



# Understanding and treating procrastination

Theory, assessment, and treatment interventions

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brueghel. Inuontor.

H. Cock. excud. cum. priuileg. 1558.

SEGNITIES ROBVR FRANGIT, LONGA OCIA NERVOS.  
 Traechheyf maeckt machteloos / en verdroocht Die sculdwen dat de mensch nieters toe en doocht



# Definition

*Pro* (forward, forth, in favour of), *crastinus* (tomorrow)

*"To voluntarily delay an intended course of action despite expecting to be worse-off for the delay."*

Voluntary action, i.e., avoidance behavior

Intention to complete an activity

Awareness of the negative consequences

# "Clinical" procrastination

During the last six months:

A. On at least half of the days, very important tasks were delayed past the adequate point in time, even though there was sufficient time to complete them.

B. Procrastination interfered strongly or very strongly with reaching personally relevant goals.

C. In addition, at least three of the following six criteria are fulfilled:

1. More than 50% of the time available for completing the task was wasted procrastinating.
2. On at least half of the days, other less important tasks were preferred, even though one wanted to start working on the more pressing task.
3. On at least half of the days, the delay caused aversion and animosity.
4. At least half of the tasks that were to be completed in the last six months were finished only under great time pressure or not at all due to procrastination.
5. At least 50% of the performance potential is impaired due to procrastination.
6. There are at least five bodily or psychological complaints due to procrastination.

**Physical problems:**

Muscle tension  
Sleeping disorders  
Cardiovascular problems  
Digestive problems

**Psychological problems:**

Restlessness  
Feelings of pressure  
Helplessness  
Internal tension  
Anxiety

(Höcker, Engberding, & Rist, 2017)

# Prevalence

## Introduction

How many college-level individuals procrastinate? Often? Seriously? No one seems to know. Incredibly, this important question has not inspired many factual studies. Our guess? About ninety-five percent.

95%

"Really?" you ask. "As many as that?"

Yes, as far as we can judge. In our general observations of the human species and especially in our work as psychotherapists, we have run across innumerable procrastinators. And their numbers increase!

Not only students, of course. Writers notoriously delay getting their manuscripts to editors on time. Business men and women submit literally millions of late reports each year. Applicants for jobs, school openings, civil service exams, and almost everything else under the sun — again by the millions, maybe even billions — promise themselves to fill out the necessary forms promptly, then finish them at the last minute, or send them in days or weeks after deadline . . . or not at all.

Do people really procrastinate with forms when it will cost them money? Oh, yes! Who among us has not mailed tax forms at the very last minute — and considerably after that? And how many human beings avoid being late most of the time for appointments, dates, dinners, interviews, therapy sessions, and whatnot? Damned few!

What about how-to books? Surely you can learn from copious literature how to overcome procrastination? Nope. The closest thing we could find in print was a book by Paul T. Ringenbach, *Procrastination Through the Ages, a Definitive History*. It presents an interesting survey, but it sheds little light on coping with the problem.

Does no one care? Will no one lift a finger to help rid the world of this destructive aspect of slothfulness? Fortunately we do and

(Ellis & Knaus, 1977)

# Assessment

The Pure Procrastination Scale (Irrational Procrastination Scale)

Cutoffs are lacking, but  $\geq 40$  points is often used ( $\geq 32$  points)

Important to screen for ADHD, e.g., ASRS

Important to screen for depression, e.g., PHQ-9

Important to screen for perfectionism, e.g., CPQ

Overlap with stress-related issues, e.g., self-assertiveness and workload

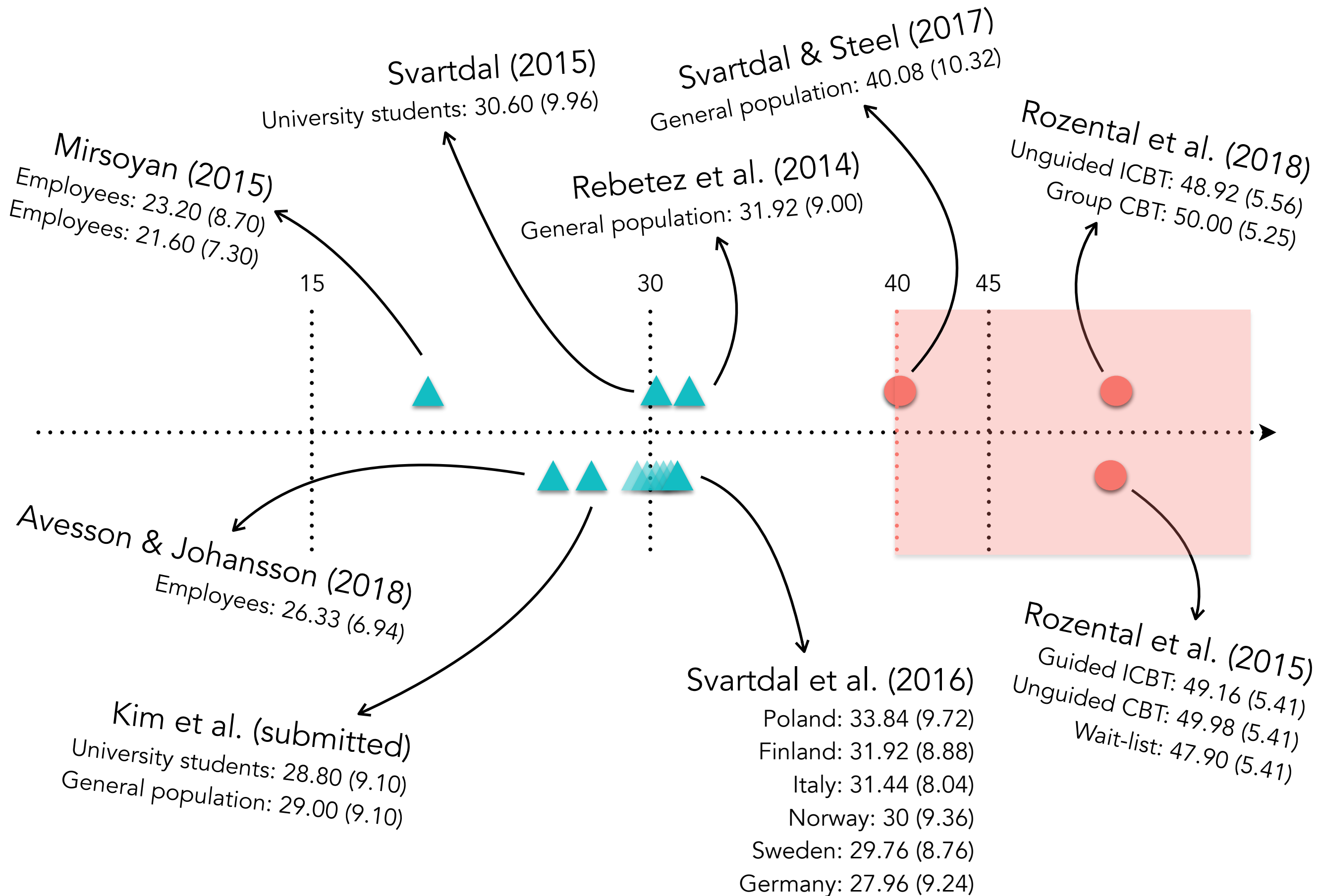
(Rozenal & Carlbring, 2014)

# Pure Procrastination Scale (PPS)

Nedan följer ett antal påståenden som handlar om din förmåga att fullfölja uppgifter och fatta beslut. Bedöm i vilken utsträckning du tycker att dessa påståenden stämmer in på dig genom att ringa in den siffra (1-5) som bäst beskriver din situation. Du räknar ut resultatet genom att summera alla dina poäng.

	Mycket sällan eller stämmer inte alls i mitt fall	Stämmer sällan i mitt fall	Stämmer ibland i mitt fall	Stämmer ofta i mitt fall	Mycket ofta eller stämmer helt och hållet i mitt fall
Jag skjuter upp beslut tills det är försent	1	2	3	4	5
Även efter att jag har fattat ett beslut dröjer det innan jag agerar i enlighet med det	1	2	3	4	5
Jag kastar bort mycket tid på bagateller innan jag fattar ett slutgiltigt beslut	1	2	3	4	5
När jag måste hålla en tidsgräns slösar jag ofta bort tiden på annat	1	2	3	4	5
Även när det gäller arbeten som inte är särskilt krävande kan det ta mig flera dagar att slutföra dem	1	2	3	4	5
Jag ägnar mig ofta åt saker som jag hade tänkt att göra för flera dagar sedan	1	2	3	4	5
Jag säger hela tiden att "det där gör jag i morgon"	1	2	3	4	5
Jag väntar vanligtvis med att påbörja ett arbete som jag måste göra	1	2	3	4	5
Det känns som om tiden inte räcker till	1	2	3	4	5
Jag får inte saker och ting gjorda i tid	1	2	3	4	5
Jag är inte bra på att hålla utlovade tider	1	2	3	4	5
Att skjuta upp saker och ting till sista minuten har tidigare stått mig dyrt	1	2	3	4	5

**Referens:** Rozental, A., Forsell, E., Svensson, A., Forsström, D., Andersson, G., & Carlbring, P. (2014). Psychometric evaluation of the Swedish version of the Pure Procrastination Scale, the Irrational Procrastination Scale, and the Susceptibility to Temptation Scale in a clinical population. *BMC Psychology*, 2(54).



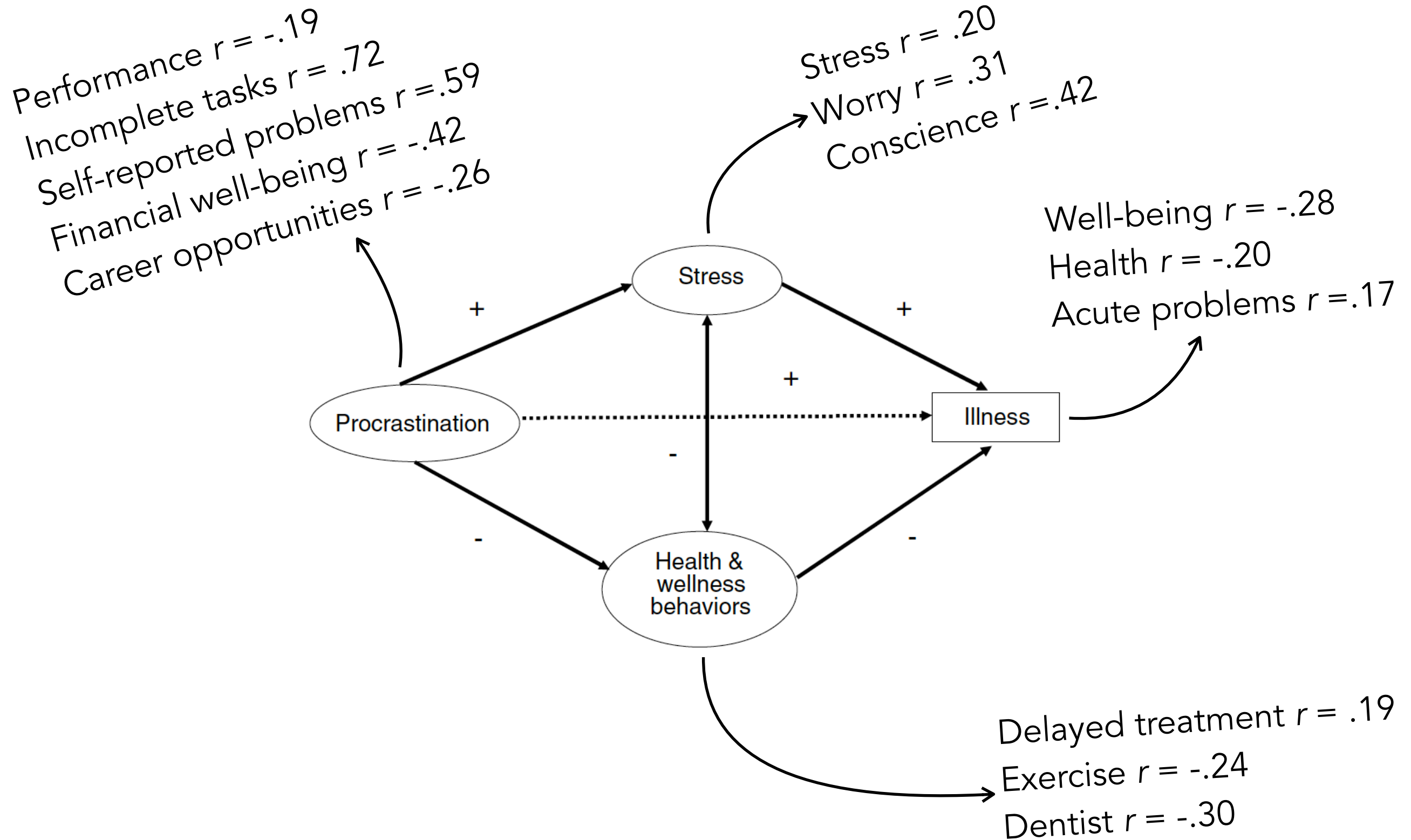


**Table 1**  
*Sociodemographics and severity level on the primary and secondary outcome measures at screening for the obtained clusters and the total sample*

	1. Average procrastinators	2. Severe procrastinators	3. Well-adjusted procrastinators	4. Mild procrastinators	5. Primarily depressed	Total sample
Participants: <i>n</i> (%)	198 (27.89)	154 (21.69)	99 (13.94)	177 (24.93)	82 (11.55)	710
IPS: <i>M</i> ( <i>SD</i> )	38.61 (3.22)	40.69 (2.86)	39.39 (3.17)	35.99 (3.42)	38.17 (3.51)	38.47 (3.62)
PPS: <i>M</i> ( <i>SD</i> )	50.22 (3.70)	53.95 (3.68)	52.36 (3.81)	43.24 (4.52)	47.41 (4.94)	49.26 (5.69)
STS: <i>M</i> ( <i>SD</i> )	45.02 (4.29)	47.42 (4.60)	45.21 (5.11)	35.74 (5.02)	34.34 (5.49)	42.02 (7.07)
GAD-7: <i>M</i> ( <i>SD</i> )	7.21 (3.01)	14.79 (3.95)	4.80 (3.48)	4.54 (3.13)	11.20 (4.15)	8.31 (5.26)
MADRS-S: <i>M</i> ( <i>SD</i> )	15.61 (3.96)	24.95 (5.90)	9.39 (4.47)	10.77 (4.64)	23.45 (4.83)	16.47 (7.69)
QOLI: <i>M</i> ( <i>SD</i> )	-0.15 (1.00)	-.93 (1.58)	2.31 (1.10)	1.56 (1.36)	-0.47 (1.17)	0.41 (1.73)
Age: <i>M</i> ( <i>SD</i> )	37.31 (10.50)	37.60 (9.99)	37.96 (10.73)	40.23 (12.21)	40.77 (11.66)	38.59 (11.07)
Gender: <i>n</i> (% male)	125 (63.10)	75 (48.70)	47 (47.50)	107 (60.50)	42 (51.20)	396 (55.80)
In a relationship: <i>n</i> (%)	114 (57.60)	95 (61.70)	70 (70.70)	120 (67.80)	49 (59.80)	448 (63.10)
University degree: <i>n</i> (%)	103 (52.00)	73 (47.40)	64 (64.60)	114 (64.40)	45 (54.90)	399 (56.20)
On sick leave: <i>n</i> (%)	3 (1.50)	4 (2.60)	2 (2.00)	2 (1.10)	6 (7.30)	17 (2.40)
Previous psychological treatment: <i>n</i> (% yes)	91 (46.00)	90 (58.40)	43 (43.40)	63 (35.60)	35 (42.70)	322 (45.40)
Previous/concurrent psychotropic medication: <i>n</i> (% yes)	49 (24.70)	60 (39.00)	31 (31.30)	27 (15.30)	32 (39.00)	199 (28.00)

*Note:* IPS – Irrational Procrastination Scale, PPS – Pure Procrastination Scale, STS – Susceptibility to Temptation Scale,GAD-7 - Generalized Anxiety Disorder Assessment 7-item, MADRS-S - Montgomery Åsberg Depression Rating Scale – Self-report version, QOLI – Quality of Life Inventory

# Implications



(Steel, 2007; Sirois, 2007)



# Theories

*Table 2.* The four perspectives delineating an understanding of procrastination, the theories referred to in order to explain procrastination, and examples of variables that have been associated with procrastination in studies

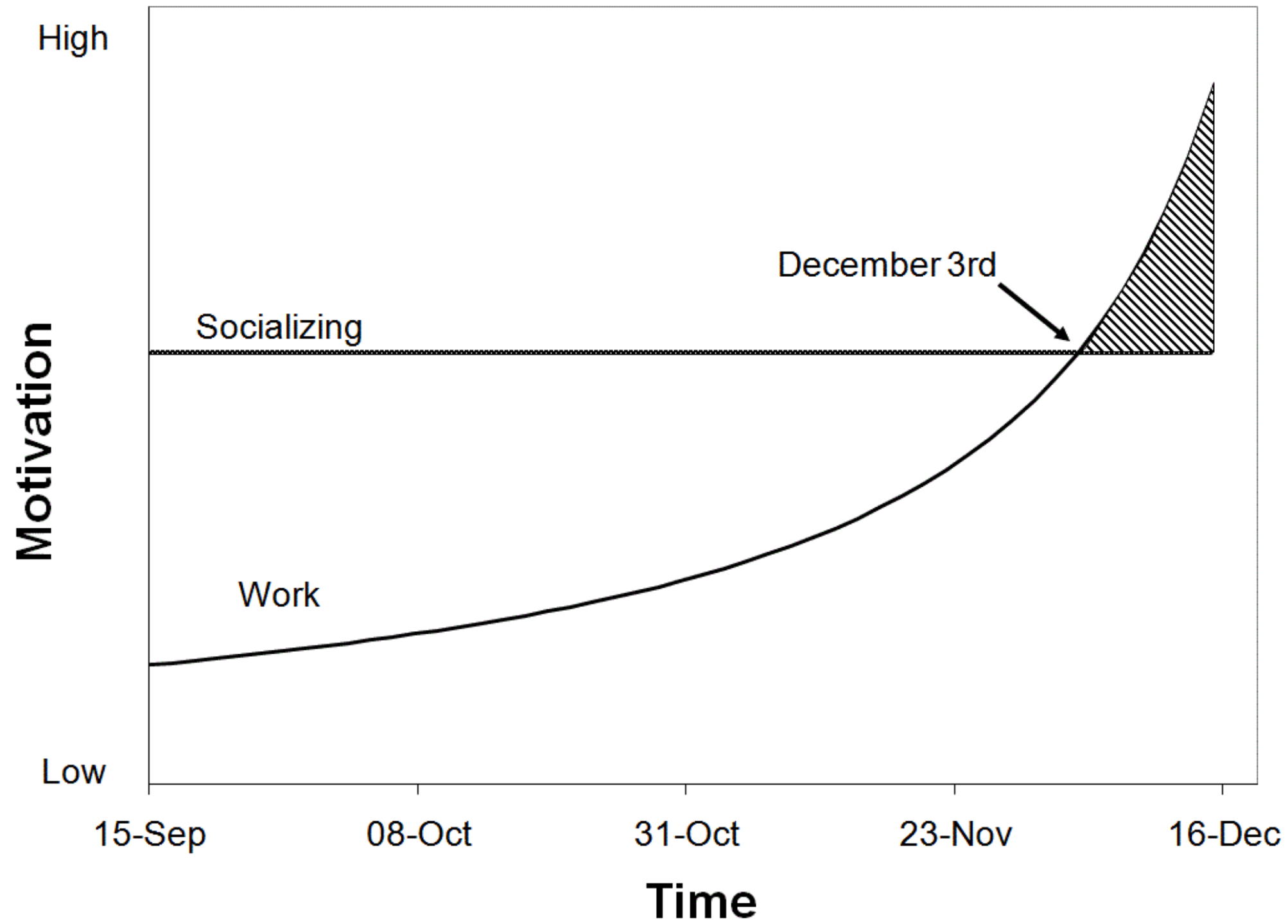
	Differential psychology perspective	Motivational and volitional psychology perspective	Clinical psychology perspective	Situational perspective
Understanding procrastination as ...	a trait.	a motivational or/and volitional deficit.	a clinically relevant phenomenon.	being evoked by certain situational features.
Theories that have been referred to in order to explain procrastination:	(Big Five)	Self-Determination Theory, Temporal Motivation Theory, Action Control Theory.	Psychoanalysis, Cognitive Behaviorism, Neuropsychology.	–
Examples of variables that have been associated with procrastination in studies:	Conscientiousness, Neuroticism, Perfectionism.	Intrinsic motivation, Goal orientation, Self-regulation, Time-management.	Anxiety, depression, stress.	Task difficulty, Task attractiveness, Task specificity.

(Klingsieck, 2013)

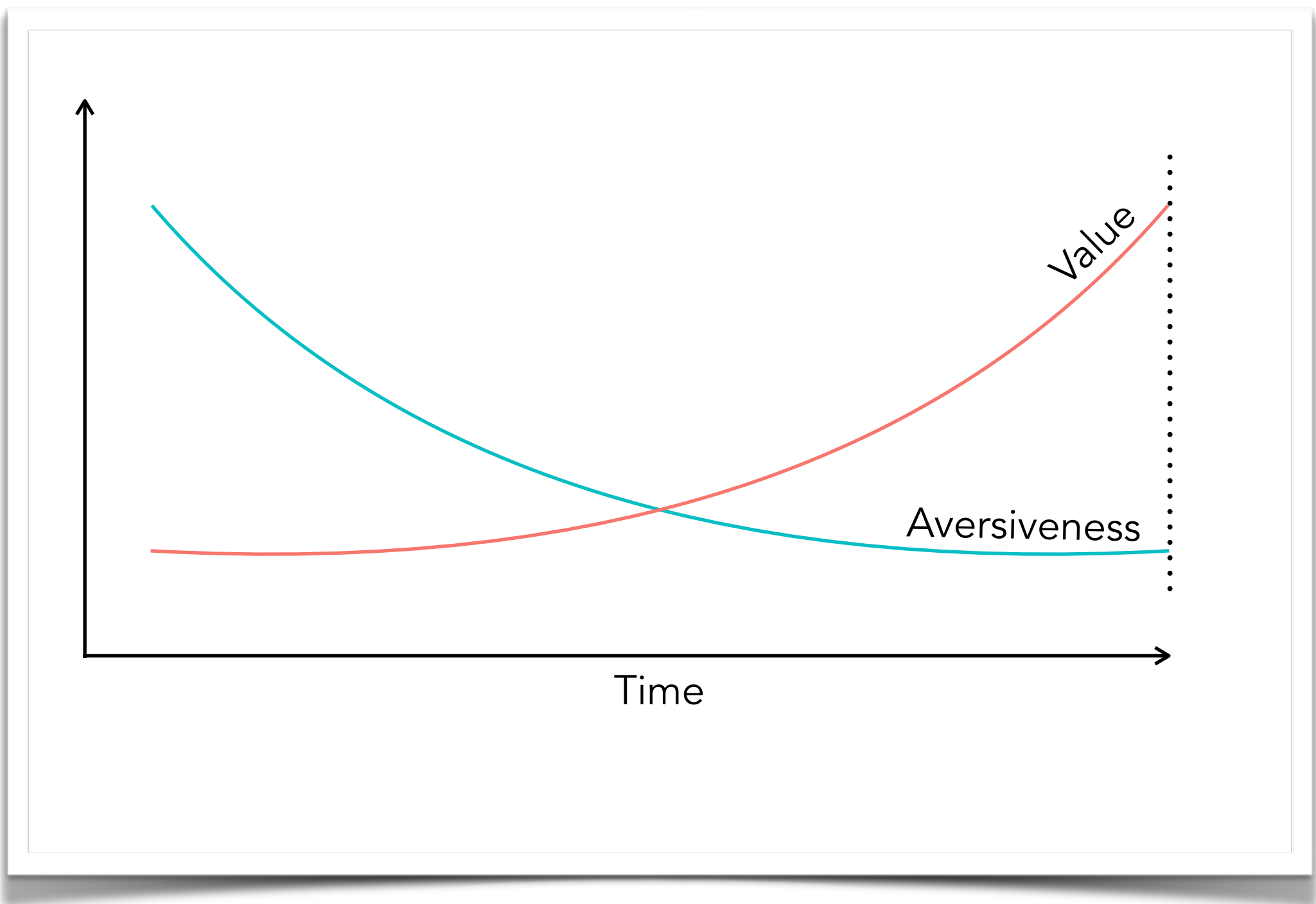
$$\text{Motivation} = \frac{\text{Expectancy} \times \text{Value}}{\text{Impulsiveness} \times \text{Delay}}$$

(Steel & König, 2006)





(Steel & König, 2006)



(Zhang & Feng, 2019)



# Clinical perspective

Clinical psychology – the maintenance and implications of procrastination

*“Of all the perspectives, it is the clinical one that puts the negative consequences and correlates of procrastination intensely into focus...”*

Adaptation of the motivational and self-regulation perspectives

Conceptualizing procrastination as an avoidance/escape behavior

Cognitive behavior therapy the most empirically sound treatment format

(Klingsieck, 2013; Rozental & Carlbring, 2014)

Time  
↓

## Appraisal

Negative efficacy expectations, e.g., *"This is too hard"*  
Negative value expectations, e.g., *"Why should I do this?"*  
Negative emotions, e.g., frustration  
Dysfunctional beliefs, e.g., *"I need to feel motivated"*  
Prior experiences, e.g., *"I've never managed this before"*

## Self-handicapping

Projection bias, i.e., setting goals based on current situation  
Present bias, i.e., using the current situation to predict future events  
Planning fallacy, i.e., dismissing prior experiences of similar assignments  
Future discounting, i.e., discounting the value of future events

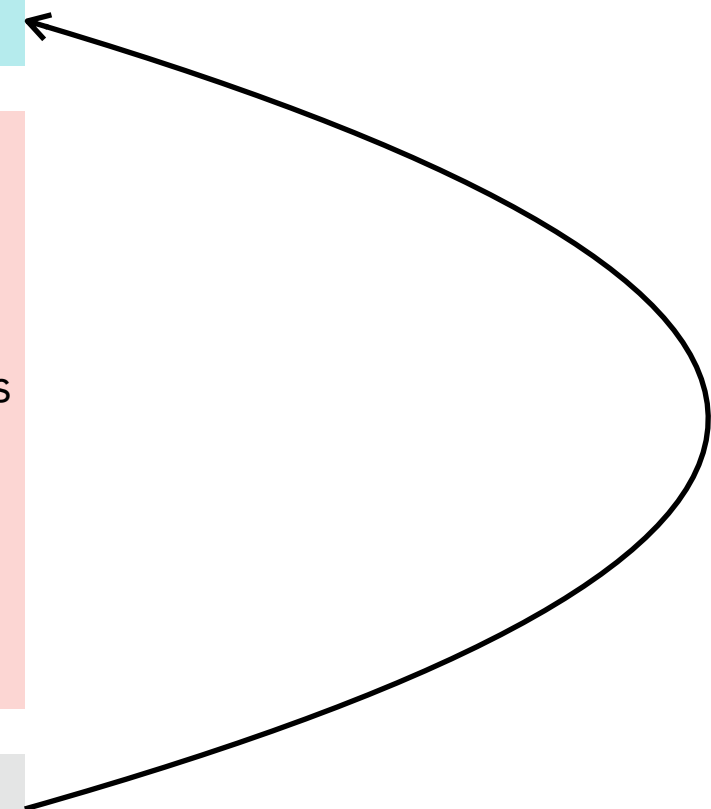
- Inadequate goal-setting and time management
- Failure to set the occasion for goal-directed behavior

## Avoidance/escape

- Failure to execute goal-directed behavior
- Excessively monitoring performance
- Rumination and daydreaming
- Failure to tolerate negative affect, i.e., urgency
- Choice of competing activity that results in immediate gratification

## Negative feedback loop

Self-attribution confirming prior expectations, beliefs, and experiences



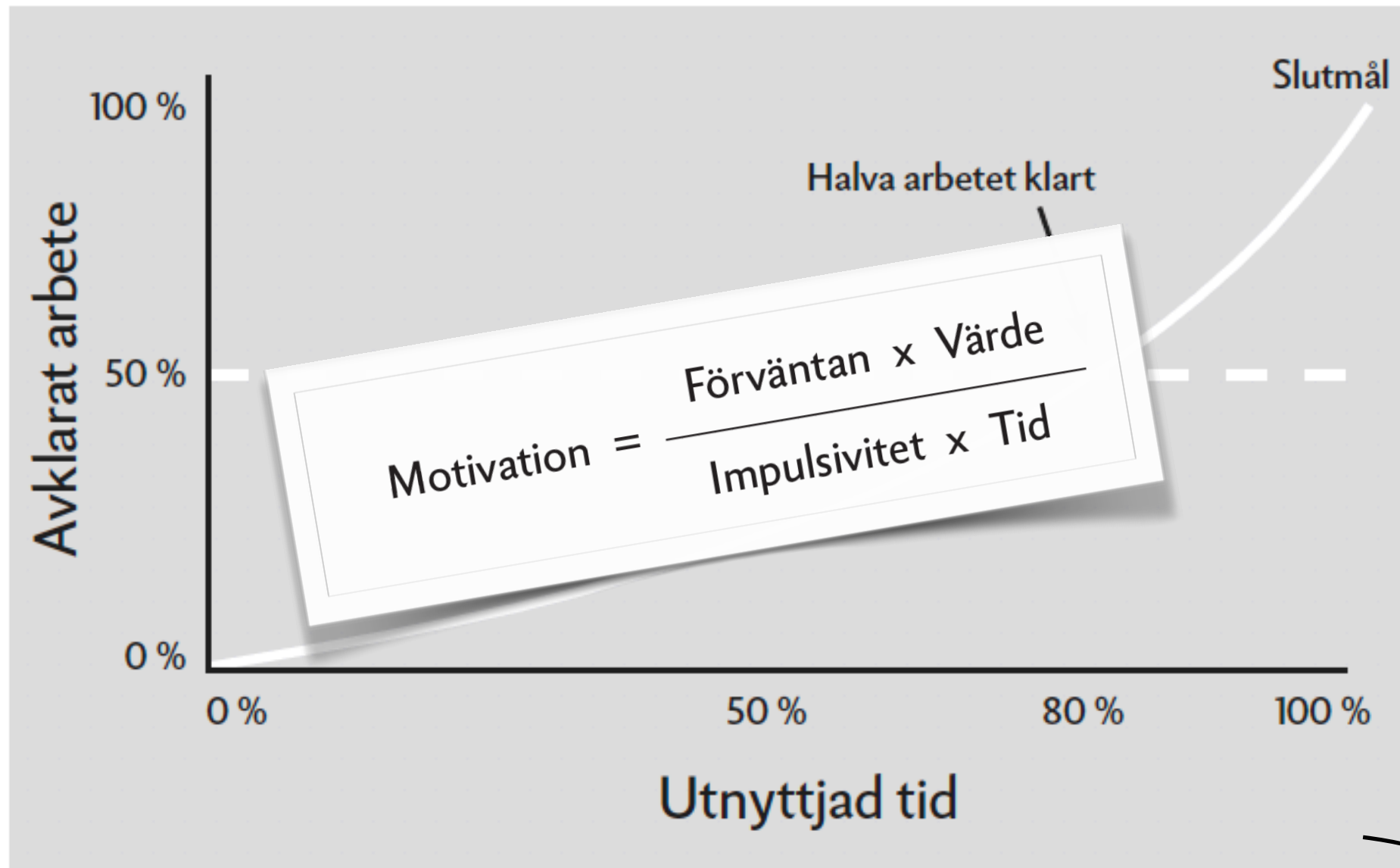


# Treatment outline

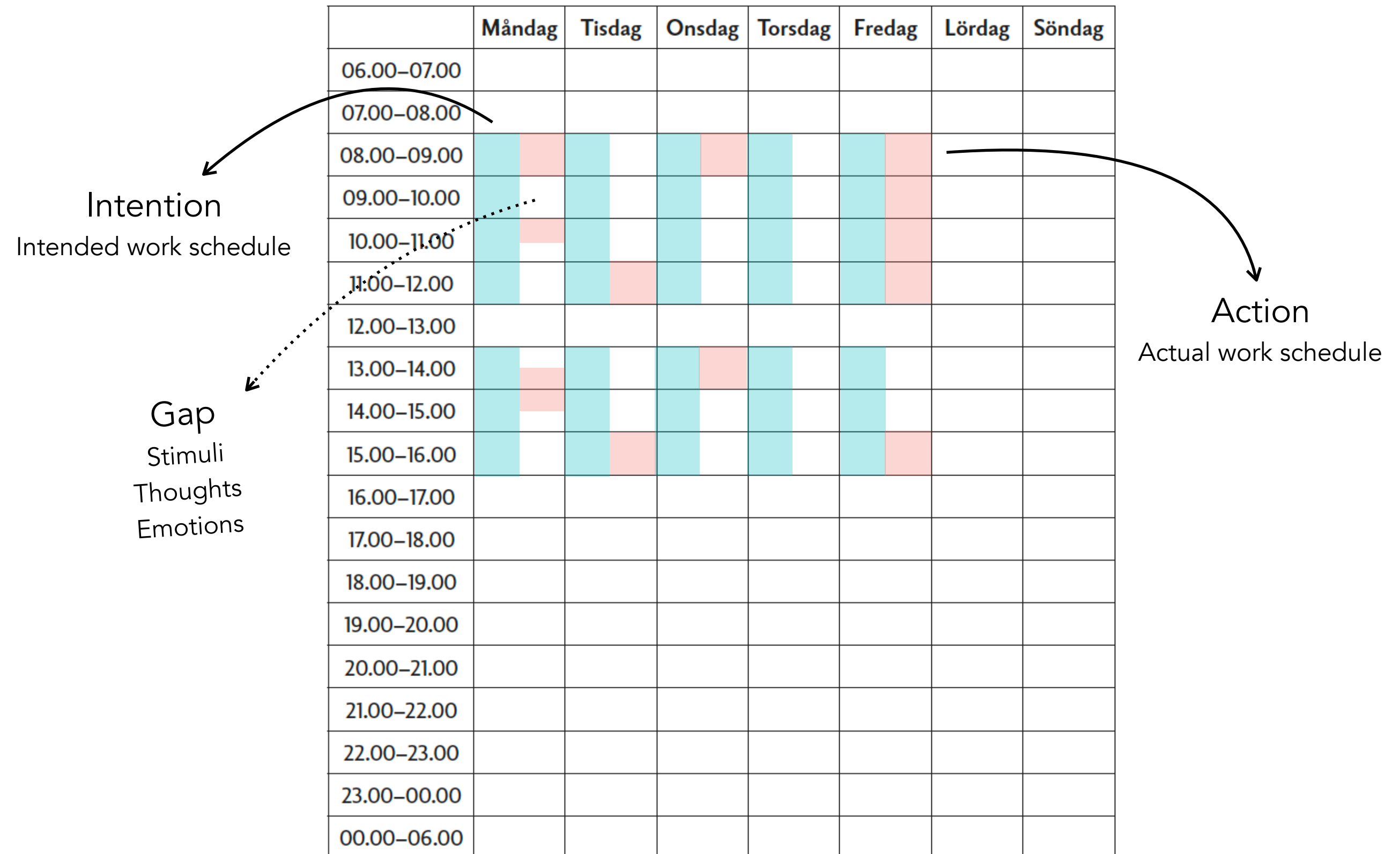
Session number and treatment focus	Between-session assignment
1. The procrastination equation	Reading material, reflection, and unschedule
2. Costs and benefits of procrastination	Motivational worksheet, i.e., cost-benefit analysis
3. Goal-settings techniques	Goal-setting worksheets, e.g., SMART goals
4. Reward scheduling and motivational loops	Reward scheduling worksheets, e.g., fusing
5. Ego depletion and circadian and ultradian rhythms	Scheduling worksheets, e.g., dedicated work hours
6. Stimulus control and pseudo work	Distractions worksheet, i.e., monitoring triggers
7. Self-assertiveness	Priority worksheet, i.e., differentiating urgent tasks
8. Dysfunctional beliefs	Behavioral experiment worksheet, i.e., practicing flexibility
9. Value clarification	Valued chain worksheet, i.e., formulating a valued direction
10. Relapse prevention	Relapse prevention worksheet, i.e., managing risks

(Rozenal & Wennersten, 2014; Rozenal & Carlbring, 2013)

# Psychoeducation



# Unschedule





# Mini-goal

Exposure  
Overcoming emotions

Beskriv den uppgift du för närvarande skjuter upp:

.....

.....

*Exempel: Att städa badrummet.*

Min känsla efter att ha slutfört mitt minimål:

.....

.....

*Exempel: Det känns okej, det är ju inte särskilt jobbigt att ta fram sakerna.*

Ett minimål som gör att jag kommer ett steg närmare att bli klar med min uppgift:

.....

.....

*Exempel: Att ta fram rengöringsmedel från städskrubben.*

Mina tankar kring att ta ytterligare ett steg på min uppgift eller mitt åtagande:

.....

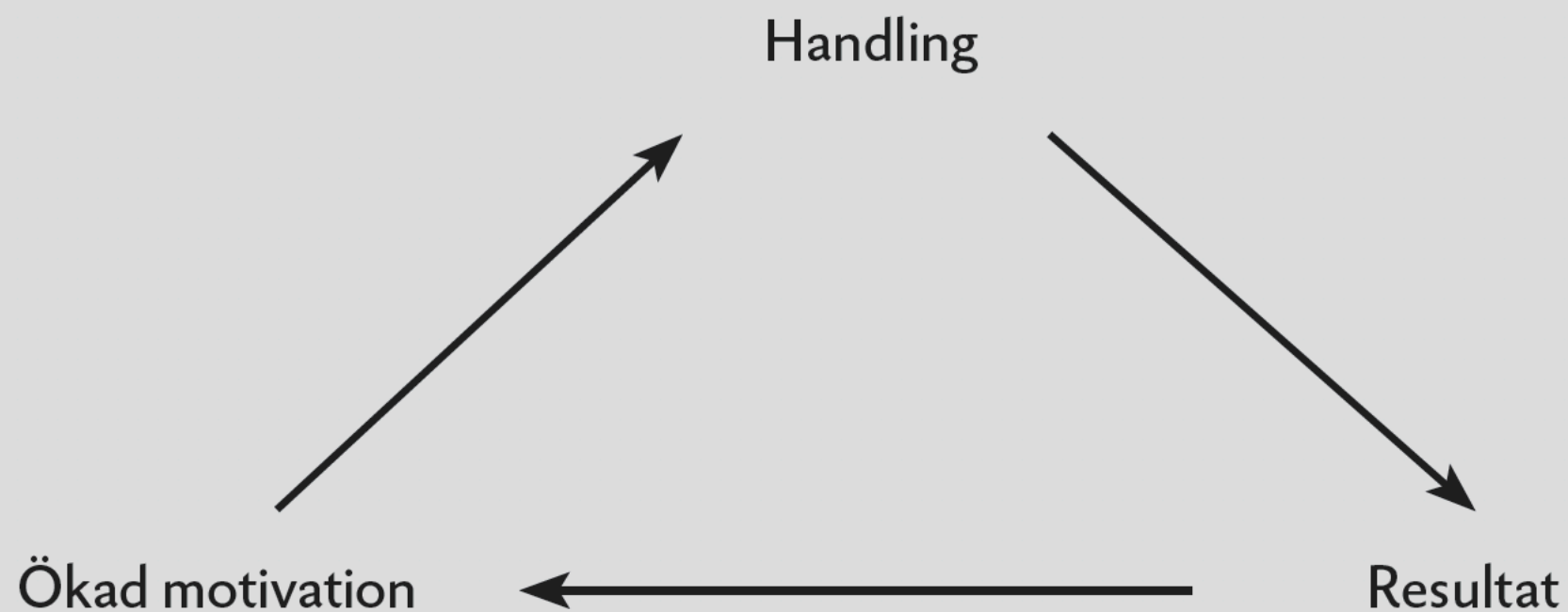
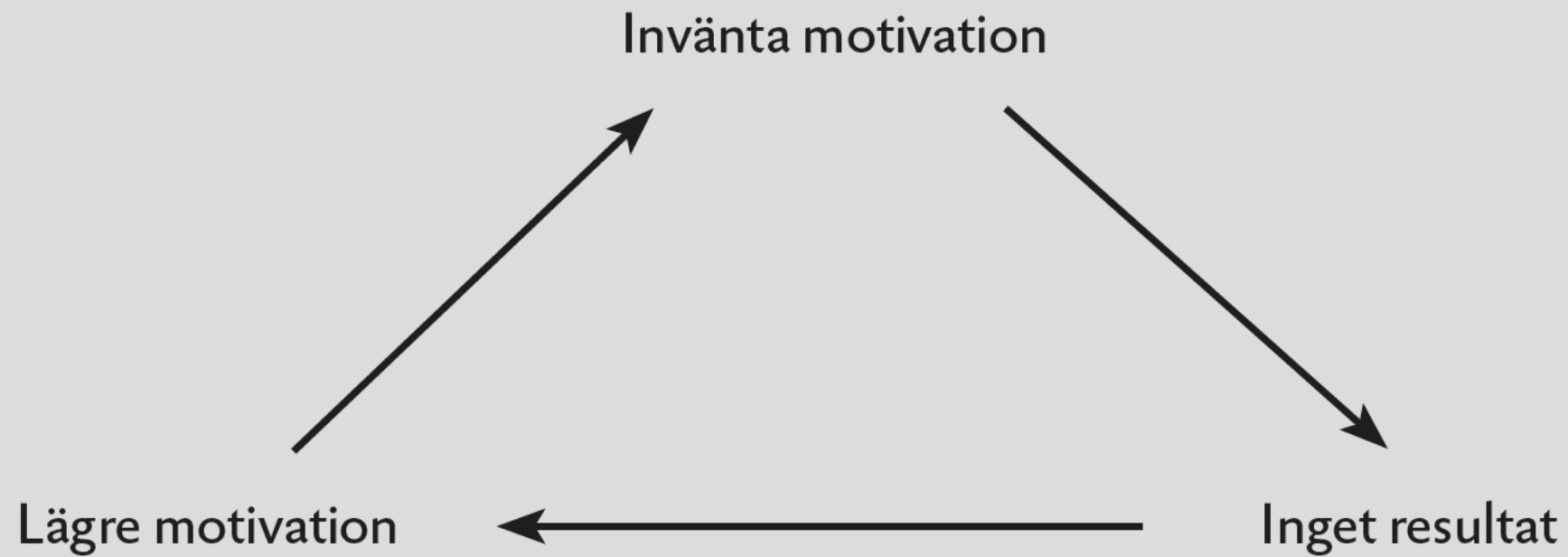
.....

*Exempel: Nu när jag ändå har tagit fram sakerna kan jag lika väl börja med att dammsuga badrummet.*

Mini-goal

Negotiating a starting point

# Psychoeducation



# Reward scheduling

	Måndag	Tisdag	Onsdag	Torsdag	Fredag	Lördag	Söndag
06.00–07.00							
07.00–08.00							
08.00–09.00							
09.00–10.00							
10.00–11.00							
11.00–12.00							
12.00–13.00							
13.00–14.00							
14.00–15.00							
15.00–16.00							
16.00–17.00							
17.00–18.00							
18.00–19.00							
19.00–20.00							
20.00–21.00							
21.00–22.00							
22.00–23.00							
23.00–00.00							
00.00–06.00							

Small reward

High frequency behaviors

Large reward  
Incentives



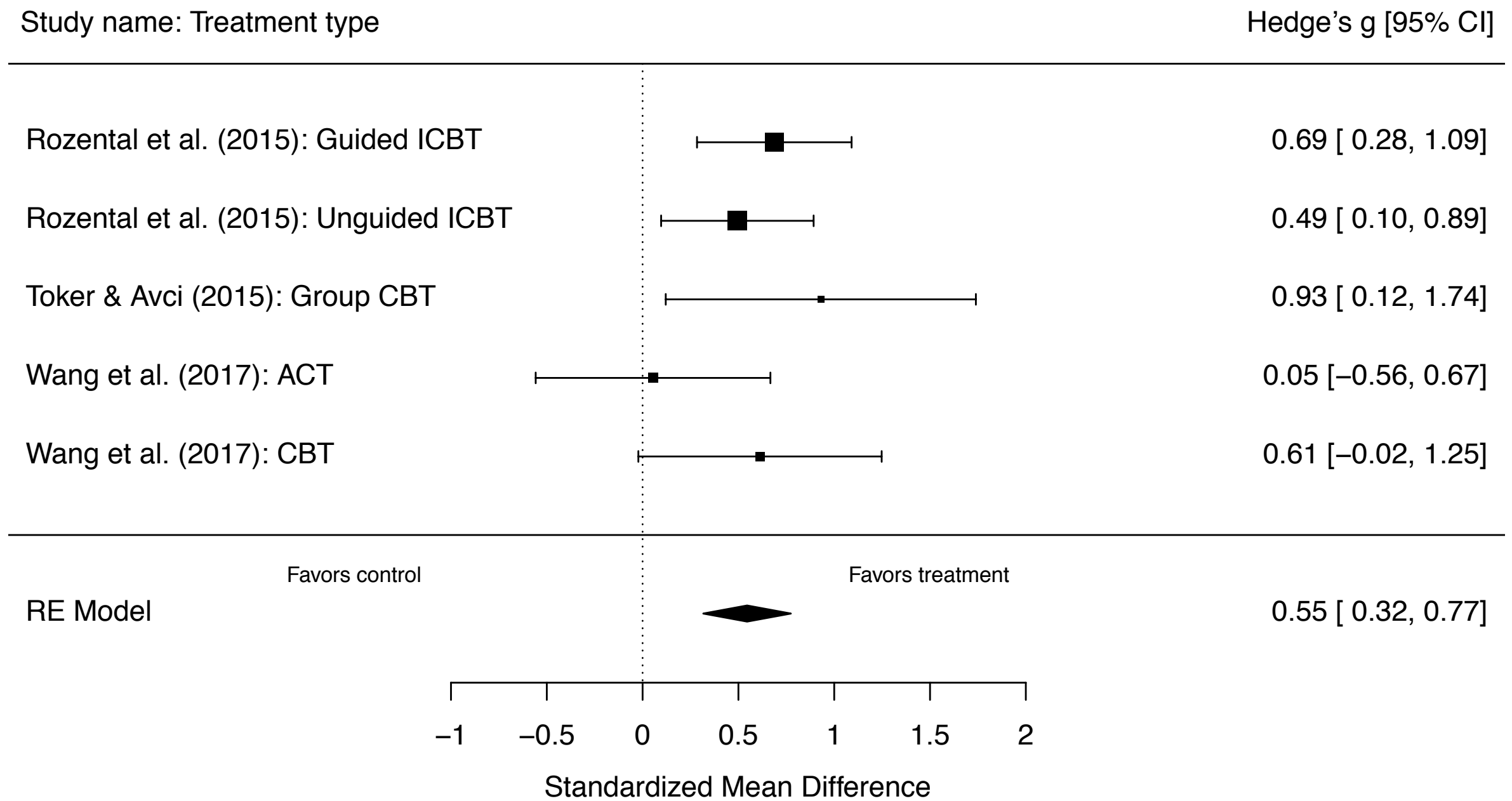
# Distractions

Saker jag kan göra för att fortsätta skjuta upp min uppgift	Saker jag kan göra för att blir klar med min uppgift
<p><i>Exempel:</i> Kolla på roliga Youtube-klipp.</p>	<p><i>Exempel:</i> Sätta mobiltelefonen på ljudlöst.</p>

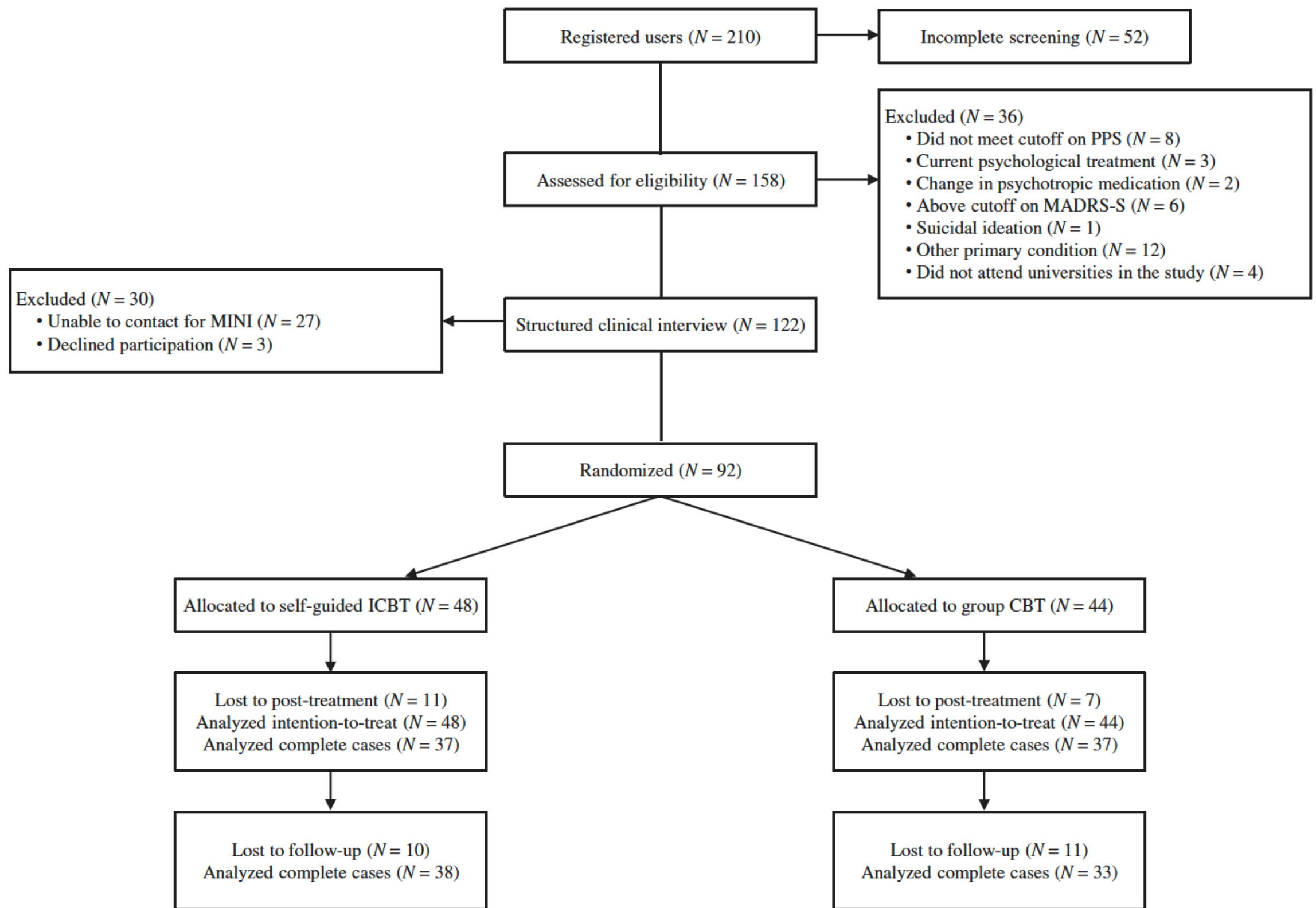
Beskriv tre saker som du kan åtgärda redan idag för att ha lättare att bli klar med din uppgift:

- 1) .....
- 2) .....
- 3) .....

*Exempel: Stänga av mejlprogrammet medan jag skriver på datorn.  
Stänga av pushnotiserna på min mobiltelefon. Plugga på biblioteket i  
stället för hemma.*



(Rozental et al., 2018)



MINI = MINI-International Neuropsychiatric Interview; PPS = Pure Procrastination Scale; MADRS-S = Montgomery-Åsberg Depression Rating Scale – Self-Rated; ICBT = Internet-based Cognitive Behavior Therapy

(Rozenal et al., 2018)

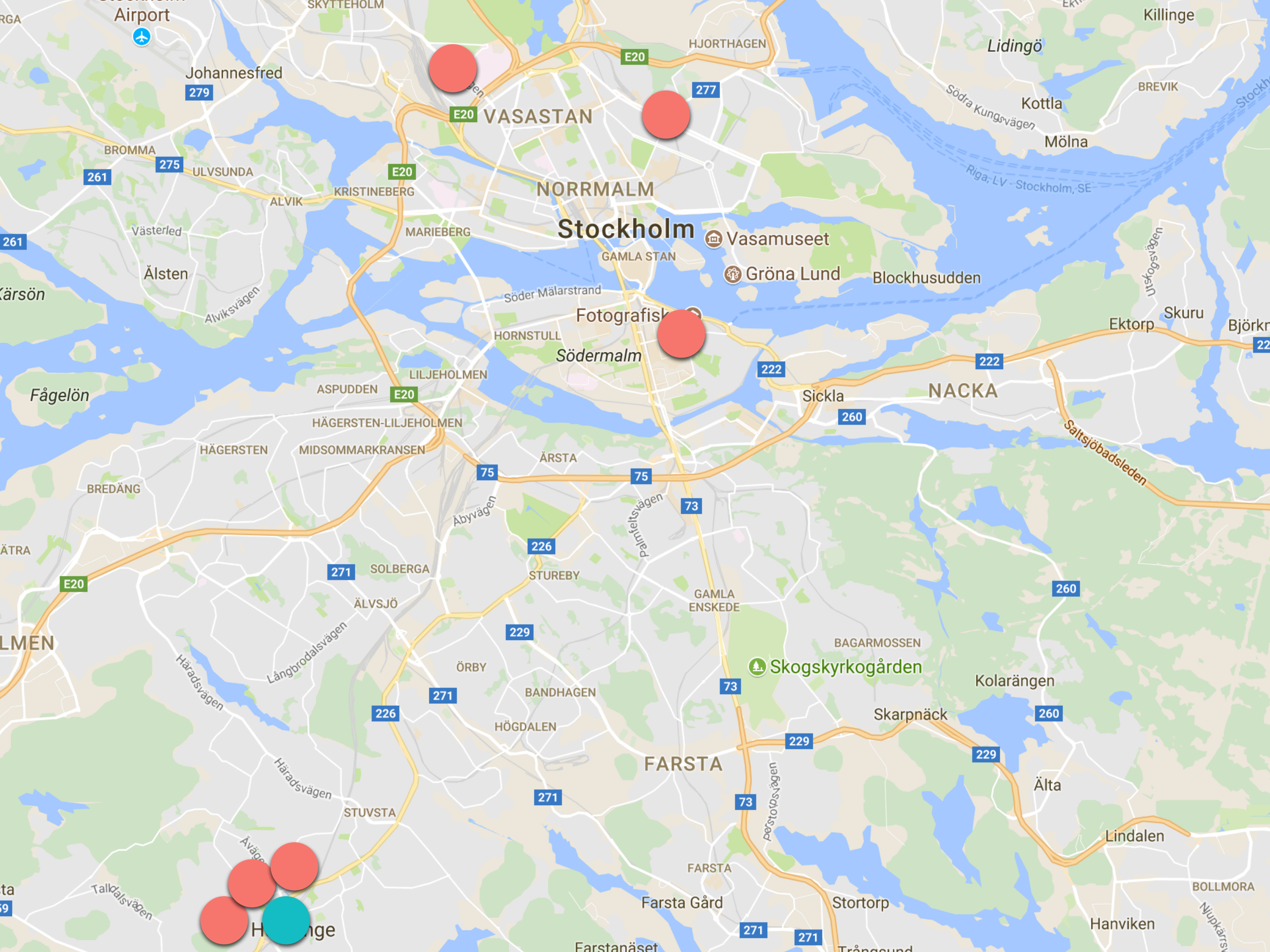




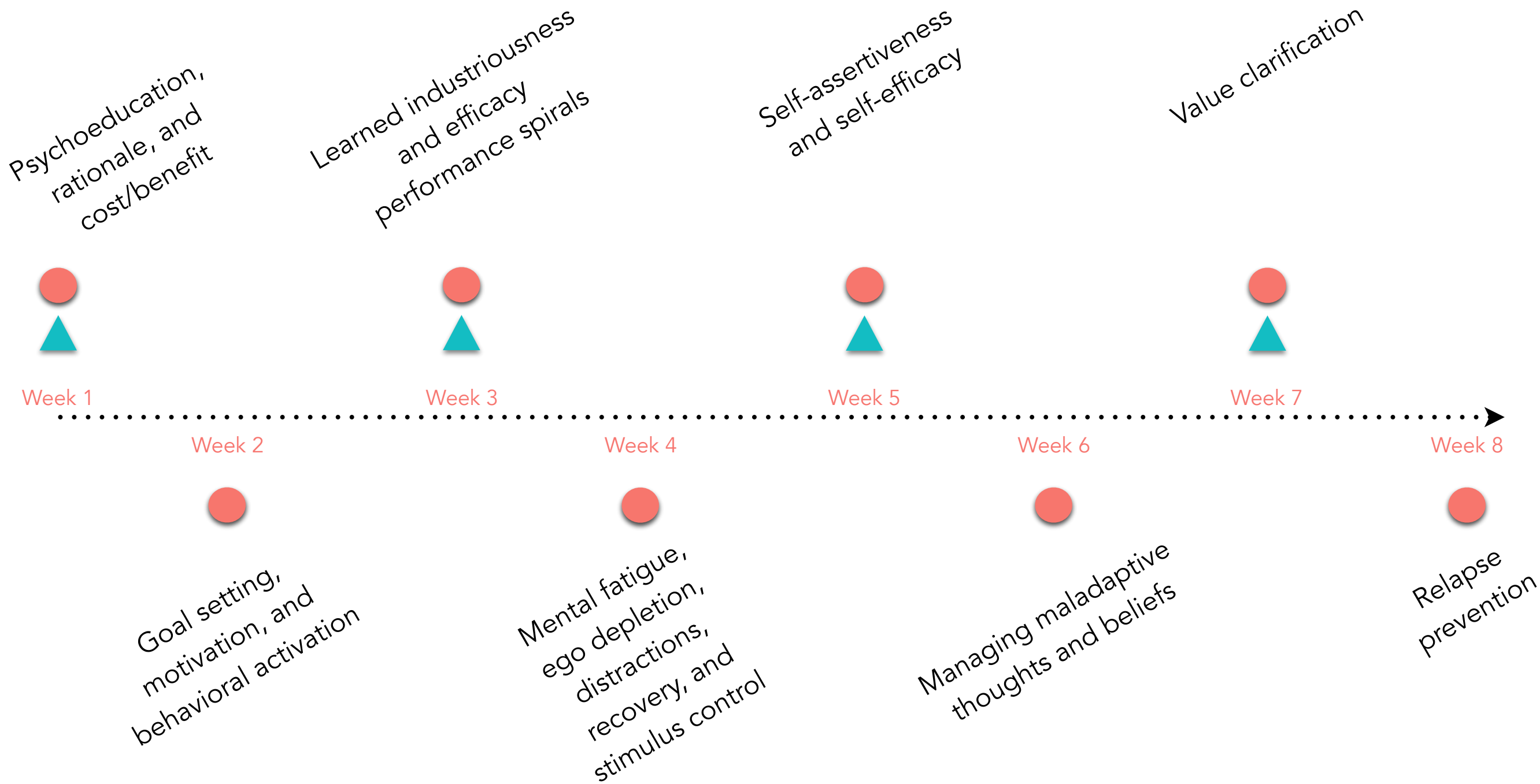
Table 1

## Sociodemographic Characteristics of Participants at the Pretreatment Assessment

Baseline characteristic	Self-guided ICBT (N = 48)	Group CBT (N = 44)	Full sample (N = 92)
Gender (female): N (%)	30 (62.5)	38 (86.4)	68 (73.9)
Age (years): M (SD)	28.4 (7.9)	30.0 (7.5)	29.2 (7.7)
University points (ECTS): M (SD) <sup>a</sup>	124.0 (99.7)	145.2 (107.3)	134.1 (103.4)
Marital status: N (%)			
Single	16 (33.3)	17 (38.6)	33 (35.9)
Married/Partner	31 (64.6)	25 (56.8)	56 (60.9)
Divorced/Widow	1 (2.1)	2 (4.5)	3 (3.3)
Children (yes): N (%)	11 (22.9)	11 (25)	22 (23.9)
University: N (%)			
Karolinska Institutet	27 (56.3)	29 (65.9)	56 (60.9)
Södertörn University	16 (33.3)	10 (22.7)	26 (28.3)
Ersta Sköndal University College	2 (4.2)	2 (4.5)	4 (4.3)
Sophia Hemmet University	2 (4.2)	2 (4.5)	4 (4.3)
Red Cross University College	1 (2.1)	1 (2.3)	2 (2.2)
Type of education: N (%)			
Professional, e.g., nurse	28 (58.3)	24 (54.5)	52 (56.5)
Non-professional, e.g., sociology	14 (29.2)	14 (31.8)	28 (30.4)
Course, e.g., academic writing	4 (8.3)	2 (4.5)	6 (6.5)
Post graduate	2 (4.2)	4 (9.1)	6 (6.5)
Employment parallel to studies (yes): N (%)	23 (47.9)	27 (61.4)	50 (54.3)
Psychiatric diagnosis according to MINI (yes): N (%)			
Depression	2 (4.2)	2 (4.5)	4 (4.3)
Anxiety	6 (12.5)	12 (27.3)	18 (19.6)
Depression/anxiety	1 (2.1)	4 (9.1)	5 (5.4)
Other	0 (0)	1 (2.3)	1 (1.1)
None	39 (81.2)	25 (56.8)	64 (69.6)
Previous psychological treatment (yes): N (%)	15 (31.3)	16 (36.4)	31 (33.7)
Previous/ongoing psychotropic medication (yes): N (%)	8 (16.7)	9 (20.5)	17 (18.5)

<sup>a</sup> 30 university points (ECTS) equals studying one semester at full time, i.e., 180 = Bachelor's degree; 300 = Master's degree ECTS = European Credit Transfer and Accumulation System; ICBT = Internet-based Cognitive Behavior Therapy; CBT = Cognitive Behavior Therapy; MINI = MINI-International Neuropsychiatric Interview

(Rozenal et al., 2018)



● Self-guided ICBT  
▲ Group CBT

(Rozental et al., 2018)

Table 4

Observed Marginal Means, Standard Deviations, and Ns for Each Outcome Measure Divided by Condition and Assessment Point

Measure and condition	Pre			Post (8 weeks)		
	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>
Procrastination Assessment Scale for Students						
Self-guided ICBT	125.29	23.39	48	115.03	21.37	38
Group CBT	126.18	22.39	44	116.87	21.37	38
Montgomery Åsberg Depression Rating Scale - Self-report version						
Self-guided ICBT	14.16	7.31	48	9.84	7.29	38
Group CBT	15.60	7.00	44	10.74	7.29	38
Generalized Anxiety Disorder Assessment 7-item						
Self-guided ICBT	5.18	4.47	48	3.65	3.69	38
Group CBT	6.50	4.28	44	4.68	3.69	38
Symptoms Checklist 90						
Self-guided ICBT	0.66	0.58	48	0.37	0.45	37
Group CBT	0.86	0.56	44	0.62	0.45	37

ICBT = Internet-based Cognitive Behavior Therapy; CBT = Cognitive Behavior Therapy

Table 5

Within-Group Effect Sizes and Between-Group Effect Sizes, Presented as Cohen's *d* [95% CI] for All Outcome Measures

	Measure				
	PPS	PASS	MADRS-S	GAD-7	SCL-90
Within-group effect sizes pre- and post-treatment					
Self-guided ICBT	1.29 [0.81, 1.74]	0.46 [0.02, 0.88]	0.59 [0.15, 1.02]	0.37 [-0.06, 0.79]	0.55 [0.11, 0.98]
Group CBT	1.24 [0.76, 1.70]	0.42 [-0.03, 0.85]	0.68 [0.23, 1.12]	0.45 [0.01, 0.89]	0.47 [0.02, 0.91]
Between-group effect sizes pre- and post-treatment					
Self-guided ICBT vs. Group CBT	0.16 [-0.29, 0.61]	0.09 [-0.36, 0.54]	0.12 [-0.33, 0.57]	0.28 [-0.18, 0.73]	0.55 [0.09, 1.01]

PPS = Pure Procrastination Scale; PASS = Procrastination Assessment Scale for Students MADRS-S = Montgomery Åsberg Depression Rating Scale – Self-report Version;

GAD-7 = Generalized Anxiety Disorder Assessment 7-item; SCL-90 = Symptoms Checklist 90; ICBT = Internet-based Cognitive Behavior Therapy;

CBT = Cognitive Behavior Therapy

(Rozenal et al., 2018)

Table 2

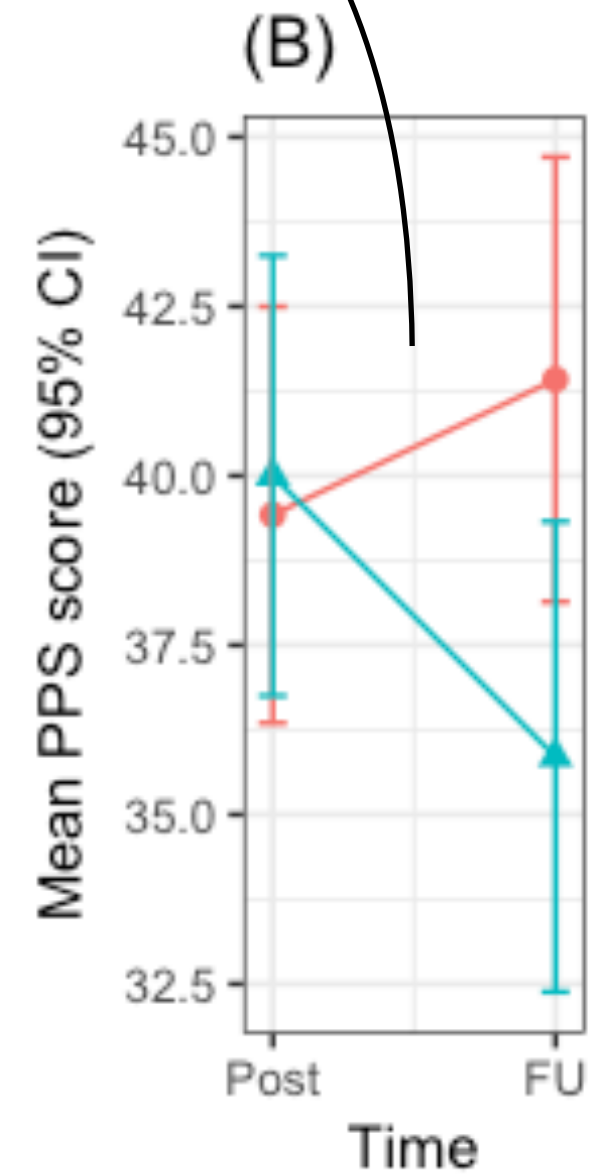
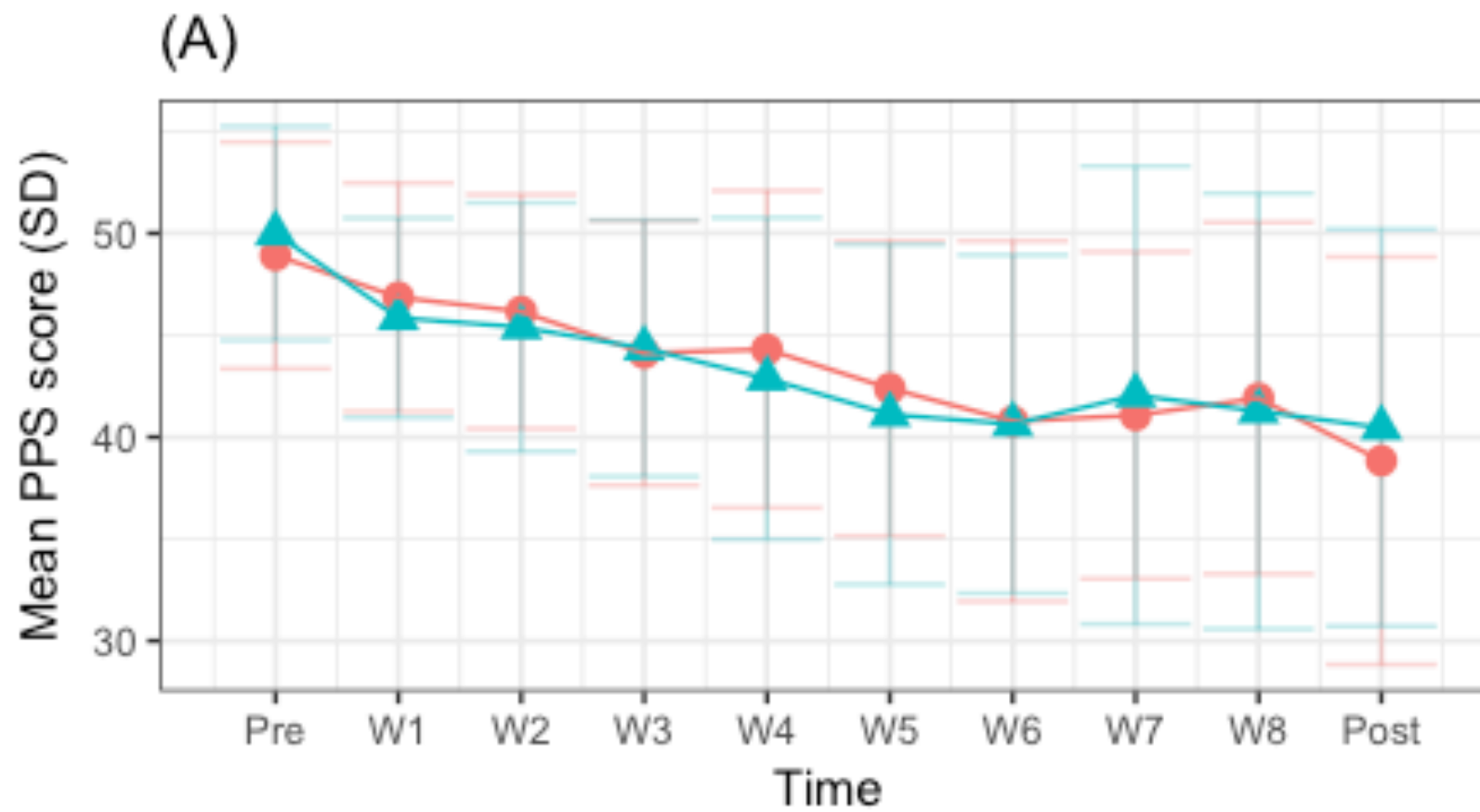
Number of Self-Reported Completed Modules and Actual Number of Attended Sessions During the Treatment Period

	Completed (%)	Cumulative Inverse %
Self-guided ICBT <sup>a</sup>		
Zero modules	2 (4.2)	94.4
One module	3 (6.3)	86.1
Two modules	7 (14.6)	66.7
Three modules	4 (8.3)	55.6
Four modules	2 (4.2)	50.0
Five modules	2 (4.2)	44.4
Six modules	4 (8.3)	33.3
Seven modules	3 (6.3)	25.0
Eight modules	9 (18.8)	
Group CBT		
Zero sessions	5 (11.4)	88.6
One session	4 (9.1)	79.5
Two sessions	9 (20.5)	59.1
Three sessions	8 (18.2)	40.9
Four sessions	18 (40.9)	

<sup>a</sup> Missing data = 12 (25%)



14.1% another psychological treatment  
4.3% change in medication



● Self-guided ICBT  
▲ Group CBT

(Rozental et al., 2018)



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