

6th Biennial Procrastination Research Conference Abstracts

York University, Toronto

TUESDAY AUGUST 4TH, 2009

9:00 – 10:00 am

Session 1: Definitions and Measurement

A: On the Definition and Measurement of Procrastination

Piers Steel, University of Calgary

Presently, there has been sufficient work written on procrastination for two separate meta-analyses on the topic, by van Eerde (2003) and Steel (2007). This work reflects the importance of the phenomenon, given that it is substantially associated with poor performance in school, in work, and in life (e.g., health). Procrastination is reported widely in the popular press, with hundreds of books published on the subject and millions of dollars in sales. Clearly, there is an interest in the topic within both the academic and popular culture realms. However, to properly research any phenomenon, there must first be a foundation of understanding and of measurement. For procrastination, this foundation is still uncertain as issues regarding definition and assessment have yet to be effectively resolved. Initial investigation indicates that our measures of procrastination are substantively different, with Ferrari, Johnson, and McCown (1995) indicating that "it is possible that the use of an inappropriate measure [of procrastination] would result in erroneous conclusions, either wrongly supporting or rejecting one's hypothesis" (p. 70). This paper addresses the important issue of conceptual clarity in the realm of procrastination, both in terms of definition and measurement. First, the definition of procrastination will be clarified. Second, a meta-analysis conducted on measurement of procrastination will be reviewed. Finally, using over two thousand respondents, exploratory and confirmatory factor analyses will be conducted to provide conceptual clarity around the factor structure of procrastination. This paper will further provide guidance on how we might improve our study of this pathological delay.

B: In Search of the Arousal Procrastinator: An Investigation of the Relation Between Procrastination, Arousal-based Personality Traits and Beliefs About Procrastination Motivations

Kyle Simpson, Timothy Pychyl, Carleton University

Arousal procrastination was investigated to determine: 1) if the General Procrastination Scale (GP; Lay, 1986) measures procrastination motivated by arousal, and 2) whether sensation seeking (SS), extraversion (E), and the reducer index (R) account for variance in beliefs about the motivation for academic procrastination. Participants were 311 undergraduate students (60.1% female), primarily Caucasian (63.3%), with a mean age of 20.9 (SD = 3.08). An online questionnaire package included measures of procrastination and 3 arousal-based personality inventories. A factor analysis of the GP and the Sensation Seeking Scale-V (SSS-V; Zuckerman, Eysenck, & Eysenck, 1978) produced 6 factors with the GP and SSS-V items loading on separate factors, indicating no relation. A regression analysis revealed that SS, E, and R together accounted for 5.2% of the variance in participants' arousal-related beliefs motivating their procrastination. These results challenge the existing literature claiming that the GP is a measure of arousal procrastination, but do indicate that some individuals believe that their procrastination is motivated by a need for heightened arousal.

10:30 am – 12:00 pm

Student Papers 1

A: Knowing the Better and Doing the Worse: A Philosophical Analysis of Procrastination, Temptation, and Making Healthy Changes

Emrah Eren, Fuschia Sirois, University of Windsor

Although the benefits of making healthy changes such as increasing physical activity and eating healthier are clear, many people find it difficult to follow through with their intentions to make these changes. The ancient Greeks identified this phenomena as "akrasia" (literally "lack of mastery"), a type of behavioural incontinence that results from a psychological conflict between what we know we should do and what we lack the will to resist. Aristotle suggested that akrasia occurs because temptation interferes with acting on one's best intentions. Although research

indicates that chronic procrastinators tend to practice fewer wellness behaviours due to low perceived mastery over their health, the possible role of temptations has not been previously investigated. The aim of this study was to prospectively examine if and how temptations interfere with procrastinators' intentions to make healthy lifestyle changes.

A sample of 211 adults from the community who intended but had not started to make healthy changes in the next six months completed a survey including Lay's (1986) General Procrastination scale, and questions about their intended healthy changes. Six months later they were re-contacted, and 96 people completed measures of situational temptations, health-related mastery, and rated their thoughts and feelings about the intended healthy changes. Procrastination scores were higher among those who were unsuccessful (47%) compared to those who were successful. For the overall sample and the failure group, procrastination significantly predicted being tempted by positive social situations, but not general situational cues or because of negative affective states. Low enthusiasm and enjoyment for their most important healthy change explained the link between procrastination and social temptation. Although mastery was negatively associated with social temptations and procrastination, it did not explain the link with social temptations. Our findings support an akratic explanation of why procrastinators have difficulty following through with healthy lifestyle changes.

B: Approach and Avoidance Personal Goals: Goal Appraisal Profiles, Congruence with Personality and Procrastination

Matthew Dann, Timothy Pychyl, Carleton University

In this study, we investigate the relation between approach and avoidance goals and the personality constructs of BIS and BAS and how congruent and incongruent fits are related to the level of procrastination on different goals in a person's life. In addition, we examine whether differences in BIS and BAS orientation lead to differences in the quantity of avoidance (relative to approach) goals a person adopts. Furthermore, we examine what a typical avoidance and approach goal looks like in terms of how individuals think about them. A sample of undergraduate students completed a series of online measures including the Personal Goal Elicitation Procedure (PGEP; Elliot & Friedman, 2007), a Personal Goal Appraisal Module (PGAM; Little, 1983), and the Behavioural Inhibition/Activation Scales (BIS/BAS Scales; Carver & White, 1994). Correlations were used to examine the relation between BIS/BAS orientation and the adoption of avoidance goals. An ANOVA analysis was used to investigate congruent and incongruent personality-goal fits in terms of level of procrastination. Finally a profile analysis was used to compare how people typically think about their approach and avoidance goals.

C: Procrastination, Rumination and Savouring: An Exploration of the Cognitive Underpinnings of Task Delay

Emily Sumner, Joseph R. Ferrari, DePaul University

Procrastination is defined as the purposive and habitual delay in starting or completion tasks to the point of experiencing anxiety or stress (Ferrari, Johnson, & McCown, 1995). Ferrari and colleagues identified two valid and reliable forms of chronic procrastination based on self-report measures: avoidant and arousal procrastination. Avoidant procrastination is motivated by a need to avoid fears of failure and/or success. Arousal procrastination is motivated by a desire for a physiological "rush" while working toward the completion of tasks at a deadline. Research on both avoidant and arousal procrastinators demonstrate low self-confidence and self esteem among this group (Ferrari et al., 1995). However, little is known about the cognitive processes underlying this maladaptive lifestyle. The present studies investigated procrastination and its possible relation to rumination and ability to savor positive life events.

Martin and Tesser (1996) define rumination as a cognitive process involving conscious thoughts that revolve around a common theme and that recur in the absence of immediate environmental demands requiring the thoughts. Savoring is the capacity to attend to the joys, pleasures, and other positive feelings that we experience in our lives (Bryant, 1989). Through a series of electronic self-report surveys, Study 1 used quantitative analysis to compare men and women procrastinators and non-procrastinators on their tendency to ruminate and savor about life events. Study 2 used qualitative methods with a second sample to further investigate the relationship between procrastination and savoring. Results from quantitative methods were consistent with previous research on the characteristics of chronic procrastinators, such as low states of self-confidence and low self-esteem. Qualitative analysis supported previous research on savoring. This research yields insight into to cognitive underpinnings of procrastination and is a starting point for new research to develop a further understanding of procrastinators and help them to change this maladaptive lifestyle.

1:30 3:00 pm

Session 2: Health and General Well-being

A: Do Good Things Come to Those Who Wait? Procrastination and Leading the Good Life

Lalin Anik, Harvard Business School

While procrastination is often perceived as a negative state – by both sufferers and observers – we explore whether the tendency to procrastinate may be associated with a world view that encourages engagement in activities known to be linked to higher well-being. Echoing Thomas Hobbes' (1651) depressing view that life is "nasty, brutish, and short," we explore people's overarching perceptions of life by asking them two simple questions: whether they think life is short or long, and whether they think life is hard or easy. Across a series of studies, we find that more than half of respondents endorse the Hobbesian view of life as both short and hard, while a mere fraction (roughly 10%) endorse the anti-Hobbesian view that life is easy and long. These world-views then impact people's well-being, with those endorsing the Hobbesian view reporting the lowest well-being and those endorsing the anti-Hobbesian view reporting the greatest. Most importantly, we demonstrate that the underpinnings of these differences in well-being are linked to individuals' usage of their time. While anti-Hobbesians report being much more likely to procrastinate than Hobbesians, they seem to use this "wasted" time in ways that actually buttress their well-being: We find that anti-Hobbesians have far more reciprocal friendships, are more likely to volunteer and donate money, and are more likely to vote than non-Hobbesian; indeed, we also find that endorsement of the anti-Hobbesian viewpoint becomes more and more prevalent as individuals age, with the majority of people over the age of 70 holding this view. Taken together, our results suggest that the procrastination that comes with seeing life as long and easy may encourage people to engage in behaviors that actually cause their life to become longer and easier.

B: Moving Forward in Life: A Guide to Directed Everyday Living

Clarry Lay, York University

This presentation is an update and broadening of the original description of my own attempt to counsel procrastinators. The over-riding thesis, as before, is that directed everyday living, with its emphasis on the timely pursuit of one's honourable intentions, constitutes the most elementary form of success in life and results in feeling good and feeling good about oneself. A general framework for directed everyday living is developed and ways to maximize its enactment are considered.

C: "I'll look after my health, later": A Prospective Study of the Linkages of Procrastination to Health and Well-being in Undergraduate Students.

Fuschia Sirois, Jennifer Voth, University of Windsor

Timothy Pychyl, Carleton University

Previous research with student and adult populations has indicated that chronic procrastination can take a toll on physical well-being through association with higher stress and poor health behaviours (Sirois, Melia-Gordon, & Pychyl 2003; Sirois, 2007). These studies tested the procrastination-health model using cross-sectional designs. Therefore, it is not known if the proposed relations of procrastination to health and well-being will hold when tested over time.

In this study we used latent growth modelling to prospectively examine the linkages among procrastination, stress, health behaviours, and health. This structural equation modelling technique allowed us to address the following questions: Does trait procrastination prospectively predict stress, health, and health behaviours, and is procrastination linked to changes in stress, health, and health behaviours over time? A sample of 364 undergraduates (67% female, 77% Caucasian) completed a self-report survey that included Lay's (1986) General Procrastination scale, measures of wellness behaviours, stress, and health status at three times across the academic year, with four to six weeks between each participation.

Preliminary examination of the model testing associations between stress, health, and wellness behaviours found that although stress did not change over time, wellness behaviours and health status improved. At each time point stress was negatively associated with wellness behaviours and predicted more health problems, whereas more frequent wellness behaviours predicted fewer health problems. The final model with procrastination predicting health, wellness behaviours, and stress was a good fit to the data (CFI = .99, RMSEA = .04). Consistent with previous procrastination-health models, procrastination significantly predicted higher stress, fewer wellness behaviours, and more health problems at all three time points. Procrastination did not, however, predict changes in wellness

behaviours or health status. These findings contribute to existing knowledge about the effects of procrastination on health and well-being and confirm that procrastination may be bad for one's health.

3:30 – 4:30

Session 3: Academic Procrastination

A: Gender Role Orientation on Academic Procrastination in a group of Turkish Adolescents

Bilge Uzun Ozer, Middle East Tech. University

Joseph R. Ferrari, DePaul University

Gender-role orientation which develops through middle childhood but much more significant at adolescence is known as an acquisition of a set of standards for appropriate masculine or feminine behavior in particular society. In academic setting adolescents may classify some of the tasks as feminine and masculine tasks, which might be one of the reasons why they procrastinate. Gender-roles are believed to be more appropriate construct to assess procrastination than gender particularly in adolescence. Surprisingly, however, there is limited research on the effect of gender-roles on procrastination. In this respect, the purpose of this study was to investigate the effect of gender-roles on academic procrastination in a group of Turkish adolescents. Procrastination Assessment Scale-Student (PASS) and Bem Sex Roles Stereotypes (BSRI) were administered to 223 (120 female, 103 male) high school students. The average age of the participants was 15.4 ($SS = 1.78$) with an age range between 14 and 17 years old.

Factor analysis performed to find out the possible reasons of academic procrastination yielded 3 causal factors for high school sample namely; perfectionism, aversiveness of task, and rebellion against control. The results of the one way ANOVA yielded no significant difference on procrastination level. However, MANOVA results revealed significant difference on the reason of procrastination. Specifically, participants who have femininity orientation procrastinated more due to the reason of rebellion against control while the participants with masculinity gender-role orientation procrastinated more as a result of aversiveness of task. The findings were discussed by considering the related literature.

B: Procrastination Cognitions in Stress and Distress

Gordon Flett, York University

Case accounts of distressed procrastinators often emphasize the negative internal self-talk that accompanies chronic forms of dilatory behaviour and associated deficits in cognitive-emotional regulation (e.g., Garland & Scott, 2007; Palmer & Gyllensten, 2008). The current presentation will describe related empirical research on automatic thoughts as assessed by the Procrastinatory Cognitions Inventory (PCI; Stainton, Lay, & Flett, 2000). The PCI is an 18-item measure of the frequency of such thoughts as "I can turn it in later," "I need to start earlier," and "Why can't I do what I should be doing?" Initial research established that higher PCI scores are linked with negative affect and trait anxiety; also, procrastinatory cognitions mediate the link between trait procrastination and negative affect (Stainton et al., 2000). Higher PCI scores are also associated with impulsivity, loneliness, and problematic internet use (Davis, Flett, & Besser, 2002). Three studies will be described that further highlight the role of the PCI in stress and distress. Study 1 was conducted with 94 undergraduates who completed the PCI and scales tapping perfectionistic automatic thoughts, the five-factor personality model, and depression. Analyses confirmed that procrastinatory thoughts were correlated robustly with the measures of perfectionistic automatic thoughts and depression; moreover, the PCI accounted for unique variance in depression beyond variance attributable to perfectionistic thoughts and neuroticism. Study 2 with 69 undergraduates found a strong association between the PCI and negative self-thoughts as assessed by the Automatic Thoughts Questionnaire (ATQ) and the PCI and ATQ were both associated with depression and anxiety. Finally, Study 3 with 110 graduate students established that PCI scores were associated with substantially elevated levels of graduate student stress, writer's block, and impostor feelings. The findings highlight the potential usefulness of cognitive-behavioural interventions that target the automatic thoughts about procrastination and the negative self-thoughts of certain distressed students.

WEDNESDAY AUGUST 5TH , 2009

9:00 – 10:00 am

Session 4: Cross-cultural Perspectives and Measurement

A: Psychometric Properties of Tuckman Procrastination Scale in a Turkish Sample

Bilge Uzun Özer, Mesut Sackes, Middle East Technical University

Bruce W. Tuckman, Ohio State University

The aim of the present study was to adapt Tuckman Procrastination Scale-Short Version into Turkish. A stepwise validation procedure was followed to establish cross-cultural equivalence of the Turkish Version of the Tuckman Procrastination Scale-Short Version (TVTPS-S). A sample of 236 (92 male, 137 female, 7 not indicated) college students participated in the study. The average age of the participants was 20.45 (SD = 1.73) with an age range between 18 and 29 years old. Evidence for construct validity was gathered using multiple techniques. The factor structure of the TVTPS-S was examined using explanatory (maximum-likelihood) and confirmatory factor analysis. Pearson correlation coefficients between the TVTPS-S scores and participants' scores from other related constructs (self-efficacy and goal orientation) were calculated. Internal-consistency and coefficient of stability was calculated to assess reliability of the measurement. The results of a maximum-likelihood factor analysis with varimax rotation showed that two items in the original instrument (item 4 and item 10) loaded on a different factor. Confirmatory factor analysis indicated that one factor solution was not a good fit. A review of the items revealed that those two items that loaded on a different factor represent tendency to avoid something "tough," whereas remaining items represent tendency to "delaying" or "not finishing." This subtle meaning of those two items in the original scale became evident in Turkish sample. Therefore those two items were removed from the analysis. Maximum-likelihood factor analysis with 14 items revealed a one factor solution. Confirmatory factor analysis yielded fit index values demonstrating a viability of unidimensional solution. Overall results provided evidence for the cross-cultural equivalence of the TVTPS-S.

B: Self-control in Relation to Parental Independence and Procrastination

Mohsen Haghbin, Adam McCaffrey, and Timothy Pychyl, Carleton University

Conducting two independent studies, we investigate how the relationship between fear of failure and procrastination may be mediated by psychological constructs and/or processes that capture executive functions of self. In the first study, fear of failure, measured as self-reported reason of procrastination, was defined as a distal factor and self-control was specified as a mediational factor in relation to academic procrastination. In the second study, general fear of failure was measured and defined as a possible distal causal factor and self-determination constructs as proximal causal factors in relation to procrastination. These models were tested in samples of 200 and 300 undergraduate students in Canada respectively. Structural equation modeling and multiple regression analysis were used to determine the overall fit of the models with data as well as the significance of the specified relationships.

10:30 am – 12:00 pm

Student Papers 2

A: In the Eye of the Beholder: Regret and Life Satisfaction for the Chronic Procrastinator

Kimberly Mancina, Joseph R. Ferrari, DePaul University

Chronic procrastination occurs in as much as 20% of adult populations, and has been linked to impairments in mental health and/or social functioning. "To procrastinate is to voluntarily delay an intended course of action despite expecting to be worse off for the delay" (Steel, 2007). Such delay and inaction tendencies associated with the lifestyle of the chronic procrastinator may lead to the accumulation of negative outcomes or regrets. In fact, Ferrari, Barnes, and Steel (2008) found that arousal and avoidant procrastinators reported more regret than non-procrastinators in life domains such as education, health, and finances. Increased regrets negatively affect an individual's well-being, thereby decreasing one's life satisfaction. The purpose of this cross-cultural study was to explore the nature of regret and life satisfaction with chronic procrastination.

Over 3,100 participants from 11 countries responded to online versions of Lay's (1986) GP/arousal and McCown & Johnson's (1989) AIP/avoidant procrastination scales. Additionally, participants completed Roese & Summerville's

(2005) Life Domain Regret (LDR) scale and Diener et al.'s (1985) Satisfaction With Life Scale (SWLS). It was expected that arousal and avoidant procrastinators will report both higher levels of regret and lower levels of life satisfaction, than non-procrastinators. Additionally, because prevalence rates of chronic procrastination have been found to be relatively similar across different cultures, it was expected that reported levels of regret and life satisfaction will also be similar despite country of origin. Results of this study will provide insight into the consequences of chronic procrastination.

B: Emotional Intelligence, Self-control and Procrastination

Eric Heward, Timothy Pychyl, Carleton University

In this study, we explored the role of emotional intelligence, the ability to accurately appraise, utilize, and regulate emotions, in relation to self-control and procrastination. A sample of undergraduate students completed a battery of tests including the Trait Emotional Intelligence Questionnaire (TEIQue; Petrides & Furnham, 2003), the emotion regulation questionnaire (ERQ; Gross & John, 2003), Self-Control Schedule (SCS; Rosenbaum & Ben-Ari, 1985) and the Procrastination Assessment Scale for Students (PASS; Solomon & Rothblum, 1984). A mediated model was tested to determine whether the hypothesized relation between emotional intelligence and procrastination was mediated by self-control. The results are discussed in relation to self-regulation failure and the central role of emotional regulation in this process.

C: In Charge of Delay: Professionals with Personal Power Who Procrastinate

April Gonzalez, Joseph R. Ferrari, DePaul University

Procrastination in the workplace is a problem of self-regulatory failure in regards to the prioritization and completion of work related tasks. There appears to be a link between professionals with personal power in the workplace, that is, the ability to act, influence and control their own work schedules (e.g., self-structured jobs) and/or the work schedules of other employees. Professionals with high levels of personal power tend to be college educated white-collar workers, a group defined by salaried professional, managerial, or administrative positions. Research by Hammer and Ferrari (2002), indicated that white-collar workers report procrastinating more frequently than blue-collar workers, a group that is often paid an hourly wage for primarily performing unskilled manual labor jobs. This study expands on prior research by considering the worldwide prevalence of workplace procrastination and the differentiating country of employment and type of job (e.g., management, self employed).

This research consists of 4,300 self-reported surveys collected online from 70 countries over a six-week period. Respondents completed Lay's (1996) GP arousal procrastination and McCown and Johnson's (1989) AIP avoidant procrastination scales, and occupational related demographic information. The Handbook of Occupational Groups and families (U.S. Government, 2008), categorized occupations reported as either "blue" or "white-collar" professionals. Consistent with Hammer and Ferrari (2002), results indicated that white-collar professionals are significantly more likely to report being chronic procrastinator than blue-collar workers. Also, findings suggest that personal power in the workplace (e.g., self-structured jobs) may be another predictor of procrastination.

Future studies should further investigate the influence of personal power on procrastination in the workplace. For instance, professionals with self-structured jobs, in an attempt to avoid more challenging, complicated, or intimidating tasks, may use their flexibility in scheduling to waste time on activities that are part of the their job description, but are not the most meaningful tasks to be completed (e.g., e-mail reading), or put off tasks with delayed rewards in favor of completing those with immediate gratification.

1:30 – 2:30 pm

Session 5 – Closing Keynote Papers: New Perspectives on Procrastination

A: Blame it on Time: A New Perspective on Procrastination, Perfectionism, and Task Performance

Fuschia Sirois, University of Windsor

Despite the fact that many people believe that they do their best work under time pressure, some individuals may be paralyzed by time limits and live under the illusion that time limits keep them from achieving their true performance potential. For such individuals, poor performance may be blamed on lack of time, and foster the illusion that more time for a given task will result in a significantly better performance (*time-related perfectionism*). When faced with time limits such individuals may anticipate poor performance and delay task initiation (*failure anticipation*), and/or become distressed (*performance stress*). Similar to some conceptualizations of procrastination, time-perfectionists may delay the start of important tasks for fear of poor performance.

In this paper I explore the conceptual similarities and distinctions between procrastination and time-related perfectionism (as measured by the Blame it on Time or BIOT scales) with findings from three studies to illustrate. Across the three studies the BIOT subscales were positively associated with procrastination, although the strongest links were with the failure anticipation subscale. In study 1 the BIOT scale was tested and validated with a sample of 980 adults recruited from the community and compared with procrastination scales on several key indicators. Study 2 was conducted with 145 undergraduates and examined similarities and differences in the responses of procrastinators and time perfectionists to conditions of feedback and difficulty for two timed tasks. In Study 3, 208 undergraduates wrote about a negative academic event, and a subgroup ($N = 100$) generated counterfactuals. Differential results were found for the time perfectionists and procrastinators. Most notable was the association of time perfectionism but not procrastination with making more upward rather than downward counterfactuals. The findings highlight the role of perceived time limits in procrastination and suggest that time-related perfectionism and specifically *failure anticipation* may contribute to procrastination.

B: I've been Thinking ~~~ I (WE) Am (Are) WRONG: A Better Approach to Understanding/Dealing with Procrastination

Joseph R. Ferrari, DePaul University

For the past 30 years, many of us have been studying the causes and consequences of procrastination, the purposive delay in the start and/or finishing of a task to the point of discomfort, anxiety, and guilt. Related to our understanding of procrastination, many of us focused on how to help students with academic procrastination improve their skills in classroom to result in educational success. Despite our efforts to demonstrate to colleagues and professionals that the topic of procrastination is more than time management and should be a major focus for scholarly interest, there has been no significant re-examination of the topic.

And so, I wonder if we have been examining procrastination from a wrong lenses, an inappropriate focus. In this presentation, I ask us to do a paradigm shift in studying the causes and consequences, as well as the "cures" of procrastination. I suggest we focus on a STRENGTH BASED approach, borrowing from positive psychology. Instead of emphasizing procrastination, and its negative side ~~~ we should focus on PERSISTENCE and the benefits of "stick-to-it-ness." We need to focus on research that explains why some people finish what they start, keep on despite obstacles, taking care of business, achieving closure, staying on the task, getting it off one's desk and out the door – all strengths of character we identify as persistence, perseverance, and industriousness. This presentation will review some of the major presentations and characteristics of procrastination, but then focus on a strengths approach for the next 20 years of our research and treatment.