SELF-COMPASSION AND INTERNET ADDICTION

Murat İSKENDER, Ahmet AKIN
Sakarya University, Faculty of Education,
Sakarya,Turkey
iskender@sakarya.edu.tr

ABSTRACT
The purpose of this research is to examine the relationship of self-compassion and internet addiction. Participants were 261 university students who completed a questionnaire package that included the Self-compassion Scale and the Online Cognition Scale. The hypothesis model was tested through structural equation modeling. In correlation analysis, self-kindness, common humanity, and mindfulness factors of self-compassion were found negatively related to internet addiction. On the other hand, self-judgment, isolation, and over-identification factors of self-compassion were found positively correlated to internet addiction. According to path analysis results, internet addiction was predicted negatively by self-kindness and mindfulness. Further self-judgment, isolation, and over-identification predicted internet addiction in a positive way. Results were discussed in the light of literature.
Keywords: Media in education; Human-computer interface; Higher education

1. INTRODUCTION
Self-compassion means being discerning and gentle towards oneself in the face of hardship or perceived inadequacy. It also involves acknowledging that suffering, failure, and inadequacies are part of the human condition, and that all people—oneself included—are worthy of compassion (Neff, 2003b; Neff, Kirkpatrick, & Rude, 2007). Neff (2003a, b) has proposed that self-compassion includes three main components: Self-kindness versus self-judgment, a sense of common humanity versus isolation, and mindfulness versus over-identification. While these three components of self-compassion are conceptually distinct and are experienced differently at the phenomenological level, they interact so as to mutually enhance and engender one another (Neff, 2003a).

The first dimension, self-kindness, contains being kind and understanding toward oneself in instances of pain or failure rather than being harshly self-critical. When noticing some disliked aspect of one's personality, for example, the flaw is treated gently and the emotional tone of language used towards the self is soft and supportive (Neff, 2009). Self-compassion entails not being self-critical when one's expectations are not met and not being harmful to individual's ego in order to make achievements. Instead, self-compassion suggests the individual should encourage his/her ego gently and patiently to change behaviors (Neff, 2003a). Common humanity, the second dimension of self-compassion, is seeing one's happy or painful experiences as not personal, but as all human beings'. The sense of common humanity principal to self-compassion involves recognizing that all humans are imperfect and that they fail and make mistakes (Neff, 2009). Having this kind of awareness, one perceives these experiences as part of the larger human experience rather than feeling isolated and alienated from the society (Neff, 2003a). This awareness also emphasizes one's relatedness to all other humans and to another individual (Kirkpatrick, 2005).

Mindfulness, the third component of self-compassion, is a pre-conceptual awareness that allows individual to accept life's most stressful and painful emotions without being carried away by them (Gunaratana, 1993; Martin, 1997; Neff, 2003a; Nisker, 1998; Rosenberg, 1999). Mindfulness is a state of balanced awareness that one's feelings and thoughts are observed without avoiding or trying to change them, without exaggeration and prejudice. When individuals accept and tolerate their distress and pain and when they are gentle and kind toward themselves they avoid suppressing their emotions and thoughts. Thus, when they are aware that distress and pain are something all humans experience, they are not trapped by over-identification. Therefore, self-compassion functions as an adaptive strategy for emotion-organizing through decreasing negative emotions but creating more positive emotions of kindness and relatedness (Neff, Hsieh, & Dejitterat, 2005).

Although new, the construct of self-compassion shows great promise and demonstrates positive associations with current markers of psychological well-being. Studies have demonstrated that self-compassion is negatively associated with self-criticism, depression, anxiety, rumination, thought suppression (Neff, 2003a), performance-approach/avoidance goals (Akın, 2008a), submissive behavior (Akın, 2009) and positively with social relationship, emotional intelligence, self-determination (Neff, 2003a), learning-approach goals (Akın, 2008a), psychological well-being (Akın, 2008b), control beliefs for learning (Iskender, 2009), self-efficacy (Iskender, 2009), and academic success (Conway, 2007). Also, self-compassion has been shown to be positively related to social identity strength and unrelated to race-based rejection sensitivity (Williams, 2005).

1.1. Internet addiction

The Internet, together with its merits and defects, is widely questioned (Kilimci, 2010) and selecting the 'right' or 'good quality' information has become an issue (Özad & Kutoğlu, 2010). Internet addiction, as a form of technological addiction (Griffiths, 2001) ruins lives by causing neurological complications, psychological disturbances, and relational chaos (Hur, 2006). This phenomenon affects people with varying frequency around the world and has produced negative impacts on the academic, relationship, financial, and occupational aspects of many lives (Chou & Hsiao, 2000; Griffiths, 2000; Young, 1998). As a result, the importance of research on internet addiction has grown (Bayraktar & Gun, 2007; Huang, Wang, Qian, Zhong, & Tao, 2007) and researchers have described a wide range symptoms of internet addiction such as intense preoccupation with using the internet (Chou, 2001), excessive amounts of time spent online, compulsive use of the internet, difficulty in managing the time spent on the internet, feeling that the world outside of the internet is boring, becoming irritated if disturbed while online, and decreased social interaction with ''real'' people (Kraut et al., 1998). They have also characterized internet addiction by psychomotor agitation, anxiety, craving (Ferraro, Caci, D'Amico, & Di Blasi, 2007), hostility (Yen, Ko, Yen, Wu, & Yang, 2007), substance experience (Ko et al., 2006; Yen, Yen, Chen, Chen, & Ko, 2007), loss of control, intolerance, withdrawal, impairment of function, reduced decision-making ability (Ko, Yen, Chen, Chen, & Yen, 2005), and constant online surfing despite negative effects on social and psychological welfare. Correspondingly, research on internet addiction demonstrated that the greater use of the internet is associated positively with some social and psychological variables such as, declines in the size of social circle, depression (Yen, Ko et al., 2007; Young & Rogers, 1998), loneliness (Kraut et al., 1998; Nalwa & Anand, 2003; Whang, Lee, & Chang, 2003), lower self-esteem and life satisfaction (Ko et al., 2005), sensation seeking (Lin & Tsai, 2002), poor mental health (Yang, 2001; Young & Rogers, 1998), external academic locus of control (İskender & Akin, 2010), parent-adolescent conflict (Yen, Yen et al., 2007), and low family function (Armstrong, Phillips, & Saling, 2000; Ko et al., 2005; Yen, Yen et al., 2007) and negatively with internal academic locus of control and social self-efficacy (İskender & Akin, 2010).

1.2. The present study

Because self-compassion research is still developing, studies examining the relationship between self-compassion and some psychological variables such as internet addiction are needed. Thus, the aim of the present study is to examine the relationships between self-compassion and internet addiction. In this study we utilized internet addiction as an indicator of psychological maladjustment and self-compassion as an indicator of psychological adjustment. Based on the relationships of internet addiction (e.g. Ferraro et al., 2007; İskender & Akin, 2010; Ko et al., 2005; Kraut et al., 1998; Nalwa & Anand, 2003; Yang, 2001; Young & Rogers, 1998) and self-compassion (Akın, 2008a; Akın, 2009; Conway, 2007; Iskender, 2009; Neff, 2003a, b; Williams, 2005) with psychological constructs we hypothesized that internet addiction would be associated negatively with self-kindness, common humanity, and mindfulness. We also hypothesized that self-judgment, isolation, and over-identification would be related positively to internet addiction.

2. METHOD

2.1. Participants

Participants were 261 university students enrolled in various undergraduate programs at the Sakarya University, Turkey. Of the participants, 75 were first-year students, 53 were second-year students, 52 were third-year students, and 81 were fourth-year students. One hundred and twenty one of the participants (46%) were males and 140 (54%) were females. A large majority of the students (88%) were between 17 and 24 years of age (20.93 ± 1.24).

2.2. Measures

Self-compassion Scale. Self-compassion was measured by using Turkish version of the Self-compassion Scale (Akın, Akın, & Abacı, 2007; Neff, 2003b). This scale is a 26-item self-report measurement consisting of six sub-scales which measure self-kindness, self-judgment, common humanity, isolation, mindfulness, and over-identification. Each item was rated on a 5-point Likert scale (1=strongly disagree to 5=strongly agree). Language validity findings indicated that correlations between Turkish and English forms were .94, .94, .87, .89, .92, and .94 for six subscales, respectively. Results of confirmatory factor analysis indicated that the model was well-fit and Chi-Square value (x^2= 779.01, N= 633, sd= 264, p= 0.00) which was calculated for the adaptation of the model was found to be significant. The goodness of fit index values of the model were RMSEA= .056, NFI= .95, CFI= .97, IFI= .97, RFI= .94, GFI= .91, and SRMR= .059. The internal consistency coefficients were .77, .72, .72, .80, .74, and .74 and the test-retest reliability coefficients were .69, .59, .66, .60 .69, and .56, for six subscales, respectively.

Online Cognition Scale. Internet addiction was measured using Turkish version of the Online Cognition Scale (OCS, Davis, Flett, & Besser, 2002; Ozcan & Buzlu, 2005). This scale contains 36 items on a 7-point Likert-type

scale (1=strongly disagree to 7=strongly agree). It has four sub-dimensions: Diminished impulse control (10 items), loneliness/depression (6 items), social comfort (13 items), and distraction (7 items). A sum of all scores yields a total score that ranges from 36 to 252; higher scores indicate higher internet addiction level. The Cronbach alpha internal consistency coefficients of the adapted Turkish form were .79 for diminished impulse control, .60 for loneliness/depression, .84 for social comfort, .73 for distraction, and .91 for entire scale. For test-retest reliability the scale was administered to 148 undergraduate students twice in four weeks. The Pearson correlation coefficients were .89, .76, .87, .85, and .90, respectively (Ozcan & Buzlu, 2005).

2.3. Procedure
Permission for participation of students was obtained from related chief departments and students voluntarily participated in research. Completion of the questionnaires was anonymous and there was a guarantee of confidentiality. The instruments were administered to the students in groups in the classrooms. The measures were counterbalanced in administration. Prior to administration of measures, all participants were told about purposes of the study.

2.4. Statistical Analysis
In this research, Pearson correlation coefficient and structural equation modeling was utilized to determine the relationships between internet addiction and self-compassion. The variables which were entered in structural equation modeling were measured by summing the items of each scale. These analyses were carried out via LISREL 8.54 (Joreskog & Sorbom, 1996) and SPSS 13.0.

3. RESULTS
3.1. Descriptive Data and Inter-correlations
Table 1 shows the means, standard deviations, inter-correlations, and internal consistency coefficients of the variables used.

Table 1: *Descriptive Statistics, Alphas, and Inter-correlations of the Variables*

Variables	1	2	3	4	5	6	7
1. Self-kindness	1						
2. Self-judgment	-.29**	1					
3. Common humanity	.66**	-.26**	1				
4. Isolation	-.00	.51**	.00	1			
5. Mindfulness	.66**	-.32**	.60**	-.20**	1		
6. Over-identification	-.31**	.67**	-.32**	.54**	-.35**	1	
7. Internet addiction	-.41**	.67**	-.30**	.42**	-.36**	.50**	1
Mean	14,70	13,18	11,61	11,42	12,20	11,29	81,70
Standard deviation	4,46	4,54	3,27	3,51	3,49	3,76	43,52
Alpha	.69	.68	.53	.61	.69	.67	.95

**p < .01

When Table 1 is examined, it is seen that there are correlations between self-compassion and internet addiction. Self-kindness (r=−.41), common humanity (r=−.30), and mindfulness (r=−.36) related negatively to internet addiction. In contrary, self-judgment (r=.67), isolation (r=.42), and over-identification (r=.50) were found positively associated with internet addiction. There were also significant correlations between dimensions of self-compassion.

3.2. Structural Equation Modeling
Hypothesized model was examined via structural equation modeling (SEM). Figure 1 presents the results of SEM analysis, using maximum likelihood estimations. The model fitted well ($\chi2$ =.06, *p* =.32621, GFI =.99, AGFI =.96, CFI =1.00, NFI =.99, RFI =.98, IFI =1.00, SRMR =.018, and RMSEA =.025) and also accounted for 72% of the internet addiction variances.
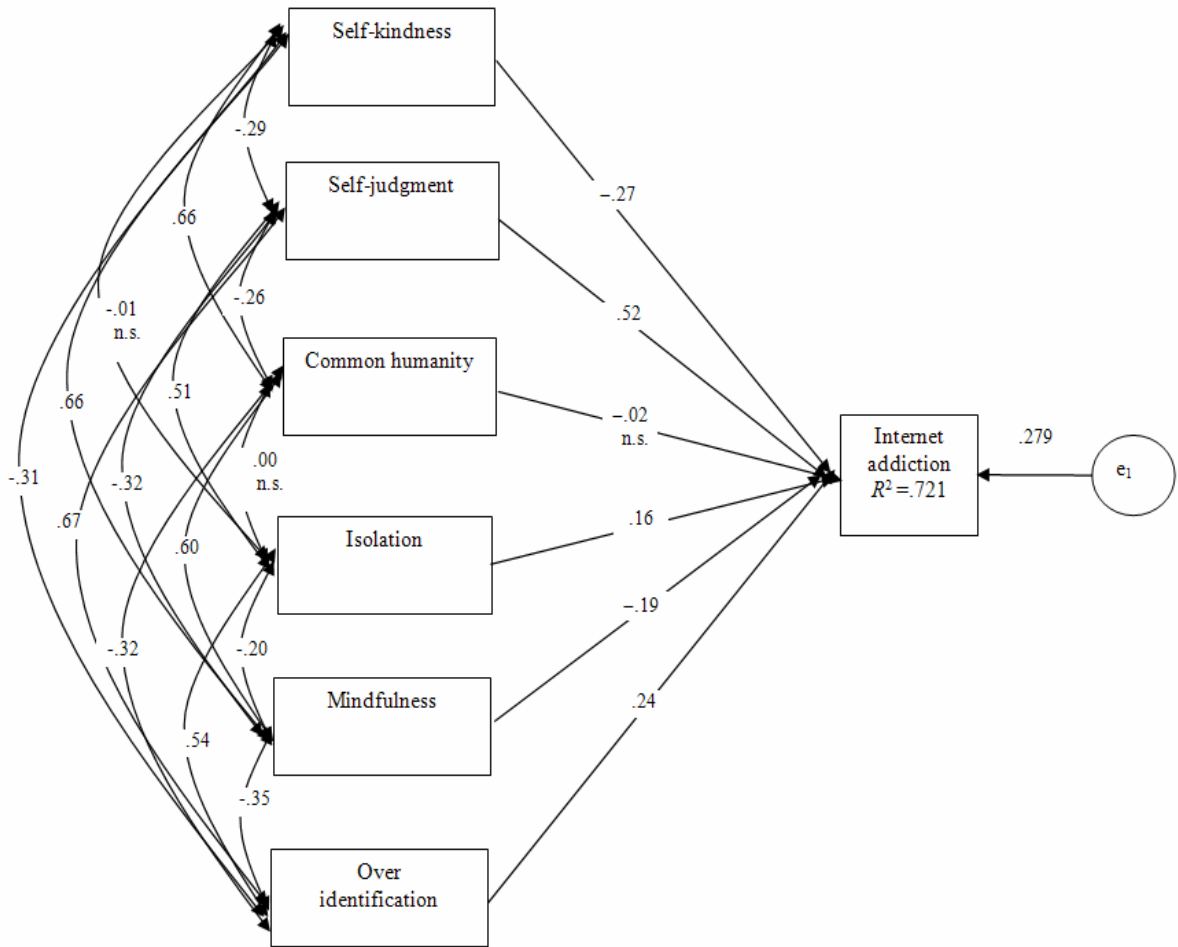
Figure 1: Path analysis between self-compassion and internet addiction

The standardized coefficients in Figure 1 clearly showed that internet addiction was predicted negatively by self-kindness (-.27) and mindfulness (-.19). On the other hand, self-judgment, isolation, and over-identification predicted internet addiction in a positive way (.52, .16, and .24, respectively). However, the path from common humanity to internet addiction wasn't significant.

4. DISCUSSION
The purpose of this research was to examine the associations between self-compassion and internet addiction. Findings have demonstrated that there are relationships between these variables. Also the goodness of fit indexes of the path model indicated that the model was acceptable (Hu & Bentler, 1999).

As predicted, the path model delineated that self-kindness and mindfulness, predicted internet addiction in a negative way. These dimensions of self-compassion are adaptive in nature and they represent that, in the event of negative life-experiences, individual's approach toward himself is warm, gentle, and kind. Also, self-compassion is a strong negative predictor of anxiety and depression even after controlling for self-criticism (Neff, 2003a), suggesting that self-compassion provides unique buffering effects (Neff, 2009). Moreover, self-kindness and mindfulness dimensions has been associated positively with well-being indices such as feelings of autonomy and competence (Neff, 2003a), happiness, optimism, positive affect (Neff, Rude, & Kirkpatrick, 2007), psychological well-being (Akın, 2008b), control beliefs for learning (Iskender, 2009), self-efficacy (Iskender, 2009), and learning-approach goals (Akın, 2008a). On the other hand, research showed that internet addiction was associated with several maladaptive variables such as depression (Yen, Ko et al., 2007; Young & Rogers, 1998), loneliness (Kraut et al., 1998; Nalwa & Anand, 2003; Whang, Lee, & Chang, 2003), lower self-esteem, and life satisfaction (Ko et al., 2005). So it can be said that the internet addiction may be viewed as a sign of psychopathology. When thought in this context, the negative relationships between self-kindness, mindfulness, and internet addiction are not surprising.

However self-judgment, isolation, and over-identification which can be viewed as maladaptive components of self-compassion were found positively correlated with internet addiction. Among all other variables the self-judgment dimension has the highest correlation with internet addiction. Research on self-compassion generally demonstrated that self-judgment, isolation, and over-identification factors related positively to negative variables such as anxiety, depression, self-criticism, neuroticism, rumination, thought suppression, neurotic perfectionism (Neff, 2003a, b; Neff, Rude, & Kirkpatrick, 2007), and submissive behavior (Akın, 2009). In parallel recent studies on internet addiction showed that internet addiction related positively to decrease in social interactions, depression, loneliness, and lower self-esteem (Ko et al., 2005; Kraut et al., 1998). Consistent with these results in this study self-judgment, isolation, and over-identification were found positively related to internet addiction. Thus, it can be said that an increment in self-judgment, isolation, and over-identification will increase internet addiction.

The present research makes several contributions. First, it demonstrates that self-compassion associated with internet addiction. Second, to our knowledge, this study was the first to examine the relationships between these variables. However research investigating the relationships between self-compassion, internet addiction, and other psychological constructs are needed, to reinforce the findings of this study. It is also important to note that research on self-compassion is still in its nascent phases and more research will need to be done before any policy implications can be drawn.

This research suggests that the encouragement of self-compassion could be highly beneficial for diminishing internet addiction. Encouraging the development of self-compassion should be useful for students by helping them to counter destructive self-critical tendencies, recognize their interconnection with others, and deal with their emotions with greater clarity and equanimity (Neff, 2003a). This study has also several implications for prevention of internet addiction. Because, students who are addicted to the internet usually suffer from problems in their daily routine, school performance, family relationships, and mood (Young & Rogers, 1998), it is important for mental health professionals to develop interventional strategies for preventing internet addiction. Also students should be encouraged to make a healthy and timely use of the internet as an invaluable tool for enhancing their academic skills and worldwide communication (Ghassemzadeh, Shahraray, & Moradi, 2008).

Limitations of the study may be acknowledged. First, participants were university students and replication of this study for targeting other student populations should be made in order to generate a more solid relationship among constructs examined in this study, because generalization of the results is somewhat limited. Second, as correlational statistics were utilized, no definitive statements can be made about causality. And last, the data reported here for self-compassion and internet are limited to self-reported data.

Consequently, this research shows that self-compassion has a direct impact on internet addiction. Students high in self-judgment, isolation, and over-identification are more likely to vulnerability to internet addiction than are people high in self-kindness and mindfulness. Thus, the current findings increase our understanding of the relationships between self-compassion and internet addiction. We hope that our results may help educational agencies for designing suitable self-compassion development programs geared toward the college population.

REFERENCES
Akın (2009). Self-compassion and submissive behavior. *Education and Science, 34*(152), 138–147.
Akın (2008a). Self-compassion and achievement goals: A structural equation modeling approach. *Eurasian Journal of Educational Research, 31*, 1–15.
Akın (2008b). Scales of Psychological well-being: A study of validity and reliability. *Educational Science: Theory & Practice, 8*(3), 721–750.
Akın, Ü., Akın, A., & Abacı, R. (2007). Self-compassion Scale: A study of validity and reliability. *Hacettepe University Journal of Education, 33*, 1–10.
Armstrong, L., Phillips, J., & Saling, L. (2000). Potential determinants of heavier internet usage. *International Journal of Human-Computer Studies*, *53,* 537–550.
Bayraktar, F., & Gun, Z. (2007). Incidence and correlates of internet usage among adolescents in North Cyprus. *CyberPsychology & Behavior, 10*(2), 191–197.
Chou, C. (2001). Internet heavy use and addiction among Taiwanese college students: An online interview study. *Cyberpsychology & Behavior, 4*(5), 573–585.
Chou, C., & Hsiao, M. C. (2000). Internet addiction, usage, and gratifications the Taiwan's college students' case. *Computers & Education, 35,* 65–80.
Conway, D. G. (2007). *The role of internal resources in academic achievement: Exploring the meaning of self-compassion in the adaptive functioning of low-income college students.* Unpublished doctoral dissertation, University of Pittsburgh, PA, USA.

Davis, R. A., Flett, G. L., & Besser, A. (2002). Validation of a new scale for measuring problematic internet use: Implications for pre-employment screening. *CyberPsychology & Behavior*, *5,* 331–345.

Ferraro, G., Caci, B., D'Amico, A., & Di Blasi, M. (2007). Internet addiction disorder: An Italian study. *CyberPsychology & Behavior, 10,* 170–175.

Ghassemzadeh, L., Shahraray, M., & Moradi, A. (2008). Prevalence of internet addiction and comparison of internet addicts and non-addicts in Iranian high schools. *CyberPsychology & Behavior, 11*(6), 731–733.

Griffiths, M. D. (2000). Does internet and computer ''addiction'' exist? Some case study evidence. *CyberPsychology & Behavior, 3,* 211–218.

Griffiths, M. (2001). Sex on the internet: Observations and implications for internet sex addiction. *Journal of Sex Research, 38,* 333–351.

Gunaratana, V. H. (1993). *Sati. In mindfulness in plain English.* Somerville, MA: Wisdom Publications.

Hu, L. T., & Bentler, P. M. (1999). Cut off criteria for fit indexes in covariance structural analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 6,* 1–55.

Huang, Z., Wang, M., Qian, M., Zhong, J., & Tao, R. (2007). Chinese Internet Addiction Inventory: Developing a measure of problematic internet use for Chinese college students. *Cyberpsychology & Behavior, 10,* 805–811.

Hur, M. H. (2006). Demographic, habitual, and socioeconomic determinants of internet addiction disorder: An empirical study of Korean teenagers. *CyberPsychology & Behavior*, *9*(5), 514–525.

Iskender, M. (2009). The relationship between self-compassion, self-efficacy, and control belief about learning in Turkish university students. *Social Behavior and Personality, 37*(5), 711–720.

İskender, M., & Akin, A. (2010). Social self-efficacy, academic locus of control, and internet addiction. *Computers & Education*, 54, 1101–1106.

Joreskog, K. G., & Sorbom, D. (1996). *LISREL 8 reference guide.* Lincolnwood, IL: Scientific Software International.

Kilimci, S. (2010). Integration of the internet into a language curriculum in a multicultural society, *The Turkish Online Journal of Educational Technology-TOJET,* 9(1), 107-113.

Kirkpatrick, K. L. (2005). *Enhancing self-compassion using a Gestalt two-chair intervention.* Unpublished doctoral dissertation, University of Texas at Austin.

Ko, C. H., Yen, J. Y., Chen, C. C., Chen, S. H., & Yen, C. F. (2005). Gender differences and related factors affecting online gaming addiction among Taiwanese adolescents. *Journal of Nervous and Mental Disease, 193*(4), 273–277.

Ko, C., Yen, J., Chen, C., Chen, S., Wu, K., & Yen, C. (2006). Tri-dimensional personality of adolescents with internet addiction and substance use experience. *Canadian Journal of Psychiatry, 51*(14), 887–894.

Kraut, R., Patterson, M., Lundmark, V., Kiesler, S., Mukopadhyay, T., & Scherlis, W. (1998). Internet paradox: A social technology that reduces social involvement and psychological well-being? *American Psychologist, 53*(9), 1017–1031.

Lin, S. S. J., & Tsai, C. C. (2002). Sensation seeking and internet dependence of Taiwanese high school adolescents. *Computers in Human Behavior, 18,* 411–426.

Martin, J. R. (1997). Mindfulness: A proposed common factor. *Journal of Psychotherapy Integration, 7*, 291–312.

Nalwa, K., & Anand, A. (2003). Internet addiction in students: A cause of concern. *CyberPsychology & Behavior, 6*(6), 653–656.

Neff, K. D. (2003a). Self-compassion: An alternative conceptualization of a healthy attitude toward oneself. *Self and Identity, 2*(2), 85−102.

Neff, K. D. (2003b). The development and validation of a scale to measure self-compassion. *Self and Identity, 2*(3), 223−250.

Neff, K. D. (2009). Self-Compassion. In M. R. Leary & R. H. Hoyle (Eds.), Handbook of Individual Differences in Social Behavior (pp. 561-573). New York: Guilford Press.

Neff, K. D., Hsieh, Y., & Dejitterat, K. (2005). Self-compassion, achievement goals, and coping with academic failure. *Self and Identity, 4*, 263−287.

Neff, K. D., Kirkpatrick, K. L., & Rude, S. S. (2007). Self-compassion and adaptive psychological functioning. *Journal of Research in Personality, 41*, 139–154.

Neff, K. D., Rude, S. S., & Kirkpatrick, K. L. (2007). An examination of self-compassion in relation to positive psychological functioning and personality traits. *Journal of Research in Personality, 41*, 908–916.

Nisker, W. (1998). Mindfulness: The opposable thumb of consciousness (Chapter 3). In *Buddha's nature: A practical guide to discovering your place in the cosmos* (pp. 26−30). New York: Bantam Books.

Özad, B. E., & Kutoğlu, Ü. (2010). The use of the internet in media education, *The Turkish Online Journal of Educational Technology-TOJET,* 9(2), 245-255.

Ozcan, N. K., & Buzlu, S. (2005). An assistive tool in determining problematic internet use: Validity and reliability of the Online Cognition Scale in a sample of university students. *Journal of Dependence, 6*(1), 19–26.

Rosenberg, L. (1999). Breathing with the body (Chapter 1). In *Breath by breath: The liberating practice of insight meditation* (pp. 10–39). Boston: Shambala.

Yang, C. K. (2001). Sociopsychiatric characteristics of adolescents who use computers to excess. *Acta Psychiatrica Scandinavica, 104,* 217–222.

Yen, J., Ko, C., Yen, C., Wu, H., & Yang, M. (2007). The comorbid psychiatric symptoms of internet addiction: Attention deficit and hyperactivity disorder (ADHD), depression, social phobia, and hostility. *Journal of Adolescent Health, 41,* 93–98.

Yen, J. Y., Yen, C. F., Chen, C. C., Chen, S. H., & Ko, C. H. (2007). Family factors of internet addiction and substance use experience in Taiwanese adolescents. *Cyberpsychology & Behavior, 10,* 323–329.

Young, K. S. (1998). Internet addiction: The emergence of a new clinical disorder. *CyberPsychology & Behavior, 1*(3), 237–244.

Young, K. S., & Rogers, R. C. (1998). The relationship between depression and internet addiction. *CyberPsychology & Behavior, 1,* 25–28.

Whang, L. S., Lee, S., & Chang, G. (2003). Internet over-users' psychological profiles: A behavior sampling analysis on internet addiction. *Cyberpsychology & Behavior, 6*(2), 143–150.

Williams, J. G. (2005). *Forewarning: A tool to disrupt stereotype threat effects.* Unpublished doctoral dissertation, University of Texas at Austin, TX, USA.