# COLTIVATION TRAINING PROGRAM FOR CAREGIVERS OF PEOPLE WITH MENTAL ILLNESS IN DENMARK A RANDOMIZED CLINICAL TRIAL

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#### Original Investigation | Psychiatry

## Effect of a Compassion Cultivation Training Program for Caregivers of People With Mental Illness in Denmark A Randomized Clinical Trial

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#### Abstract

**IMPORTANCE** Caregivers of people with mental illness are at increased risk of developing depression, anxiety, and stress.

**OBJECTIVE** To investigate the effect of a compassion cultivation training (CCT) program on decreasing caregiver psychological distress.

#### Key Points

Question is a compassion cultivation training (CCT) intervention effective in decreasing psychological distress in informal caregivers of people with mental illness?

Findings in this randomized clinical trial





- 32 Excluded
  - 6 Did not meet inclusion criteria
  - **25** Declined to participate
  - 1 Wanted to participate but had to withdraw owing to depression

#### **161** Randomized

- 79 Allocated to CCT intervention
  - 73 Received allocated intervention
  - 6 Did not receive allocated intervention
    - **5** Owing to work logistics
    - **1** Thought the course was taught in another location
  - 6 Discontinued intervention
    - 1 Dislocated shoulder, needed surgical treatment, and could not drive
    - 1 Experienced adverse effects when meditating
    - 1 Was overwhelmed with life situations
    - **3** Studied from home owing to difficulties with work/life logistics
- 4 Lost to follow-up (reasons unknown)
- 8 Lost at 3-mo follow-up
  - 1 Was too overwhelmed to answer
  - **7** Reasons unknown
- 12 Lost at 6-mo follow-up
  - 1 Was too overwhelmed with life to answer
  - 1 The email could not be delivered
  - 1 Did not want to answer because the intervention was perceived as unhelpful and the participant preferred to speak with their physician

79 Analyzed

9 Reasons unknown

- 82 Allocated to waitlist control
  - 4 Had to seek psychological services while in the waitlist control group

- 5 Lost to follow-up
  - 1 Felt better and did not want to participate
  - 4 Reasons unknown
- 5 Lost at 3-mo follow-up (reasons unknown)
- 4 Lost at 6-mo follow-up
  - 1 Did not find questionnaire email until after the due date
  - **3** Were too busy





Table 1. Demographic Characteristics of Caregivers at Baseline

	No. (%)					
Characteristic	Intervention group (n = 79)	Control group (n = 82)	Total (n = 161)			
Sex						
Men	11 (14.1)	8 (9.7)	19 (11.8)			
Women	68 (85.9)	74 (90.2)	142 (88.2)			
Age, mean (SD), y	55.9 (13.3)	49.5 (10.8)	52.6 (12.5)			
Educational level						
No high school	1 (1.3)	1 (1.2)	2 (1.2)			
High school	4 (5.1)	2 (2.4)	6 (3.7)			
Trade school	5 (6.3)	10 (12.2)	15 (9.2)			
Short continuing education	8 (10.1)	3 (3.7)	11 (6.8)			
Medium continuing education	43 (54.4)	25 (30.5)	68 (42.0)			
Long continuing education	17 (21.5)	38 (46.3)	55 (34.0)			
PhD	0	3 (3.7)	3 (1.9)			
Other	1 (1.3)	0	1 (0.6)			
Caretaking duration, y						
0-5	22 (28.2)	22 (27.1)	45 (28.1)			
5-10	23 (29.5)	20 (24.7)	43 (26.9)			
10-15	5 (6.5)	16 (19.8)	21 (13.1)			
15-20	9 (11.5)	5 (6.2)	14 (8.8)			
>20	19 (24.4)	18 (22.2)	37 (23.1)			
Psychiatric disorder of person being cared for <sup>a</sup>						
Anxiety	18 (22.2)	35 (42.7)	53 (32.7)			
ADHD	10 (12.7)	14 (17.1)	24 (14.8)			
Autism	17 (21.5)	14 (17.1)	32 (19.8)			
Bipolar disorder	9 (11.4)	12 (14.6)	21 (13.0)			
OCD	6 (7.6)	12 (14.6)	18 (11.1)			
Depression	19 (24.1)	21 (25.6)	40 (24.7)			
Addiction	10 (12.7)	8 (9.8)	18 (11.1)			
Personality disorder	8 (10.1)	13 (15.9)	21 (13.0)			
PTSD	7 (8.7)	7 (8.5)	14 (8.6)			
Schizophrenia	21 (26.6)	13 (15.9)	34 (21.0)			
Eating disorder	7 (8.9)	3 (3.7)	10 (6.2)			
Stress	6 (7.6)	9 (11.0)	16 (9.9)			
Acquired brain injury	6 (7.6)	6 (7.3)	12 (7.4)			
Other <sup>b</sup>	7 (8.7)	10 (12.2)	17 (10.5)			

Abbreviations: ADHD, attention-deficit hyperactivity disorder; OCD, obsessive compulsive disorder; PTSD, posttraumatic stress disorder.

- <sup>a</sup> Caregivers often had loved ones with comorbid disorders; therefore, the percentages do not total 100.
- b Includes disruptive behavior, bodily distress syndrome, intellectual disability, psychogenic nonepileptic seizures, Parkinson disease, schizotypal disorder, attachment disorder, Tourette syndrome, dementia.



Table 2. Effect of CCT on the Primary Outcome of Depression, Stress, and Anxiety in Informal Caregivers of People With Mental Illness at Postintervention and 3- and 6-Month Follow-up

Measure	CCT Interver	CCT Intervention			Control				
	Caregivers, No.	Score, mean (SD)	Within-group change from baseline, mean (95% CI) <sup>a</sup>	Caregivers, No.	Score, mean (SD)	Within-group change from baseline, mean (95% CI) <sup>a</sup>	Between-group difference, mean (95% CI) <sup>a</sup>	P value	Cohen d
Depression <sup>b</sup>									
Baseline	76	10.89 (8.66)	NA	79	10.80 (8.38)	NA	NA	NA	NA
Postintervention	68	7.84 (8.30)	-3.60 (-5.47 to -1.73)	76	11.28 (9.53)	0.56 (-1.22 to 2.34)	-4.16 (-6.75 to -1.58)	.002	0.66
3 mo	63	7.02 (8.14)	-3.68 (-5.60 to -1.76)	76	11.09 (10.93)	0.11 (-1.67 to 1.88)	-3.78 (-6.40 to -1.17)	.005	0.56
6 mo	54	6.61 (8.27)	-3.93 (-5.96 to -1.90)	72	11.40 (10.67)	0.31 (-1.50 to 2.12)	-4.24 (-6.97 to -1.52)	.002	0.45
Anxiety <sup>b</sup>									
Baseline	74	6.89 (6.48)	NA	82	6.68 (5.33)	NA	NA	NA	NA
Postintervention	67	5.10 (5.33)	-2.03 (-3.32 to -0.75)	73	6.73 (7.00)	0.21 (-0.99 to 1.40)	-2.24 (-3.99 to -0.48)	.01	0.51
3 mo	62	4.95 (5.51)	-2.01 (-3.33 to -0.69)	76	7.05 (6.95)	0.49 (-0.70 to 1.67)	-2.50 (-4.27 to -0.73)	.006	0.56
6 mo	53	5.55 (5.94)	-1.18 (-2.57 to 0.21)	72	7.43 (7.85)	0.94 (-0.26 to 2.15)	-2.12 (-3.96 to -0.29)	.02	0.30
Stress <sup>b</sup>									
Baseline	77	14.96 (7.90)	NA	78	15.77 (7.40)	NA	NA	NA	NA
Postintervention	65	10.65 (7.11)	-4.15 (-6.00 to -2.30)	77	15.81 (8.81)	0.05 (-1.67 to 1.77)	-4.20 (-6.73 to -1.67)	.001	0.74
3 mo	63	10.75 (8.35)	-3.90 (-5.78 to -2.03)	76	15.68 (10.36)	-0.13 (-1.87 to 1.60)	-3.76 (-6.32 to -1.21)	.004	0.56
6 mo	54	10.39 (7.74)	-4.17 (-6.15 to -2.19)	71	15.38 (10.03)	-0.38 (-2.15 to 1.39)	-3.79 (-6.44 to -1.13)	.005	0.43

Abbreviations: CCT, compassion cultivation training; NA, not applicable.



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<sup>&</sup>lt;sup>a</sup> Adjusted for sex, age, educational level, years as informal caretaker, and diagnosis of schizophrenia or anxiety for patient.

<sup>&</sup>lt;sup>b</sup> Measured using the Depression, Anxiety, Stress Scale. Each subscale has a range of 0 to 14, with higher scores indicating more psychological distress.

# SECONDARY OUTCOME AT 6 MONTH FOLLOW-UP—

- ↓ Perceived stress: 95% CI: -1.99 (-4.01 .03), p=0.054, d=0.29
- ↑ Resilience: 95% CI: .32 (.11 .53) , p=0.002, *d*=0.36
- ↑ WHO-5 well-being: 95% CI: 7.53 (1.00 14.05), p=0.024, *d*=0.35
- † Emotion regulation: Cognitive reappraisal: 95% CI: 2.02 (.01 4.04), p=0.049, d=0.29

↓ Emotion regulation: Emotion Suppression: 95% CI: -1.65 (-3.13 - -.17),

- ↑ Self-compassion: 95% CI: 4.28 (2.05 6.50), p=0.000, d=0.51
- ↑ Mindfulness: 95% CI: 5.18 (3.18 7.18), p=0.000, *d*=0.69
- →Compassion for other: 95% CI: -.05 (-.24 .13), p=0.568, d=0.09





## **LIMITATIONS**

No active control group

Nonblinding of the intervention allocation

Self-reported outcome measures, makes it possible that information bias was present





### **PERSPECTIVES**

According to WHO, depression is the leading cause of disability worldwide, and perceived stress is an independent risk factor for increased illness and mortality.

Policy makers and health care professionals have few options in offering caregiver's evidence-based interventions that help improve their mental health.

Compassion is a trainable skill that promotes mental health

CCT can be taught in a group format reducing societal cost.





# **Q&A**

