

## The Effects of Some Socio-Demographic and Academic Characteristics of University Students on Self-Control

**Assoc. Prof. Canani Kaygusuz**

19 Mayıs University, Faculty of Education, Department of Psychological Counseling

**Assoc. Prof. Gülsüm Duyan**

Turgut Özal University, School of Health, Department of Social Work

**Prof. Aynur Oksal**

Uludağ University, Faculty of Education, Department of Primary Education

**Professor Dr. Veli Duyan**

Ankara University, Faculty of Health Sciences, Department of Social Work

### Abstract

*This study was carried out to examine the relationship between socio-demographic factors and self-control and investigate if academic life is related with self-control of university students ( $F = 954$ ,  $M = 400$ ). The data was gathered via Self-Control Schedule and Personal Information Form. In the analysis of the data, descriptive statistics,  $t$  test, correlation and variance analysis were employed. The results showed that having a negative life experience within the recent month and gender has an effect on self-control while the variables of age, place of birth, socio-economic status (SES), type of family and place of longest residence had no effect on self-control. Academic research findings regarding the relationship between academic life and self-control revealed that as the study period and total GPA increases self-control scores also increase.*

**Keywords:** College student, self-control, academic setting,

### 1. Introduction

Individuals increase their chance of survival and happiness when they are able to adapt to environmental change when it is necessary and this ability is mostly related with self-control capacity. Self-control capacity is probably the most powerful and useful part of human evolution (Rothbaum, Weisz, & Snyder, 1982). Self-control is perceived as individuals' capacity to change them and to adapt to determine the ideal harmony between themselves and their environment (Rothbaum et al., 1982) and it is claimed this capacity strengthens social life. It is claimed that individuals' capacity to inhibit anti-social impulses and act according to the necessities of group life is the cornerstone of civilization (Freud, 1930). Tangney, Baumeister & Boone (2004) claim that this can only be accomplished by maintaining self-control and lack of self-control is linked with many of the social and personal problems (Baumeister, Heatherton, & Tice, 1994).

Self-control is perceived as an umbrella term connecting different concepts and measures used in various disciplines such as impulsivity, conscientiousness, self-adjusting, delay of gratification, distractibility, hyperactivity, willpower and timing (Moffitt et. al., 2011). Many different field researchers are interested in different aspects of self-control. For example, while neuro-psychologists work on self-control as a component of pre-frontal cortex activity associated with executive function (Eslinger, Flaherty-Craig & Benton, 2004), behavioral geneticists argue that self-control is affected by both genetic and environmental factors and examining the genes is related to this concept (Bouchard, 2004; Epstein, 2006). Psychologists work on the development of self-control skills beginning in childhood and how it changes throughout life (Kochanska, Coy & Murray, 2001., Jackson et al, 2009); while healthcare scientists focus on the relation between self-control and unhealthy behaviors like premature death, psychiatric disorders, overeating, smoking, unsafe sex life, drunk driving, failure to comply with medical regimen (Caspi, Moffitt, Newman, Silver, 1996, Kern, Friedman, 2008).

On the other hand, sociologists point out those low self-control results in unemployment and it also constitutes the foundation for the formation of criminal behavior (Caspi, Wright, Moffitt, & Silva, 1998). These claims give way to the hypothesis that self-control directs people to a happier and healthier life. Indeed, daily observations show that some people are better at managing their lives. For example, some people are better at controlling their anger, maintaining their diets, stopping after drinking a few drinks, saving money, keeping their words, working consistently at the work place and keeping secrets (Tangney et. al., 2004). It is claimed that individuals with high level of self-control are more successful in interpersonal harmony and build more satisfying relationships (Finkel & Campbell, 2000). They also feel more guilt and less shame and even though shame is disruptive, feeling more guilt has benefits in personal and interpersonal relations (Tangney, 1991, 1995; Tangney, Miller, Flicker & Barlow, 1996; Tangney, Wagner & Gramzow, 1992; Baumeister, Stillwell, & Heatherton, 1994; Leith & Baumeister, 1998). Besides these, self-control is also associated with unwanted pregnancies, sexually transmitted diseases, credit card debts, violent crimes, avoiding exercise, cigarette addiction. These studies suggest that self-control is associated with emotional patterns that are useful for both - individuals and people who are in relation with them. Engels, Finkenauer, den Exter Blokland & Baumeister (2000) also revealed that adolescents with high level of self-control show a lot less juvenile delinquency behaviors like fighting, vandalism, theft and drug use. According to Tangney et. al., (2004) who reviewed the studies on the subject, people with high level of self-regulation experience lower levels of anger in situations where anger is expected, they can better regulate food and drink intake, they have better family ties and can establish better interpersonal relationships, they encounter less domestic conflict, have a secure attachment style; have very few impulse control problems such as alcohol use and overeating, have higher scores in academic life, use time effectively and they can avoid emotional fluctuations that can affect success. .

Generally, the theoretical approaches claim that men's level of self-control is lower than that of women's and for this reason criminal behavior is more common among men than women (Burton, Cullen, Evans, Alarid & Dunaway, 1998; Chapple & Johnson, 2007; Moffitt, Caspi, Rutter, & Silva, 2001). According to Hagan et al., (1987)'s power-control theory, the uncontrolled behavior of men is mostly related with their socialization. Men take more risks and their level of self-control is lower because (a) they are kept under less surveillance compared to women (Chapple & Johnson, 2007; Hagan et al., 1987; LaGrange & Silverman, 1999; Moffitt et al., 2001). And (b) they are socialized to take more risks than women especially in patriarchal families ((Chapple & Johnson, 2007; Else-Quest, Shibley Hyde, Goldsmith, & Van Hulle, 2006; Hagan et al., 1987)).

Gottfredson and Hirschi (1990) reported that women are raised under more surveillance and they are reported to be punished more severely than men for their wrong behaviors although self-control behavior is developed through the same social processes such as strong attachment between the child and parents, effective surveillance, acknowledging deviant behavior and the punishment of deviant behaviors regardless of gender. In the patriarchal families boys and girls are treated differently. Boys are supported in risk-taking behavior, because this is one of the characteristics of masculinity. In this type of families girls are taught to remain passive and meet the needs of others. Women's high level of self-control can be explained with their stronger attachment to others, their being under surveillance more strictly than men and the higher possibility of them to be punished upon deviant behavior (Costello & Mederer, 2003). Women are more sensitive to the effects of punishment than men and they also give more importance to the judgment of others about themselves than men (Heimer, 1996). Some of the other studies (Keane, Maxim, & Teevan, 1993; Tittle, Ward & Grasmick, 2003) revealed that men show behaviors that point out their low level of self-control compared to women such as excessive alcohol consumption, smoking, unbalanced relations, making large amount of debt and avoiding the use of seat belt while driving. LaGrange & Silverman (1999) reported that men scored higher than women in impulsivity, current time orientation and risk taking.

There are some studies drawing attention to the relation between self-control and academic competence (Tangney, Baumeister, & Boone, 2004; Wolfe & Johnson, 1995). For example; Feldman, Martinez-Pons and Shaham (1995) reported that children with high level of self-control took higher scores in computer skills training. Mansfield, Pinto, Parente, & Wortman (2004), revealed that the ones with low academic standing have significantly low level of self-control while Wolfe & Johnson (1995) reported that, among 32 personality characteristics, self-control was the only one that significantly affected university students' average scores. In addition, Tice & Baumeister's (1997) study pointed out that negligent (cannot effectively regulate time-related tasks) students experienced greater stress and health problems and received lower grades.

This study was carried out to examine the effects of some socio-demographic variables and some characteristics about the academic lives of university students on self-control.

### *1.1. Purpose and research questions*

Relevant to aim of the present study, the research questions that guided the study were as follows:

1. Is there any relationship between student characteristics and self-control?
2. Is there any relationship between academic characteristics of the students and self-control?

## **2. Method**

### *2.1. Sample*

This study had a sample group of 1354 (F=954; M=400) university students. Most of the students were lived in cities (Rural=274; Urban=874 and Metropolitan area=206) and spent most of their lives in urban areas (Rural=219; Urban=916; Metropolitan areas=219). Average age of the students was 20, 84 (SS=1,71) and they were generally coming from middle socioeconomic status (Low=88; Middle=1104 and High=162) and nuclear families (N=1196).

### *2.2. Measures*

**1. Questionnaire:** The questionnaire includes some socio-demographic characteristics such as students' gender, birth place, socioeconomic level, family type, negative life experiences and the place of longest residence and as academic characteristics it includes questions about current semester of education and academic GPA..

**2. Self-Control Schedule:** Self-Control Schedule was developed by Rosenbaum (1980) in order to evaluate individuals' self-control skills in an effective and theory-based way and the scale's reliability and validity study in Turkish language had been carried out by Duyan, Gülden, & Gelbal (2012). Self-Control Schedule is a self-conducted tool built to evaluate the experiential, renewing and restorative aspects of individuals' self-control skills which is composed of 36 items. The scale's Cronbach Alpha reliability coefficient was determined as 0.809. The items of 4, 6, 8, 9, 14, 16, 18, 19, 21, 29 and 35 are scored reversely. The items can be answered as; "Fits me completely +3, Fits me mostly +2, Fits me a little +1; Does not fit me a little -1, Does not fit me mostly -2, Does not fit me completely -3". Thus the score that can be taken from the scale varies between -108 to +108. Higher scores mean higher level of self-control.

### *2.3. Data Collection*

The data was gathered in class environment by the researchers. The participants had been informed about the aim of the research and volunteer participation was prioritized. The personal information of the participants was not gathered. The process of gathering the data took about 30 minutes for every group/class.

### *2.4. Data Processing and Analysis*

Data obtained from the survey was processed and analyzed with "SPSS 16.0 for Windows" software package. In the statistical analysis of the data, simple tables were used for nominal variables while for interval and ratio variables descriptive statistics like arithmetic mean and standard deviation were used. To examine the relationship between independent and dependent variables; analysis of variance (F), t tests and Pearson product moment correlation coefficient analyses were used to compare the means according to the variables' level of measurement.

## **3. Results**

This study aims to examine if socio-demographic factors affect self-control and whether self-control is associated with academic life or not on the basis of binary groups / clusters. The findings of the study are given as follows:

### *Findings on the effects of socio-demographic characteristics on self-control*

In this study, socio-demographic variables such as gender, place of birth, socioeconomic status (SES), family type, negative life experience and the longest place of residence are determined as variables. The impacts of these variables on self-control are given in Table 1.

**Table1: The impact of socio-demographic variables on self-control.**

Socio-demographic variables		N	Mean	SD	Statistics
Sex	Female	954	35,04		t=4,971*
	Male	400	28,18		
Place of birth	Rural	274	31,29	20,32	F = 1,073
	Urban	874	33,64	23,75	
	Metropolitan area	206	32,67	25,36	
SES	Low	88	34,06	23,76	F = 2.855
	Medium	1104	32,35	23,62	
	High	162	36,96	20,93	
Family type	Nuclear	1196	32,79	23,39	t = -, 978
	Broken	158	34,72	23,06	
Negative life experience	Yes	663	31,41	23,48	t = -2.432*
	No	690	34,49	23,12	
Place of longest residence	Rural	219	31,72	20,85	F=2,732
	Urban	916	33,99	23,61	
	Metropolitan	219	30,21	24,45	
Age		1354	20,84	1,71	r=,036
		1354	33,01	23,36	p = ,183

p<.05

In Table 1, it can be seen that the participants' birth places, their SES, family types and the place of longest residence have no impact on their self-control while their gender and negative life experiences in the recent month affect self-control. In terms of gender, women ( $x = 35.04$ ) had significantly higher level of self-control than males ( $x = 28.18$ ) ( $t = 4.971$ ,  $p < .001$ ); while the ones who had not have any negative life experiences in the recent month had significantly higher level of self-control than those with no negative life experiences in the recent month ( $x = 34.49$ ) ( $t = 2.432$ ,  $P < .01$ ). Although the ones who spent most of their lives in urban areas compared to the ones in rural or metropolitan areas, the ones coming from broken families compared to the ones coming from nuclear families, the ones with high SES compared to the ones with low SES, the ones born in urban areas compared to the ones born in rural or metropolitan areas have higher level of self-control; the differences are not statistically significant. The rise in age has no significant relation with self-control ( $r = .036$ ;  $p > .05$ )

#### *Findings on the relation between academic variables and self-control*

Table 2 shows the findings about whether there is a relation between participants' current semester and their academic gpa's.

**Table 2: The relation between academic variables and self-control**

Academic variables	N	Mean	SD	
Semester	1354	4,53	2,12	$r = .078^*$
Academic Average (GPA)	1354	71,19	19,27	$r = .089^*$

p<.05

Table 2 shows that there are significant relations between participants' current semester, their academic average and self-control.

#### **4. Discussion**

Self-control, which means individuals' capacity to change and adapt in order to attain ideal harmony with themselves and their environments (Rothbaum, et.al. 1982) was determined to be related to social and personal problems (Baumeister, et.al. 1994), it was also determined that people with high level of self-control have less overeating and alcohol intake problems besides having less emotional and behavioral problems (Tangney, Baumeister & Boone, 2004). However, people with low level of self-control had been found to be significantly unhappy about personal harmony, emotional life and school or work life. Moreover, adolescents with high level of self-control had been shown to exhibit less delinquent behaviors such as fights, vandalism, theft and substance abuse (Engels, et.al. 2000).

There are various studies on the relation between self-control and academic competency (Tangney, Baumeister, & Boone, 2004; Wolfe & Johnson, 1995). In a study with bachelor's students (Mansfield et al., 2004), the results showed that the ones with low academic achievement had significantly low self-control. In another study on university students (Wolfe & Johnson 1995), self-regulation was found to be the only personality trait that predicted their average grade out of 32 different personality traits.

In this study, a relation between gender which was among socio-demographic variables and self-control was determined. It is possible to explain this finding to women's upbringing. In Turkey, where traditional social characteristics are still being maintained, the social status of women could not reach an autonomous position. The fact that women are being pressurized especially in terms of sexuality (Ekşi, 1990; Göle, 2008), their being held responsible for negative sexual experiences and punishment even with death (eg, honor killings) might be leading women to be careful about self-control. This way of upbringing starting at very early ages, which is based on gender stereotypes, may be effective on the cognitive construction of women and this may lead them to a higher level of self-control. This view is supported by other studies (Chapple, & Johnson, 2007; Hagan et. al., 1987; LaGrange, & Silverman, 1999; Moffitt et. al., 2001; Blackwell & Piquero, 2005) which provided the evidence for the work of Gottfredson and Hirschi's (1990) and Hagan et. al. (1987) suggesting there were some differences between genders in terms of self-control. These findings can be summarized as that women's self-control level is higher than that of men; because especially in patriarchal families also women are kept under control more than men, besides; their deviant behavior is more probable to be punished than that of men. Moreover, in such families men are encouraged to take risks.

It was found out in this study that there is a relationship between a socio-demographic variable (having a negative life experience in the recent month) and self-control. The reason that individuals' experiencing a negative life event in the recent month had low level of self-control may be due to the weakening of self-defense response because of that negative life experience. There were no findings in the literature showing negative life experiences as a factor affecting self-control. Therefore, these findings are not possible to support via the help of existing literature. In this study, age factor had been found to have no effect on self-control scores which is probably stemming from the fact that the age range of the group was close to each other and they were all in the same developmental stage.

Participants' birthplaces, family types, place of longest residence has no effect on their self-control which shows that such variables does not make any difference on self-control that appears to be a personality characteristic. In other words, the effect of some socio-demographic characteristics on self-control is not dominant enough to make a difference. Participants' semester and GPA's were found to be related to self-control; as the number of semesters increased, their GPA increased which was followed by an increase in the level of their self-control. In the literature there is no finding about the relation between students' semester and the increase in their level of self-control. The rise in self-control and the number of the semesters was first tried to be connected to participants' increasing age but, as mentioned above, age factor had no effect on self-control, which led to the idea that the education given at the university might have properties that strengthen students' self-control levels. It is supported by some studies in the literature that academic averages and self-control have a significant relationship (Tangney, et.al., 2004; Wolfe, & Johnson, 1995; Mansfield et. al., 2004). The level of self-control being high is a factor which makes it easier to focus on personal goals. Thus, goal-orientation may have directed university students to pursue a higher academic achievement. The finding that some socio-demographic characteristics (place of birth, SES, family type, the place of longest residence) had no effect on self-control and the lack of such studies in the literature brings out the need of new studies with different groups in order to determine the socio-demographic effects on self-control. Likewise, the age factor having no effect on self-regulation was thought to be stemming from the fact that the age group of the sample was very close to each other. Working with a group having a wider age range can bring clarity to the subject.

This study also points out the importance of focusing on cultural factors and trying to examine the role of gender in understanding the reason of women's high level of self-control. Relationship between the semester and self-control may lead the educational institutions to review their curriculum and review the factors in their education program that lead to an increase in self-control levels. The relation between academic standing and self-control had been shown in many other studies in the literature. Thus, those who are in expectation of high level of academic success should raise individuals with high self-control.

In consequence, the relationship between academic performance and self-control skills is evident in the given Turkish context and from a social work perspective, it is necessary to determine students' self-control needs, plan and develop psycho-social services, psychological counseling and guidance services at schools. Through these psycho-social services for students; personal development of young people and their academic and social empowerment can be achieved.

## References

- Baumeister, R. F., Heatherton, T. F., & Tice, D. M. (1994). *Losing control: How and why people fail at self-regulation*. San Diego: Academic Press, Inc.
- Baumeister, R. F., Stillwell, A. M., & Heatherton, T. F. (1994). Guilt: An interpersonal approach. *Psychological Bulletin*, 115, 243–267.
- Blackwell, B. S., & Piquero, A. R. (2005). On the relationships between gender, power control, self-control, and crime. *Journal of Criminal Justice*, 33, 1-17.
- Bouchard, T. J. (2004). Genetic influence on human psychological traits. *Current Directions in Psychological Science*, 13, 148–151.
- Burton, V. S., Cullen, F. T., Evans, T. D., Alarid, L. F., & Dunaway, R. G. (1998). Gender, self-control, and crime. *Journal of Research in Crime and Delinquency*, 35, 123-147.
- Caspi A, Moffitt, T. E., Newman D. L., & Silva, P. A. (1996) Behavioral observations at age 3 years predict adult psychiatric disorders. Longitudinal evidence from a birth cohort. *Arch Gen Psychiatry*, 53:1033–1039.
- Caspi, A., Wright, B. R. E., Moffitt, T. E., & Silva, P.A. (1998) Early failure in the labor market: Childhood and adolescent predictors of unemployment in the transition to adulthood. *American Sociological Review*, 63:424–451.
- Chapple, C. L. & Johnson, K. A. (2007). Gender differences in impulsivity. *Youth Violence and Juvenile Justice*, 5, 221-234.
- Costello, B. J., & Mederer, H. J. (2003). A control theory of gender difference in crime and delinquency. In C. L. Britt & M. R. Gottfredson (Eds.), *Control theories of crime and delinquency* (pp. 77-107). New Brunswick, NJ: Transaction.
- Duyan, V., Gülden, Ç., & Gelbal, S. (2012). Öz-Denetim Ölçeği - ÖDÖ: Güvenirlilik Ve Geçerlik Çalışması, *Toplum ve Sosyal Hizmet*, 23,1, 25-38.
- Ekşi, A. (1990). *Çocuk, genç ve ana babalar*. Ankara: Belge yayınevi.
- Else-Quest, N. M., Shibley Hyde, J. S., Goldsmith, H. H., & Van Hulle, C. A. (2006). Gender differences in temperament: A meta-analysis. *Psychological Bulletin*, 132, 33-72.
- Engels, R., Finkenauer, C., den Exter Blokland, E. A. W., & Baumeister, R. F. (2000). *Parental influences on self-control and juvenile delinquency*. Manuscript in preparation, Utrecht University, Netherlands.
- Epstein, R. P., (2006). The molecular genetics architecture of human personality: Beyond self-report questionnaires. *Molecular Psychiatry*, 11, 427–445.
- Eslinger P. J, Flaherty-Craig C. V., & Benton, A. L. (2004) Developmental outcomes after early prefrontal cortex damage. *Brain and Cognition*, 55, 84–103.
- Feldman, S. C., Martinez-Pons, M., & Shaham, D. (1995) The relationship of self-efficacy, self-regulation, and collaborative verbal behavior with grades: Preliminary findings. *Psychological Reports*, 77, (3,1), 971-978.
- Finkel, E., & Campbell, W. K. (2000, February). Ego depletion and accommodation in romantic relationships. Poster presented at the Society for Personality and Social Psychology, Nashville, TN.
- Freud, S. (2011). *Uygurluk ve Hoşnutsuzlukları*, (Çev: Yardımlı, A). İstanbul: İdea Yayınları (özgün eser : Das Unbehagen in der Kultur 1930).
- Gottfredson, M. R., & Hirschi, T. (1990). *A general theory of crime*. Stanford, CA: Stanford University Press.
- Göle, N. (2008). *Melez desenler*. İstanbul: Metis yayınları.
- Hagan, J., Gillis, A. R., & Simpson, J. (1985). The class structure of gender and delinquency: Toward a power-control theory of common delinquency behaviors. *American Journal of Sociology*, 90, 1151-1178.
- Hagan, J., Simpson, J., & Gillis, A. R. (1987). Class in the household: A power-control theory of gender and delinquency. *American Journal of Sociology*, 92, 788-816.
- Heimer, K. (1996). Gender, interaction, and delinquency: Testing a theory of differential social control. *Social Psychology Quarterly*, 59, 39-61.

- Jackson, J. J., et. al. (2009) Not all conscientiousness scales change alike: A multimethod, multisample study of age differences in the facets of conscientiousness. *Journal of Personality and Social Psychology*, 96, 446–459.
- Keane, C., Maxim, P. S., & Teevan, J. J. (1993). Drinking and driving, self-control, and gender: Testing a general theory of crime. *Journal of Research in Crime and Delinquency*, 30, 30-46.
- Kern, M. L., & Friedman, H. S. (2008) Do conscientious individuals live longer? A quantitative review. *Health Psychology*, 27:505–512.
- Kochanska, G., Coy, K. C., & Murray, K. T. (2001) The development of self-regulation in the first four years of life. *Child Development*, 72:1091–1111.
- LaGrange, T. C., & Silverman, R. A. (1999). Low self-control and opportunity: Testing the general theory of crime as an explanation for gender differences. *Criminology*, 37, 41-72.
- Leith, K. P., & Baumeister, R. F. (1998). Empathy, shame, guilt, and narratives of interpersonal conflicts: Guilt-prone people are better at perspective taking. *Journal of Personality*, 66, 1–37.
- Mansfield, P. M., Pinto, M. B., Parente, D. H., & Wortman, T. I. (2004). College students and academic performance: A case of taking control. *NASPA Journal*, 41(3), 551-567.
- Moffitt et al. (2011) A gradient of childhood self-control predicts health, wealth, and public safety. *PNAS*, 108 (7), 2693-2698
- Moffitt, T. E., Caspi, A., Rutter, M., & Silva, P. A. (2001). *Sex differences in antisocial behavior*. Cambridge, England: Cambridge University Press.
- Rosenbaum, M. (1980). A Schedule for assessing self-control behaviors: Preliminary findings. *Behavior Therapy*, 11(1), 109–21.
- Rothbaum, F., Weisz, J. R., & Snyder, S. S. (1982). Changing the world and changing the self: A two-process model of perceived control. *Journal of Personality and Social Psychology*, 42, 5–37.
- Tangney, J. P. (1991). Moral affect: The good, the bad, and the ugly. *Journal of Personality and Social Psychology*, 61, 598–607.
- Tangney, J. P. (1995). Recent advances in the empirical study of shame and guilt. *American Behavioral Scientist*, 38, 1132–1145.
- Tangney, J. P., Wagner, P. E., & Gramzow, R. (1992). Proneness to shame, proneness to guilt, and psychopathology. *Journal of Abnormal Psychology*, 103, 469–478.
- Tangney, J.P., Baumeister, R.F., & Boone, A.L. (2004). High Self-Control Predicts Good Adjustment, Less Pathology, Better Grades, and Interpersonal Success. *Journal of Personality*, 72, 2, 271-324.
- Tangney, J.P., Miller, R. S., Flicker, L., & Barlow, D. H. (1996). Are shame, guilt and embarrassment distinct emotions? *Journal of Personality and Social Psychology*, 70, 1256–1269.
- Tice, D. M., & Baumeister, R. F. (1997). Longitudinal study of procrastination, performance, stress, and health: The costs and benefits of dawdling. *Psychological Science*, 8, 454-458.
- Tittle, C. R., Ward, D. A., & Grasmick, H. G. (2003). Gender, age, and crime/deviance: A challenge to self-control theory. *Journal of Research in Crime and Delinquency*, 40, 426-453.
- Wolfe, R. N., & Johnson, S. D. (1995). Personality as a predictor of college performance. *Educational and Psychological Measurement*, 55, 177–185.