

Note. This is a brief manual that describes how the imagery-based CCT was used in Study 1 and Study 2 and how imagery-based CCT can be applied in therapeutic practice or experimental studies. For experimental purposes, the German audio files can be found here: [10.5281/zenodo.7730459](https://zenodo.org/record/7730459)

Alternatively, researchers can freely use the texts provided for their own preparations of audio files provided they cite this paper. A worksheet for the assessment and use of the imagery-based CCT is provided below.

Step 1: Define a disgust-/contamination-related situation and initial assessment (p0)

Instruction for an experimental condition: “Close your eyes and try to engage in the following imagination exercise. Imagine an object that you consider to be heavily contaminated. In other words, an object that you perceive as dirty or contaminated. Let your imagination run wild, it could be moldy food, a garbage can, or a dirty toilet or shower. Any object that you would avoid touching out of concern for getting dirty. Now imagine this object as accurately as possible. What does it look like? What does it smell like? How would it feel? Now, let the image fade away and open your eyes again. Click next to continue with the experiment.”

Instruction for a clinical situation: “Close your eyes and try to engage in the following imagination exercise. Imagine the object that you consider to be heavily contaminated. Think about the one object that you would avoid touching out of concern for getting dirty. Now imagine this object as accurately as possible. What does it look like? What does it smell like? How would it feel? Now, let the image fade away and open your eyes again. Click next to continue with the experiment.”

Step 2. Assessment of disgust and contamination

- (a) How contaminated/disgusting is the object on a scale from 0 = “not at all” to 100 = “very much”?
- (b) Would you be willing to touch the object (1 = “yes”/0 = “no”)?
- (c) How uncomfortable would it feel, if you had to touch it (0 = “not at all” to 100 = “very much”)?

Step 3. CCT (from this experiment): pencil #1 touches object (p1)

Instruction: “Now close your eyes for a moment and come fully into yourself. (...) Direct your attention from the external to your own internal events. (...) Now imagine the object that you have just visualized (...). Imagine a new, clean pencil and how this pencil comes into contact with the object (...) Imagine very clearly that the pencil and the object touch each other in all places and do not just touch (...) but that the pencil has come into complete contact with the object. And then return to the room with your attention focused, slowly open your eyes again, and when you feel ready, answer the next question.”

Step 4. Assessment of disgust and contamination

- (a) How contaminated/disgusting is ***the pencil*** #1 on a scale from 0 = “not at all” to 100 = “very much”?
- (b) Would you be willing to touch the pencil (1 = “yes”/0 = “no”)?
- (c) How uncomfortable would it feel, if you had to touch it (0 = “not at all”; 100 = “very much”)?

Step 5. CCT (from this experiment): pencil #2 touches pencil #3

Instruction: “Close your eyes and try to engage in the next imagination exercise. Bring the image of the pencil you just evaluated to your mind again. For a brief moment, look at the pencil very closely. Now imagine someone taking another pencil from the package and touching it on all sides to the pencil you just evaluated. Clearly imagine the process of touching. Every part of the old pencil touches the new one. And now the image of the old pencil fades and you look at the new pencil alone. What exactly does the pencil look like? How do you think the pencil feels? How does it smell? This image also fades from your mind’s eye. Please open your eyes again and click on continue to continue with the experiment.”

Step 6. Assessment of disgust and contamination

- (a) How contaminated/disgusting/sweet is ***pencil*** #1 on a scale from 0 = “not at all” to 100 = “very much”?
- (b) Would you be willing to touch the pencil (1 = “yes”/0 = “no”)?
- (c) How uncomfortable would it feel, if you had to touch it (0 = “not at all”; 100 = “very much”)?

<p><i>Subsequent steps:</i> repeat steps 5 and 6 until reaching pencil #12 or a contamination rating of 0 was provided three times in a row.</p>

For documentation:

Date													
Name													
Pencil	Initial	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12
Contamination													
Disgust													
Distress													
Discomfort													
...													

Evaluation

Following the results of Study 2, we can draw the following conclusions concerning the C-OCD cohort:

- on average, they did not rate the contamination below 50 (even on pencil #12).
- 66% did not display a 75% reduction in disgust.

Thus, if the patient responses display such a pattern, a strong conviction of the law of contagion and a rigid (pathological) contamination pattern can be assumed.

On the other hand, both the AC and the NAC groups showed:

- on average, a value of less than 20 from pencil #5 onwards.
- >90% displayed a 75% reduction in disgust perception.

Thus, if the patient responses display such a pattern, a low conviction of the law of contagion and a flexible contamination pattern can be assumed.

For experimental purposes: the candy condition

Instruction: “Now close your eyes for a moment and come fully into yourself. (...) Direct your attention from the external to your own inner events. (...) Imagine a piece of candy as accurately as possible. Imagine a piece of candy with all its aspects in your mind. (...) Imagine what you see as precisely as possible. (...) Let the imagined picture have a good effect on you. Try to imagine as accurately as possible what it smells like. (...) Imagine as accurately as possible how it tastes. And then return to the room with your attention focused, slowly open your eyes again, and when you feel ready, answer the next question.”

Results of the pre-Study

We eliminated 13 participants because of no entry. The participants 34 and 39 show all 101 answers. We should discuss whether we exclude them. A total of 52 participants participated. Thereof 34 were female, 17 male and 1 person identified oneself as others. The mean age was 33.75 years (SD = 14.95). The majority of 48 participants had abitur. The mean experiment duration was 15.26 minutes (SD = 5.00, Range: 4.47 - 23.8). Three participants report that they were distracted, however qualitative reports show that distraction was not severe enough to exclude them. On a scale between 0 and 100 experienced reality of the videos was rated 63.22 (SD=26.17).

Tabelle 2: Video Ratings and explicit Questions

	VidNrNw	Obj_Conta	Obj_Disg	Pen_Conta	Touch	Unwell_Touch	Unwell_Face	Unwell_Lick	n_length	QuestDisg
1	Bonbon	85.21	25.26		0.89	12.66	25.72	37.96	47	
2	Brot	71.38	61.00	61.78	0.71	45.22	67.56	86.84	45	64.23
3	Klobuerste	82.33	81.67	76.40	0.31	69.33	83.96	94.62	48	73.63
4	Klopapier	85.17	87.56	80.40	0.19	77.81	88.62	96.15	48	75.73
5	Maden	42.55	52.38	41.23	0.81	32.94	53.02	72.83	47	63.79
6	Masken	62.53	53.49	58.43	0.68	41.87	64.15	80.57	47	64.08
7	Sieb	55.31	58.81	48.08	0.81	38.62	57.31	78.31	48	62.08
8	Tampon	72.91	69.51	68.53	0.47	59.51	76.40	90.87	47	54.92
9	Zahnbuerste	59.76	59.10	51.64	0.76	38.24	56.36	76.80	50	79.12
10	Bild	11.46	5.27	11.44	0.98	4.31	14.69	50.38	52	

Tabelle 3: Correlation matrix

	Obj_Conta	Obj_Disg	Pen_Conta	Touch	Unwell_Touch	Unwell_Face	Unwell_Lick	QuestDisg
Obj_Conta	1.00	0.78	0.83	-0.54	0.68	0.69	0.66	0.34
Obj_Disg	0.78	1.00	0.69	-0.61	0.77	0.75	0.66	0.44
Pen_Conta	0.83	0.69	1.00	-0.62	0.77	0.77	0.70	0.33
Touch	-0.54	-0.61	-0.62	1.00	-0.73	-0.62	-0.49	-0.38
Unwell_Touch	0.68	0.77	0.77	-0.73	1.00	0.88	0.69	0.46
Unwell_Face	0.69	0.75	0.77	-0.62	0.88	1.00	0.84	0.42
Unwell_Lick	0.66	0.66	0.70	-0.49	0.69	0.84	1.00	0.33
QuestDisg	0.34	0.44	0.33	-0.38	0.46	0.42	0.33	1.00