

- Kirby, J. & Biggs, J. (1981). Learning styles, information processing abilities, and academic achievement Final Report, Australian Research Grants Committee, Belconnen, A.C.T.
- Magnussen, I., & Endler, N. (Eds.), 1977. *Personality at the crossroads*. Hillsdale, NJ: Lawrence Erlbaum.
- Marton, F., Hounsell, D. & Entwistle, N. (Eds.). (1984). *The experience of learning*. Edinburgh: Scottish Academic Press.
- Marton, F. & Saljo, R. (1976). On qualitative differences in learning: I. Outcome and process. *British Journal of Educational Psychology*, 46, 411.
- Neil, M. J. & Child, D. (1984). Biggs' SPQ: A British study of its internal structure. *British Journal of Educational Psychology*, 54, 228-234.
- Watkins, I. (1983). Assessing tertiary study processes. *Human Learning*, 2, 29-37.
- Watkins, D. & Hattie, J. (1981). The learning processes of Australian university students: Investigations of contextual and personal factors. *British Journal of Educational Psychology*, 51, 384-93.
- Watkins, D. & Hattie, J. (1985). A longitudinal study of the approaches to learning of Australian tertiary students. *Human Learning*, 4, 121-142.
- Wilson, J. D. (1981). *Student learning in higher education*. London: Croom Helm.

Psychological Antecedents of Student Procrastination

Gery Beswick *The Flinders University of South Australia*, Esther D. Rothblum *University of Vermont*, and Leon Mann *The Flinders University of South Australia*

Abstract: The study examined three psychological explanations for procrastination: indecision (Janis & Mann, 1977); irrational beliefs about self-worth (Ellis & Knaus, 1977); and low self-esteem (Burka & Yuen, 1983). Times taken by 245 students in a first-year Psychology course to submit three separate assignments (a term-paper outline, a term paper, and a research questionnaire) were recorded and correlated with measures of indecision, irrational beliefs, and self-esteem, depression and anxiety. Similarly, students' self-reported frequency of procrastination was correlated with the above measures. Small but significant correlations were found between indecision, irrational beliefs, and low self-esteem and two measures of procrastination: time taken to submit a term paper and self-reported frequency of procrastination. Multiple regression analyses revealed that self-esteem and, to a lesser extent, indecision accounted for significant unique portions of the variance in procrastination. Significant correlations were also found between anxiety and depression and the two measures of procrastination. A significant negative correlation was found between self-reported procrastination and final course grade, indicating that procrastination is detrimental to academic performance. It was found that older students (21 and over) were less likely to procrastinate than younger students.

Procrastination is a destructive habit, creating difficulties in study, career and personal life. In modern industrial society time and punctuality are considered important values. A heavy cost is carried by those who are dilatory. Procrastinators suffer psychological stress in their frantic efforts to meet impending deadlines and undergo the pain of failure and criticism for failing to meet deadlines.

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Requests for reprints should be sent to Gery Beswick, Department of Psychology, The Flinders University of South Australia, Bedford Park, South Australia, 5042.

Procrastination on academic tasks is a common problem among students (Solomon & Rothblum, 1984). Many students report that they defer preparation for tests and examinations until the last minute and hand in assignments after the deadline. The present study investigates the phenomenon of delay in student submission of assignments as well as students' perceptions of their tendency to procrastinate. The aim of the study is to examine several theoretical explanations for student procrastination as well as several factors associated with procrastination tendencies, such as anxiety and depression. The theoretical approaches to be examined are Janis and Mann's (1977) postulate that conflict and indecision are a cause of procrastination, Ellis and Knaus' (1977) view that procrastination is due to irrational beliefs held by people who equate their self-worth with their performance on tasks, and Burka and Yuen's (1983) observation that procrastination is used as a protective device by people with fragile self-esteem.

Indecision and Procrastination

Janis and Mann's (1977) conflict theory of decision making treats procrastination as a major "coping pattern" for dealing with difficult decisions. According to conflict theory, the antecedents of procrastination include severe decisional conflict coupled with pessimism about finding a satisfactory solution to the problem. Procrastination is therefore a means of dealing with conflict and indecision. For example, the student who habitually procrastinates may be deeply conflicted about whether or not to continue on a course of studies. In specific cases, the student who puts off starting work on an assignment may be conflicted about which topic to choose or may be undecided about what is required. Mann (1982) has devised a scale of procrastination as it relates to conflictful decisions. Items include: "Even after I have made a decision I delay acting upon it"; "I delay making decisions until it is too late"; "I put off making decisions"; "I waste a lot of time on small matters before getting to the final decision"; "When I have to make a decision I wait a long time before starting to think about it." The decision procrastination scale has a Cronbach alpha of .80 and a test-retest reliability of .69.

We assume that if conflict and indecision are major factors in procrastination, this will be reflected in a strong association between scores on Mann's (1982) decision-procrastination scale and the tendency to procrastinate.

Irrational Beliefs and Procrastination

Ellis and Knaus (1977) regard procrastination as an emotional disturbance stemming from irrational thoughts. According to Ellis and Knaus, one of the major irrational beliefs leading to procrastination is the idea that "I must do well" to prove that "I am a worthwhile person." Inevitably, when the person fails to do well, the irrational belief produces a loss of self-esteem ("self-downing"). The irrational belief also acts as an incentive to defer starting and

completing work. The student begins to reason "This assignment will only confirm my inadequacy as a person" and is therefore motivated to avoid putting his or her self-esteem on the line once again.

To examine the role of irrational beliefs in procrastination, students will be administered the Ellis scale of irrational cognitions, devised by MacDonald and Games (1972). The scale consists of 11 items measuring subjects' tendency to endorse "irrational" beliefs such as "One must be perfectly competent, adequate, and achieving to consider oneself worthwhile" and "There is always a right or perfect solution to every problem and it is catastrophic if it is not found". McDonald and Games report a Cronbach alpha of .79 for the scale. We expect that if irrational beliefs are a key factor in procrastination, then a strong association will be found between scores on the scale of irrational cognitions and the tendency to procrastinate.

Fragile Self-esteem and Procrastination

Burka and Yuen (1983) have observed that a fragile sense of self-esteem is a personality trait commonly found among procrastinators. Several theoretical approaches including Ellis and Knaus (see above) discuss low self-esteem as a concomitant of procrastination. However, Burka and Yuen (1983), more than other writers, emphasize procrastination as a strategy to protect a vulnerable sense of self-esteem. Among procrastinators "putting things off acts as a buffer for their shaky sense of self-worth" (Burka & Yuen, 1982, p. 32).¹ To test whether low self-esteem is a major factor in procrastination, we will examine the relationship between a well-known measure of self-esteem (Rosenberg, 1965) and the tendency to procrastinate.

Other Correlates of Procrastination

While procrastination may be functional in enabling the student to cope with conflict and indecision (Janis & Mann, 1977), to avoid confirmation of the irrational belief that one is an inadequate person (Ellis & Knaus, 1977), and to protect a vulnerable sense of self-esteem (Burka & Yuen, 1983), it is also likely to produce psychological costs, such as anxiety and depression. The procrastinator may be painfully aware that procrastination is a problem. The consequences of habitual procrastination are likely to be anxiety, despair, and depression as the person fails to complete tasks or performs them unsatisfactorily. To test the assumption that procrastination is accompanied by anxiety and depression, scores on the Spielberger Trait Anxiety Inventory (Spielberger, Gorsuch, & Lushene, 1968) and the Beck Depression Inventory (Beck & Beamesdorfer, 1974) will be correlated with students' tendency to procrastinate.

1. Burka and Yuen's (1983) model of procrastination is multifaceted. Although low self-worth is a central component of their cycle of procrastination they, in fact, describe several "types" of procrastinators.

Rehe:riu oral Procrastination

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 at hiii hdickk, low self-esteem, and procrastination is a study of student ↑
 ardiness in submitting work required as part of a first-year course in ↑
 1'srchology at an Australian university. The measures used to determine ↑
 procrastination consist of three items:

1. True taken to submit the outline of a term paper.
2. Time taken to submit a 1,000 word term paper.
3. Time taken to return a research questionnaire.

Specific deadlines were set and announced for each of the three tasks. The second datum, time taken to submit the term paper, is the main measure because grades on the paper counted toward the final course grade and late submission drew a penalty. The third datum, time taken to return the research questionnaire, is of interest because it provides a check on whether students who procrastinate on academic work also delay on non-academic tasks.

Self-reported Procrastination

We are also interested in learning whether delay in submitting academic assignments is regarded as a problem by students. Accordingly, included in the study is a measure of students' self-reported tendency to procrastinate on various academic tasks and the extent to which such procrastination is regarded as a personal problem. The measure, modified from Solomon and Rothblum's (1984) Procrastination Assessment Scale (PASS), consists of questions regarding three academic tasks: writing a term paper, studying for exams, and keeping up with weekly readings. Self-reported tendency to procrastinate on the task (never [1] to always [5]) and the extent to which it is regarded as a problem (not at all [1] to always [5]) together yield a score for each task ranging from 0 to 10 and a maximum total score of 30 for the three tasks combined. Students were also asked to indicate for each task whether they wanted to decrease any tendency to procrastinate (do not want [1] to definitely [5]).

The present study had the following aims: (a) to test the association between measures of indecision, irrational beliefs, and self-esteem (three theoretical explanations for procrastination) and behavioural procrastination and self-reported procrastination on academic tasks; (b) to examine the association of procrastination with anxiety and depression; and (c) to examine the relationship between procrastination and academic performance in the course. Finally, because of the high proportion of mature-entry students at the university, we were able to examine the effects of age and full-time versus part-time enrolment on procrastination.

Method

Participants

The sample consisted of 245 students (81 males, 164 females) enrolled in a first-year Psychology course at The Flinders University of South Australia. All participants completed a research questionnaire and returned it to the Student Office. The course enrolment was 404 students, thus the participation rate in this study was 61%. Mean age of the sample was 23 years (range 16-58 years). Of the 245 subjects, 189 were full-time students and 54 were enrolled part-time (two students did not provide information on their enrolment status). Checks conducted on the final grades of the 245 students participating in the study indicated that they were somewhat better students than the non-participants.

Procedure

At the conclusion of a lecture in June students were each handed a packet of questionnaires and were asked to complete and return them to the Student Office within one week where they were date-and time-stamped. The packet of questionnaires contained the Procrastination Assessment Scale (Solomon & Rothblum, 1984), the Ellis Scale of Irrational Cognitions (MacDonald & James, 1972), the Beck Depression Inventory (Beck & Beamesdorfer, 1974), the Rosenberg Self-Esteem Scale (Rosenberg, 1965), and the State-Trait Anxiety Inventory (Spielberger et al., 1968). Earlier in the year (March) students had filled out the Decision-Procrastination Scale (Mann, 1982) as part of a separate study. Behavioural measures of procrastination consisted of three items which students had to submit during the course: (a) outline of a term paper; (b) the term paper itself; (c) the packet of research questionnaires handed out in class. Time taken by each student to submit each of these pieces was recorded in the Student Office where they were date-and time-stamped on arrival. In addition, students' grades on the two academic assignments - the term paper outline and the term paper - were recorded as a measure of academic performance and students' final grades in the Psychology course were recorded at the end of the year (December).

Results

Punctuality and Procrastination

Table 1 shows the number and percentage of students handing in assignments and the research questionnaire before the day of deadline, on the day of deadline, and after the deadline. As Table 1 shows, most students handed in their assignments on the day of deadline (88% for the outline, 79% for the essay), while most (73%) handed in the packet of research questionnaires prior to the day of deadline. However, there was a considerable range in submission time, with some students handing in assignments up to a week after the deadline.

While there is little evidence of procrastination in an absolute sense (i.e., missed deadlines) there is some evidence of the "last-minute rush" kind of

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Task	Time to deadline	Day of deadline	After deadline	Mean time of deadline	Range of return times
Submit term paper outline	$t = 24$ (11c)	$n = 196$ (88ri)	$n = 4$ (2%)	4.4 hrs pre-deadline	5 days 1 hr pre-deadline 8 days 9 hrs post-deadline
Submit term paper	$t = 32$ (15t)	$n = 181$ (79(1i))	$n = 14$ (6%)	6.5 hrs pre-deadline	7 days 7 hrs pre-deadline -8 days 5 hrs post-deadline
Hand in research questionnaires	$n = 177$ (73ri)	$n = 41$ (17ri)	$n = 23$ (10%)	3 days 0.5 hrs pre-deadline	6 days 9 hrs pre-deadline -9 days 9 hrs post-deadline

procrastination that impairs performance. There was a negative correlation between time to hand in the term paper outline and grade for this assignment ($r = -.16$, $df = 224$, $p < .05$). The relationship between time taken to hand in the term paper and grade for the term paper was nonsignificant ($r = .10$, $df = 229$, ns). Self-reported procrastination correlated significantly with grade for the term paper outline ($r = -.26$, $df = 238$, $p < .001$), grade for the term paper ($r = -.21$, $df = 239$, $p < .001$), and final grade for the Psychology course ($r = -.30$, $df = 221$, $p < .001$). Thus, students who report and reveal tendencies to defer academic tasks tend to do less well academically, reflecting either the haste in which the work was completed or the possibility that weaker students put off doing their work. As older students tended to achieve higher grades, we recalculated the association between self-reported procrastination and final grade in the course, holding the age factor constant by means of partial correlation. The significant partial correlation of $r = -.16$, $df = 221$; $p < .05$ between academic procrastination and final grade indicated that, irrespective of the age of the student, procrastination was linked with lower grades.

Procrastination as a Personal Problem

A substantial proportion of students report strong tendencies to procrastinate in their studies. For example, 46% reported they "nearly always" and "always" procrastinate when writing term papers; 35% indicated that procrastination on writing term papers constitutes a personal problem; and 62% wanted to cut down on the habit. A similar pattern of responses was found on the task of studying for exams (31% nearly always or always procrastinate) and keeping up with weekly reading assignments (47% nearly

always or always procrastinate). Reported frequency of procrastination was associated with the tendency to view procrastination as a personal problem ($r = .61$ for essays; $r = .52$ for exam preparation; $r = .51$ for weekly readings - all $df = 245$, $p < .001$). It is clear, however, that not all students who admit to procrastination regard it as a problem and this has implications for their motivation to do something about it.

Relationship Between Measures of Procrastination

Pearson product moment correlations were performed between the three behavioural measures of procrastination (times taken to hand in the term paper outline, the term paper, and the research questionnaire) and self-reported procrastination. The strongest correlation was between times for handing in the term paper outline and the term paper ($r = .43$, $df = 220$, $p < .001$). Self-reported procrastination correlated significantly with times for handing in the term paper outline ($r = .36$, $df = 223$, $p < .001$) and the term paper ($r = .23$, $df = 228$, $p < .001$). Thus, students who were slow to hand in assignments recognise that they tend to procrastinate on academic tasks. None of the correlations involving time to return the research questionnaire were significant. The remainder of this article concentrates on statistical analyses involving submission of the term paper, the main behavioural measure.

Evaluating the Antecedents of Procrastination

To what extent is procrastination a function of conflict and indecision (Janis & Mann, 1977), irrational beliefs about personal inadequacy (Ellis & Knaus, 1977) or a vulnerable sense of self-esteem (Burka & Yuen, 1983)? Table 2 presents correlations between the measures of indecision, irrational beliefs, self-esteem, and behavioural and self-reported procrastination.

Procrastination and indecision. Consistent with Janis and Mann's (1977) theory of procrastination as a strategy for coping with conflictful decisions, there was a small but significant correlation ($r = .15$, $df = 203$, $p < .05$) between decisional procrastination and delay in submitting the term paper. There was also a significant correlation ($r = .32$, $df = 207$, $p < .001$) between decision procrastination and self-reported procrastination.

Procrastination and irrational beliefs. There was no evidence to support the Ellis and Knaus (1977) view that irrational beliefs are a determinant of behavioural delay. The correlation between irrational beliefs and time taken to submit the term paper was negligible ($r = .03$, $df = 224$, ns). There was a small but significant correlation between irrational beliefs and self-reported procrastination ($r = .20$, $df = 239$, $p < .01$).

Procrastination and low self-esteem. Consistent with Burka and Yuen's (1982) postulate that procrastination is a means of protecting a vulnerable sense of self-esteem, there was a significant negative correlation between self-esteem and delay in submitting the term paper ($r = -.20$, $df = 223$, $p < .01$).

Table 2 Correlations Between Theoretical Antecedents and Concomitants of Procrastination and Delay in Submitting Term Paper and Self-reported Frequency of Procrastination

	Behavioural procrastination (time handed in term paper)	Self-reported procrastination (PASS score)
Antecedents		
Indecision (Slann)	$r = .15$ $df = 203$ $p < .05$	$r = .32$ $df = 207$ $p < .001$
Irrational beliefs (Slacktonald & Games)	$r = .03$ $df = 224$ ns	$r = .20$ $df = 239$ $p < .01$
Self-esteem (Roscnherg)	$r = -.20$ $df = 223$ $p < .01$	$r = -.35$ $df = 237$ $p < .001$
Concomitants		
Anxiety (Spielberger et al.)	$r = .16$ $df = 220$ $p < .05$	$r = .40$ $df = 234$ $p < .001$
Depression (Beck & Beamesdorler)	$r = .14$ $df = 216$ $p < .05$	$r = .27$ $df = 228$ $p < .001$

Similarly, there was a significant negative correlation between self-esteem and self-reported procrastination ($r = -.35$, $df = 237$, $p < .001$).

Predictors of Voluntarily Reported Procrastination

The question arises whether the three psychological explanations cover much the same ground or make a unique contribution in predicting procrastination. A multiple regression analysis was performed using time taken to hand in the term paper as the dependent variable, entering self-esteem into the regression first, then indecision and irrational beliefs, to determine the portions of variance for which they account. Self-esteem accounted for a small but significant portion of the variance (5%), but indecision (10% and irrational beliefs (less than 1%) contributed little extra.

A multiple regression analysis was also performed on self-reported procrastination as the dependent variable, again entering self-esteem, indecision, and irrational beliefs as predictor variables. Self-esteem and indecision accounted for significant portions of the variance (12% and 3% respectively), but irrational beliefs contributed little.

Accordingly, low self-esteem and, to a lesser extent, indecision both account for unique variance in explaining procrastination, whereas the measure of irrational beliefs makes little additional contribution.

Correlates of Procrastination

It was postulated that procrastination is likely to be associated with the psychological costs of anxiety and depression. Table 2 shows significant correlations of both anxiety and depression with delay in submitting the term paper ($r = .16$, $df = 220$, $p < .05$, and $r = .14$, $df = 216$, $p < .05$, respectively). There were also significant correlations between anxiety and self-reported procrastination ($r = .40$, $df = 234$, $p < .001$) and depression and self-reported procrastination ($r = .27$, $df = 228$, $p < .001$).

Age, Gender and Student Status as Factors in Procrastination

Two students did not provide information on their age, but the remaining 42 subjects were split into two age groups: under 21 ($n = 139$) and 21 and over ($n = 103$). The older students took less time to submit their first assignment than the younger students, $F(1,216) = 9.5$, $p < .001$; and the older students reported less procrastination on writing essays, $F(1,240) = 16.1$, $p < .001$; studying for exams, $F(1,241) = 24.6$; $p < .001$; and keeping up with weekly readings, $F(1,241) = 6.8$, $p < .01$.

Looking at the hypothesised antecedents and concomitants of procrastination, older students reported higher self-esteem, $F(1,236) = 20.1$, $p < .001$; and were less irrational, $F(1,238) = 37.7$, $p < .001$; less indecisive, $F(1,204) = 9.8$, $p < .01$; less anxious, $F(1,232) = 27.0$, $p < .001$; and less depressed, $F(1,227) = 18.4$, $p < .001$. Thus, mature-age students may procrastinate less because they have greater psychological strengths than younger students.

There was no difference between full- and part-time students on time taken to submit the first assignment, but part-time students reported less procrastination on all academic tasks, $F(1,241) = 7.6$, $p < .01$. This finding was confounded by the fact that only 8 of the 53 part-time students were under 21, so the part/full-time variable was dropped from further analyses.

Finally, no gender differences were found in the time taken to submit the first assignment nor in self-reported procrastination on academic tasks.

Discussion

It is striking that while only a minority of students (6%) submitted the term paper after the deadline, a large proportion reported that they nearly always or always procrastinate on writing term papers (46%), that procrastination on term papers is nearly always or always a problem (35%), and that they would like to decrease procrastination on this task (62%). This apparent discrepancy could reflect unnecessary concern or inaccurate self-perception by students. However, it is likely that students recognise that tendencies to put off work create problems and lead to poor grades. Although most students meet deadlines, it is possible that many manage only after frantic last-minute activity. Such procrastination may not be evident to course instructors, but is reflected in the correlation between behavioural and self-reported procrastination ($r = .23$ for the term paper).

The fact that students tend to see procrastination as a problem bears on the question of whether they are more interested in creating a positive impression of themselves rather than reporting accurately on their study habits. Our belief is that the data are valid. First, as shown, there were significant correlations between self-reported procrastination and actual procrastination in submitting work. Second, self-reported procrastination was significantly correlated with poorer performance in the course - the term paper and the final grade. Third, there is evidence from previous work on procrastination that scores on the PASS are not affected by social desirability responses (Dalton, Rothblum & Solomon, 1984).

Only modest support was found for the three theoretical explanations of procrastination. The factor of irrational beliefs (Ellis & Knaus, 1977) was a weak predictor, yielding close to zero correlation with time taken to hand in the term paper and a small, albeit significant, correlation with self-reported frequency of procrastination. There was a stronger relationship between indecision and procrastination on academic tasks (Janis & Mann, 1977). Low self-esteem (Burka & Yuen, 1983) was most strongly associated with behavioural delay and self-reported procrastination, and it emerged from the multiple regression analyses as a stronger predictor of procrastination than indecision and irrational beliefs. But clearly, the three theoretical approaches are not mutually exclusive or contradictory. Students who have difficulty in getting down to work and submitting assignments tend to have low self-esteem, report being indecisive and hold irrational beliefs about personal standards. These procrastinating students tend also to be more anxious and depressed. However, the modest proportion of variance accounted for by these cognitive/personality factors suggests that other psychological factors must be considered for a full accounting of student procrastination. Some likely contributors to such an account include inefficient study habits, poor work organisation, competing claims on time, low motivation for study, and uncertain career goals.

Older students exhibited and reported less procrastination than younger students. Procrastination has been found to increase the longer students are in college (Scmb, Glick & Spencer, 1979), leading to the assumption that procrastination is "learned" in college. Perhaps this pertains only to the traditional younger college students. It appears that students who begin their studies as mature-age adults may have resources such as higher self-esteem, stronger motivation, and better decision making skills that counteract the tendency to procrastinate,

The question of the generalisability of our findings arises because of the fact that only 611-; of the original class participated in the study. We have evidence that the participating students achieved higher grades in the course than non-participating students. We surmise that the non-participating students would be as likely to procrastinate as the participating students.

conceivably could be more likely to do so. Accordingly, we believe that, if anything, our findings are an underestimation of the extent of student procrastination and of the strength of the correlates of procrastination.

References

- Beck, A. T. & Bearnadosfer, A. (1974). Assessment of depression: The depression inventory. *Journal of Personality and Social Psychology*, 7, 151-169.
- Burka, J. B. & Yuen, L. M. (1982, January). Mind games procrastinators play. *Psychologist Today*, pp. 32-34.
- Burka, J. B. & Yuen, L. M. (1983). *Procrastination: What you do it, what to do about it*. Reading, MA: Addison-Wesley.
- Dalton, M., Rothblum, E. D. & Solomon, L. J. (1984). *Fear of failure, test anxiety and task performance as predictors of academic procrastination*. Unpublished manuscript, University of Vermont.
- Ellis, A. & Knaus, W. J. (1977). *Academic procrastination*. New York: Institute for Rational Living.
- Janis, I. & Mann, L. (1977). *Decision making: A strategy for conflict, choice and commitment*. New York: Free Press.
- MacDonald, A. P. & Games, R. G. (1972). Ellis' irrational beliefs: A validation study. *Rational Living*, 7, 25-28.
- Mann, L. (1982). *Decision making questionnaires I and II*. Unpublished questionnaires, Flinders University of South Australia.
- Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, NJ: Princeton University Press.
- Semb, G., Glick, D. M. & Spencer, R. E. (1979). Student withdrawals and delayed work patterns in self-paced psychology courses. *Teaching of Psychology*, 6, 23-25.
- Solomon, L. J. & Rothblum, E. D. (1984). Academic procrastination: Frequency and cognitive-behavioural correlates. *Journal of Counseling Psychology*, 31, 503-509.
- Spielberger, C. D., Gorsuch, R. L. & Lushene, R. (1968). *Self-evaluation questionnaire*. Palo Alto, CA: Consulting Psychologists Press.