

Cognitive Conceptualisation of Procrastination. A Review of the Literature, Proposed Model and Suggestions for Treatment

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'When we procrastinate we waste time, miss opportunities and do not live authentic lives'
(Norman Milgram)

Procrastination is a form of self-regulatory failure that is not well understood. Part of the difficulty of studying procrastination is defining procrastination in the first place. Definitions abound. The common theme in definitions is postponing, delaying or putting off a task or decision, in keeping with the Latin origins of the term: *pro* meaning "forward, forth or in favour of" and *crastinus* meaning "of tomorrow".

Procrastination is often considered to be the irrational delay of behaviour. We have dozens of things we could be doing at any particular moment, so some of them have to be put off. Prioritising turns into procrastination when we know the job needs to be done, we know we'll be worse off if we don't do it, we intend to do it and we still don't do it. It is profoundly irrational behaviour, a breakdown in volitional action. Other definitions focus on the temporal aspect of procrastination. Silver, (1974) argues that procrastination is when a task is put off past the optimal time it should be initiated to guarantee the maximal likelihood of its successful completion. However this definition is problematic in that it does not take into account the importance of a specific task or the payoffs associated with task completion.

Others define procrastination more broadly, describing two forms. Functional procrastination includes avoiding paying

income tax until the last possible due date or putting off starting a task when there is a reasonable chance it will be reassigned to a co-worker. Dysfunctional procrastination is self defeating and leads to penalties for the procrastinator (Ferrari, 1994). Further, procrastination can be a subjective thing: one person's feelings of putting off a task might be someone else's version of punctuality (Silver, 1974).

Procrastination is a long-standing concept. The ancient Roman orator Cicero and the Greek historian Thucydides both wrote about it. Procrastination is common today. A high proportion of people say they sometimes procrastinate. Academic procrastination is widespread among students, with a large number indicating they suffer from problematic procrastination. It is estimated that 20-30% of college students perceive procrastination as a significant problem for them (Briordy, 1980). In the general population, 15-20 % of adults have been found to engage in chronic procrastination (Harriot & Ferrari, 1996).

There are many desirable, readily available distractions competing for one's attention, such as the internet (a.k.a. cyber-slacking) and computer games. Many jobs are becoming more self structured, meaning that opportunities to procrastinate are likely to increase and it is increasingly up to the individual to self regulate and impose one's own work goals & deadlines. Many might regard procrastination as too flippant a topic to warrant serious scientific inquiry, (after all, everyone

procrastinates, at least occasionally). This may be a factor in the relatively low level of empirical investigation in this area. However, the harm related to procrastination can be significant: a study by the tax preparation firm H&R Block found putting off doing their taxes cost US citizens an average of \$400 each because of errors due to the last minute rush. In the medical arena, procrastination by patients has been found to be a major problem (White, Wearing & Hill, 1994).

Procrastination is related to a variety of psychiatric syndromes. McCown (1994) found increased rates of procrastination in substance abusers and in those with PTSD as compared with non-patients, but no relationship between phobias, anxiety and depression and procrastination. People with borderline, antisocial and narcissistic personality disorders were found to have significantly higher procrastination scores than those with no personality disorder. It is unclear, however, whether procrastination causes psychological dysfunction or whether psychological dysfunction causes procrastination.

A recent meta-analysis by Steel (2007) revealed that neuroticism, rebelliousness and sensation seeking showed only a weak association with procrastination. Strong, consistent predictors of procrastination were task aversiveness (the degree to which a task is unpleasant due to frustration, resentment, and in particular, boredom), task delay (temporal proximity of reward, with delayed reward increasing the likelihood of procrastination), low self-efficacy and impulsiveness (procrastinators tend not to have a future temporal orientation, tend to dislike structure or routine, and tend to start daily routines with the more pleasurable tasks), as well as low conscientiousness and self

regulatory failure (i.e. of low self control, distractibility, poor organisation and low achievement motivation). There is evidence of an intention-action gap, where procrastinators intend to work as hard as others, but this is not reflected in their actual work habits.

Steel (2007) found low conscientiousness to be the central facet of procrastination, and that it appears to be a fairly stable personality trait. Irrational beliefs and perfectionism are often assumed to be major causes of procrastination, but Steel found only weak correlations between procrastination and perfectionism. Procrastinators were found to be less likely to be perfectionists. Irrational beliefs appear to be the source of at least some procrastination, particularly fear of failure and fear of evaluation by others.

A weak association has been found between procrastination and rebelliousness. While rebelliousness and hostility are seen by some theorists as major motivations for procrastination, current evidence does not support this theory. Rebelliousness may explain why someone would avoid tasks entirely, but not why they would delay them. Caving in to demands at the last minute is not a particularly autonomous act.

Steel (2007) found depression to be associated with procrastination. Depression appears to be related to procrastination via waning energy levels, which make many tasks more aversive to pursue. Evidence regarding mood is not definitive. Those with poorer moods are more likely to indicate that they procrastinate, regardless of their actual behaviour.

In terms of effects on performance, procrastination is related to reduced

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performance, though some final hour catching up is possible. Procrastinators are able to do a tremendous amount of work before a deadline, but overall performance is impaired. Men appear to procrastinate more than women and procrastination appears to decrease with age.

Clinical assessment

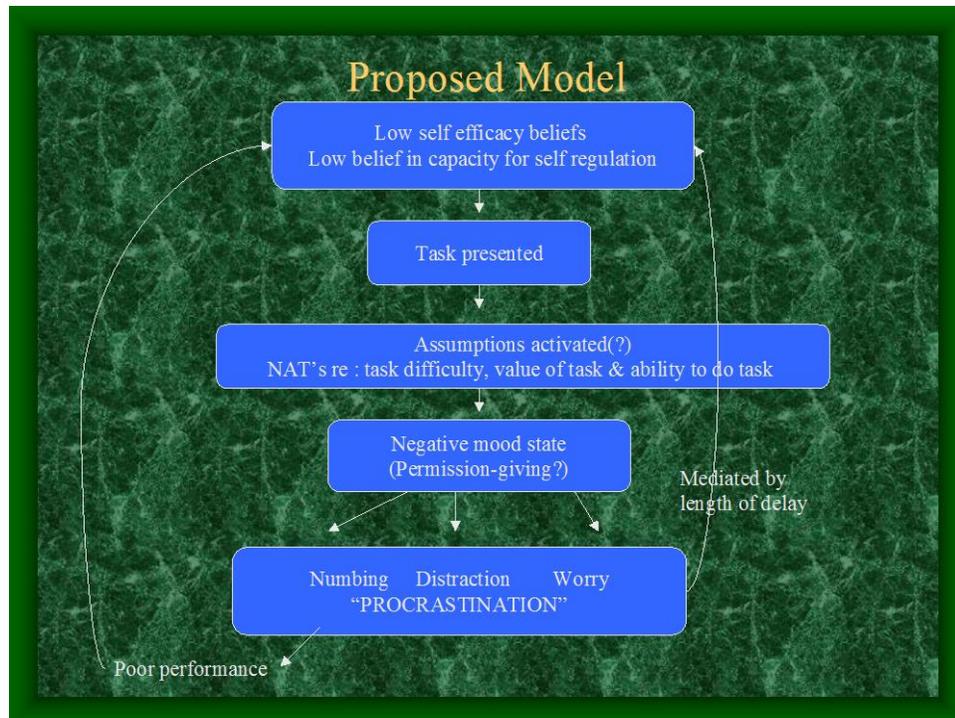
A thorough clinical assessment including the history of problems with procrastination is important. Assessment includes current and past history of depression, substance use and phobias. What appears to be procrastination may be a phobia, such as a blood phobia in medical procrastination or the result of generalised anxiety disorder.

Case conceptualisation

Traditional approaches to procrastination assume procrastination can be formulated in terms of cognitive distortions and faulty information processing, based on irrational beliefs such as “I must always do well at everything”, “it is safer to do nothing than take a risk and fail” as well as the conviction that “present pains for future gain are unbearable”. Automatic

thought records and Socratic questioning may be useful to encourage clients not to dismiss their strengths or to over-generalise their failures and to consider alternative explanations (Ellis & Knaus, 1977). However this approach is not based on empirical research. In addition, when the person has longstanding, complex problems, merely intervening at the thought level may not be sufficient.

No existing cognitive behavioural model was able to be found for chronic procrastination. A model proposed below attempts to conceptualise chronic procrastination by drawing together what can be concluded from existing research, but also integrates concepts from other recent cognitive behavioural models. It is a generic model, which has not been evaluated and is unlikely to apply to all procrastinators given the heterogeneity of individuals who procrastinate. Individualised assessment and conceptualisation are recommended. This model approaches procrastination more as a habitual coping process connected to thoughts and beliefs, than as a personality flaw.



The beliefs at the core belief level are theorised to centre on low self-efficacy. Self-efficacy is the extent to which one feels one's behaviour is under volitional control. It plays a central role in the self-regulation of behaviour through its effects on intention formation and strength. In addition it is proposed that there are negative beliefs at the meta-cognitive level, about the individual's ability to control attentional processes and to self-regulate. A study by Spada, Hiou & Nikcevic (1994) found an association between procrastination and meta-cognitive beliefs, with beliefs about cognitive confidence significantly correlated with procrastination. It may be that when a task is presented, a number of assumptions are activated, such as the following:

"If I set a goal for myself I will not achieve it"

"If I try, I will fail"

"If I don't feel like doing something, I should put it off until I feel better"

"I'm very good at doing things at the last minute"

(These are not evidence-based, but are based on the clinical observations of writers such as Ferrari et al, 1995)

It is proposed that negative automatic thoughts occur in response to the task, regarding task aversiveness, the perceived value of the task, and one's ability to complete the task. These negative thoughts are likely to lead to a negative mood state. Steel concluded that "consistently and strongly, the more people dislike a task, the more they consider it effortful or anxiety-producing, the more they procrastinate" (Steel, 2007, p.21). There may be a permission-giving process at this stage: "I've got plenty of time, I'll do it later" (overestimation of the time available); "It won't take long" (underestimation of the time required); "I'm not in the mood/I am too stressed to work" (belief that working when not in the mood is sub-optimal) or "I can't work

my best unless I'm in a certain place/time/with a particular person, so I can't do it now". This permission-giving idea is based on Beck, Wright, Newman & Liese's (1993) model of cognitive therapy for substance abuse. Ellis & Knaus (2002) observe this among procrastinators and call it "excuse-making". At this stage, the procrastinatory behaviour occurs, which can take the form of numbing (substance use, or numbing activity); distraction (through choosing to do other, more immediately rewarding activities) or worrying. Worry is proposed as a procrastinatory behaviour in line with Wells' description of worry as a cognitive activity. Worry has been found to be robustly associated with procrastination (Stober & Joormann, 2001). It is proposed that this entire process is mediated by the length of delay between the presentation of the task and the time that the task is expected for its completion, with procrastination more likely to occur when there is more time to complete the task. The procrastination then tends to affect the person's performance, reinforcing the core beliefs.

This proposed model may fit for some individuals and tie together some of the research findings, however, as Ferrari, Johnson & McGown (1995, p.2) state, "Procrastination is a complex, often chronic, behavioural pattern that sometimes defies straightforward causal explanation...a frustrating and ultimately self-defeating pattern".

Treatment Implications

The aim of treatment is to reduce procrastination rather than to eliminate it. Procrastination is often reinforced, such as when one's boss re-allocates tasks or offers to help. There is some evidence that people can learn to procrastinate less (Baumeister, Heatherton & Tice 1994).

Very little research compares treatment methods in diverse populations, especially in groups of non-students. A range of potential strategies may be used to treat procrastination within a cognitive behavioural approach, some of which have been described in the literature, based on clinical experience.

- Sharing the case conceptualisation can throw new light on the patient's difficulties and suggest points of intervention. It is suggested that the formulation can be depicted as a diagram including specific instances, to make it relevant to the client and help the client make connections.
- Keeping records in the form of daily schedules may help clients identify current patterns and opportunities to use their time differently, reducing worry and distracting activities (Vicenzi & Meneghelli, 2006).
- Motivational interviewing strategies based on Prochaska and DiClemente's work may be helpful when clients are ambivalent about attempting to change. Fear of change may be due to past unsuccessful therapy or to feeling threatened by the idea of changing beliefs and compensatory behaviours, or to the fear of failure ("I'll fail at this too"). Strategies could include reviewing the costs and benefits of engaging in treatment and committing to treatment goals, drawing out commitment language and confidence language.
- Encouraging clients to set specific, realistic and proximal goals (i.e. more immediate sub goals towards a larger goal) may

help counter any tendency to vague goals.

- Teaching clients to break down tasks so that they are not viewed as overwhelming, but as manageable.
- Using thought records of task-related and permission-giving thoughts in order to help the client develop coping responses for likely situations.
- Behavioural strategies can include increasing environmental cues about upcoming deadlines and increasing self-rewards associated with completing tasks. Stimulus control can be used to encourage clients to find a good place to work/study, and minimise distractions (turn off phone & message bleep on PC) and develop a habit of working regularly in this place.
- Encouraging “doing instead of worrying”. Educating clients that worry is a cognitive activity that can be postponed and interrupted such as when the phone rings.
- Relaxation training may be useful for highly anxious individuals, to allow them to calm themselves enough to get started.
- Behavioural experiments can be used as a way of getting started. The “10 minute rule” has been proposed by Ramsay (2002) as a minimum time for clients to experiment with getting on with the task, even if the task turns out to be as aversive as anticipated. The objective is to help the client get started on the task and gather experiential data rather than avoid the task due to negative thoughts or imagery. The client can then compare the actual experience to

the negative anticipations and make an informed decision based on experience rather than an avoidant decision based solely on negative anticipations. Ramsay also suggests the use of “consideration of options” as a form of manageable exposure for clients who struggle with commitment to an emotionally intimidating challenge. This may lead on to the client agreeing to a manageable exposure to a feared situation (e.g. attending a party for 10 minutes). For clients who procrastinate over decision-making (often in an attempt to make a decision with a guaranteed positive outcome), it may be helpful to try behavioural experiments in exposing themselves to uncertainty, by making a more rapid decision. Setbacks can be reframed as opportunities to gain new information about goals, to revise decisions, or as an exercise in developing frustration tolerance and building resilience

- Identify assumptions that appear to make procrastination more likely so these can be addressed with the standard cognitive behavioural approach, including reviewing the advantages & disadvantages of having this idea and, if it appears disadvantageous, to review the evidence for and against and back it up with behavioural experiments to support more helpful assumptions.
- Positive data logs documenting steps towards self-efficacy can be a way of building up the new belief.

- Broader fears can be addressed. For example, does the person have fears of extra responsibilities or commitments should they overcome their procrastination?
- Finally, relapse prevention can assist in predicting lapses.

Future Research

There is considerable potential for research in the area of procrastination. A consensus as to the definition of procrastination would be beneficial. Clarification of the nature of different subtypes of procrastinators would be helpful, particularly examining whether there are optimistic as well as pessimistic procrastinators. Clarification of the assumptions held by procrastinators would also be helpful. Cognitive behavioural treatments warrant evaluation, with an emphasis on identifying which components of CBT treatments are most helpful.

Little evidence exists of the connection between brain functioning and procrastination. There is a need for research examining executive functioning and neural systems involved with the self-regulation of behaviour and the development of attentional tactics that can be used to delay gratification. It is unclear whether procrastinators are more distractible than others, and further research in this area is desirable.

There is evidence that some procrastinators have different time orientations (such as a present-fatalistic time orientation) and less consideration of future consequences. These areas warrant further exploration.

In the health area, procrastinators tend to engage in fewer wellness behaviours such as healthy eating and exercise. They have

weaker intentions and lower health specific self-efficacy, tending to delay seeking care for health problems (Sirois, Melia-Gordon & Pychyl 2003). Further research into the effects of health efficacy on health behaviours is warranted.

Resources available on the internet:

The Procrastination Research Group (2006) has a list of articles, chapters & books.

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