Next generation treatments to prevent suicide

Craig J. Bryan, PsyD, ABPP

Director, Suicide Care Clinic

Professor, Department of Psychiatry

University of Vermont | Larner College of Medicine

AMERICAN PSYCHOLOGICAL ASSOCIATION

Psychological Bulletin

ISSN: 0033-2909

http://dx.doi.org/10.1037/bul0000305

Interventions for Suicide and Self-Injury: A Meta-Analysis of Randomized Controlled Trials Across Nearly 50 Years of Research

Specific intervention type		
Medication only	816	0.94 [0.90, 0.99]
CT/CBT	52	0.81 [0.70, 0.93]
Eclectic psychotherapy	21	0.93 [0.78, 1.10]
DBT	29	0.98 [0.83, 1.17]
Psychotherapy and medication combined	80	0.80 [0.69, 0.92]
Checking-in programs	29	0.87 [0.75, 1.00]
Psychoanalysis/insight-based therapy	5	0.84 [0.63, 1.13]
Problem solving therapy	6	0.66 [0.45, 0.97]
Safety planning/means safety	3[a]	—
Inpatient hospitalization	0[a]	—
Other	145	0.94 [0.89, 1.00]

JAMA Psychiatry | Original Investigation

Suicidal Ideation and Suicide Attempts After Direct or Indirect Psychotherapy A Systematic Review and Meta-Analysis

Wouter van Ballegooijen, PhD; Josine Rawee, MS; Christina Palantza, MSc; Clara Miguel, MSc; Mathias Harrer, MSc; Ioana Cristea, PhD; Remco de Winter, MD, PhD; Renske Gilissen, PhD; Merijn Eikelenboom, PhD; Aartjan Beekman, MD, PhD; Pim Cuijpers, PhD

Table 2. Summary of Main Analyses and Sensitivity Analyses

	Suicidal ideation			Suicide attempts		
Treatment type	Comparisons, No.	Pooled effect, Hedges *g* (95% CI)	I^2	Comparisons, No.	Pooled effect, relative risk (95% CI)	I^2
Direct						
3-Level meta-analysis	64	−0.39 (−0.53 to −0.24)*	83.2	64	0.72 (0.62 to 0.84)*	40.5
Outliers removed	56	−0.26 (−0.34 to −0.18)*	38.1	60	0.71 (0.62 to 0.81)*	16.2
Influential cases removed	61	−0.25 (−0.35 to −0.16)*	54.8	60	0.68 (0.58 to 0.79)*	23.3
Adjusted for publication bias	64	−0.18 (−0.32 to −0.04)*	95.8	64	0.94 (0.82 to 1.09)	98.1
Low risk of bias due to missing outcome data	27	−0.50 (−0.84 to −0.16)*	84.6	32	0.68 (0.54 to 0.85)*	50.1
Waiting list conditions removed	59	−0.36 (−0.50 to −0.21)*	81.8	64	0.72 (0.62 to 0.84)*	40.5
Indirect						
3-Level meta-analysis	39	−0.30 (−0.42 to −0.18)*	52.2	26	0.68 (0.48 to 0.95)*	0
Outliers removed	37	−0.23 (−0.33 to −0.13)*	27.4	26	0.68 (0.48 to 0.95)*	0
Influential cases removed	38	−0.25 (−0.37 to −0.14)*	40.0	24	0.71 (0.50 to 0.999)*	0
Adjusted for publication bias	39	−0.16 (−0.34 to 0.03)	92.6	26	0.66 (0.48 to 0.90)*	0
Low risk of bias due to missing outcome data	18	−0.29 (−0.49 to −0.09)*	55.6	13	0.71 (0.56 to 0.91)*	0
Waiting list conditions removed	25	−0.30 (−0.45 to −0.15)*	58.3	26	0.68 (0.48 to 0.95)*	0

* Statistically significant ($P < .05$).

	Suicidal Ideation			Suicide Attempts		
Treatment	**k**	**Hedge's g**	**(95% CI)**	**k**	**RR**	**(95% CI)**
Direct						
ASSIP	--	--	--	3	0.87	(0.26, 2.91)
CAMS	**3**	**-0.46**	**(-0.85, -0.08)**	4	1.14	(0.34, 3.81)
CBT	**21**	**-0.51**	**(-0.91, -0.12)**	**12**	**0.65**	**(0.50, 0.83)**
DBT	4	-0.42	(-1.30, 0.46)	**7**	**0.49**	**(0.39, 0.60)**
Dynamic	4	0.01	(-0.36, 0.39)	4	0.41	(0.06, 2.67)
Family therapy	8	-0.27	(-0.58, 0.05)	7	1.14	(0.87, 1.49)
PST	--	--	--	7	0.99	(0.77, 1.29)
Other	24	-0.36	(-0.63, 0.10)	**20**	**0.60**	**(0.46, 0.77)**
Indirect						
CBT	**12**	**-0.27**	**(-0.40, -0.14)**	8	0.84	(0.51, 1.41)
Dynamic	--	--	--	5	0.69	(0.42, 1.14)
Family therapy	--	--	--	3	0.29	(0.02, 3.65)
Imaging	3	-0.65	(-3.17, 1.87)	--	--	--
PST	**4**	**-0.50**	**(-0.91, -0.09)**	--	--	--
Other	**20**	**-0.23**	**(-0.37, -0.11)**	**10**	**0.62**	**(0.48, 0.81)**

Essential Ingredients of Effective Interventions

1. Based on a simple, empirically-supported model
2. High fidelity by the clinician
3. Adherence by the patient
4. Emphasis on skills training
5. Prioritization of self-management
6. Easy access to crisis services

Rudd & Perez-Munoz (2019)

Brief Cognitive Behavioral Therapy (BCBT) for Suicide Prevention

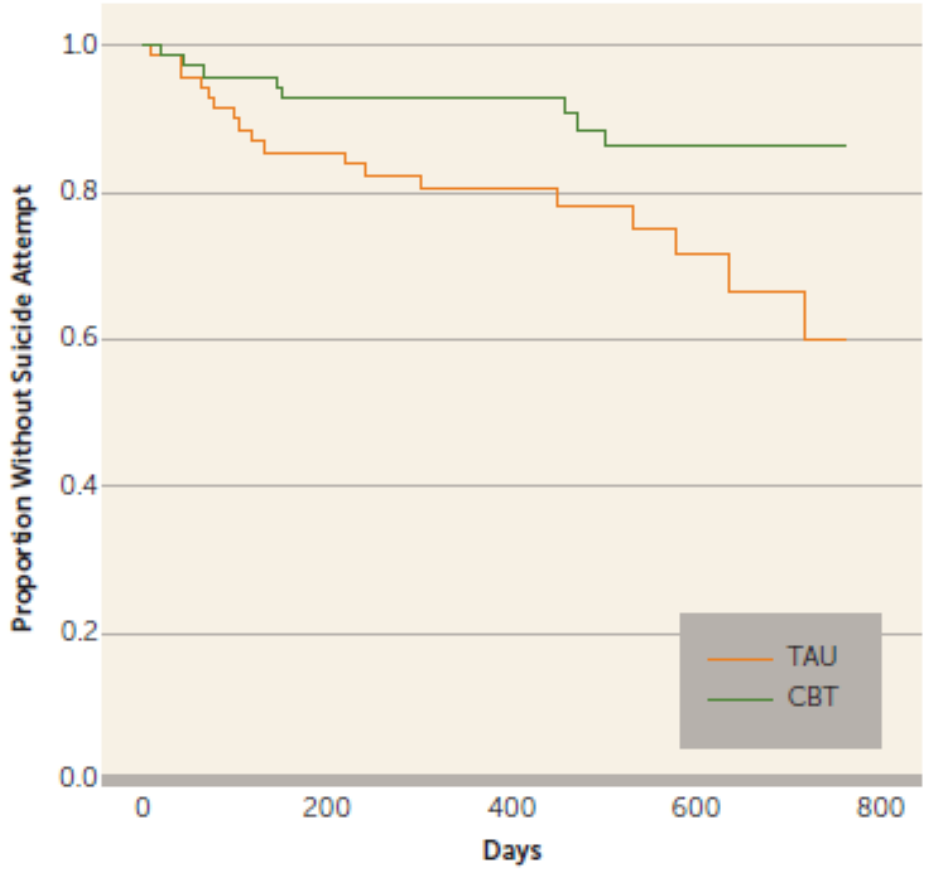
University of Vermont | Larner College of Medicine

BCBT Outcomes: Suicide Attempts

TABLE 2. Estimated Suicide Attempt-Free Probabilities

	Brief Cognitive-Behavioral Therapy		Treatment as Usual	
Assessment Period	Attempt-Free Probability	95% CI	Attempt-Free Probability	95% CI
3 Months	0.96	0.94–0.98	0.91	0.88–0.95
6 Months	0.96	0.94–0.98	0.85	0.81–0.88
12 Months	0.93	0.90–0.96	0.80	0.75–0.85
18 Months	0.86	0.81–0.91	0.75	0.69–0.81
24 Months	0.86	0.81–0.91	0.64	0.55–0.73

BCBT associated with 60% reduction in suicide attempts



[a] CBT=cognitive-behavioral therapy; TAU=treatment as usual (log-rank χ^2=5.28, df=1, p=0.02).

Rudd et al. (2015)

BCBT Outcomes: Attempt Rates by Subgroups

Subgroup	BCBT	TAU
No. of Therapy Sessions		
0-12	0%	26%
13-24	12%	39%
25-48	21%	21%
49+	19%	51%
Gender		
Female	9%	59%
Male	14%	34%
Diagnosis		
Posttraumatic Stress	14%	34%
Substance Use	21%	47%
Borderline Personality	0%	51%
Prior Suicide Attempt		
No	0%	54%
Yes	15%	32%

Bryan & Rudd (2018)

Contents lists available at ScienceDirect

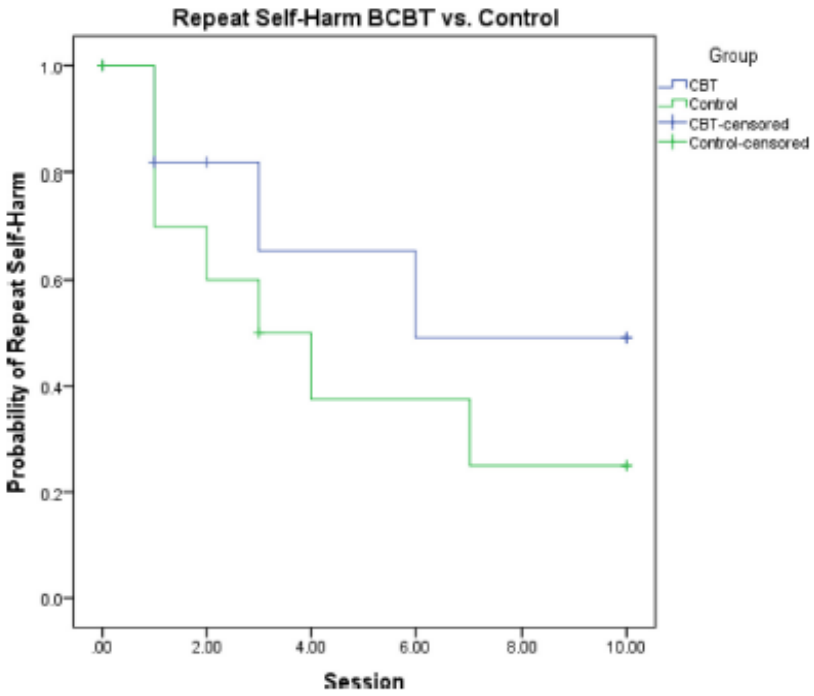
Journal of Affective Disorders

journal homepage: www.elsevier.com/locate/jad

Research paper

Cognitive behavioral therapy for suicide prevention in youth admitted to hospital following an episode of self-harm: A pilot randomized controlled trial

Mark Sinyor[a,b,*], Marissa Williams[a,c], Rachel Mitchell[a,b], Rabia Zaheer[a,d], Craig J. Bryan[e,f], Ayal Schaffer[a,b], Neal Westreich[a], Janet Ellis (MBBCir)[a,b], Benjamin I. Goldstein[a,b], Amy H. Cheung[a,b], Steven Selchen[a,b], Alex Kiss[g,h], Homer Tien[i,j]



Original Investigation | Psychiatry

Telehealth Brief Cognitive Behavioral Therapy for Suicide Prevention
A Randomized Clinical Trial

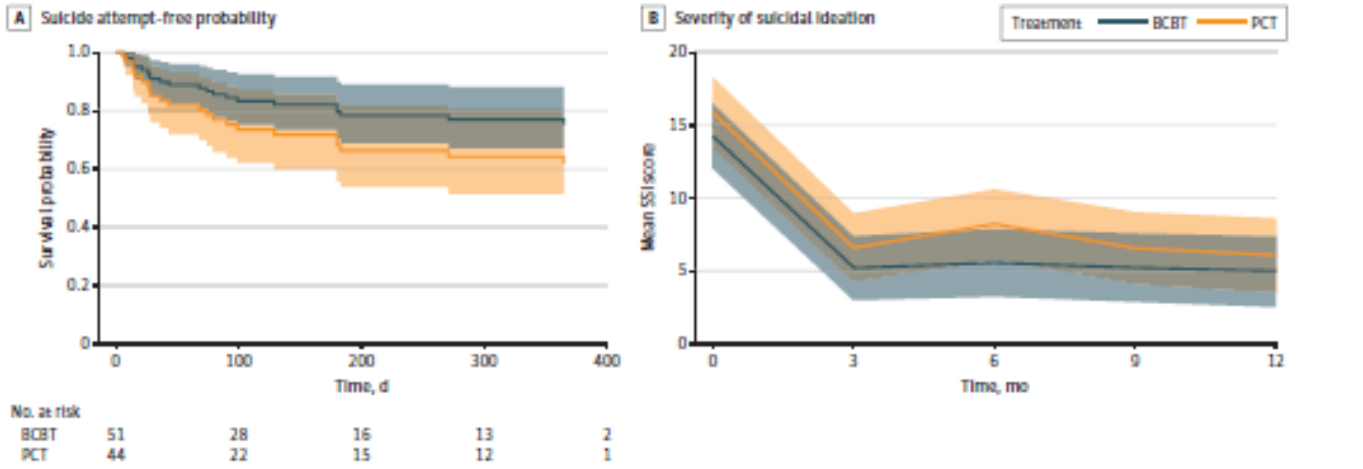
Justin C. Baker, PhD, ABPP; Austin Starkey, BS; Ennio Ammendola, PhD; Christina Rose Bauder, PhD, MPH; Samantha E. Daruwala, PhD; Jaryd Hiser, PhD; Lauren R. Khazem, PhD; Keelin Rademacher, BS; Jarrod Hay, BS; AnnaBelle O. Bryan, MS; Craig J. Bryan, PsyD, ABPP

Table 3. Suicide Attempt Counts and Means Across Groups, by Attempt Type

	Suicide attempts, Total No. (mean per participant) [95% CI]	
Attempt type	BCBT	PCT
Combined	36 (0.70) [0.49-1.00]	56 (1.40) [1.07-1.84]
Aborted	25 (0.51) [0.33-0.78]	30 (0.73) [0.50-1.06]
Interrupted	6 (0.09) [0.04-0.24]	19 (0.47) [0.29-0.74]
Actual	5 (0.10) [0.04-0.24]	7 (0.19) [0.09-0.39]

Abbreviations: BCBT brief cognitive behavioral therapy; PCT, present-centered therapy.

Figure 2. Suicide Attempt-Free Probability and Severity of Suicidal Ideation Over Time Among High-Risk Patients Receiving Brief Cognitive Behavioral Therapy (BCBT) vs Present-Centered Therapy (PCT) via Video Telehealth



BL indicates baseline; SSI, Scale for Suicide Ideation.

JAMA Psychiatry | Original Investigation

Brief Cognitive Behavioral Therapy for Suicidal Inpatients
A Randomized Clinical Trial

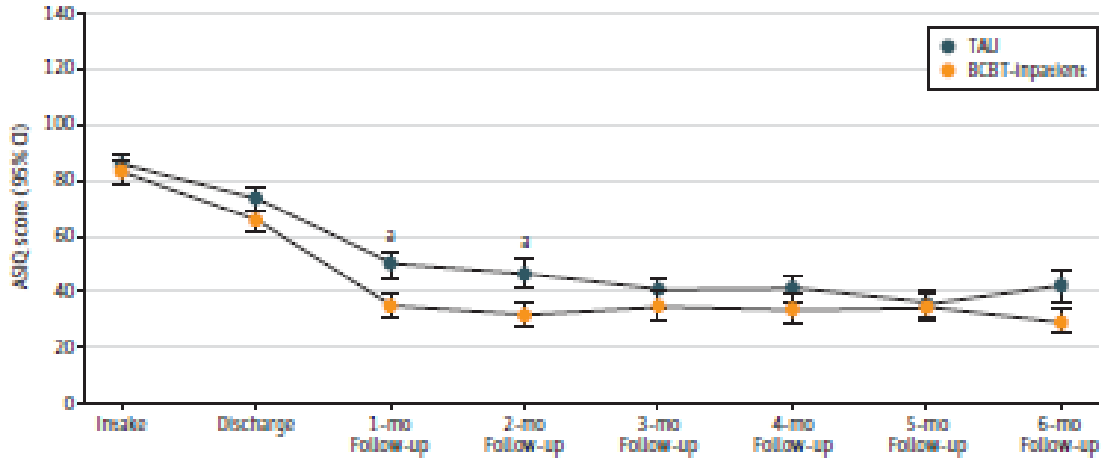
Gretchen J. Diefenbach, PhD; Kayla A. Lord, PhD; Jessica Stubbing, DClinPsy; M. David Rudd, PhD; Hannah C. Levy, PhD; Blaise Worden, PhD; Kimberly S. Sain, PhD; Jessica G. Bimstein, BS; Tyler B. Rice, BS; Kate Everhardt, BS; Raitza Gueorguieva, PhD; David F. Tolin, PhD

eTable 3 Counts for Suicide Attempts By Treatment Condition and Timepoint

	Total	1-Month FU	2-Month FU	3-Month FU	4-Month FU	5-Month FU	6-Month FU
Number of Participants Attempting Suicide							
BCBT-I	15	2	4	3	1	5	4
TAU	33	13	9	9	9	5	3
Total Number of Suicide Attempts							
BCBT-I	24	2	4	4	1	9	4
TAU	67	16	16	14	9	6	6

Note. FU = follow-up. BCBT-I = Brief Cognitive Behavioral Therapy-Inpatient. TAU = Treatment as Usual. Samples sizes due to missing data: BCBT-I *n* range = 92-93; TAU *n* range = 101-103.

Figure 2. Adult Suicidal Ideation Questionnaire (ASIQ) Total Scores by Treatment Condition and Time



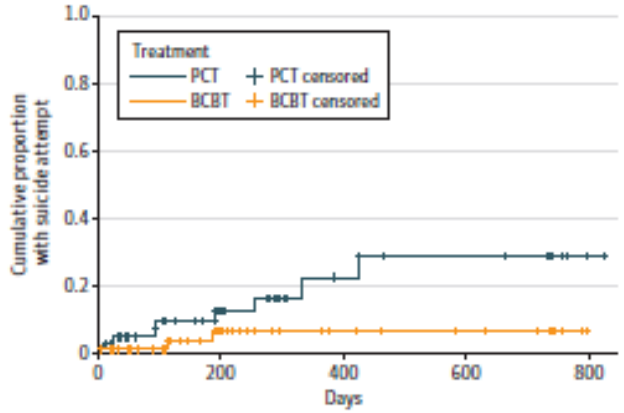
University of Vermont | Larner College of Medicine

JAMA Psychiatry | Original Investigation

Brief Cognitive Behavioral Therapy for Suicidal Military Personnel and Veterans
The Military Suicide Prevention Intervention Research (MSPIRE) Randomized Clinical Trial

Craig J. Bryan, PsyD, ABPP; Lauren R. Khazem, PhD; Justin C. Baker, PhD, ABPP; Lily A. Brown, PhD; Daniel J. Taylor, PhD, DBSM, DABSM; Kristi E. Pruiksma, PhD; Ron Acierno, PhD; Jayme G. Larick, DSW; Brian R. W. Baucom, PhD; Eric L. Garland, PhD, LCSW; M. David Rudd, PhD, ABPP

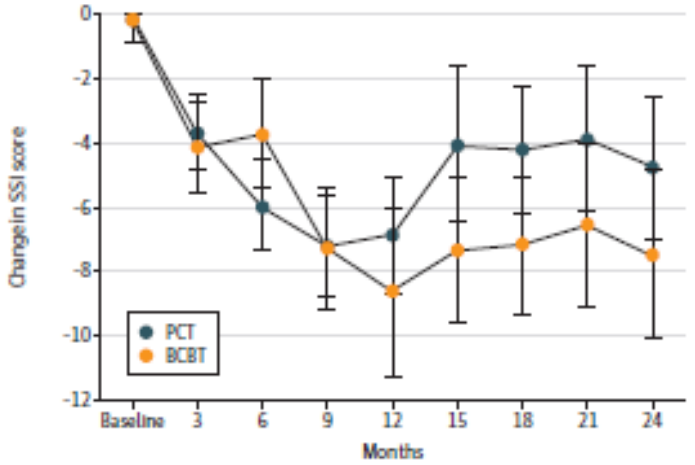
Figure 2. Cumulative Proportion of Participants in Each Treatment Group With a Follow-Up Suicide Attempt, With Number of Participants at Risk



No. at risk					
PCT	54	24	12	9	1
BCBT	52	24	15	12	0

BCBT indicates brief cognitive behavioral therapy; PCT, present-centered therapy.

Figure 3. Change in Scale for Suicidal Ideation (SSI) Mean Scores Over Time Across Treatment Groups



BCBT indicates brief cognitive behavioral therapy; PCT, present-centered therapy.

Next Generation BCBT: RCT Results

Study	Design	Tx	# of Sessions	Comparison Condition	Setting	Sample	Follow-Up	Findings
Rudd et al. (2015) N=152	RCT	BCBT	12	TAU	Outpatient	Military, 87% male, 27 y	24 months	60% reduction in attempts
Sinyor et al. (2020) N=24	RCT	BCBT	10	TAU	Outpatient	Youths, 29% male 18 y	12 months	100% reduction in attempts
Baker et al. (2024) N=85	RCT	BCBT	12	PCT	Outpatient (Virtual)	Adults, 36% male, 32 y	12 months	42% reduction in attempts
Diefenbach et al. (2024) N=200	RCT	BCBT	4	TAU	Inpatient	Adults, 42% male, 33 y	12 months	60% reduction in attempts
Bryan et al. (2025) N=108	RCT	BCBT	12	PCT	Outpatient (Virtual & F2F)	Military, 73% male, 33 y	24 months	75% reduction in attempts

BCBT Outcomes: Treatment Utilization

TABLE 4. Treatment Utilization Among Participants in Brief Cognitive-Behavioral Therapy (CBT) and Treatment as Usual During the Study Period

	Brief CBT		Treatment as Usual		
Utilization	Mean	SD	Mean	SD	p
First 3 months					
Number of individual therapy sessions	16.35	9.67	11.92	9.44	0.05
Number of group therapy sessions	6.71	13.46	13.42	20.05	0.09
Number of self-help therapy sessions	0.32	1.01	2.58	10.09	0.17
Number of inpatient hospitalization days	1.35	4.01	2.47	8.73	0.48
Number of substance use treatment program days	3.74	9.89	4.03	6.60	0.89
Entire study					
Number of individual therapy sessions	40.40	42.59	31.28	26.82	0.10
Number of group therapy sessions	13.44	28.20	20.87	31.99	0.15
Number of self-help therapy sessions	6.83	25.40	6.21	25.69	0.97
Number of inpatient hospitalization days	3.14	7.83	8.32	17.97	0.006
Number of substance use treatment program days	4.46	9.31	4.71	14.93	0.83

Mean number of BCBT sessions was 12

BCBT associated with more individual therapy sessions during first 3 months

BCBT associated with fewer hospitalization days over entire study period

Rudd et al. (2015)

BCBT Outcomes: Psychological Symptoms

TABLE 3. Differences Between Brief Cognitive-Behavioral Therapy (CBT) and Treatment as Usual on Symptom Measures During Follow-Up

	Treatment Group				Analysis		
	Brief CBT		Treatment As Usual		Hedge's g		
Measure and Assessment Period	Mean	SD	Mean	SD	g	95% CI	p
Beck Scale for Suicide Ideation, worst-point score							
Baseline	19.16	9.30	19.07	8.69	0.01	−0.31 to 0.33	0.95
3 Months	9.23	9.01	10.73	11.02	−0.14	−0.56 to 0.26	0.18
6 Months	6.40	7.14	10.63	10.18	−0.42	−0.90 to −0.07	0.03
12 Months	4.94	6.97	6.79	9.31	−0.20	−0.65 to 0.19	0.33
18 Months	5.74	9.83	9.52	10.99	−0.20	−0.77 to 0.31	0.18
Beck Scale for Suicide Ideation, current score							
Baseline	10.83	8.67	11.07	8.43	−0.03	−0.35 to 0.29	0.86
3 Months	3.90	6.16	6.14	8.27	−0.27	−0.71 to 0.11	0.14
6 Months	3.47	5.13	6.21	7.50	−0.37	−0.85 to −0.02	0.05
12 Months	3.02	4.93	3.36	6.09	−0.06	−0.48 to 0.36	0.78
18 Months	2.71	5.82	3.39	5.82	−0.06	−0.60 to 0.48	0.66
Beck Hopelessness Scale score							
Baseline	12.87	6.12	12.72	6.02	0.02	−0.29 to 0.34	0.88
3 Months	7.80	6.29	7.84	6.67	−0.01	−0.45 to 0.44	0.98
6 Months	8.40	6.07	9.22	6.70	−0.12	−0.62 to 0.36	0.60
12 Months	9.74	6.19	9.07	6.43	0.10	−0.55 to 0.76	0.74
18 Months	8.40	8.50	11.71	8.12	0.10	−1.05 to 1.25	0.46

BCBT associated with faster reduction in suicide ideation

BCBT and TAU comparable on hopelessness

Rudd et al. (2015)

BCBT Outcomes: Psychological Symptoms

Beck Depression Inventory, 2nd Edition score							
Baseline	31.95	14.26	33.51	13.39	−0.12	−0.43 to 0.21	0.48
3 Months	19.59	13.43	22.84	15.82	−0.21	−0.67 to 0.23	0.32
6 Months	20.25	12.89	25.52	16.37	−0.32	−0.85 to 0.13	0.15
12 Months	20.83	13.21	29.87	15.36	−0.59	−1.30 to 0.04	0.05
18 Months	24.80	19.97	34.00	15.57	−0.59	−1.76 to 0.58	0.34
Beck Anxiety Inventory score							
Baseline	28.87	14.78	29.74	13.96	−0.06	−0.38 to 0.26	0.71
3 Months	21.51	15.53	22.05	14.12	−0.04	−0.48 to 0.41	0.87
6 Months	22.00	14.93	26.19	14.39	−0.29	−0.77 to 0.21	0.24
12 Months	20.52	12.80	27.33	14.85	−0.46	−1.15 to 0.18	0.13
18 Months	25.80	18.62	24.71	9.69	−0.46	−1.62 to 0.70	0.89
PTSD Checklist, Military Version score							
Baseline	55.15	18.10	57.39	15.63	−0.14	−0.45 to 0.19	0.41
3 Months	46.15	16.71	51.05	16.53	−0.30	−0.74 to 0.15	0.19
6 Months	48.40	16.88	55.00	17.54	−0.38	−0.87 to 0.11	0.12
12 Months	47.77	19.18	55.93	15.36	−0.53	−1.11 to 0.21	0.14
18 Months	54.00	21.84	64.14	10.89	−0.53	−1.58 to 0.74	0.29

BCBT and TAU comparable on depression and anxiety

BCBT slightly better than TAU for PTSD symptoms, but statistically nonsignificant

Rudd et al. (2015)

BCBT Outcomes: Insomnia Symptoms

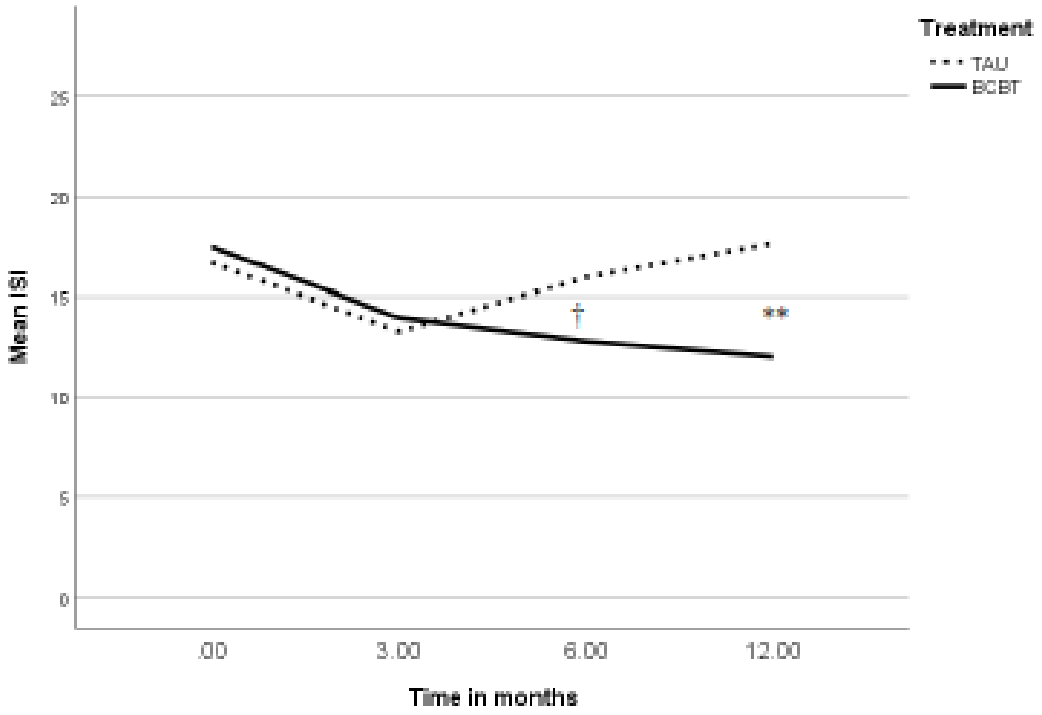


Figure 1. Change in sleep disturbance over time by treatment condition

Note. † $p = 0.06$, ** $p < 0.05$

BCBT leads to sustained improvements in insomnia symptoms

Early improvement in insomnia symptoms predicts later suicide attempts

Roberge et al. (2019)

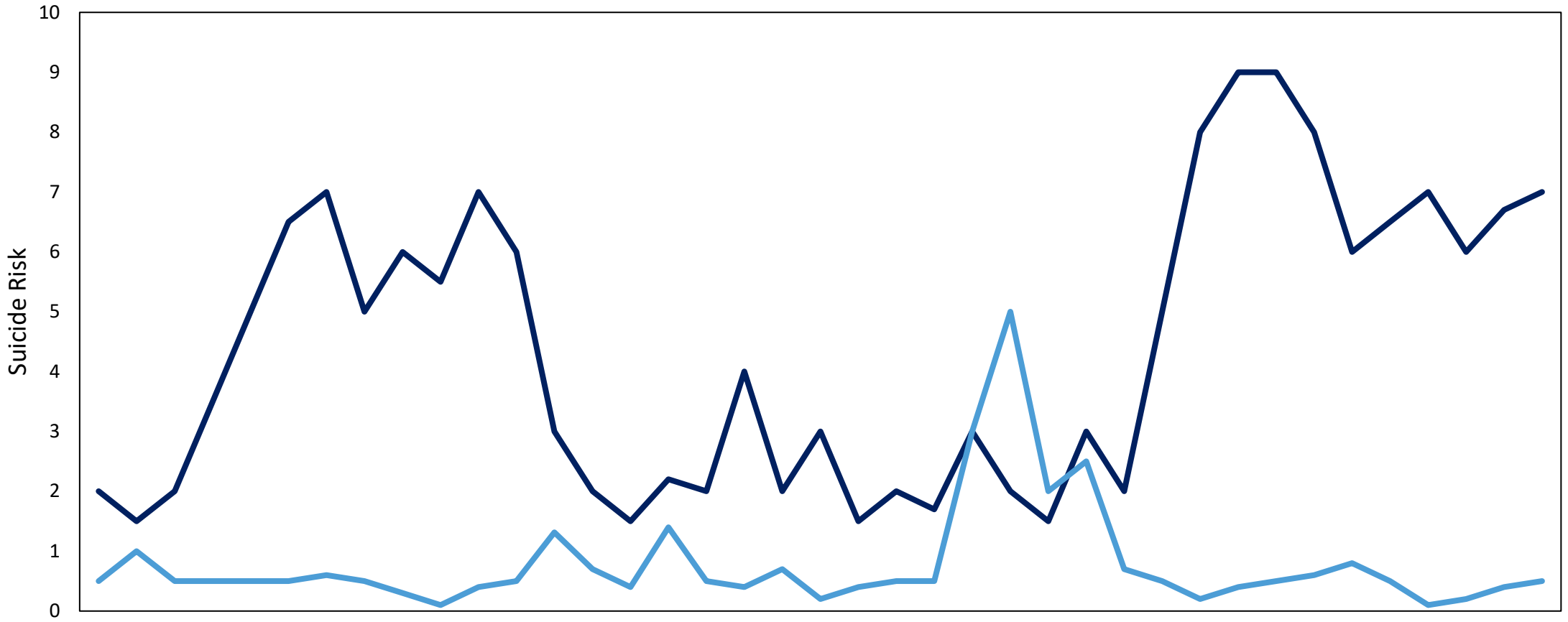
What's different about BCBT?

Functional Model of Suicide

	Reinforcement: Positive	Reinforcement: Negative
Automatic (Internal)	**Adding something desirable** ("To feel something, even if it is pain")	**Reducing tension or negative affect** ("To stop bad feelings")
Social (External)	**Gaining something from others** ("To get attention or let others know how I feel")	**Escape interpersonal task demands** ("To avoid punishment from others or avoid doing something undesirable")

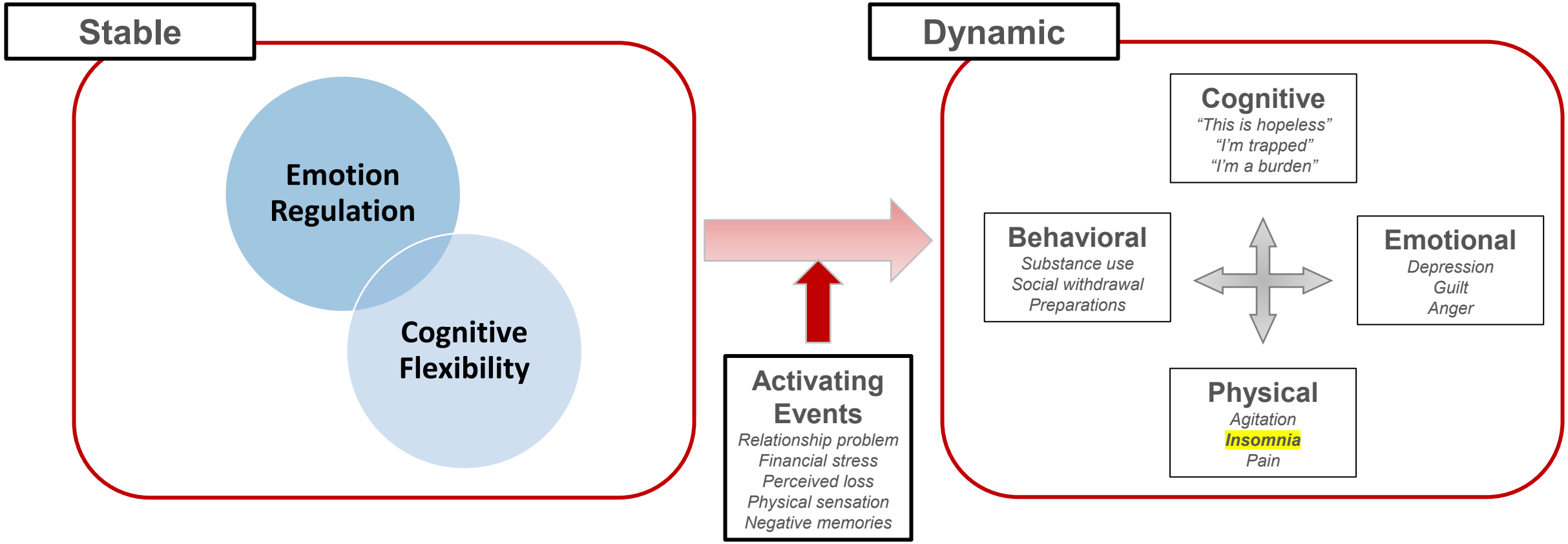
Coppersmith et al., 2021; Nock & Prinstein (2005)

Fluid Vulnerability Theory



Bryan & Rudd (2016); Kleiman et al. (2017); Wang et al. (2021)

The Suicidal Mode



Bryan & Rudd (2018)

Structure of BCBT

Phase I

Emotion Regulation

Session 1
Intake
Narrative Risk Assessment
Crisis Response Plan
Means Safety Counseling

Sessions 2-5
Sleep Disturbance
Relaxation / Mindfulness
Reasons for Living / Survival Kit
Activity Planning
Coping Cards

Phase II

Cognitive Flexibility

Sessions 6-10
ABC Worksheets
Challenging Questions
Patterns of Problem Thinking
Coping Cards

Phase III

Relapse Prevention

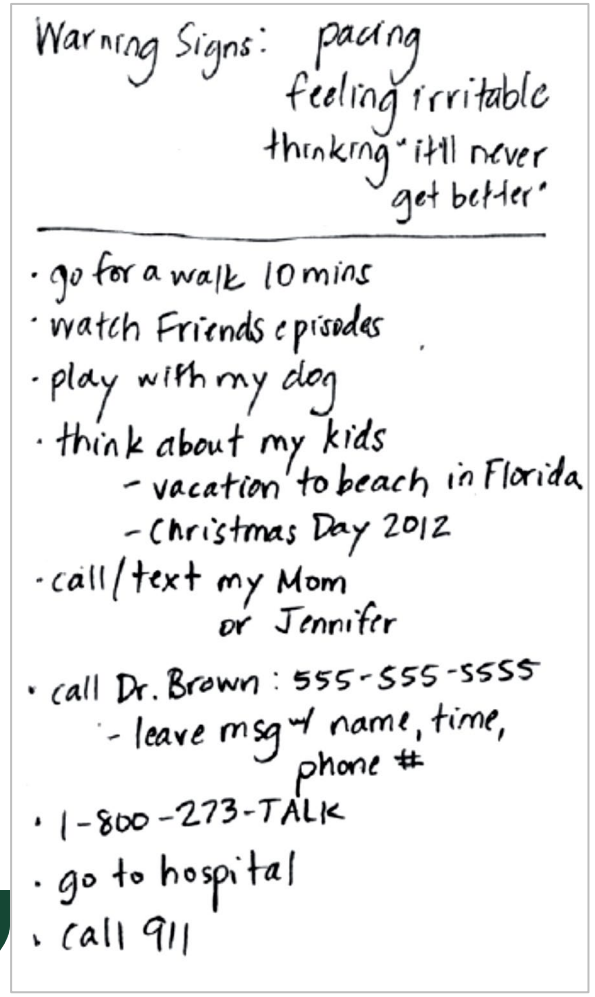
Sessions 11-12
Relapse Prevention Task

Targeting Sleep Disturbance

Improving Your Sleep Handout

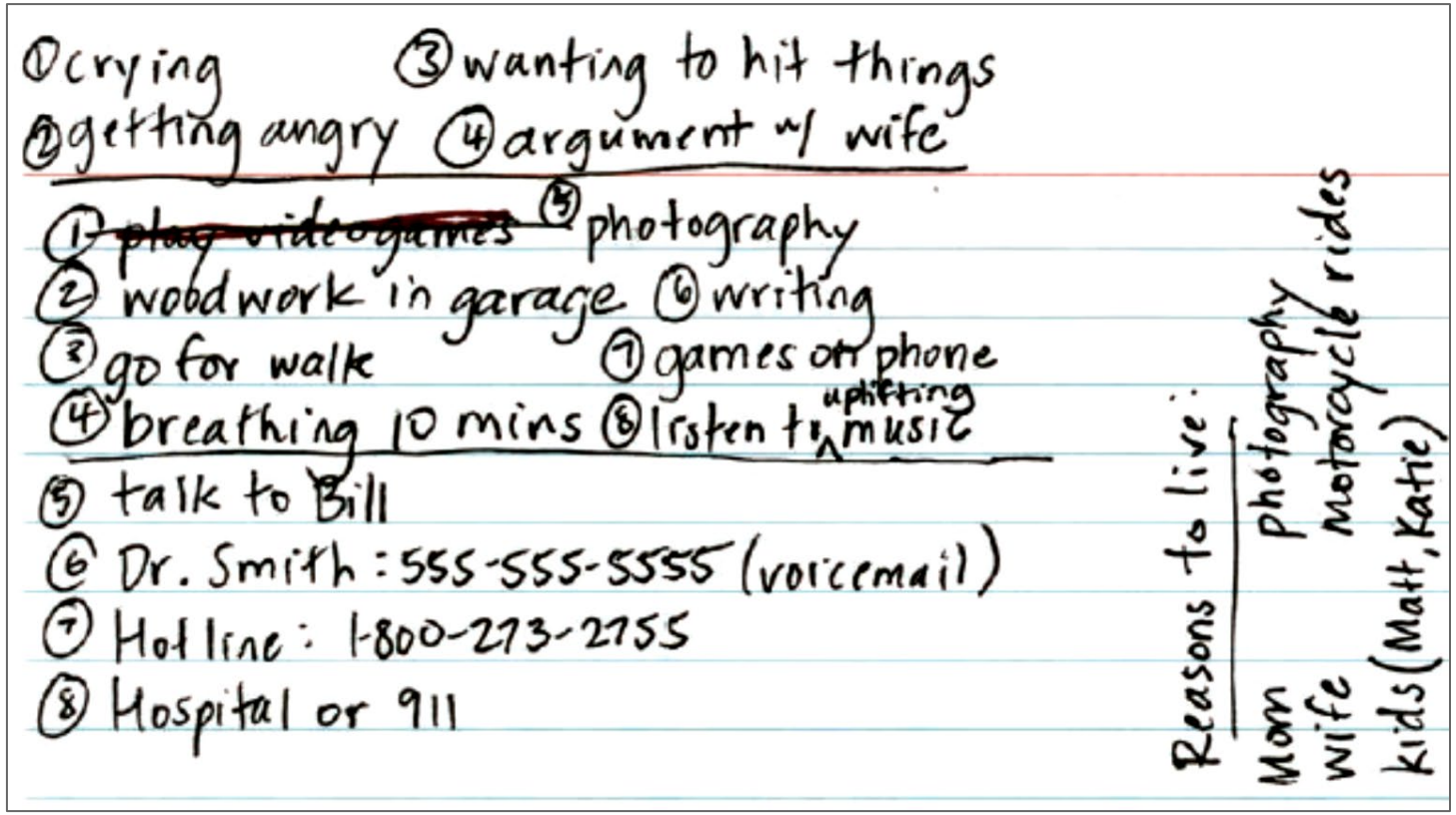
1. **Go to bed only when you're sleepy.** There is no reason to go to bed if you are not sleepy. When you go to bed too early, it only gives you more time to become frustrated. Individuals often ponder the events of the day, plan the next day's schedule, or worry about their inability to fall asleep. These behaviors are incompatible with sleep and tend to perpetuate insomnia. You should therefore *delay your bedtime until you are sleepy*. This may mean that you go to bed later than your scheduled bedtime. However, stick to your scheduled rising time *regardless* of the time you go to bed.
2. **Get out of bed when you can't fall asleep or cannot go back to sleep in 15 minutes.** When you recognize that you've become a clock watcher, get out of bed. If you wake up during your sleep and you've tried falling back asleep for 15 minutes and can't, get out of bed. Remember, the goal is to fall asleep quickly. Return to bed *only* when you are sleepy (i.e., yawning, head bobbing, eyes closing, concentration decreasing). The goal is for you to reconnect your bed with sleeping rather than frustration. You will have to repeat this step as often as necessary.
3. **Use your bed for sleep and sex only.** The purpose of this guideline is to associate your bedroom with sleep rather than wakefulness. Just as you may associate the kitchen with hunger, this guideline will help you associate sleep and pleasure with your bedroom. Follow this rule both during the day and at night. *Do not* watch TV, listen to the radio, eat, or read in bed. You may have to temporarily move the TV or radio from your bedroom to help you regain a stable sleep cycle.

Crisis Response Planning (CRP)



Warning Signs: pacing
feeling irritable
thinking "it'll never get better"

- go for a walk 10 mins
- watch Friends episodes
- play with my dog
- think about my kids
  - vacation to beach in Florida
  - Christmas Day 2012
- call/text my Mom or Jennifer
- call Dr. Brown: 555-555-5555
  - leave msg w/ name, time, phone #
- 1-800-273-TALK
- go to hospital
- call 911



① crying ③ wanting to hit things
② getting angry ④ argument w/ wife

~~① play videogames~~ ⑤ photography
② woodwork in garage ⑥ writing
③ go for walk ⑦ games on phone
④ breathing 10 mins ⑧ listen to uplifting music
⑤ talk to Bill
⑥ Dr. Smith: 555-555-5555 (voicemail)
⑦ Hotline: 1-800-273-2755
⑧ Hospital or 911

Reasons to live:
Mom
wife
kids (Matt, Katie)
photography
motorcycle rides

Crisis Response Planning (Stand Alone): RCT Results

Study	Design	Tx	Comparison Condition	Setting	Sample	Follow-Up	Findings
Bryan et al. (2017) N=97	RCT	CRP	TAU	ED, Outpatient	Military, 78% male, 26 y	6 months	76% reduction in attempts, faster reduction in SI
Chen et al. (2013) N=613	RCT	Crisis Postcard + Case Mgt	Case Mgt	High-risk adults	Adults, 32% male, 40 y	6 months	16% reduction in attempts (61% reduction per protocol)
Wang et al. (2016) N=64	RCT	Coping Card	TAU	High-risk adults	Adults, 27% male, 38 y	3 months	Sig. reduction in attempts, faster reduction in SI
Lohani et al. (2024) N=82	EMA RCT	CRP	Safety Plan	High-risk adults	Adults, 30% male, 32 y	1.5 months	Higher working alliance, more frequent CRP use, higher useful ratings

Crisis Response Planning (Integrated): RCT Results

Study	Design	Tx	Comparison Condition	Setting	Sample	Follow-Up	Findings
Bryan et al. (2024) N=157	RCT	CPT+CRP	CPT+Safety Plan	Outpatient	Mil/vets, 73% male, 27 y	12 months	50% reduction in attempts, faster reduction in SI
Kearns et al. (2025) N=95	RCT	WET+CRP	TAU (w/ Safety Plan)	Inpatient	Mil, 61% male, 27 y	4 months	100% reduction in attempts, larger reductio in SI
Bozzay et al. (2025) N=115	EMA RCT	CRP	Safety Plan	Outpatient	Mil/vets, 70% male, 47 y	2 weeks	CRP use associated w/ less severe SI

Why and How BCBT Works

University of Vermont | Larner College of Medicine

How and Why BCBT Works

1. BCBT includes procedures that have been shown to reliably reduce suicide **attempts** (not just ideation)
    - Emphasis on emotion regulation skills
    - Principles-based (v. regulatory-guided) procedures

Original Investigation | Psychiatry

Cognitive Behavior Therapy With and Without Narrative Assessment and Suicide Attempts
A Systematic Review and Meta-Analysis

Wilco C. Janssen, MSc; Saskia Y. M. Mérelle, PhD; Wouter van Ballegooijen, PhD; Renske Gilissen, PhD; Claudi L. H. Bockting, PhD

Janssen et al. (2025)

Table 3.

Meta-analysis outcomes for interventions per component, sorted by effect size.

Component	*k*	RR	CI	I^2	*p*
Interpersonal effectiveness training	12	0.47	[0.26; 0.83]	55.1%	**0.016**
Emotion regulation training	17	0.58	[0.42; 0.79]	37.8%	**0.003**
Mindfulness and relaxation	13	0.59	[0.41; 0.83]	22.5%	**0.008**
Self-compassion training	7	0.60	[0.31; 1.18]	40.3%	0.108
Insight development	21	0.60	[0.42; 0.86]	43.6%	**0.009**
Increasing social support	13	0.61	[0.39; 0.96]	28.5%	**0.037**
Follow-up contact	9	0.62	[0.40; 0.95]	63.6%	**0.034**
Crisis management and safety planning	15	0.63	[0.46; 0.88]	24.9%	**0.012**
Behavioural techniques	11	0.66	[0.40; 1.06]	8.5%	0.074
Cognitive techniques	26	0.72	[0.58; 0.91]	32%	**0.009**
Homework and self-monitoring	17	0.75	[0.59; 0.94]	37.4%	**0.019**
Problem-solving techniques	21	0.75	[0.58; 0.96]	36.4%	**0.027**
(Psycho)education	22	0.76	[0.60; 0.95]	39.6%	**0.021**
Treatment motivation enhancement	14	0.76	[0.50; 1.06]	38.6%	0.085
Assessment strategies	23	0.83	[0.67; 1.02]	23%	0.072
Relapse prevention	13	0.83	[0.63; 1.10]	28.6%	0.152
Exposure techniques	6	0.84	[0.61; 1.16]	0%	0.157
Involving next-of-kin	8	0.88	[0.44; 1.75]	52.4%	0.640

Note. Based on the three-level model (CHE).

For referral to further treatment, psychodynamic techniques, and imagery based techniques, no meta-analysis could be performed as there were not enough studies.

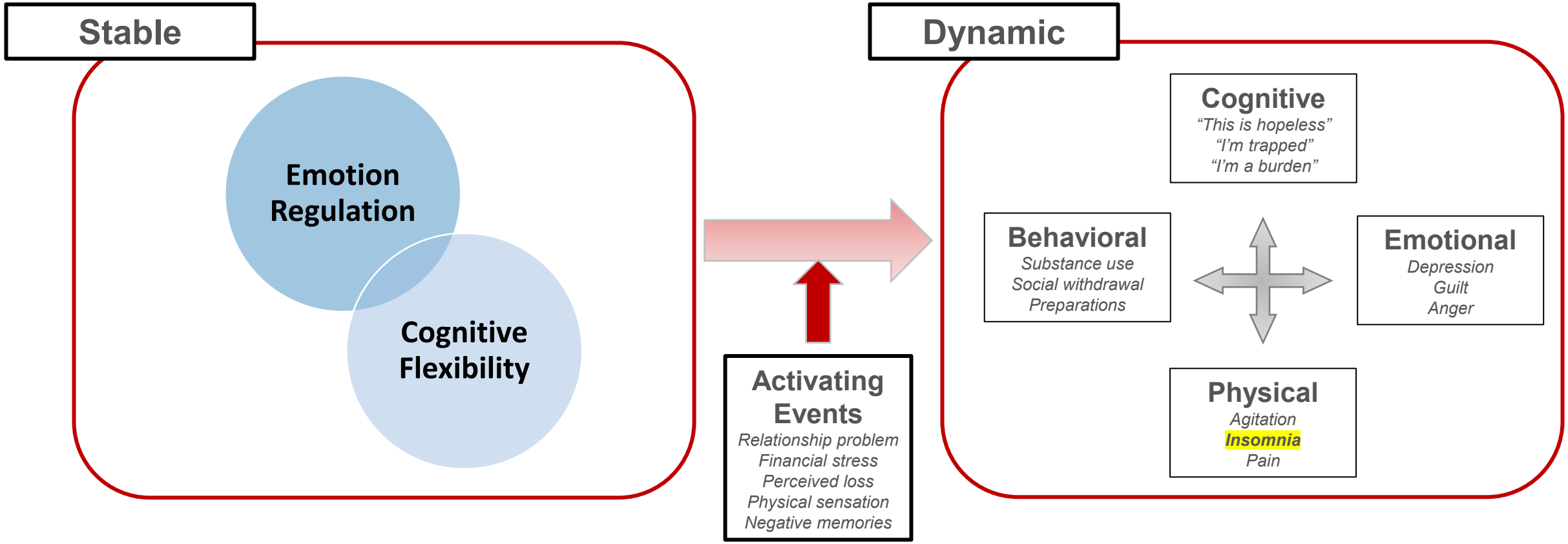
Van Eijk et al. (2025)

Why and How BCBT Works

2. BCBT does more than merely reduce suicidal ideation and emotional distress. It also…
    - Dismantles connections among suicidal mode domains
    - Creates regulatory feedback loops involving sleep
    - Creates a more centralized change process anchored by suicidal beliefs

		Regression Coefficient				
Treatment	Outcome	Intercept	SSI-5	SCS-R	PHQ-8	ISI
PCT	ΔSSI-5	2.006 (0.942)*	-0.034 (0.250)	0.038 (0.043)	-0.170 (0.115)	-0.080 (0.077)
	ΔSCS-R	8.602 (1.971)***	0.584 (0.333)†	-0.465 (0.068)***	-0.031 (0.144)	0.144 (0.111)
	ΔPHQ-8	3.669 (0.965)***	0.747 (0.253)**	0.146 (0.044)***	-0.975 (0.117)***	0.138 (0.078) †
	ΔISI	3.796 (0.967)***	-0.408 (0.253)†	0.016 (0.044)	0.246 (0.117)*	-0.507 (0.078)***
BCBT	ΔSSI-5	1.406 (0.986)	-0.103 (0.229)	-0.002 (0.042)	-0.111 (0.109)	-0.048 (0.082)
	ΔSCS-R	7.074 (2.032)***	-0.728 (0.327)*	-0.365 (0.063)***	-0.022 (0.149)	-0.244 (0.117)*
	ΔPHQ-8	1.336 (1.010)	-0.039 (0.232)	0.05 (0.042)	-0.321 (0.110)**	0.031 (0.084)
	ΔISI	1.452 (1.004)	-0.225 (0.231)	0.044 (0.042)	-0.02 (0.110)	-0.192 (0.083)*

The Suicidal Mode



Bryan & Rudd (2018)

Why and How BCBT Works

3. Clearly defined, empirically supported thresholds for clinical response and remission anchored in theory
    - Clinically significant change: Suicide Cognitions Scale-Revised (SCS-R) total score < 21
    - Reliable change index: SCS-R change score > 20
    - SCS, derivative versions, and international translations are available online in the public domain: https://osf.io/bf8uy/

Key Takeaways / Final Thoughts

1. General principles
    - Distinguish suicidal behaviors from suicidal thinking
    - Directly target mechanisms and processes underlying suicidal behaviors – **emotion regulation**
    - Importance of collaboration and route of delivery
    - Specialized care pathways

2. BCBT is more effective than other treatments because:
    - Empirically supported procedures:
        - Narrative assessment (v. checklist-based interviews)
        - Crisis response planning (v. safety planning)
        - Emotion regulation skills training
        - Insomnia/sleep strategies
    - Suicidal mode case conceptualization
    - Validated risk monitoring systems

craig.bryan@uvm.edu