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Adaptation of Turkish Version of Two Different Self-Control Scales

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ABSTRACT

The trait of self-control is receiving growing attention as it leads to plenty of positive outcomes. Besides, there are so many scales based on different theoretical approaches in the literature. In this study, we aimed to adapt two important self-control scales, namely the Dispositional Self-Control Scale (DSC; Ein-Gar & Sagiv, 2014), and Desire for Self-Control Scale (DSCS; Uzie & Baumeister, 2017) into Turkish. In this context, we evaluated factorial validity, reliability coefficients (Cronbach α and McDonald's ω), discriminant, and convergent validity of these scales among college students sample. We also tested gender differences between men and women on self-control scores for two scales. Overall findings demonstrated that DSC, and DSCS had satisfactory psychometric properties for utilization such as acceptable fit indices, a high level of reliability coefficients, and good discriminant and convergent validity. We also discussed the implications of findings and future research.

Keywords: Desire for self-control scale, dispositional self-control, scale, psychometrics

İki Farklı Öz-kontrol Ölçeğinin Türkçeye Uyarlanması

Öz-kontrol özelliği, çok sayıda önemli sonuca yol açtığı için giderek daha fazla ilgi görmektedir. Bununla birlikte alan yazında farklı teorik yaklaşımlara dayanan pek çok öz-kontrol ölçeği yer almaktadır. Bu araştırmada Öz-kontrol Eğilimi Ölçeği (ÖEÖ; Ein-Gar & Sagiv, 2014) ve Öz-kontrol Arzusu Ölçeği (ÖKAÖ; Uzie & Baumeister, 2017) olmak üzere iki önemli öz-kontrol ölçeğini Türkçeye uyarlanmayı amaçladık. Bu kapsamda, bu ölçeklerin yapı geçerliliğini, güvenirlik katsayılarını (Cronbach α ve McDonald's ω), ölçüt geçerliğini (ayırıcı ve yakınsak geçerliği) inceledik. Ayrıca bu iki ölçek için kadın ve erkek katılımcılar arasında öz-kontrol puanları açısından farklılaşma olup olmadığını test ettik. Analiz sonuçlarından elde edilen tüm bulgular; ÖEÖ ve ÖKAÖ'nün kabul edilebilir uyum indeksleri, yüksek düzeyde güvenilirlik katsayıları ve yüksek düzeyde ölçüt geçerlik sonuçları ile tatmin edici psikometrik özelliklere sahip olduğunu göstermiştir. Bununla birlikte, bulgulardan elde ettiğimiz çıkarımları ve gelecekteki araştırmalara ilişkin önerileri tartıştık.

Anahtar kelimeler: Öz-kontrol arzusu ölçeği, öz-kontrol eğilimi ölçeği, psikometrik

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1 | Introduction

Self-control is essential in most aspects of our lives as we often face temptations including procrastination at work, eating an extra piece of pizza, spending money, or sleeping one more hour. In other words, resisting immediate pleasures and resolving the dilemmas when we face requires self-control (Gillebaart & de Ridder, 2015). Given the omnipresence of the phenomena in several aspects of our lives, several studies on self-control have been conducted, and different concepts and theories have emerged to describe the construct of self-control (e.g., Baumeister et al.,1998; Gottfredson & Hirschi, 1990; Metcalfe & Mischel, 1999). Self-control is generally defined as the capacity to resist impulses and regulate behaviors, emotions, and cognitions to achieve higher-order goals (Baumeister et al., 2007; Tangney et al., 2004). In addition, self-control has been used synonymously with willpower (Job et al., 2010), self-regulation (Muraven et al., 1999), self-discipline (Duckworth & Seligman 2006), and delay of gratification (Metcalfe & Mischel, 1999).

The literature emphasizes that self-control trait inhibits undesired behaviors and motivates desired behaviors (Baumeister et al., 1998; de Ridder et al., 2012). High self-control is crucial to success across life areas from academic achievements to healthy eating habits to social relationships (Inzlicht et al., 2014). Empirical investigations indicated that high self-control is associated with higher academic performance (Duckworth & Seligman, 2006), better interpersonal functioning and health-related behaviors (Hagger et al., 2005; Tangney et al., 2004), advanced work performance (Sintemaartensdijk & Righetti, 2019), psychological adjustment, and wellbeing (Hofmann et al., 2013; Tangney et al., 2004). In sum, the trait of self-control promotes a broad range of positive consequences in our lives. Thus, it is not surprising that self-control is encouraged by religions, societies, families, schools, media, scientists, politicians, and businesses (Baumeister & Exline, 1999; Duckworth et al., 2011; Milyavskaya & Inzlicht, 2017).

In a similar vein, due to the beneficial effects of self-control in human life, it is one of the most studied fields in psychology and other social sciences such as philosophy, economics, sociology, criminology, political sciences, and medical sciences (de Ridder et al., 2012; Hofmann et al., 2013; Şimşir & Dilmaç, 2020). To date, about 4050 articles on self-control, self-discipline, self-regulation, delay of gratification, or willpower are indexed in the Web of Science. However, the number of studies on self-control in the Turkish sample is limited. One of the reasons for this limitation may be that only a few self-control instruments were developed in the Turkish sample or adapted to Turkish (e.g., Nebioglu et al., 2012). Hence, in the present study, we reviewed existing self-control scales in the literature, translated two prominent of these scales to Turkish, and reported validity/reliability results: dispositional self-control, and desire for self-control.

DISPOSITIONAL SELF-CONTROL

There are two forms of self-control reported in the literature: state and dispositional (de Ridder et al., 2012; Tangney et al., 2004). State self-control depends on specific domains or situations and differs according to conditions and time. However, dispositional self-control is a rather stable and internally consistent trait-like characteristic and independent of time and situation (de Ridder et al., 2012; Ein-Gar & Sagiv, 2014). Self-control scales existing in the literature were developed to either evaluate particular situations (Rosenbaum, 1980) or stable characteristics (Tangney et al., 2004). Ein-Gar and Sagiv (2014) preferred to measure the stable tendency of self-control and developed the Dispositional Self-Control Scale (DSC) to evaluate the broad aspects of normal self-control behavior that is context-free.

DSC was designed based on an understanding that self-control is an inclination to override two temptations recognized as avoiding pain and obtaining pleasure. These hedonic temptations were conceptualized as not doing right (NDR) and doing wrong (DW). While DW was defined as performing an impulsive manner to get immediate gratification, NDR was defined as postponing necessary duty due to ignoring the undesirable long-term outcomes of this procrastination. Also, DSC items were built yielding and overcoming DW or NDR. To test the psychometric properties of the DSC, Ein-Gar, and Sagiv (2014) conducted five consecutive studies and developed a reliable and valid scale.

DESIRE FOR SELF-CONTROL

The desire for self-control means wishing to be better able to dominate or change temptations and consciously direct feelings, thoughts, and performance. Even if the desire for self-control is described based on trait self-control, it theoretically differs from trait self-control in many aspects such as cognitive source, continuity, and goal setting (Uziel & Baumeister, 2017). The desire for self-control reflects wanting to control the present and future conditions as well as to be in control over everyday life situations (Burger & Cooper 1979). Unlike the self-control theories, self-discrepancy theory enlightens the desire for self-control. This theory highlighted individuals' perception of gaps between their existing state and wanted state (Higgins, 1987). Based on this perspective, Uziel and Baumeister (2017) developed the desire for a self-control scale (DSCS) to assess individuals' wants to have more self-control than one presently has. The research report suggested that DSCS performs well to measure the desire for self-control.

THE PRESENT STUDY

The main purpose of the present study was to translate and provide preliminary evidence of the psychometric properties of the Turkish form of two self-control scales including DSC, and DSCS. As aforementioned, a trait of self-control contributes to numerous desirable consequences in our lives. Therefore, researchers tried to understand self-control mechanisms and conducted ample research. Researchers also provided various methods and strategies to strengthen self-control (Haouser, 2019; Inzlicht & Teper, 2014). Additionally, a variety of instruments were developed such as the Self-Control Schedule (Rosenbaum, 1980), Low Self-Control Scale (Grasmick et al., 1993), Brief Self-Control Scale (Tangney et al., 2004), Stop and Start Control Scales (de Boer et al., 2011), and Habitual Self-Control Questionnaire (HSCQ; Schroder et al., 2013) to measure level trait self-control effectively. However, we recognized that existing self-control scales are very limited and old in Turkey. Thus, we believe that our research would expand self-control studies in Turkey and ensure the representation of different cultures in the literature.

RESEARCH QUESTIONS

- 1. Is DSC a valid and reliable scale in a Turkish sample?
- 2. Is DSCS a valid and reliable scale in a Turkish sample?

2 | METHOD

PARTICIPANTS

Our participants consisted of Turkish-speaking college students living in 48 different provinces of Turkey. Of the participants, 367 (73.7%) were enrolled in the Faculty of Education and 131 (26.3%) in the Faculty of Engineering. The distribution of participants was as follows: 113 (22.7%) were first-year students, 128 (25.7%) were second-year students, 156 (31.3%) were third-year students, and 101 (20.3%) were fourth-year students. Participants were 357 (71.7%) women and 141 (28.3%) men, in a total of 498 people. Participants' age ranged from 17 to 50 (M = 20.75; SD = 2.70).

PROCEDURES

We followed a stepwise process for adapting DSC, and DSCS. In the first step, we reviewed self-control scales in the literature. Then we examined these scales in terms of psychometric features. We chose the two prominent scales from them. In the second step, we got permission from the authors who developed the original form of these scales to adopt the scales into Turkish. Afterward, we obtained the ethical approval of the study from Necmettin Erbakan University Scientific Research Ethics Board (Meeting Date: 13.11.2020, Decision No: 2020/87). In the third step, we translated each scale from English to Turkish based on literature recommendations (e. g., Brislin, 1980; Eremenco et al., 2005).

As two authors who carried out this study, who have command of both Turkish and English, we carried out the translations independently. Then we compared the translations and came to a consensus. We sent it to an English language expert to have the translations checked. We held a meeting with an English language expert to make the necessary corrections and evaluate the semantic differences. After completing the translation process, we sent the

instruments to a Turkish language expert to evaluate their suitability for Turkish. We also took the evaluations of the Turkish language expert into account and made necessary corrections.

Finally, we transferred demographic questions and each scale to an online platform (i.e., Google Forms), and shared the study link with the participants using online platforms (Whatsapp, Facebook, e-mail, etc.). All participants also signed the informed consent form before participating in the study.

MEASURES

Dispositional Self-Control Scale (DSC; Ein-Gar & Sagiv, 2014): The scale consists of 17 items (e.g., People can trust me to stay on schedule even if I am overloaded and under a lot of pressure.) This Likert-type scale consists of statements containing five potential participant responses, each ranging from "Never Agree" to "Totally Agree." DSC predicted distant future orientation, aggression, alcohol misuse, and aberrant driving. The developers of the scale found that the scale had an acceptable test-retest (0.73) and internal consistency (Cronbach's alpha ranging between 0.70 and 0.88) scores.

Desire for Self-Control (DSCS; Uziel & Baumeister, 2017): The scale consists of eight items (e.g., I want to be better able to persist in pursuing goals). This Likert-type scale consists of statements containing five potential participant responses, each ranging from "Never Agree" to "Totally Agree."The researchers reported in their experimental work that a strong desire for self-control over a difficult task disrupted target tracking.

Brief Self-Control Scale (BSCS; Tangney et al., 2004): The scale consists of 13 items (e.g., I am good at resisting temptation) and two sub-dimensions: Self-discipline and Impulsivity. This Likert-type scale consists of statements containing five potential participant responses, each ranging from "Never Agree" to "Totally Agree." Turkish adaptation of this scale was carried out by Nebioglu et al. (2016). Nebioglu et al. reported that the BSCS Turkish version explains 41.65% of the total variance and has an acceptable internal consistency (Cronbach alpha ranging from 0.81 to 0.87).

DATA ANALYSIS

We used confirmatory factor analysis (CFA) to verify the factor structure of the DSC, and DSCS scales. We tested the item factor structure with the model fit values in the CFA. As reported by Kline (2019) χ^2 /df <5, CFI >0.90, SRMR <0.10, RMSEA <0.08 considered acceptable fit. We used sub-dimensions of the BSCS for discriminant and convergent validity of DSC and DSCS scales. We reported Cronbach alpha (α) and McDonald's omega (α) for the reliability of DSC, and DSCS scales. We analyzed this study using IBM SPSS Statistics 21.0 and Amos Graphics 24.

RESEARCH ETHICS

The study was in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. The study approved by Necmettin Erbakan University Scientific Research Ethics Board (Meeting Date: 13.11.2020, Decision No: 2020/87).

3 | FINDINGS

DESCRIPTIVE STATISTICS AND RELIABILITY ANALYSIS

As seen in Table 1, the Skewness and Kurtosis scores obtained from the scales range from -2 to +2. This range is consistent with the normal distribution cut-off scores reported in the literature (George & Mallery, 2010). To determine the reliability coefficients of the scales, we calculated both the Cronbach α and McDonald's ω scores. Cronbach's alpha ($\alpha \ge .74$) and McDonald's omega ($\omega \ge .73$) values taken from the sub-dimensions of the DSC scale are acceptable. Moreover, Cronbach's alpha ($\alpha = 0.87$) and McDonald's omega ($\omega = 0.88$) values obtained from the DSCS scale are good.

Table 1. Descriptive Statistics and Reliabilities

Factor	Items	M	SD	α	ω	Skewness	Kurtosis
DSC YNDR	3	16,1526	5,23039	0.82	0.97	-,196	-,724
DSC ONDR	5	16,90	2,48074	0.83	0.84	,011	,281
DSC YDW	4	8,4036	3,81880	0.87	0.87	,988	,598
DSC ODW	4	13,8775	3,05138	0.74	0.73	-,059	-,027
DSCS	8	32.33	6.91	0.87	0.88	-0.91	0.47

Note: DSC YNDR= Dispositional Self-Control Yielding to NDR temptations, DSC ONDR= Dispositional Self-Control Overcoming NDR temptations, DSC YDW=Dispositional Self-Control Yielding to DW temptations, DSC ODW= Dispositional Self-Control Overcoming DW temptations, DSCS= Desire for Self-Control Scale, M = Mean, SD = Standard deviation, $\alpha = Cronbach Alpha$, ω : Mcdonald's Omega.

DISCRIMINANT AND CONVERGENT VALIDITY

When we examined the relationship between the sub-dimensions of the DSC scale and the sub-dimensions of the BSCS scale, we found moderate negative correlation between DSC Yielding to Not Doing Right temptations (DSC-YNDR) and BSCS/Self-discipline (r=-0.40); moderate positive correlation between DSC-YNDR and BSCS/Impulsivity (r=0.47); insignificant correlation between DSC Overcoming Not Doing Right temptations (DSC-ONDR) and BSCS/Self-discipline (r=0.03); negative low-level correlation between DSC ONDR and BSCS/Impulsivity (r=-0.14); negative moderate correlation between DSC Yielding to Doing Wrong (DSC-YDW) and BSCS/Self-discipline (r=-0.39); moderate positive correlation between DSC Overcoming Doing Wrong (DSC ODW) and BSCS/Self-discipline (r=0.54); moderate positive correlation (r=-0.46).

Additionally, there was a negative moderate correlation between DSCS and BSCS/Self-discipline (r = -0.47), while there was a positive correlation between DSCS and BSCS-Impulsivity (r = 0.28), even if a low level. Correlation values can be seen in Table 2.

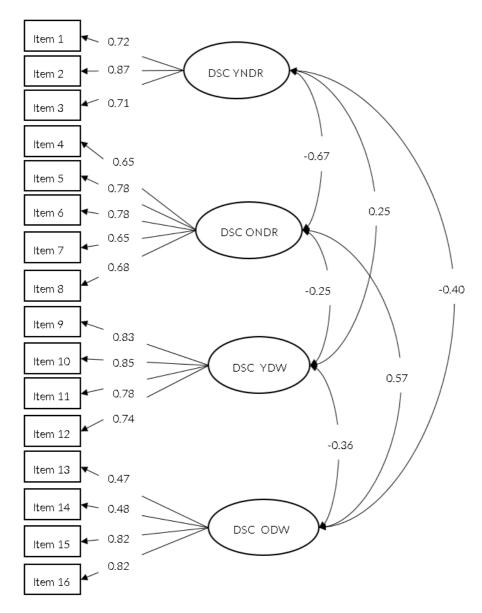
Table 2. Correlations Statistics among the Self-Control Scales

Scale	BSCS	BSCS
	Self-disciple	Impulsivity
Dispositional Self-Control Yielding to NDR temptations (DSC YNDR)	-0.40**	0.47**
Dispositional Self-Control Overcoming NDR temptations (DSC ONDR)	0.03	-0.14**
Dispositional Self-Control Yielding to DW temptations (DSC YDW)	-0.39**	0.54**
Dispositional Self-Control Overcoming DW temptations (DSC ODW)	0.51**	-0.46**
Desire for Self-Control Scale (DSCS)	-0.47**	0.28**

^{**}p < .01.

CONFIRMATORY FACTOR ANALYSIS

We performed a CFA with maximum likelihood extraction to verify the factor structures of the Turkish version of DSC. We found that the factor loads of the one item in the Turkish version of DSC were less than 0.30. We performed the CFA on the remaining sixteen items. The four-factor model revealed an acceptable fit ($\chi^2/df = 3.71$; CFI = 0.92; SRMR = 0.06; RMSEA = 0.07). Factor loadings of the items can be seen in Figure 1.



Note: DSC YNDR= Dispositional Self-Control Yielding to NDR temptations, DSC ONDR= Dispositional Self-Control Overcoming NDR temptations, DSC YDW=Dispositional Self-Control Yielding to DW temptations, DSC ODW= Dispositional Self-Control Overcoming DW temptations

Figure 1. Four Factor CFA Model of the DSC

We performed a CFA with maximum likelihood extraction to verify the factor structures of the Turkish version of DSCS. We found that factor loads of all items in the Turkish version of the DSCS were more than 0.30. Eightiem single factor model revealed an acceptable fit (χ 2/df = 3.13;CFI = 0.98; SRMR = 0.03; RMSEA = 0.06). Factor loadings of the items can be seen in Figure 2.

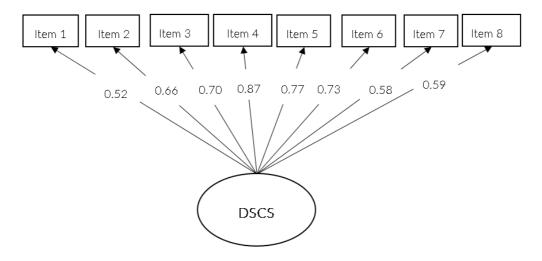


Figure 2. Single-Factor DFA Model of the DSCS

GENDER COMPARISONS

We calculated a one-way multivariate analysis of variance (MANOVA) to test gender differences between men and women in DSC subscale scores. The results showed that there was no statistically significant difference between males and females ($\lambda = .991$, F [df = 4,493] = 1,126 p = .344).

Furthermore, we performed a t-test to test gender differences between men and women in DSCS scores. According to the results, there was no statistically significant difference between men and women (t (496) = 1.058, p = .290). (Cohen's d = 0.01).

4 | DISCUSSION & CONCLUSION

The objective of the present study was to evaluate the psychometric properties of Turkish versions of two selfcontrol scales including DSC developed by Ein-Gar and Sagiv (2014), and DSCS developed by Uziel and Baumeister (2017). Self-control is an old-age concept in the existing psychology literature. Therefore, numerous self-report scales were developed and adapted to assess the level of self-control such as the Self-Control Schedule (Rosenbaum, 1980), Delay of Gratification (Mischel et al., 1989), Low Self-Control Scale (Grasmick et al., 1993), Eysenck Impulsiveness Questionnaire (Eysenck et al., 1984), Brief Self-Control Scale (Tangney et al., 2004), Self-Discipline Scale (NEO-PI-R; McCrae & Costa, 2004), Stop and Start Control Scales (de Boer et al., 2011), and Self-Discipline Scale (Şimşir & Dilmaç, 2021). However, these instruments have minor differences as well as common points. Hence, researchers have given substantial attention to the measurement of self-control and related constructs and addressed diversities of these instruments (Duckworth & Kern, 2011; Hagger et al., 2018). On the other hand, researchers addressed the validity of these instruments' different national groups (Hagger et al., 2018). In this vein, our study results confirm the validity of self-control scales in different national groups (e.g., Turkish sample). Our results indicated that all two self-control scales had satisfactory ($\alpha \ge .70$; $\omega \ge .70$) reliability coefficients among the Turkish college students sample (Tabachnick & Fidell, 2015). The results of the confirmatory factor analysis showed that all two self-control scales yielded satisfactory model fit based on the criteria proposed by Kline (2019). Additionally, the relationship between the sub-dimensions of the self-control scale (self-discipline and impulsivity) and all self-control scales supported convergent and discriminant validity. We have presented below the comparison of these scales with the original versions and their psychometric properties.

First, the CFA results for DSC (Ein-Gar & Sagiv, 2014) revealed preliminary evidence for the use of the Turkish sample in evaluating the concept of dispositional self-control in Turkey. The CFA is required to eliminate one item from the Turkish version of the DSC, due to the low factor load coefficient ($\lambda < .30$) (Büyüköztürk, 2012). A low factor loading coefficient in the DSC is likely related to meaning loss in translation or a divergent sense of self-control in the Turkish language and traditions. Additionally, a comparison of the structure analysis map of DSC with the Turkish form of DSC's CFA results demonstrates that both of them have a similar structure in terms of sub-dimensions and item loads. In sum, our results parallel with the original form of DSC as four sub-

dimensions including 16 items. The four sub-dimension of the DSC involves yielding to not doing right temptations, overcoming not doing right temptations, yielding to doing wrong temptations, and overcoming to doing wrong temptations. While doing wrong temptations items related to impulsive and self-indulgent actions, not doing right temptations related to delaying gratifications for future goals. In addition, these sub-dimensions did not differ in terms of gender.

Second, the CFA results of DSCS (Uziel & Baumeister, 2017), which measures peoples' wish for self-control, demonstrated an acceptable model fit in the Turkish sample. The factor loadings of the items of the original form of the DSCS ranged from .74 to .87 (Uziel & Baumeister, 2021). Although the factor loadings of the CFA results of the Turkish version of the DSCS are lower, they are very similar to the original form. Briefly, our results parallel with the original version of DSCS which was indicated as a single-factor model including eight items. Additionally, the structure of DSCS did not differ between men's and women's samples. The consistencies between the English and Turkish versions of the DSCS showed that the perception of desire for self-control is likely similar in both languages and samples.

LIMITATIONS AND FUTURE RESEARCH

Although the results of the present study provide strong evidence for the validity and reliability of DSC, and DSCS among Turkish populations, the limitations of the study should also be considered. First, despite our sample consisting of college students living in 48 different provinces of Turkey, it isn't adequate to generalize our results to the general all adult population. Accordingly, there is a need for studies with larger and more heterogeneous groups to generalize the results. Second, we couldn't examine test-retest reliability to evaluate the stability of the level of self-control over time. Future studies may compensate for this limitation by investigating the level of trait self-control in the progress over time. Third, as our instruments are self-report scales, participants may answer the questions in a careless or biased manner. Therefore, it may be useful for researchers to use other instruments such as semi-structured interview forms with these scales. Finally, the results of the present study provided preliminary evidence. We recommend that researchers maintain to test the psychometric properties of self-control scales in future studies.

CONCLUSION

Despite the limitations mentioned above, the results of the study demonstrated that the Turkish version of DSC, and DSCS has satisfactory psychometric properties to measure self-control among the adult population. As far as we know, this is the first adaptation study that the validity and reliability of DSC, and DSCS in Turkey. Taken together, our results would extend prior literature and confirmed the usefulness of the two different self-control scales in Turkish culture.

STATEMENTS OF PUBLICATION ETHICS

We declare that the study has no unethical problems and ethics committee approval was obtained from Necmettin Erbakan University Scientific Research Ethics Board (Meeting Date: 13.11.2020, Decision No: 2020/87).

RESEARCHERS' CONTRIBUTION RATE

The authors listed contributed to data analysis and manuscript writing. Author order reflects the weight of these contributions.

CONFLICT OF INTEREST

The authors declare that they have no conflict of interest.

REFERENCES

- Achtziger, A., & Gollwitzer, P. M. (2010). Motivation and volition in the course of action. In J. Heckhausen, & H. Heckhausen (Eds.), *Motivation and action* (pp. 275–299). Springer.
- Baumeister, R. F., & Exline, J. (1999). Virtue, personality, and social relations: Self-control as the moral muscle. *Journal of Personality*, 67(6), 1165–1194. https://doi.org/10.1111/1467-6494.00086
- Baumeister, R. F., Bratslavsky, E., Muraven, M. ve Tice, D. M. (1998). Ego depletion: Is the active self a limited resource? *Journal of Personality and Social Psychology*, 74(5), 1252–1265. https://doi.org/10.1037/0022-3514.74.5.1252
- Brislin, R. W. (1980). Translation and content analysis of oral and written material. Harry C. Triandis and. In J. W. Berry (Ed.), *Handbook of cross-cultural psychology* (pp. 389–444). Allyn & Bacon.
- Burger, J. M., & Cooper, H. M. (1979). The desirability of control. *Motivation and Emotion*, 3(4), 381-393.
- Büyüköztürk, Ş. (2012). Sosyal bilimler için veri analizi el kitabı [Manual of data analysis for social sciences] (17th ed.). Pegem Akademi
- de Boer, B. J., Van Hooft, E. A., & Bakker, A. B. (2011). Stop and start control: A distinction within self-control. *European Journal of Personality*, 25(5), 349–362.
- de Ridder, D. T. D., Lensvelt-Mulders, G., Finkenauer, C., Stok, M., & Baumeister, R. F. (2012). Taking stock of self-control: A meta-analysis of how trait self-control relates to a wide range of behaviors. *Personality and Social Psychology Review*, 16, 76–99. https://doi.org/10.1177/1088868311418749
- Duckworth, A. L., & Kern, M. L. (2011). A meta-analysis of the convergent validity of self-control measures. *Journal of Research in Personality*, 45(3), 259-268. https://doi.org/10.1016/j.jrp.2011.02.004
- Duckworth, A. L., & Seligman, M. E. (2006). Self-discipline gives girls the edge: Gender in self-discipline, grades, and achievement test scores. *Journal of Educational Psychology*, 98(1), 198–208. https://doi.org/10.1037/0022-0663.98.1.198
- Duckworth, A. L., Grant, H., Loew, B., Oettingen, G., & Gollwitzer, P. M. (2011). Self-regulation strategies improve self-discipline in adolescents: Benefits of mental contrasting and implementation intentions. *Educational Psychology*, *31*, 17–26. https://doi.org/10.1080/01443410.2010.506003
- Ein-Gar, D., & Sagiv, L. (2014). Overriding "doing wrong" and "not doing right": Validation of the dispositional self-control scale (DSC). *Journal of Personality Assessment*, 96(6), 640–653. https://doi.org/10.1080/00223891.2014.889024
- George, D., & Mallery, M. (2010). SPSS for windows step by step: A simple guide and reference, 17.0 update (10th ed.). Pearson.
- Gillebaart, M., & de Ridder, D. T. (2015). Effortless self-control: A novel perspective on response conflict strategies in trait self-control. *Social and Personality Psychology Compass*, 9(2), 88–99. https://doi.org/10.1111/spc3.12160
- Gottfredson, M. R., & Hirschi, T. (1990). A general theory of crime. Stanford University Press.
- Grasmick, H. G., Tittle, C. R., Bursik, R. J. J., & Arneklev, B. J. (1993). Testing the core empirical implications of Gottfredson and Hirschi's general theory of crime. *Journal of Research in Crime and Delinquency*, *30*, 5–29.
- Hagger, M. S., Gucciardi, D. F., Turrell, A. S., & Hamilton, K. (2019). Self-control and health-related behavior: The role of implicit self-control, trait self-control, and lay beliefs in self-control. *British Journal of Health Psychology*, 24(4), 764–786.
- Hagger, M. S., Zhang, C. Q., Kangro, E. M., Ries, F., Wang, J. C., Heritage, B., & Chan, D. K. (2018). Trait self-control and self-discipline: Structure, validity, and invariance across national groups. *Current Psychology*. Advance online publication. https://doi.org/10.1007/s12144-018-0021-6

- Hauser, M. D. (2019). Patience! How to assess and strengthen self-control. *Frontiers in Education*, 4(25). https://doi.org/10.3389/feduc.2019.00025
- Hofmann, W., Luhmann, M., Fischer, R. R., Vohs, K. D., & Baumeister, R. F. (2013). Yes, but are they happy? Effects of trait self-control on affective well-being and life satisfaction. *Journal of Personality*, 82, 265–277. https://doi.org/10.1111/jopy.12050
- Inzlicht, M., Legault, L., & Teper, R. (2014). Exploring the mechanisms of self-control improvement. *Current Directions in Psychological Science*, 23(4), 302–307. https://doi.org/10.1177/0963721414534256
- Job, V., Dweck, C. S., & Walton, G. M. (2010). Ego depletion—Is it all in your head? Implicit theories about willpower affect self-regulation. *Psychological Science*, 21(11), 1686–1693. https://doi.org/10.1177/0956797610384745
- Kline, R. B. (2019). *Yapisal eşitlik modellemesinin ilkeleri ve uygulamasi [Principles and practice of structural equation modeling]* (S. Şen, Trans.). Nobel Akademi Publishing.
- McCrae, R. R., & Costa Jr., P. T. (2004). A contemplated revision of the NEO five-factor inventory. *Personality and Individual Differences*, *36*, 587–596. https://doi.org/10.1016/S0191-8869(03)00118-1
- Metcalfe, J., & Mischel, W. (1999). A hot/cool-system analysis of delay of gratification: dynamics of willpower. *Psychological Review*, *106*(1), 3–109.
- Milyavskaya, M., & Inzlicht, M. (2017). What's so great about self-control? Examining the importance of effortful self-control and temptation in predicting real-life depletion and goal attainment. *Social Psychological and Personality Science*, 8(6), 603–611. https://doi.org/10.1177/1948550616679237
- Mischel, W., Shoda, Y., & Rodriguez, M. L. (1989). Delay of gratification in children. Science, 244, 933–938.
- Muraven, M., Baumeister, R. F., & Tice, D. M. (1999). Longitudinal improvement of self-regulation through practice: Building self-control strength through repeated exercise. *The Journal of Social Psychology*, 139(4), 446–457. https://doi.org/10.1080/00224549909598404
- Nebioglu, M., Konuk, N., Akbaba, S., & Eroglu, Y. (2012). The investigation of validity and reliability of the Turkish version of the Brief Self-Control Scale. *Bulletin of Clinical Psychopharmacology*, 22(4), 340–351. https://doi.org/10.5455/bcp.20120911042732
- Rosenbaum, M. (1980). A schedule for assessing self-control behaviors: Preliminary findings. *Behavior Therapy*, 11, 109–121.
- Schroder, K. E. E., Ollis, C. L., & Davies, S. (2013). Habitual self-control: A brief measure of persistent goal pursuit. *European Journal of Personality*, 27(1), 82–95. https://doi.org/10.1002/per.1891
- Schroder, K. E., & Schwarzer, R. (2005). Habitual self-control and the management of health behavior among heart patients. *Social Science & Medicine*, 60(4), 859–875. https://doi.org/10.1016/j.socscimed.2004.06.028
- Şimşir, Z., & Dilmaç, B. (2020). Self-discipline in the life of university students: A qualitative research. *Research on Education and Psychology (REP)*, 4(2), 153–171. https://dergipark.org.tr/tr/download/article-file/1343382
- Şimşir, Z., & Dilmaç, B. (2021). The mediating roles of grit and life satisfaction in the relationship between self-discipline and peace: Development of the self-discipline scale. *Current Psychology*. Advance online publication. https://doi.org/10.1007/s12144-021-01515-y
- Sintemaartensdijk, I., & Righetti, F. (2019). Who does most of the work? High self-control individuals compensate for low self-control partners. *Journal of Theoretical Social Psychology*, *3*(4), 209–215. https://doi.org/10.1002/jts5.47
- Stevens, J. P. (2012). Applied multivariate statistics for the social sciences. Routledge.
- Tabachnick, B. G., & Fidell, L. S. (2015). *Çok değişkenli istatistiklerin kullanımı [Using multivariate statistics]* (M. Baloğlu, Trans. Ed.). Nobel Akademik Publishing.

- Tangney, J., Baumeister, R. F., & Boone, A. L. (2004). High self-control predicts good adjustment, less pathology, better grades, and interpersonal success. *Journal of Personality*, 72, 271–324.
- Thompson, B. (2004). Exploratory and confirmatory factor analysis. American Psychological Association.
- Uziel, L., & Baumeister, R. F. (2017). The self-control irony: Desire for self-control limits exertion of self-control in demanding settings. *Personality and Social Psychology Bulletin*, 43(5), 693–705. https://doi.org/10.1177/014616721769555
- Uziel, L., Baumeister, R. F., & Alquist, J. L. (2021, January 21). What makes people want more self-control: a duo of deficiency and necessity. *Motivation Science*. Advance online publication. http://dx.doi.org/10.1037/mot00000213

APPENDIX I Items of Dispositional Self-Control Scale (DSC) (Öz-kontrol Eğilimi Ölçeği)

	1	2	3	4	5
1.Hoşuma gitmeyen görevleri tamamlamayı erteleme eğilimindeyim.*	1	2	3	4	5
2.Yapmam gereken görevleri bazen çok geç oluncaya kadar erteliyorum.*	1	2	3	4	5
3.Daha az önemli işler yapmam gerektiğinde, onları genellikle son dakikaya kadar erteliyorum.*	1	2	3	4	5
4.Çok baskı altında ve aşırı iş yüküm olsa bile insanlar programa uyma konusunda bana güvenebilirler.	1	2	3	4	5
5.Meşgul olsam bile yapılması gereken işleri asla geciktirmem.	1	2	3	4	5
6.Sinir bozucu olsalar bile görevlerimi hemen bitirme eğilimindeyim.	1	2	3	4	5
7.Yol boyunca cezbedicilere direnerek uzun vadeli hedeflerim için etkili bir şekilde çalışabilirim.	1	2	3	4	5
8.Canım yapmak istemese bile tüm görevlerimi zamanında bitirmek benim için önemlidir.	1	2	3	4	5
9.İnsanlar çoğu zaman düşünmeden karar verdiğimi söyler.*	1	2	3	4	5
10.Birçok şeyi düşünmeksizin anında yapıyorum.*	1	2	3	4	5
11.Genellikle tüm alternatifleri düşünmeden hareket ederim.*	1	2	3	4	5
12.Sıklıkla kendiliğinden (spontane) ve biraz aceleci kararlar veririm*	1	2	3	4	5
13.Heyecan verici bir şey yaşadığımda bile duygularıma kapılmam veya düşünmeden hareket etmem.		2	3	4	5
14.Stresli olduğum zaman bile aldığım kararların çoğu dikkate alınır ve hesaba katılır.	1	2	3	4	5
15.Bir şey beni baştan çıkardığında genellikle dayanmayı başarırım.	1	2	3	4	5
16.Cezbedici şeylerin üstesinden gelmeyi genellikle başarırım.	1	2	3	4	5

APPENDIX II Items Desire for Self-Control (DSCS) (Öz-kontrol Arzusu Ölçeği)

	1	2	3	4	5
1.Daha öz-disiplinli olmak istiyorum.	1	2	3	4	5
2.Görevlere daha iyi konsantre olabilmek istiyorum.	1	2	3	4	5
3.Stresli durumlarda verdiğim tepkiler üzerinde keşke daha fazla kontrol sahibi olsaydım.	1	2	3	4	5
4.Cezbedicilere daha iyi karşı koyabilmek istiyorum.	1	2	3	4	5
5.Kötü düşünceler aklıma geldiğinde onları daha iyi kontrol edebilmek istiyorum.	1	2	3	4	5
6.Keşke istenmeyen alışkanlıklarımı değiştirmede daha yetenekli olsaydım.	1	2	3	4	5
7. Duygularım üzerinde daha fazla kontrol sahibi olmak istiyorum.	1	2	3	4	5
8. Hedeflerimin peşinden giderken daha ısrarcı olmak istiyorum.	1	2	3	4	5

Not: Ölçeklerde * ile işaretlenen maddeler ters maddelerdir.