 2: Investigation of the Mediating Role of Life Satisfaction in the Relationship between Time Management and Communication Skills

In the context of evaluating the mediating role of life satisfaction in the relationship of time management and communication skills, Model 2 has been examined, taking into consideration the approaches of Baron and Kenny (1986). When Model 2 is examined according to the suggestions of the researchers, there should be a statistically significant relationship between and time management as the independent variable and the mediator, which is life satisfaction. In addition, when the effect of time management as the independent variable is controlled, the variable of mediation which is life satisfaction should significantly predict the communication skills. Besides these two approaches, when the effect of the mediating variable is controlled to reveal the role of mediation in the model, the relationship between the independent variable (time management) and dependent variable (communication skills) should either decrease or be statistically insignificant. Based on these assumptions, Model 2 was created to test the purpose of the study (Figure 3).
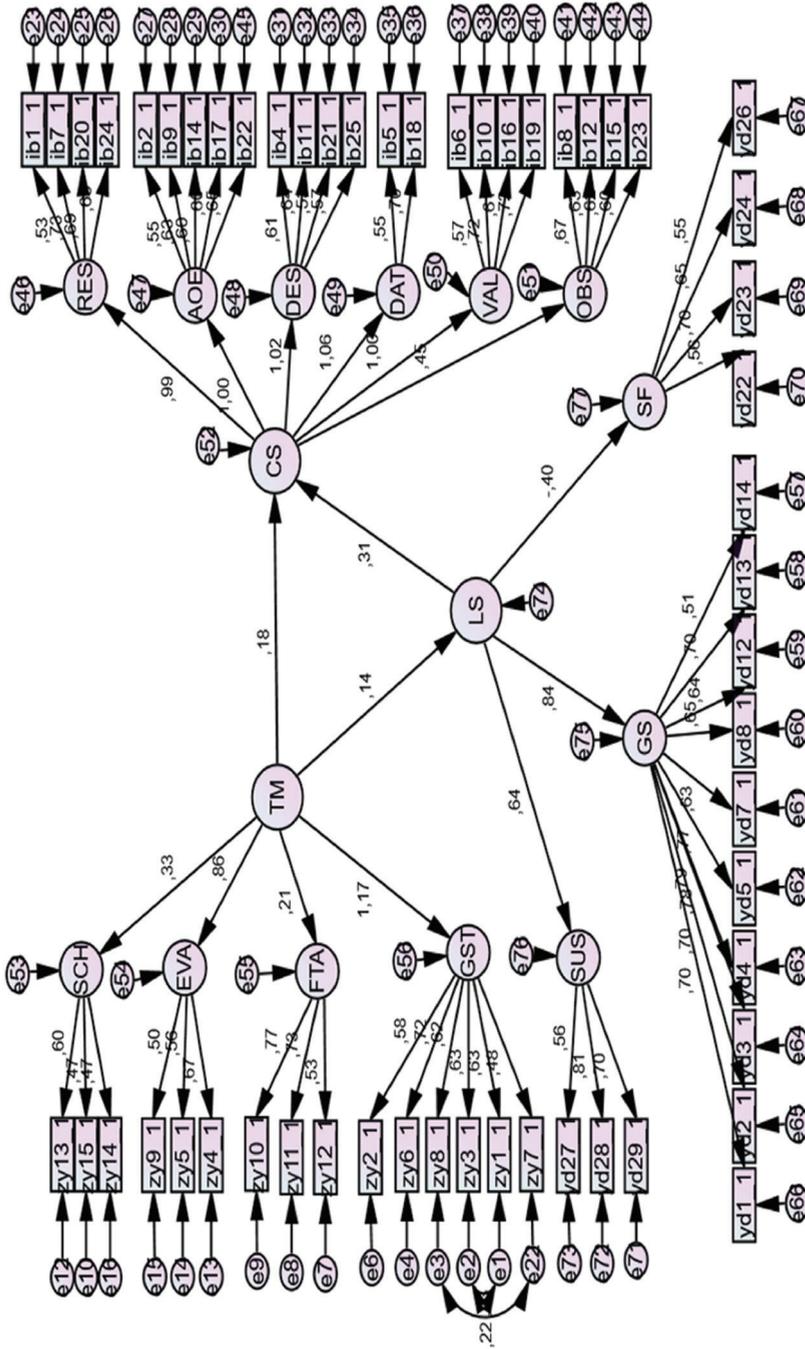
Figure 3. *Model 2 Reflecting Mediator Role of Life Satisfaction in the Relationship between Time Management and Communication Skills*

Note. TM: Time Management; IB: Communication Skills; YD: Life Satisfaction

In accordance with the suggestions of Baron and Kenny (1986), test results related to Model 1 and Model 2 were examined. Accordingly, there was a predictive relationship between time management and communication skills (β = .22, p <.001) in Model 1. After Model 2 was constructed, the predictive relationship between three variables (time management, communication skills, and life satisfaction) was varied. When Model 2 was examined, it was found that time management significantly predicted life satisfaction (β = .14, p <.001). Similarly, life satisfaction was able to predict communication skills (β = .31, p <.001). Finally, the results from Model 2 indicated that time management significantly predicted communication skills (β = .18, p <.001).

Table 2.

Regression Values after Analysis Conducted on Models

Regression Coefficients	Standard				Bias %95	
	β	β	S.E.	C.R.	Lower Limit	Upper Limit
LS<---TM	0,137	0,109	0,042	2,591**		
CS<---TM	0,178	0,07	0,020	3,541**		
CS<---LS	0,312	0,156	0,033	4,679**		
CS<---LS<---TM (Indirect Effect)	0,043	0,017			0,02	0,081

**p<.001

Note. TM: Time Management; CS: Communication Skills; LS: Life Satisfaction

Based on the findings from Model 2, the mediating effect of life satisfaction in the relationship between time management and communication skills was shown along with their regression values in Table 2. According to the findings, it has been found that life satisfaction has a partial mediating effect on the relationship between time management and communication skills. In this sense, it is important to point out that compared to Model 1(β = .22, p <.001), the predictive power of time management on communication skills in Model 2 (β= .18, p <.001) was still meaningful. When the models are compared it may be seen that the regression value was decreased from .22 to .18. Such result is also evident based on the fit indices of Model 2 (χ^2 = 3204,196, χ^2/sd = 2,269, GFI = .90, AGFI = .89, RMSEA = .046, CFI = .90, SRMR = .045, TLI = .90) as they included values closer to the ones in Model 1. As a result, such decrease shows that life satisfaction is able to explain the variances of communication skill as well. Therefore, the predictive power of time management was decreased in the model. Based on these approaches, life satisfaction has a mediating effect on the relationship between time management and communication skills among graduate students in higher education. This result is also evident due to the results of bootstrap confidence interval, which took place to decide the level of ef-

fectiveness for the mediation role of life satisfaction. According to Preacher and Hayes (2008), the existence of mediating effect is possible when the lower and upper limits for bootstrap are above zero. Based on their conclusions, the lower and upper limits for bootstrap were over zero suggesting that life satisfaction had a partial mediating effect on the relationship between time management and communication skills.

Discussion, Conclusion, and Suggestions

In this research, the mediating role of life satisfaction in the relationship between time management and communication skills among graduate students was investigated. Firstly, it was revealed that time management was a predictor of life satisfaction. The findings showed that as graduate students' level of time management increased, their level of life satisfaction increased as well. Parallel to this finding, some studies are suggesting that effective time management skills have a positive impact on good moods and life satisfaction (Ağduman, 2014; Macan et al., 1990). Knowing how to manage time effectively indicates a student that has planning skills in order to meet desired educational needs (Kıngır, 2007; Üstün et al., 2016; Wilkinson & Hansen, 2006). As for life satisfaction, it involves the fulfilment of the needs (Reeve & Lee, 2018), having dreams come true (Dilmaç & Halil, 2008), and positive feelings due to accomplishments (Pavot & Diener, 2008). From this approach, it can be concluded that individuals with impressive time management and planning abilities are capable of reaching their goals, feel successful, enjoy and satisfy with their life.

The second finding of the study indicated that life satisfaction was a predictor of communication skills of the students in master's and PhD programs. This result emphasizes that when students are in good moods, employ positive feelings, and satisfied with life, they are more prone to engage with their friends and teachers and thus improve their communication skills. This finding complies with previous studies (Caplan, 2005; Eryılmaz & Ercan, 2011). Communication skills include conveying information and understanding each other (Dökmen, 1994). In line with this, students are satisfied when they learn through conveying information and establishing common grounds of understanding with people in their social circle (Erözkan, 2007; Karakuş, 2010). Basically, students with positive feelings tend to be efficient in balancing their life in terms of being aware of factors that would help them reach to their goals by engaging with right people at the right time (Eryilmaz, 2010). Hence, in educational settings, students with high level of satisfaction are determined to take responsibilities and effectively engage with their instructors and friends (Gülnar & Balcı, 2011).

This study investigated the mediating role of life satisfaction in the relationship between time management and communication skills. The findings of the study showed that life satisfaction was a partial mediator in the relationship between time management and communication skills of graduate students in higher

education. A study showing such a mediating role is actually lacking in the literature. However, there is research indicating the relationship of life satisfaction with time management and communication skills (Avcı, 2017). In their studies, Çardak (2002) and İşcan (2008) expressed that being able to control stress and pressure during work as the indication of effective time management is aligned with good mood and life satisfaction. Conversely, people, who fail to manage their time wisely may feel bored and be unsatisfied with life (Deschamps, 2006). Parallel to this finding, the current study showed that graduate students, who were able to plan and foresee the importance of time management also reflected their enjoyment in life through their positive actions. Such actions were visible when they understood learning tasks and created stronger bonds with their teachers and peers. As for the relationship between life satisfaction and communication skills in the literature, Aydın and Gürbüz (2012) and Kocabaş and Erdem (2003) found that individuals with greater levels of satisfaction in life are inclined more to engage in peer to peer interactions, thus improve skills of communication. Similarly, there seems to a correlation between life satisfaction and communication skills as the level of enjoyment with life creates opportunities for engagement and socialization (Cüceloğlu, 1997; Schimmack, Diener & Oishi, 2002). Consistent with these findings, the results of the current study employed similar indications that graduate students having positive emotions due to their satisfaction with life seem to be enthusiastic in strengthening their relationships with friends and instructors in Turkish higher education institutions.

Based on the findings from the current study, the increase in time management increases life satisfaction and hence the communication skills of students in graduate programs. When such findings are taken into account and necessary grounds are established for improving skills in time management, graduate students may successfully plan ahead and control stress factors to tackle problems on the way. In addition, wisely use of time would help students act in the right time to make a meaningful connection with others and feel a sense of enjoyment in their life. Therefore, opportunities need to be created to help students make the most of their time for learning and engaging with satisfaction. It is crucial to keep in mind that people, who lack in managing their time may find themselves doing unsatisfactory things such as being in unwanted situations, failing to comply with responsibilities, and being excluded from learning activities that require team work (Biolcati et al., 2018; Caldwell et al., 2004; Hickerson & Beggs, 2007; Weybright et al., 2015).

This study, which is focused to determine the mediating role of life satisfaction in the relationship between time management and communication skills of graduate students includes some limitations. First, the data were collected only from three public universities, which decreased the generalizability of current research. To increase such generalizability, more universities as in types and numbers need to be included. Second, as the main goal of the study was limited to examine the mediator role of life satisfaction in the relationship between time management and communication skills, in the future studies, researchers

may consider adding different variables that may lead to new discoveries about the relationship between time management and communication skills. It may be considered as a suggestion that even though this research was conducted employing a quantitative methodology in terms of examining the mediating role of life satisfaction of the students, further research may be designed including either qualitative or mixed methods. Such an approach would help researchers gather more indepth knowledge.

References

Ağduman F. (2014). Üniversite öğrencilerinin boş zaman *motivasyon ve tatminlerinin incelenmesi.* (Yayımlanmamış yüksek lisans tezi), Sağlık Bilimleri Enstitüsü, Beden Eğitimi ve Spor Anabilim Dalı, Atatürk Üniversitesi, Erzurum.

Akgül, B. M., & Karaküçük, S. (2015). Boş zaman yönetimi ölçeği: Geçerlik-güvenirlik çalışması. *International Journal of Human Sciences, 12*(2), 1867-1879.

Akgül, B. M., & Karaküçük, S. (2015). Free time management scale: Validity and reliability analysis Boş zaman yönetimi ölçeği: Geçerlik-güvenirlik çalışması. *Journal of Human Sciences*, *12*(2), 1867-1880.

Avcı, Ö. (2017). *Duygusal zeka ve iletişim*. İstanbul: Beta Basım Yayım Dağıtım A.Ş.

Aydın, A.H., & Gürbüz, M. (2012). Zaman kavramı ve yönetimi. *Kahramanmaraş Sütçü İmam Üniversitesi Sosyal Bilimler Dergisi, 9*(2), 1-20.

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*, 1173-1182.

Baumgartner, H., & Homburg, C. (1996). Applications of structural equation modeling in marketing and consumer research: A review. *International Journal of Research in Marketing*, *13*(2), 139-161.

Bayhan, P., & Işıtan, S. (2010). Ergenlik döneminde ilişkiler: Akran ve romantik ilişkilere genel bakış. *Aile ve Toplum, 5*(20), 33-44.

Bayramlı, Ü. Ü. (2017). *Zaman yönetimi: Öz yönetim, zaman tuzakları, zaman yönetim teknikleri.* 2. Baskı, Ankara: Seçkin Yayıncılık.

Biolcati, R., Mancini, G., & Trombini, E. (2018). Proneness to boredom and risk behaviors during adolescents' free time. *Psychological Reports, 121*(2), 303–323.

Browne, M. W., & Cudeck, R. (1993). Alternative ways of assessing model fit. In K. A. Bollen & J. S. Long (Eds.), *Testing structural equation models* (pp. 136-162)*.* Newbury Park, CA: Sage.

Caldwell, L. L., Baldwin, C. K., Walls, T., & Smith, E. (2004). Preliminary effects of a leisure education program to promote healthy use of free time among middle school adolescents. *Journal of Leisure Research, 36*, 310–335.

Caplan, S. E. (2005). A social skill account of problematic internet use. *Journal of Communication, 55*, 721–736.

Cüceloğlu, D. (1997). *Yeniden insan insana*. İstanbul: Remzi Kitabevi.

Çardak, M. (2002). İlköğretim okullarında çalışan öğretmenlerin iş doyumu ile stresle başa çıkma yolları. (Yayınlanmamış yüksek lisans tezi), Niğde Üniversitesi, Niğde.

Demir, C., & Demir, N. (2006). Bireylerin boş zaman faaliyetlerine katılmalarını etkileyen faktörler ile cinsiyet arasındaki ilişki: Lisans öğrencilerine yönelik bir uygulama. *Ege Akademik Bakış Dergisi, 6*(1), 36-48.

Diener, E., Emmons, R, Larsen, R., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment, 49*, 1105-1117.

Dilmaç, B., & Halil, E. K. Ş. İ. (2008). Meslek yüksekokullarında öğrenim gören öğrencilerin yaşam doyumları ve benlik saygılarının incelenmesi. *Selçuk Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 20, 279-289.

Dökmen, Ü. (1994). *Sanatta ve günlük yaşamda iletişim çatışmaları ve empati*. İstanbul: Sistem Yayıncılık.

Erol, M., & Yıldırım, İ. (2016). The development of higher education life satisfaction scale. *Journal of Theory and Practice in Education, 12*(1), 221-243.

Erözkan, A. (2007). Üniversite öğrencilerinin iletişim becerilerini etkileyen faktörler. *Marmara* Üniversitesi *Atatürk Eğitim Fakültesi Eğitim Bilimleri Dergisi, 26*(26), 59- 72.

Eryılmaz, A. (2010). Ergenlerde Öznel iyi oluşu artırma stratejilerini kullanma ile akademik motivasyon arasındaki ilişki. *Klinik Psikiyatri, 13*, 77-84.

Eryılmaz, A., & Ercan, L. (2011). Öznel iyi oluşun cinsiyet, yaş grupları ve kişilik özellikleri açısından incelenmesi. *Türk Psikolojik Danışma ve Rehberlik Dergisi, 4*(36), 139-151.

Godbey, G. (1999). *Leisure in your life: An explanation*. Pennslavinia: Venture Publishing Inc, Second Edition.

Goll, J. C., Charlesworth, G., Scior, K., & Stott, J. (2015). Barriers to social participation among lonely older adults: The influence of social fears and identity. *PloS one*, *10*(2).

Gül, E. (2017). *Duygusal zeka ve iletişim becerileri arasındaki ilişki: Bir uygulama*. (Yayımlanmamış yüksek lisans tezi), Beykent Üniversitesi Sosyal Bilimler Enstitüsü, İstanbul.

Gülnar, B., & Balcı, Ş. (2011). *Yeni medya ve kültürleşen toplum*. LiteraTürk.

Gürkan, T., A. Oktay, Ö., & Unutkan, P. (2005). *Okul öncesi eğitimde güncel konular içinde, öğretmen nitelikleri görev ve sorumlulukları*. İstanbul: Morpa.

Hickerson, B. D., & Beggs, B. A. (2007). Leisure time boredom: Issues concerning college students. *College Student Journal, 41*, 1036–1044.

İşcan, Ö. (1999). *Bilgi toplumunda zaman yönetimi ve bankacılık sektöründe yöneticiler üzerinde bir uygulama.* (Yayınlanmamış yüksek lisans tezi), Atatürk Üniversitesi, Erzurum.

Jones K. (2000). *Time management: The essential guide to thinking and working smarter*. Çeviri: Akkoyunlu C.A. Baskı. İstanbul: Doğan Kitapçılık A.Ş.

Karabulut, E. (2014). Örgütsel iletişim ve duygusal *zeka ilişkisi: Bir uygulama*. (Yayınlanmamış yüksek lisans tezi), Dumlupınar Üniversitesi Sosyal Bilimler Enstitüsü, Kütahya.

Karagöz, Y., & Kösterelioğlu, İ. (2008). İletişim becerileri değerlendirme ölçeğinin faktör analizi metodu ile geliştirilmesi. *Dumlupınar Üniversitesi Sosyal Bilimler Dergisi*, 21, 81-98.

Karakuş, C. (2010). *Kurumsal iletişim yönteminde halkla ilişkiler ajanslarının yeri.* (Yayımlanmamış yüksek lisans tezi), Marmara Üniversitesi Sosyal Bilimler Enstitüsü, İstanbul.

Kelly, W. E. (2002). Harnessing the river of time: A theoretical framework of time use efficiency with suggestions for counselors. *Journal of Employment Counseling, 39*(1), 12-21.

Kıngır S. (2007). *Yönetsel anlamda zamanın etkin kullanımı ve bir araştırma*, 1. Baskı, Ankara: Gazi Kitabevi.

Kline, R. B. (2011). Principles and practice of structural equation modeling. New York: The Guilford Press.

Kocabaş, İ., & Erdem, R. (2003). Yönetici adayı öğretmenlerin kişisel zaman yönetimi davranışları. *Fırat Üniversitesi Sosyal Bilimler Dergisi, 13*(2), 203–210.

Kurt, F. (2014). Çeştepe *aile sağlığı merkezine başvuran hastaların duygusal zeka* düzeyleri ve iletişim becerileri. (Yayımlanmamış yüksek lisans tezi), Beykent Üniversitesi Sosyal Bilimler Enstitüsü, İstanbul.

Macan, T. H., Shahani, C., Diphoye, R. L., & Phillips, A. P. (1990). College students' time management: Correlations with academic performance and stress. *Journal of Educational Psychology, 82*, 760-768.

Mannell, R.C., & Kleiber, D.A. (1997). *A social psychology of leisure*. State College, PA: Venture Puplishing.

Marsh, H. W., Hau, K. T., Artelt, C., Baumert, J., & Peschar, J. L. (2006). OECD's brief self report measure of educational psychology's most useful affective constructs: Cross-cultural, psychometric comparisons across 25 countries. *International Journal of Testing*, *6*(4), 311-360.

Özer, G. (2009). Öz-belirleme kuramı çerçevesinde ihtiyaç doyumu, içsel güdülenme ve bağlanma stillerinin üniversite öğrencilerinin öznel iyi oluşlarına etkileri. (Yayımlanmamış yüksek lisans tezi), Gazi Üniversitesi, Ankara.

Pavot, W., & Diener, E. (2008). The satisfaction with life scale and the emerging construct of life satisfaction. *The Journal of Positive Psychology*, *3*(2), 137-152.

Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, *40*(3), 879-891.

Reeve, J. & Lee, W. (2018). A neuroscientific perspective on basic psychological needs. *Journal of Personality, 87*, 102-114.

Sarpkaya, R. (2010). *Türk eğitim sistemi ve okul yönetimi.* Ankara: Anı.

Schermelleh-Engel, K., Moosbrugger, H., & Muller, H. (2003). Evaluating the fit of structural equation models: Tests of significance and descriptive goodness-of-fit measures. *Method of Psychological Research*, *8*(2), 23-74.

Schimmack, U., Diener, E., & Oishi, S. (2002). Life-satisfaction is a momentary judgment and a stable personality characteristic: The use of chronically accessible and stable sources. Journal of Personality, 70, 345–384.

Schumacker, R. E., & Lomax, R. G. (2010). *A beginner's guide to structural equation modeling*. New York: Taylor & Francis Group.

Shaikh, B. T., & Deschamps, J. P. (2006). Life in a university residence: issues, concerns and responses. *Education for Health, 19*(1), 43-51.

Smith, W. H. (2000). *The 10 natural laws of successful time and life management*. 3. Baskı. İstanbul: Sistem Yayıncılık.

Sü Eröz, S. (2011). *Duygusal zeka ve iletişim arasındaki ilişki: Bir uygulama*. (Yayımlanmamış doktora tezi), Uludağ Üniversitesi Sosyal Bilimler Enstitüsü, Bursa.

Tabachnick, B. G., & Fidell, L. S. (2013). *Using multivariate statistics*. Boston, MA: Pearson.

Tezcan, M. (1994). *Boş zamanların değerlendirilmesi sosyolojisi*. 4. Baskı, Ankara, Atilla Kitabevi.

Uluşahin, S. (1999). *Zaman yönetimi.* (Yayınlanmamış yüksek lisans tezi), Hacettepe Üniversitesi Sosyal Bilimler Enstitüsü, Ankara.

Üstün Ü. D., Kalkavan A., & Demirel, M. (2016). Investigating free time motivation scores of physical education and faculty of education students according to different variables. *The Online Journal of Recreation and Sport, 2*(1), 18-26.

Wang, J., & Wang, X. (2012). *Structural equation modeling: Applications using Mplus*. West Susex: John Wiley & Sons.

Wang, W. C. (2019). Exploring the relationship among free-time management, leisure boredom, and internet addiction in undergraduates in Taiwan. *Psychological reports*, *122*(5), 1651-1665.

Wang, W. C., Kao, C. H., Huan, T. C., & Wu, C. C. (2011). Free time management contributes to better quality of life: A study of undergraduate students in Taiwan. *Journal of Happiness Studies*, *12*(4), 561-573.

Weybright, E. H., Caldwell, L. L., Ram, N., Smith, E. A., & Wegner, L. (2015). Boredom prone or nothing to do? Distinguishing between state and trait leisure boredom and its association with substance use in South African adolescents. *Leisure Sciences, 37*, 311–331.

Wilkinson, T. J., & Hansen, J. I. C. (2006). The relationship among leisure ınterests, personality traits, affect, and mood. *Measurement and Evaluation in Counseling and Development, 39*(1), 31.

Yılmaz, E., & Altınok, V. (2009). Okul yöneticilerinin yalnızlık ve yaşam doyum düzeylerinin incelenmesi. *Kuram ve Uygulamada Eğitim Yönetimi, 59*(59), 451-470.

Zelinski, E. J. (2004). *The joy of not working*. İstanbul: Boyner Yayınları.