

A Diagnostic Measure of Procrastination

Temporal Motivational Theory is based upon the observation that three major factors increase people's likelihood of procrastination. First, we procrastinate when we have lower *expectancy* of success at a task. Diminished self-efficacy or self-confidence is associated with lower levels of motivation. Second, we procrastinate when the task has low *value* (i.e., unpleasant or boring), despite larger but later rewards for completion. The less enjoyable the work becomes, the more likely we are to put it off. Third, we procrastinate when we *impulsively* act upon short-term temptations that distract us from our long-term goals. The more we are susceptible to temptations, the greater the likelihood that there will be a gap between our intentions and actions.

Despite the empirical support for these factors being critical in determining procrastination, what is lacking is a way of determining which ones are operating in any individual procrastinators. People's procrastination can be driven by just one factor or all three simultaneously. To provide a diagnostic measure, nine items were developed for each major factor: expectancy, value and impulsiveness. Following Burisch's (1984) methodology for the constructing personality inventories, new items were developed for the expectancy and value constructs.

The expectancy or self-efficacy items focused on assessing the degree that people believe that their efforts are rewarded. For example, "I can overcome difficulties with the necessary effort" and "When I put in the hours, I am successful." The value items focused the meaningfulness and enjoyableness of tasks and responsibilities. For example, "I don't find my work enjoyable" and "Work bores me." For impulsiveness, nine of the highest loading items were drawn from the Susceptibility to Temptation Scale (Steel, 2010). Example items include, "It takes a lot for me to delay gratification" and "My actions and words satisfy my short-term pleasures rather than my long-term goals."

To assess the ability of these scales to predict procrastination, they were administered along with the Irrational Procrastination Scale (Steel, 2010) and the UPPS impulsive behavior scale (Whiteside & Lynam, 2001) to 1,279 respondents, with an average age of 33 years old and 50.3% male. After eliminating the lowest loading item per scale, reliability for each eight item scale was .83 for Expectancy, .84 for Value, and .83 for Impulsiveness. Using a Principal Component Analysis with Varimax rotation identifies three factors that accounts for 49% of the variance. Each item loaded on the appropriate factor, though four of the value items had significant cross-loadings with the impulsiveness factor.

Correlations with procrastination were: -.29 with Expectancy, .59 with Value, and .63 with Impulsiveness. Of note, higher scores of Expectancy and Impulsiveness indicate *more* of the construct. Higher scores of value indicate work is *less* enjoyable or interesting. Multiple regression produced an R^2 of .485, $F(3, 1275) = 400.84$, $p < .0001$, with all variables significantly predicting. The addition of UPPS impulsiveness scales increased R^2 to .566, a significant increase $F(4, 1271) = 58.85$, $p < .000$, but also reflecting that most of the variance has already been captured.

Of note, the UPPS is comprised of four scales: *Urgency* (intense cravings), *Premeditation* (thinking acts through), *Sensation Seeking* (enjoying the new and exciting) and *Perseverance*

(finishing what you start). Sensation Seeking and Premeditation demonstrated low associations with procrastination, generating correlations of .08 and -.02 respectively. Urgency and Perseverance correlated at .48 and -.64 respectively with procrastination, and at .65 and -.55 respectively with the diagnostic impulsiveness scale.

In its entirety, the results confirm that though procrastination is influenced by considerations of expectancy and value, overwhelmingly, the behavior is driven by impulsiveness. In particular, impulsiveness in the form of both intense cravings or lack of perseverance is critical to understanding why we procrastinate. Procrastination as a form of thrill-seeking or sensation seeking is not an influential construct. Also, of importance is the low association with premeditation. This suggests that procrastinators are capable of appreciating the consequence of their actions as much as anyone else. It is getting people to act upon their early assessments and subsequent intentions where the challenge lies.

Burisch, M. (1984). Approaches to personality inventory construction: A comparison of merits. *American Psychologist, 39*, 214-227.

Steel, P. (2010). Arousal, avoidant and decisional procrastinators: Do they exist? *Personality and Individual Differences, 48*, 926-934.

Whiteside, S., & Lynam, D. (2001). The Five Factor Model and impulsivity: Using a structural model of personality to understand impulsivity. *Personality and Individual Differences, 30*(4), 669-689.