

Research Note

Procrastination Among Undergraduate Students: Effects of Emotional Intelligence, School Life, Self-Evaluation, and Self-Efficacy

Henry P.H. Chow

University of Regina

Procrastination is considered a complex phenomenon with cognitive, affective, and behavioral elements that involves the intentional postponement of an intended course of action despite awareness of possible negative consequences (Rothblum, Solomon, & Murakami, 1986; Steel, 2007). Procrastination on academic tasks is a common problem among students (Day, Mensink, & O'Sullivan, 2000; Schouwenburg, 1995; Solomon & Rothblum, 1984; Wolters, 2003). A substantial body of literature has shown a negative association between procrastination and academic performance (Akinsola, Tella, & Tella, 2007; Beck, Koons, & Milgrim, 2000; Elvers, Polzella, & Graetz, 2003; Moon & Illingworth, 2005; Orpen, 1998; Tice & Baumeister, 1997; Wang & Englander, 2010). As well, procrastination has been linked to other adverse behavior and outcomes including poor study habits, test anxiety, cramming for examinations, late submission of course work, fear of failure, fear of social disapproval by peers, lower grades, sense of guilt, and depression (Clark & Hill, 1994; Dewitte & Schouwenburg, 2002; Ferrari & Scher, 2000; Fritzsche, Young, & Hickson, 2003; Lay & Schouwenburg, 1993; Lee, 2005; Midgley & Urdan, 2001; Uzun Ozer, Demir, & Ferrari, 2009). However, there is also evidence to suggest that some students use procrastination strategically to help them juggle multiple responsibilities (Sokolowska & Zusho, 2006) or to offset negative emotions related to upcoming deadlines (Tice & Baumeister, 1997). In this article we present the findings from a study that explored the determinants of procrastination in a sample of undergraduate students.

Method

The data for this analysis were based on a questionnaire survey of undergraduate students¹ that was conducted during the academic year 2006-2007 at the University of Regina (Chow, 2009). The sample comprised 94 (27.5%) male and 248 (72.5%) female students with an average age of 22.06 years ($SD=5.63$). Caucasian students ($n=288$, 85.0%) and Canadian citizens ($n=331$, 97.1%) constituted most of the sample. A sizable proportion of the respondents were registered with the Faculties of Arts ($n=201$, 57.8%), Social Work ($n=50$, 14.4%), and Administration ($n=42$, 12.1%). With respect to marital status, most were single or never married ($n=273$, 79.8%). About two thirds of the respondents indicated either Protestantism ($n=93$, 26.6%) or

Catholicism ($n=139$, 39.7%) as their religious affiliation. Over half the sample had a father ($n=187$, 56.3%) or a mother ($n=216$, 64.1%) with postsecondary education. As well, over three fifths of the sample ($n=198$, 62.6%) reported an annual family income of more than \$60,000.

Data Analysis

Procrastination was measured using a modified version of the 10-item Procrastination Scale developed by Schwarzer, Schmitz, and Diehl (2000). Respondents were asked to indicate the extent to which the 10 statements represented their opinions about themselves using a five-point Likert scale (1=*not at all true* to 5=*very true*). The descriptive statistics are presented in Table 1. A summated score² ($M=30.73$, $SD=5.46$) based on these 10 items was computed and

Table 1
Descriptive Statistics for Items Measuring Procrastination

	1	2	3	4	5	M	N
	n	n	n	n	n	(SD)	
	(%)	(%)	(%)	(%)	(%)		
a. It is often days before I get around to do things that I wanted to do right away	22 (6.5)	60 (17.7)	101 (29.8)	127 (37.5)	29 (8.6)	3.24 (1.05)	339
b. I begin each day with a clear picture of what I want to achieve for that day	23 (6.8)	74 (21.8)	98 (28.9)	114 (33.6)	30 (8.8)	3.16 (1.08)	339
c. I frequently complete tasks earlier than is required	49 (14.5)	131 (38.8)	84 (24.9)	57 (16.9)	17 (5.0)	2.59 (1.08)	338
d. I often take on things which I then end up not doing	52 (15.4)	123 (36.4)	95 (28.1)	56 (16.6)	12 (3.6)	2.57 (1.05)	338
e. When it comes to putting my plans into action I am disciplined	14 (4.1)	48 (14.2)	133 (39.3)	126 (37.3)	17 (5.0)	3.25 (.91)	338
f. Tasks that still have not been completed worry me	8 (2.4)	21 (6.2)	49 (14.5)	163 (48.4)	96 (28.5)	3.94 (.94)	337
g. I manage to organize my day in such a way that by evening I feel I have carried out the most important jobs	18 (5.4)	63 (18.8)	112 (33.3)	110 (32.7)	33 (9.8)	3.23 (1.04)	336
h. I don't allow the most important things in my life to become "buried" in everyday stress	14 (4.2)	73 (21.7)	95 (28.3)	120 (35.7)	34 (10.1)	3.26 (1.04)	336
i. I often have a guilty conscience because I know that I put things off.	17 (5.0)	50 (14.8)	80 (23.7)	128 (37.9)	63 (18.6)	3.50 (1.11)	338
j. If I have received an e-mail, it can sometimes take days before I reply.	58 (17.2)	76 (22.5)	68 (20.1)	78 (23.1)	58 (17.2)	3.01 (1.35)	338

1=*not at all true* to 5=*very true*.

used for regression analysis. This scale was found to be internally consistent with a Cronbach's alpha reliability coefficient of .688.

To explore the major factors contributing to procrastination, a multiple ordinary least-squares (OLS) regression model was constructed using 10 predictor variables.³ The OLS regression model for procrastination as shown in Table 2 was found to be statistically significant ($F(10,339)=10.646, p<.001$) and accounted for 21.7% of the variation. Socioeconomic status (SES) ($\beta=-.108, p<.05$), self-evaluation ($\beta=-.119, p<.05$), self-efficacy ($\beta=-.149, p<.05$), emotional intelligence ($\beta=-.156, p<.05$), and satisfaction with school life ($\beta=-.192, p<.001$) were found to be significantly related to procrastination. Specifically, students who reported lower SES held a less positive attitude toward themselves, scored lower on the self-efficacy scale, demonstrated a lower level of emotional intelligence, and expressed dissatisfaction with school life were more likely to procrastinate.

Discussion and Conclusion

This analysis revealed a close link between SES and procrastination. In the light of the high costs associated with university attendance,⁴ students from a lower socioeconomic background may worry more about their financial situation. Earlier research has shown a strong relationship between worry and procrastination (Stober & Joormann, 2001). With respect to self-evaluation, respondents who evaluated themselves more negatively were found to be more likely to procrastinate. This is not surprising as empirical evidence demonstrates that low self-esteem or feelings of worthlessness lead to avoidance of tasks that might result in failure (Ferrari, 2000).

Table 2

Unstandardized and Standardized Ordinary Least-squares Regression Coefficients for Effects of Sociodemographic and Background Variables on Procrastination

	b	β
1. Sex	-.628	-.052
2. Age	-.069	-.072
3. Socio-economic status	-.708	-.108*
4. Religious affiliation	-.331	-.026
5. Emotional intelligence	-.058	-.156*
6. Academic aspirations	-.023	-.003
7. Self-evaluation	-.687	-.119*
8. Emotional well-being	.057	.050
9. Self-efficacy	-.139	-.149*
10. Satisfaction with school life	-1.177	-.192***
(Constant)	55.192	
<i>F</i>	10.646 ***	
<i>R</i> ²	.239	
Adjusted <i>R</i> ²	.217	
<i>N</i>	350	

* $p<.05$; *** $p<.001$.

Congruent with earlier studies on self-efficacy and procrastination (Ferrari, Parker, & Ware, 1992; Klassen, Krawchuk, & Rajani, 2007; Seo, 2008; Tan et al., 2008), a negative association was found between these two variables. This suggests that an individual's lack of task or domain confidence can result in delaying initiation or completion of tasks. As emotional intelligence is considered a learned ability to understand, use, and express emotions in healthy and productive ways (Nelson & Low, 1999, 2003), the finding that students who scored lower on the emotional intelligence scale tended to procrastinate more is not unexpected (Deiz, Traz, & Aydogan, 2009; Pychyl, 2009). Finally, respondents who expressed dissatisfaction with school life were more likely to procrastinate. This may be due to lack of motivation and interest in their program of study.

To conclude, it is vital to identify students who are at risk for procrastination. The results from this preliminary analysis should be of interest to academic advisors, counselors, and educators. Intervention programs designed to assist struggling students and to reduce procrastination would be beneficial. As the current findings are limited by the cross-sectional design of the study and the use of a non-random sample of students, causal interpretations must be made cautiously. A further limitation concerns the reliance on self-reported measures of procrastination. Additional research is needed with undergraduate student populations in other geographical locations. It would also be worthwhile to explore the differences among students who attend diverse types of postsecondary institutions (e.g., university vs. community college). This area of research can be strengthened by the inclusion of a behavioral index of task postponement (Howell, Watson, Powell, & Buro, 2006). Other predictor variables such as perfectionism, approaches to learning, achievement goals, and personality should also be taken into consideration in future studies.

Note

1. Using a convenience sample, 350 undergraduate students attending the University of Regina participated in this survey. With the co-operation of the faculty members in the Department of Sociology and Social Studies, questionnaires were distributed to various sociology and social studies classes. Students were informed both in writing and verbally that participation was voluntary and that return of their completed survey would serve as their participation consent. The survey took approximately 15 to 20 minutes to complete and no incentive was provided. Although the respondents were recruited from Sociology and Social Studies classes, it should be emphasized that these 350 students were officially registered with quite a number of faculties and schools, including Administration, Arts, Education, Engineering & Applied Science, Fine Arts, Kinesiology & Health Studies, Science, and Social Work.
2. It should be noted that five items (*b, c, e, g, and h*) were re-coded to create a scale that a higher score would reflect higher levels of procrastination.
3. Ten predictor variables were used in the multiple OLS regression model for *procrastination*: *Sex* was a dichotomous variable (1=male; 0=female). *Age* ($M=22.06$, $SD=5.63$) was measured in years. *Socio-economic status* ($M=3.49$, $SD=.82$) was a continuous variable measured on a 5-point scale ranging from 1 (low) to 5 (high). *Religious affiliation* was a categorical variable (1=Protestant; 0=other). *Academic aspirations* ($M=3.41$, $SD=.75$) was based on the highest educational credential that respondents expected to obtain (1=Do not expect to obtain a degree or diploma or certificate; 2=university diploma or certificate; 3=bachelor's degree; 4=master's degree; 5=doctoral degree). *Self-*

evaluation ($M=3.74$, $SD=.92$) was based on respondents' degree of agreement with the statement "I take a positive attitude toward myself" measured on a five-point scale (1 = strongly disagree to 5 = strongly agree). *Emotional well-being* was an additive score ($M=16.86$, $SD=4.69$) based on respondents' frequency of feeling sad ($M=2.94$, $SD=.96$), lonely ($M=2.66$, $SD=1.09$), stressed ($M=4.08$, $SD=.92$), like crying ($M=2.78$, $SD=1.23$), depressed ($M=2.41$, $SD=1.18$), and hopeless ($M=2.00$, $SD=1.15$) in the past thirty days measured on a 5-point scale (1=never to 5=very frequently). This scale has a Cronbach's alpha reliability coefficient of .809. *Satisfaction with school life* ($M=3.63$, $SD=.88$) was based on respondents' satisfaction with their school life measured on a 5-point scale ranging from 1 (very dissatisfied) to 5 (very satisfied). *Emotional intelligence* was measured using the Emotional Intelligence Scale developed by Schutte et al. (1998). A composite score ($M=117.47$, $SD=13.09$) was generated based on respondents' degree of their agreement with 33 statements using a 5-point scale (1=strongly disagree to 5=strongly agree). This scale has a Cronbach's alpha reliability coefficient of .879. *Self-efficacy* was measured using the General Self-efficacy Scale developed by Schwarzer and Jerusalem (1995). An additive score ($M=37.62$, $SD=5.82$) was computed based on respondents' opinions on ten statements measured on a 5-point scale ranging from 1 (not at all true) to 5 (very true). This additive scale has a Cronbach's alpha reliability coefficient of .903. See Chow (2009) for more detailed statistical analyses of the emotional intelligence and self-efficacy scales used.

4. Canadian full-time undergraduate students paid an average of \$ 4,917 in tuition fees for the 2009-2010 academic year, up from \$ 4,747 the year before. During the 1990s, the undergraduate tuition fees increased at an annual average rate of more than 9.6%. Since 2000, increases have slowed to an average of 3.8% (Statistics Canada, 2009, 2007).

Acknowledgments

This survey was conducted under the auspices of the Department of Sociology and Social Studies at the University of Regina. Appreciation is extended to Jenna Bedel, Zdenka Chloubova, Gillian Gay, Jodie Hills, Troy Kolish, Kelly LaLonde, Aaron Machuk, Bret Matlock, Kevin Meacher, Jayne Mitchell, Dominic Rubrecht, Joleen Yuchscherer, and Mandi Woodrow for their research assistance, and to Lap-chi Yu, Chap-ning Wong, Yau-tsang Chan, She-weng Chow, and John Conway for their unflagging support.

References

- Akinsola, M.K., Tella, A., & Tella, A. (2007). Correlates of academic procrastination and mathematics achievement of university undergraduate students. *Eurasia Journal of Mathematics, Science and Technology Education*, 3, 363-370.
- Beck, B., Koons, S., & Milgrim, D. (2000). Correlates and consequences of behavioral procrastination: The effects of academic procrastination, self-consciousness, self-esteem, and self-handicapping. *Journal of Social Behavior and Personality*, 15, 3-13.
- Chow, H.P.H. (2009). *EQ, quality of life, life goals, test anxiety, and educational experience: A survey of university students in Regina*. Regina, SK: Department of Sociology and Social Studies, University of Regina.
- Clark, J.L., & Hill, O.W. (1994). Academic procrastination among African-American college students. *Psychological Reports*, 75, 931-936.
- Day, V., Mensink, D., & O'Sullivan, M. (2000). Patterns of academic procrastination. *Journal of College Reading and Learning*, 30, 120-134.

- Deiz, M.E., Tras, Z., & Aydogan, D. (2009). An investigation of academic procrastination, locus of control, and emotional intelligence. *Educational Sciences: Theory and Practice, 9*, 623-632.
- Dewitte, S., & Schouwenburg, H. (2002). Procrastination, temptations, and incentives: The struggle between the present and the future in procrastinators and the punctual. *European Journal of Personality, 16*, 469-489.
- Elvers, G., Polzella, D., & Graetz, K. (2003). Procrastination in online courses: Performance and attitudinal differences. *Teaching of Psychology, 30*, 159-162.
- Ferrari, J.R. (2000). Procrastination and attention: Factor analysis of attention deficit, boredomness, intelligence, self-esteem, and task delay frequencies. *Journal of Social Behavior and Personality, 15*, 185-196.
- Ferrari, J.R., Parker, J.T., & Ware, C.B. (1992). Academic procrastination: Personality correlates with Myers-Briggs types, self-efficacy, and academic locus of control. *Journal of Social Behavior and Personality, 7*, 495-502.
- Ferrari, J.R., & Scher, S.J. (2000). Toward an understanding of academic and nonacademic tasks procrastinated by students: The use of daily logs. *Psychology in the Schools, 37*, 359-366.
- Fritzsche, B.A., Young, B.R., & Hickson, K.C. (2003). Individual differences in academic procrastination tendency and writing success. *Personality and Individual Differences, 35*, 1549-1557.
- Howell, A.J., Watson, D.C., Powell, R.A., & Buro, K. (2006). Academic procrastination: The pattern and correlates of behavioral postponement. *Personality and Individual Differences, 40*, 1519-1530.
- Klassen, R.M., Krawchuk, L.L., & Rajani, S. (2007). Academic procrastination of undergraduates: Low self-efficacy to self-regulate predicts higher levels of procrastination. *Contemporary Educational Psychology, 33*, 915-931.
- Lay, C.H., & Schouwenburg, H.C. (1993). Trait procrastination, time management, and academic behavior. *Journal of Social Behavior and Personality, 8*, 647-662.
- Lee, E. (2005). The relationship of motivation and flow experience to academic procrastination in university students. *Journal of Genetic Psychology, 166*, 5-14.
- Midgley, C., & Urdan, T. (2001). Academic self-handicapping and performance goals: A further examination. *Contemporary Educational Psychology, 26*, 61-75.
- Moon, S., & Illingworth, A. (2005). Exploring the dynamic nature of procrastination: A latent growth curve analysis of academic procrastination. *Personality and Individual Differences, 38*, 297-309.
- Nelson, D., & Low, G. (1999). *Exploring and developing emotional intelligence skills*. Kingsville, TX: EI Learning Systems.
- Nelson, D., & Low, G. (2003). *Emotional intelligence: Achieving academic and career excellence*. Upper Saddle River, NJ: Prentice-Hall.
- Orpen, C. (1998). The causes and consequences of academic procrastination: A research note. *International Journal of Research and Method in Education, 21*, 73-75.
- Pychyl, T.A. (2009). Increasing emotional intelligence, decreasing procrastination. *Psychology Today*. Retrieved August 27, 2009, from: <http://www.psychologytoday.com/blog/dont-delay/200904/increasing-emotional-intelligence-decreasing-procrastination>
- Rothblum, E.D., Solomon, L.J., & Murakami, J. (1986). Affective, cognitive, and behavioral differences, between high and low. *Journal of Counseling Psychology, 33*, 387-394. .
- Schouwenburg, H. (1995). Academic procrastination: Theoretical notions, measurement, and research. In J.R. Ferrari & J.L. Johnson (Eds.), *Procrastination and task avoidance: Theory, research, and treatment* (pp. 71-96). New York: Plenum Press.
- Schutte, N., Malouff, J., Hall, L., Haggarty, D., Cooper, J., Golden C., & Dornheim, L. (1998). Development and validation of a measure of emotional intelligence. *Personality and Individual Differences, 25*, 167-177.
- Schwarzer, R., & Jerusalem, M. (1995). Generalized self-efficacy scale. In J. Weinman, S. Wright, & M. Johnston (Eds.), *Measures in health psychology: A user's portfolio. Causal and control beliefs* (pp.

- 35-37). Windsor, UK: NFER-NELSON.
- Schwarzer, R., Schmitz, G. S., & Diehl, M. (2000). *Procrastination scale*. Available: <http://www.fu-berlin.de/gesund/skalen>
- Seo, E.H. (2008). Self-efficacy as a mediator in the relationship between self-oriented perfectionism and academic procrastination. *Social Behavior and Personality*, 36, 753-764.
- Sokolowska, J., & Zusho, A. (2006). "Effective" procrastination strategies? *Self-regulation of academic procrastination among high achievers*. Paper presented at the American Psychological Association Annual Convention, New Orleans.
- Solomon, L.J., & Rothblum, E.D. (1984). Academic procrastination: Frequency and cognitive-behavioral correlates. *Journal of Counseling Psychology*, 31, 503-509.
- Statistics Canada. (2007). University tuition fees, 2007/2008. *The Daily*, October 18.
- Statistics Canada. (2009). University tuition fees, 2009/2010. *The Daily*, October 20.
- Steel, P. (2007). The nature of procrastination: A meta-analytic and theoretical view of quintessential self-regulatory failure. *Psychological Bulletin*, 133, 65-94.
- Stober, J., & Joormann, J. (2001). Worry, procrastination, and perfectionism: Differentiating amount of worry, pathological worry, anxiety, and depression. *Cognitive Therapy and Research*, 25, 49-60.
- Tan, C.X., Ang, R.P., Klassen, R.M., Yeo, L.S., Wong, I.Y.F., Huan, V.S., & Chong, W.H. (2008). Correlates of academic procrastination and students' grade goals. *Current Psychology*, 27, 135-144.
- 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.
- Uzun Ozer, B., Demir, A., & Ferrari, J.R. (2009). Exploring academic procrastination among Turkish students: Possible gender differences in Prevalence and Reasons. *Journal of Social Psychology*, 149, 241-257.
- Wang, Z., & Englander, F. (2010). A cross-disciplinary perspective on explaining student performance in introductory statistics—What is the relative impact of procrastination? *College Student Journal*, 44, 458-471.
- Wolters, C.A. (2003). Understanding procrastination from a self-regulated learning perspective. *Journal of Educational Psychology*, 95, 179-187.

Henry Chow is a professor and Graduate Program Co-ordinator in the Department of Sociology and Social Studies at the University of Regina and an adjunct faculty member in the Department of Sociology at the University of Calgary. He received his doctorate in sociology and equity studies in education from the Ontario Institute for Studies in Education of the University of Toronto. His areas of interests include the sociology of education, criminal justice, and ethnic studies. He can be reached at the Department of Sociology and Social Studies, University of Regina, 3737 Wascana Parkway, Regina SK S4S 0A2; Tel: 306-585-5604; Fax: 306-585-4815; e-mail: Henry.Chow@uregina.ca