Evidence-based practice in the clinic: Cognitive Behavioral Therapy

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Content

- In this lecture:
  - Introduces cognitive behavior therapy (CBT) in practical terms.
  - Basic idea on what happens during CBT.
  - Theoretical model of CBT.
  - Therapy techniques: cognitive restructuring and behavioral experiment.
  - Principles of doing CBT.

  - 5 minutes break time
  - Q & A at the end (feel free to send your questions throughout the lecture).

Content

- What this lecture is not:
  - Not a lecture on the empirical status of CBT.
  - Not clinical training on CBT.

Two simple questions to start with

- In your own mind, briefly consider these two questions:
- When was the last time that you felt upset?
- What caused you to feel upset?

Central premise

- CBT addresses this issue using the “cognitive model”.
- The cognitive model postulates that our emotional experience is influenced by how we **process information cognitively**, i.e. how we think.
- Emotions, whether positive or negative, are the result of our thinking.

Central premise

- It is not a situation in and of itself that determines what a person feels, but rather how the situation is construed by the person.

- *“There is nothing good or bad, but thinking makes it so.”* (*Hamlet* by William Shakespeare)

Central premise

- Mental illnesses, such as depression and anxiety, are underpinned by ***systematic biases*** in how we think about our experiences.
- CBT seek to identify and address these systematic biases with the client.
- When clients learn to evaluate their thinking in a more realistic and adaptive way, they experience improvement in their feelings.

Layman understanding of emotion

- The cognitive model may not be the natural way in how people relate to their emotional experience.

- A more common way in which people understand their emotions is that "something happened".

- "I feel sad because I scored poorly in the exam."
- "I feel angry because someone jumped the queue in front of me."
- "I feel excited because I will begin my overseas trip tomorrow."

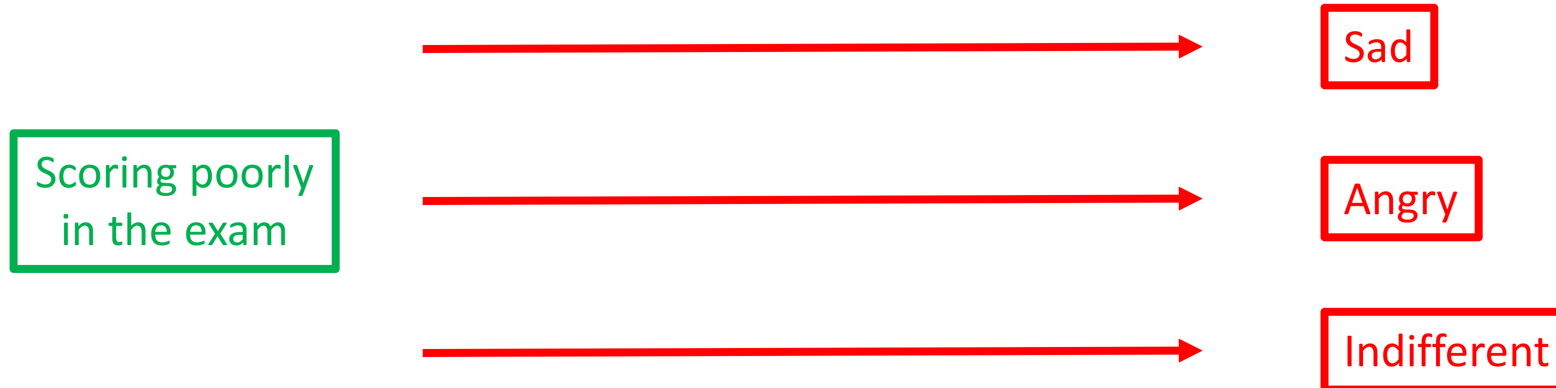
Layman understanding of emotion

- People are brought up to talk about feelings in relation to external events.

- Child: *"Mommy, I feel so unhappy."*
- Mother: *"Oh dear, what happened?"*

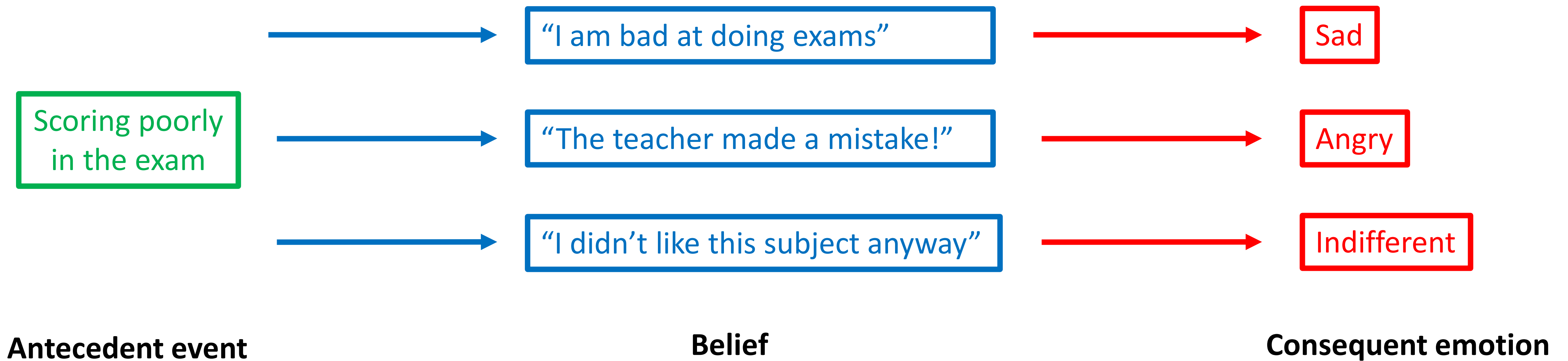
The cognitive model

- The problem with the layman understanding is that events actually have an *indirect* influence in how we feel.
- The same event can lead to different emotions.



The cognitive model

- The same event can elicit different emotions, depending on our perception of the event.



Client's cognition

- During therapy, how the client perceives an event may not be obvious initially.
- For a lot of people, the natural tendency is to talk about events and feelings associated with the distress.
- Identifying the client's cognition requires the therapist's active effort to probe into it.
- *"When you were in this situation, **what was going through your mind?"***

Client’s cognition

- Client: *“This week has been very bad. I don’t know where to start… You know how I’m doing my exams recently, right? It’s not going good. I feel so bad. I feel so tired. I know I need to move on but I just don’t have the energy to do so. Every time I try to focus on preparing the next paper, I just get so tired that I have to go back to my bed.”*

- Therapist: *“It seems like you are going through a pretty difficult week, with your exams going on. You’ve been feeling bad and unmotivated, maybe a little sad too from what I’m seeing. You mentioned you do try to work on the next paper but it’s a difficult thing to do because you get so tired. When you were feeling tired,* ***what was going through your mind****?*

- Client: *“I just kept thinking how low the test score was, and how I am so bad at doing exams.”*

Digging in to the meaning

- The therapist facilitates the client to verbalize how things really mean for the client.

- Client: *"I just kept thinking how low the test score was, and how I am so bad at doing exams. I don't know how I can get through the rest of the exams. I will probably score even worse. Everyone will look down on me. Why can't I do anything well? I don't know how to tell my mom about this. She will scold me. She always does that. But I know she is just worried about me, since I am the lowest achiever in the family. My sisters are all so capable and independent. I am just useless."*

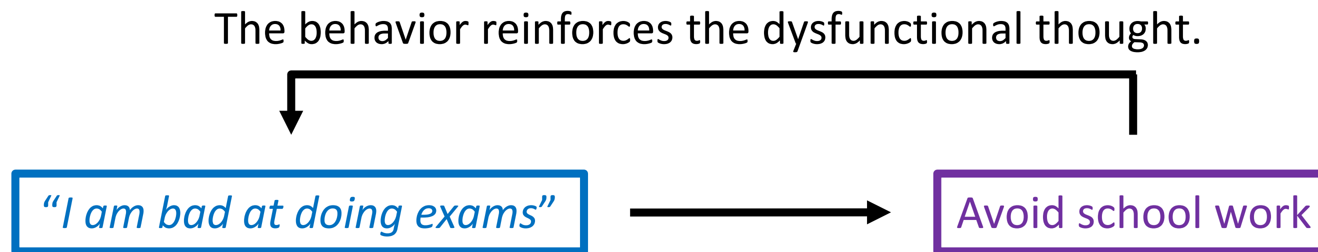
Case conceptualization

- Identifying the thoughts sets the stage for developing an individual case conceptualization (also called formulation).
- The formulation can be a simplistic and linear model.

- The conceptualization is ideally written down together with the client, so the client and therapist share the same understanding of the underlying issues.

Case conceptualization

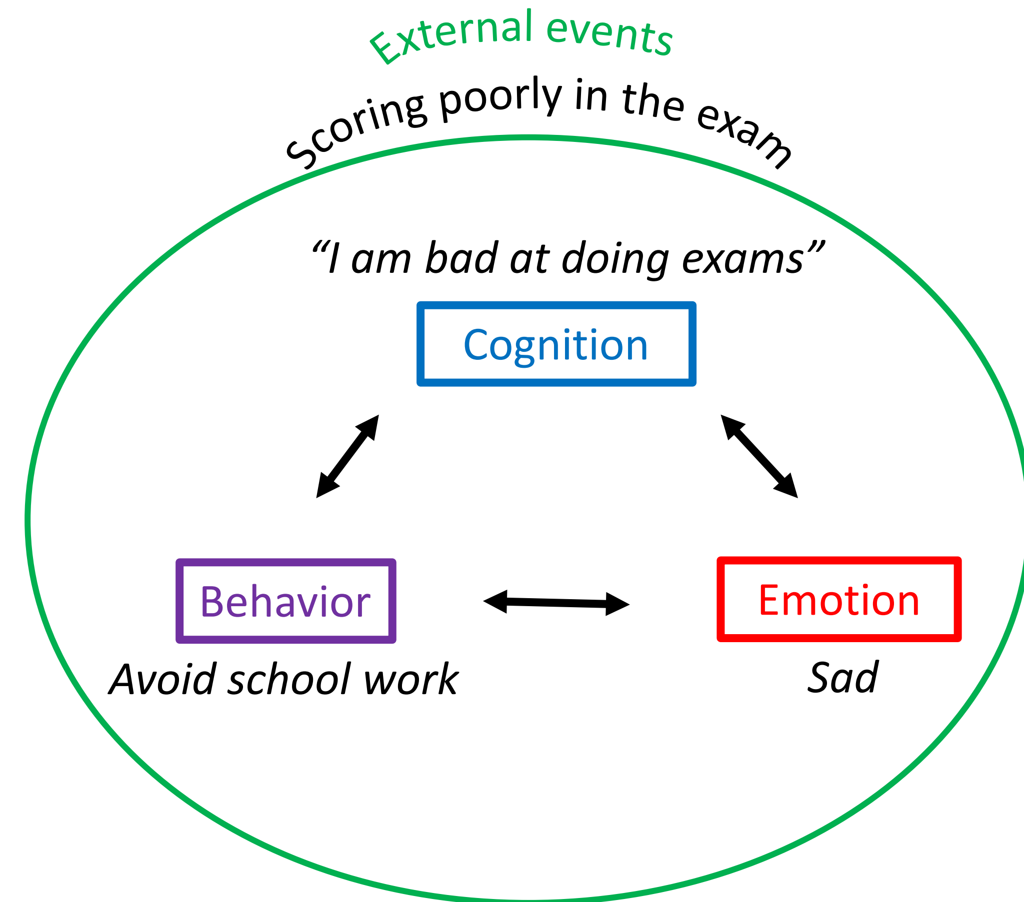
- The formulation can include a behavioral component.



Case conceptualization

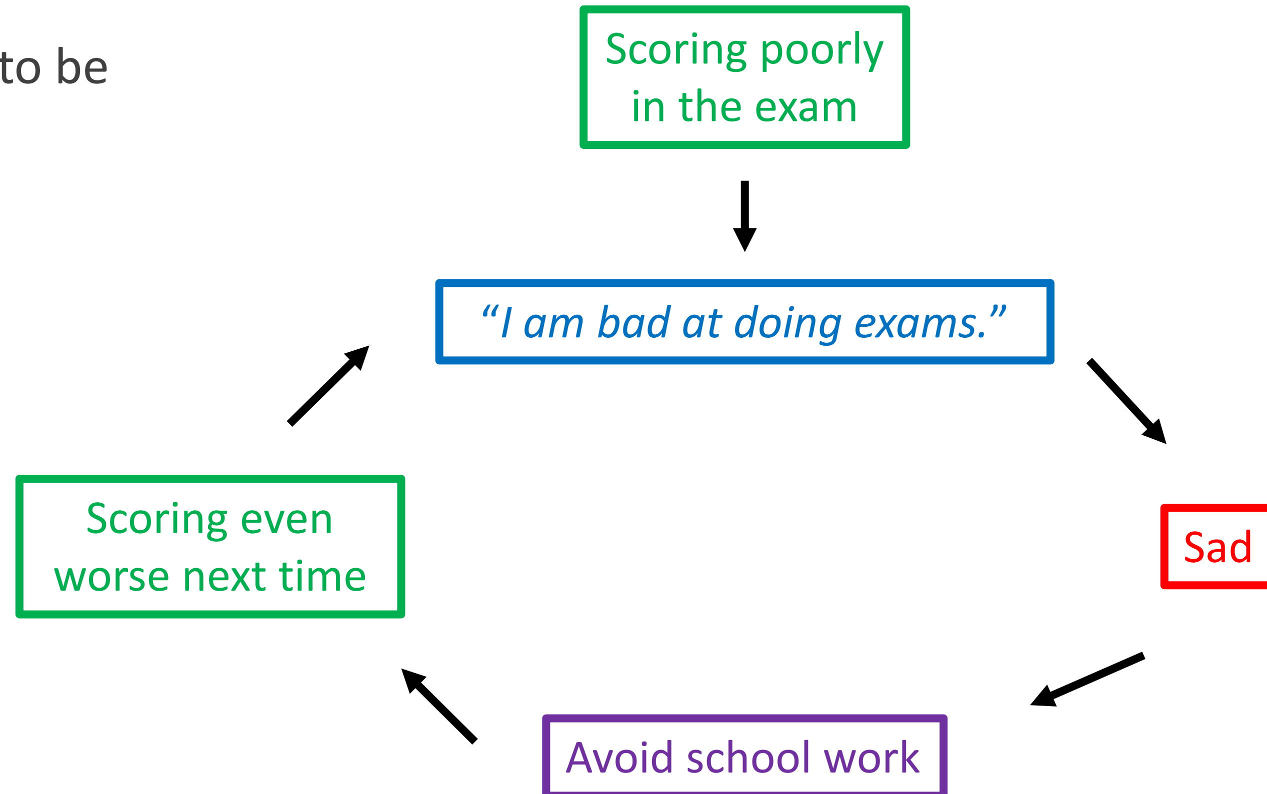
- It can also integrates cognition, behavior, and emotion components.

- Importance lies in differentiating the components of our experience and understanding how these components influence each other.



Case conceptualization

- It needs to be in a way that is accurate and simplistic enough to be useful for the client.



Cognitive restructuring

- In CBT, emotional disorders that understood to be underpinned by negative cognition (also called dysfunctional thought).

- To address this issue, the client learns to evaluate and respond to negative cognition more adaptively through “cognitive restructuring”.

- **What makes a thought a “good” thought?**

Positive thinking?

- *"Just look at the bright side!"*

- While being optimistic can be useful, it is often unhelpful for people who experience significant emotional distress.
  - *"If I could think more positively, I would have done so already."*
  - *"You say I am not all bad just to make me feel better. Everyone knows I am a failure."*

- Positive thoughts may not be an accurate reflection of the fact.
  - *"It is okay not to revise for the exam, I will score highly anyway!"*

Realistic thinking

- Our thoughts should reflect the reality as closely as possible.

- Clients learn to “test” their thoughts against evidence (e.g. how things in fact turned out in the past).

- In essence, they develop an investigative mindset on their thoughts and feelings.

- This is facilitated through a process of *reviewing evidence*.

Finding the evidence

- The subject of investigation: **My thought ("If I try to do something difficult, then I will fail").**

- The process of investigation: **What's the evidence for and against this thought?**

- Evidence for:
  - **My mom always says I can't do anything well.**

- Evidence against:
  - **No one else says that.**
  - **My exam score was not so bad last time.**
  - **My friend said I make the best cake, so actually I can do something well.**

Depressive realism?

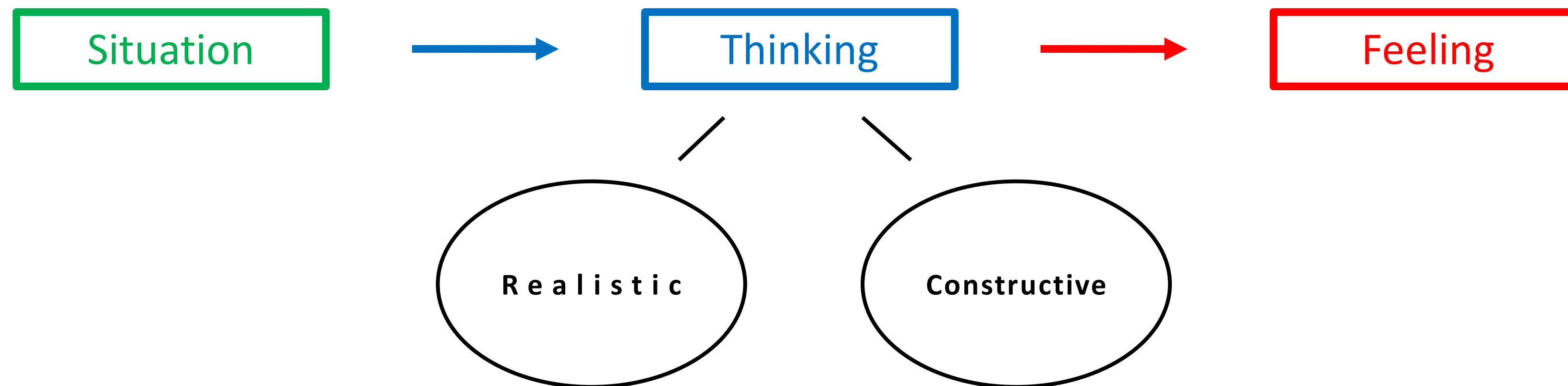
- A potential problem with realistic thinking is that reality can be cruel.

- E.g. a capable young man feeling depressed following a road traffic incident where he lost both his legs.

- Focusing his mind on the reality of losing both legs can be very disheartening.
  - “I cannot walk anymore.”
  - “I cannot work in my job anymore.”
  - “I need assistance every time using the toilet.”

Realistic and constructive thinking

- Realistic thinking is necessary – so our thoughts do not deviate from the reality of the world we live in.
- But realistic thinking is not sufficient to enjoy an emotionally healthy life.
- Our thoughts also need to be constructive, i.e. it helps to think in such a way.



Cognitive distortions

- What happens when our thoughts do not fulfill the criteria of being realistic and constructive?
- It may reflect a systematic bias in thinking, which leads to emotional distress.
- There is a variety of “cognitive traps”.

All-or-none thinking

- Also called black-and-white thinking or dichotomous thinking.
- Viewing situations in absolute terms without consideration of the middle ground.

"If I score well on this paper, then I am a success."

"But if I score poorly, then I am a failure."

- The problem is that, in reality, there is a lot of grey area to consider.
- Things tend to occur on a continuum.

Overgeneralizing

- Drawing conclusions for a broad array of events based on a single incident.
- Unable to analyze events independently.

- *“I performed so bad on today’s paper, I will surely fail tomorrow’s papers.”*
- *“This dog bit me, all dogs are dangerous.”*

Catastrophizing

- Thoughts that are the disastrous prediction of an event.
- A typical cognitive distortion for anxious clients.
- They exaggerate how badly things will turn out.

- *“If I walk near a dog, it will bite me.”*
- *“If I don’t wash my hands for 10 minutes, I will get infected and die.”*

Jumping to conclusions

- Reaching a conclusion internally before an event unfolds.
- This can be in the form of mind-reading or fortune-telling.

- *“He is looking towards me. He must be thinking I am ugly.”*
- *“I will place all my money on this bet. I will win this one.”*

“Should” and “must” statements

- Thinking in rule-based terms such as “should” and “must” regularly can lead to frustration.
- It represents a rather fixed expectation on how the self, other people, or the world should operate.
- But your expectations may not be met.

- *“I must not make any mistake in what I do.”*
- *“He should listen and follow through my instructions.”*

Labelling

- Assigning negative labels to yourself or other people.
- Represents a biased and exaggerated view of the reality.

- *“I am a failure.”*
- *“He is a winner.”*

Emotional reasoning

- Confusing subjective emotions with reality.
- Feeling something must be true because you feel strongly about it.

- *“I feel so bad. I must be a failure.”*
- *“I feel so afraid of him. He must be a bad person.”*

Cognitive distortions

- This is not an exhaustive list of cognitive distortions.

- Some cognitive distortions are more prominent to specific mental disorders.

- E.g. Anxiety patients usually catastrophize their feared topic.
  - A client with social anxiety may catastrophize the outcome of public speaking.
  - *“When I speak on the stage, I will get so nervous and shaky. Other people will notice how shaky I am and criticize how poor my presentation was.”*

- E.g. Schizophrenia patients often jump into conclusions regarding other people’s intentions.
  - *“Someone is walking behind me. He must be following me and planning to kidnap me.”*

Cognitive distortions

- The therapist can go through each cognitive distortion with the client and relate them with client's own experience.

- Doing so can help the client gain distance from his/her own thoughts, facilitating the process of evaluating the thoughts.

- Clients can be surprised at how often they fall into these cognitive traps.

- They need to build a good awareness of how the cognitive distortions affect their daily lives.

Thought record

- An early therapy task is for the client to build better awareness of his/her thoughts.
- This can be facilitated through the use of "dysfunctional thought record".
- The record is usually given as "homework" for the client to do before the next therapy session.

What happened?	How did it make you feel?	What was your thought about this?
I failed the exam.	*Sad.*	*I am bad at doing exams.*

Variants of thought record

- There are variants of dysfunctional thought record.
- This version helps to improve client's **awareness** to the cognitive distortions that affect them.

What happened?	How did it make you feel?	What was your thought about this?	Which cognitive distortion is this?
I failed the exam.	*Sad.*	*If I try to do something difficult, then I will fail.*	*Overgeneralizing*

Variants of thought record

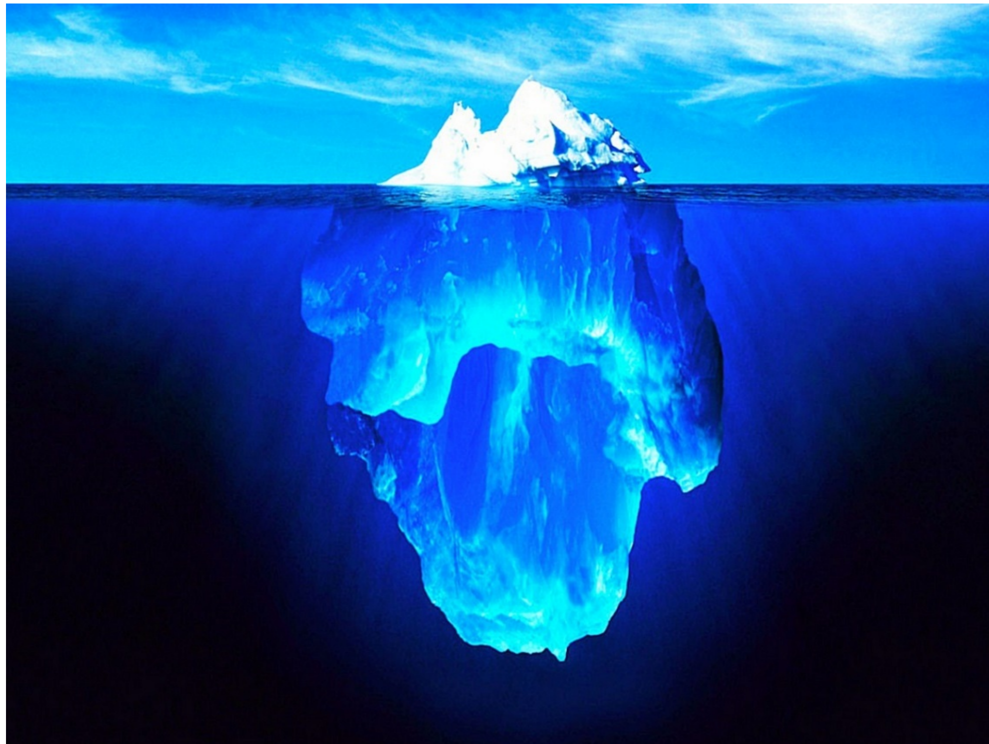
- This version trains clients to **evaluate** the dysfunctional thoughts.

What happened?	How did it make you feel? (Intensity in bracket)	What was your thought about this?	What is the evidence for this thought?	What is the evidence against this thought?
I failed the exam.	*Sad. (90%)*	*If I try to do something difficult, then I will fail.*	*My mom always says I can't do anything well.*	*No one else says that.* *My exam score was not so bad last time.* *My friend said I make the best cake, so actually I can do something well.*

Layers of thought

- In CBT, different layers of cognition contribute to the perception of an event.

From the more superficial to deeper thoughts.



Automatic thoughts: surface-level cognition, thoughts that “pop-up” in our mind.

“I am bad at doing exams.”

Intermediate beliefs: underlying assumptions that influence how we view an event.

“If I try to do something difficult, then I will fail.”

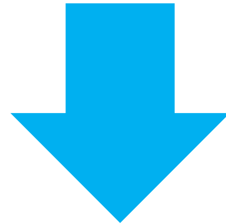
Core beliefs: deepest-level, in the form of unconditional thoughts. (Also called schemas.)

“I am useless.”

Layers of thought

Automatic thoughts: Situation-specific thoughts that “pop-up” in our mind.

“I am bad at doing exams.”

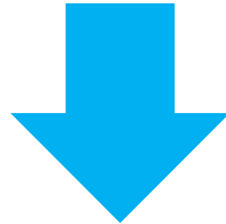


“I didn’t do well this time.”

Layers of thought

Intermediate beliefs: Conditional thoughts that influence how we view an event.

"If I try to do something difficult, then I will fail."

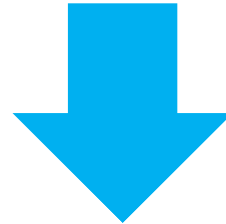


"If I try to do something difficult, I may or may not succeed."

Layers of thought

Core beliefs: Unconditional thoughts that are global and rigid.

“I am useless.”



“I have strengths and weaknesses just like anyone else.”

Appropriate use of CBT

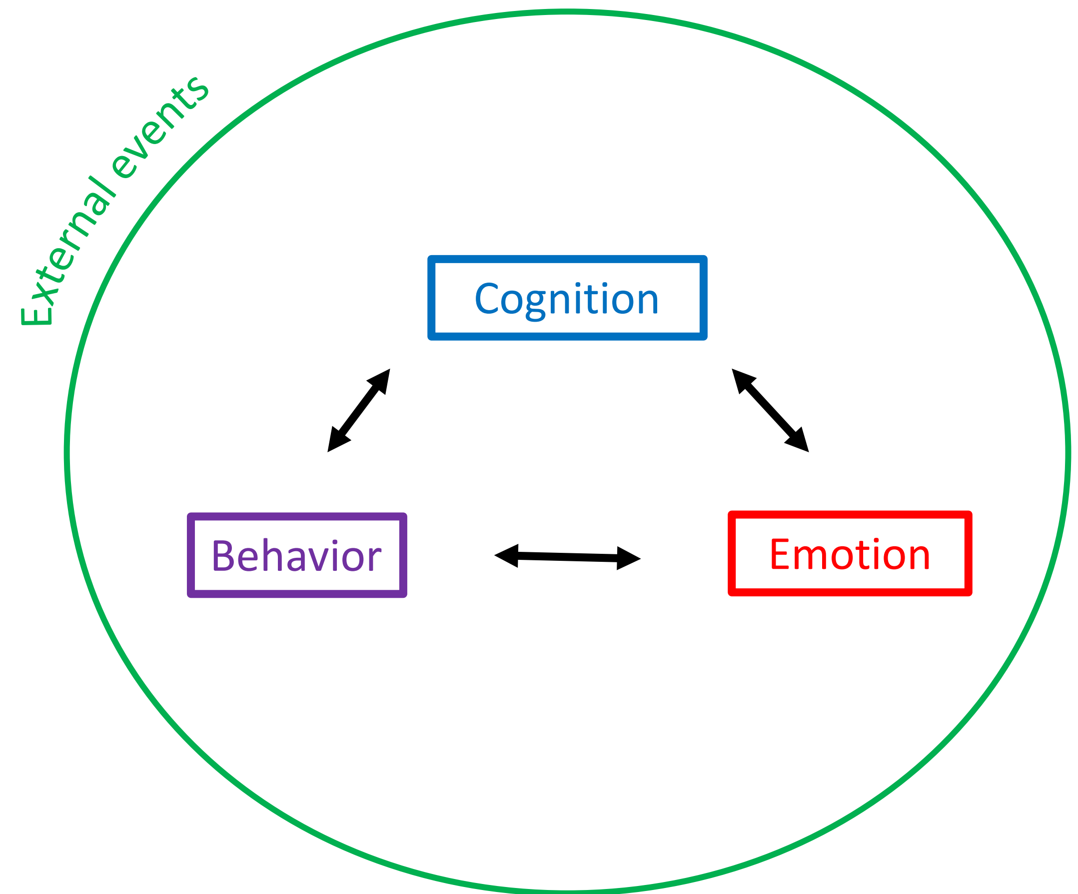
- Not all negative emotions are “bad”.
- CBT does not aim to remove all of our distress.
- Some negative emotions are normal and adaptive.
  - Grieving for a family member.
  - Anger when our rights are being violated.
- We have to determine whether the distress is in proportion to the event.

Brief recap

- CBT is based on the cognitive model, which postulates that emotional distress is directly influenced by our thinking.

- Therapy is based on an individual case conceptualization which teases apart how different components of our experience influence each other.

- Cognitive restructuring is a therapy technique that corrects systematic biases in thinking.



Limitations in cognitive techniques

- Addressing cognitive distortions is an important part of therapy.
- However, sometimes it is insufficient to bring about change.
- Cognitive restructuring often relies on retrospective examination: *what's the past evidence for or against my thought?*
- What if the past experience is not informative enough to tell about the accuracy of the thought?

Limitations in cognitive techniques

"I don't know what will really happen when I do public speaking. The audience may or may not criticize me. I have not done it for 20 years!"

Limitations in cognitive techniques

- It may also be the case that the client find it difficult to accept or believe in the new thought.
- “I know the audience will not criticize me, but …”
- Knowing the new cognition in the head, but not feeling it at heart.

Behavioral interventions

- Other than changing how we think (the cognitive intervention), modifying how we behave is also important in CBT.
- There is a variety of behavioral interventions, one of which is conducting a behavioral experiment.
- Behavioral experiments are **planned experiential activities**.
- They are commonly used in the treatment of anxiety.

Behavioral approach to anxiety

- Anxiety is characterized by:
  - Apprehension (fear towards something)
  - Avoidance from the source of apprehension

- Clients with an anxiety difficulty expect a **catastrophic outcome** when they imagine approaching (rather than avoiding) the fear.

Behavioral approach to anxiety

- For example, social anxiety disorder is characterized by the fear of **social evaluation**.
- Clients with social anxiety catastrophizes the outcome of social interactions. They expect to be **criticized or ridiculed.**
- The social situations can be ordinary daily interactions (such as greeting people) or in the form of public performance (making a public speech).
- Not just the typical shyness.

Behavioral approach to anxiety

- Social anxiety is associated with two types of behavioral coping:

- Avoidance: avoids public speaking, leaving it for another person.
  - leaving the group presentation to a group mate

- Safety behaviors: engages in the speaking, but in a way that the client believed would help with the anxiety, yet in fact worsens the anxiety.
  - not looking at the audience
  - keep checking whether his hand is shaking

Behavioral experiment

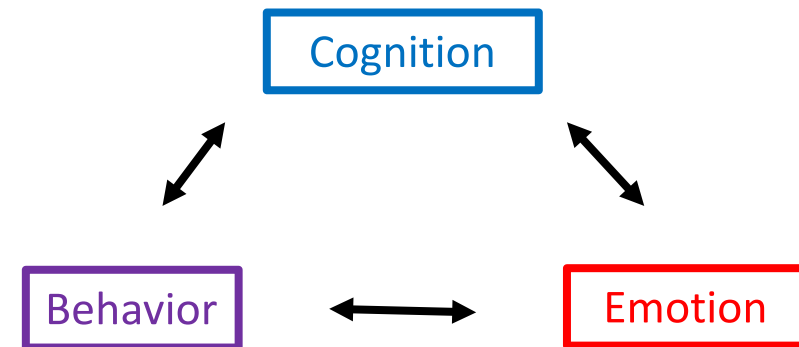
- A behavioral experiment could be in the form of the client making a public speech and observing the audience’s reaction.
- Guiding client through a behavioral experiment can help to examine whether the **catastrophic outcome** is a realistic outcome of the situation.
- The “findings” of the experiment serves as new evidence for the client to evaluate his cognition.
- Thus, the behavioral intervention is complementary to the cognitive intervention.

Establishing the cognitive model

- Identifying the cognition underlying the fear.
- Therapist: *"What do you imagine would happen when you are speaking on the stage?"*

External event: Doing an oral presentation

"I will get so nervous, my body will shake so heavily. The audience will see how stupid I am and criticize me for wasting their time."



Very anxious

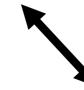
Establishing the cognitive model

- Identifying the <u>behaviors</u> in response to the fear.
- Therapist: *"What do you do to prevent this terrible outcome from happening?"*

External event: Doing an oral presentation

"I will get so nervous, my body will shake so heavily. The audience will see how stupid I am and criticize me for wasting their time."

Cognition



Behavior

Emotion

Avoid eye contact
Keep checking my hand

Very anxious

Running the experiment

- The subject of investigation
- Predictions
- The experiment
- Results (what actually happened)
- Conclusion (what to learn from this experience)

Running the experiment

- The subject of investigation: **My thought (“I will get so nervous, my body will shake so heavily. The audience will see how stupid I am and criticize me for wasting their time.”).**
- Predictions: **The audience will come forward and criticize me.**
- The experiment: **do the oral presentation, don’t focus on myself, and remember to make eye contact with the audience.**
- Results (what actually happened): **no one commented how I did, some people even clapped at the end.**
- Conclusion (what to learn from this experience): **my performance is not as bad as I feel it to be.**

Debriefing

- One of the most important part of doing a behavioral experiment is debriefing.

- The therapist helps to “unpack” the new experience by asking the details.
  - “What was the audience like?”
  - “What was going through your mind?”
  - “How was it different from your previous experience?”

- Attribute the success to the client and celebrate it together.

Exposure exercise

- Behavioral interventions require client’s persistent effort.
- It is rare for clients to recover from anxiety after a single behavioral experiment.
- Even though the cognition may have been “de-catastrophized” in some way, the client will require more successful experience for enduring change.
- Graded exposure exercise is an effective technique for treating anxiety.

Exposure exercise

- Setting up a fear hierarchy with the client.
- E.g. in the case of social anxiety.

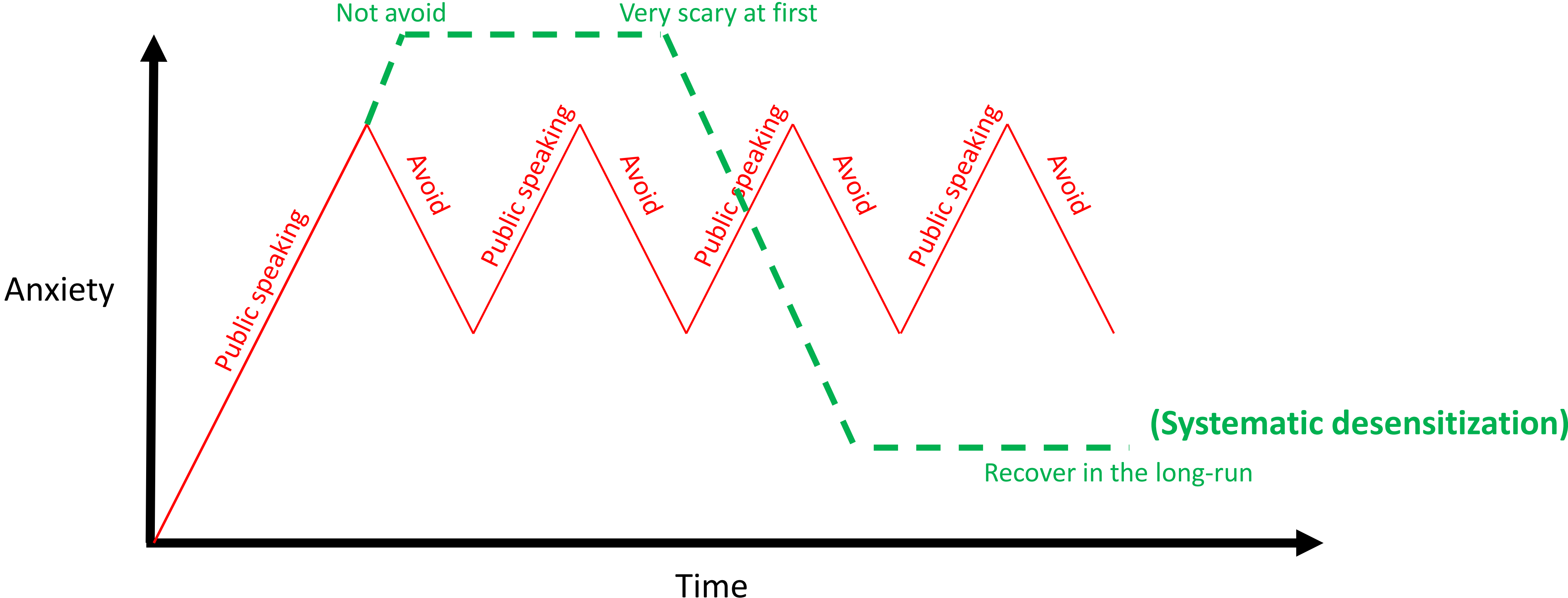
Fear intensity	Fear situation
80 – 100	*Speaking in a large group presentation (30 people).*
60 – 80	*Speaking in a small group presentation (4-5 people).*
40 – 60	*Speaking to unfamiliar classmates.*
20 – 40	*Inviting friends to a dinner.*
0 – 20	*Going to a small social gathering.*

Graded exposure from the less anxious to the most anxious situation.

Rationale for exposure

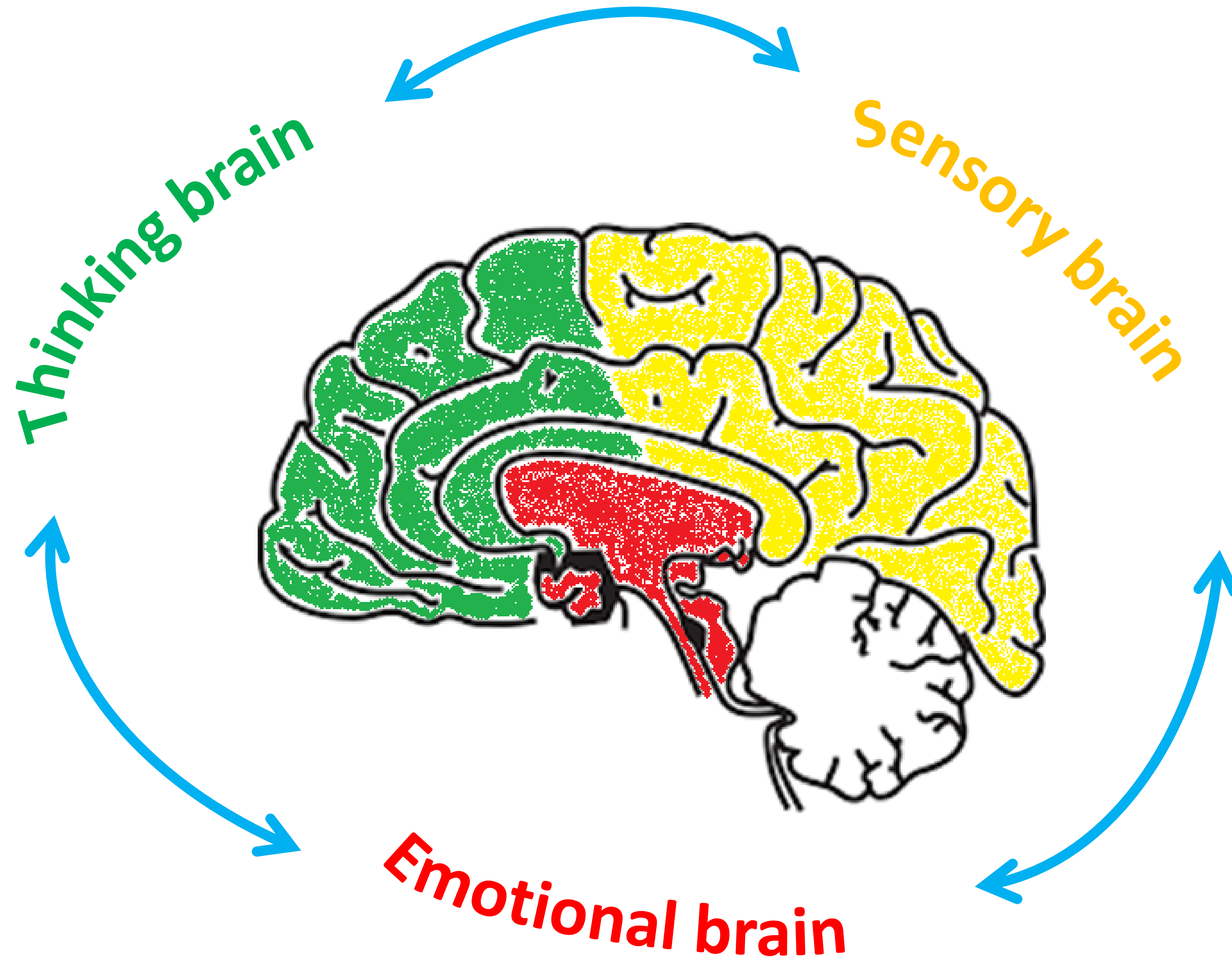
- Exposure exercise can be very challenging for clients.
- We are asking them to approach the very thing that they strive to avoid.
- Preparing the client with a sound rationale for doing so can be helpful.

Rationale for exposure



Beyond dialogues

- Not just a “talking therapy”, but a form of “doing therapy”.
- Connecting the head and the heart.

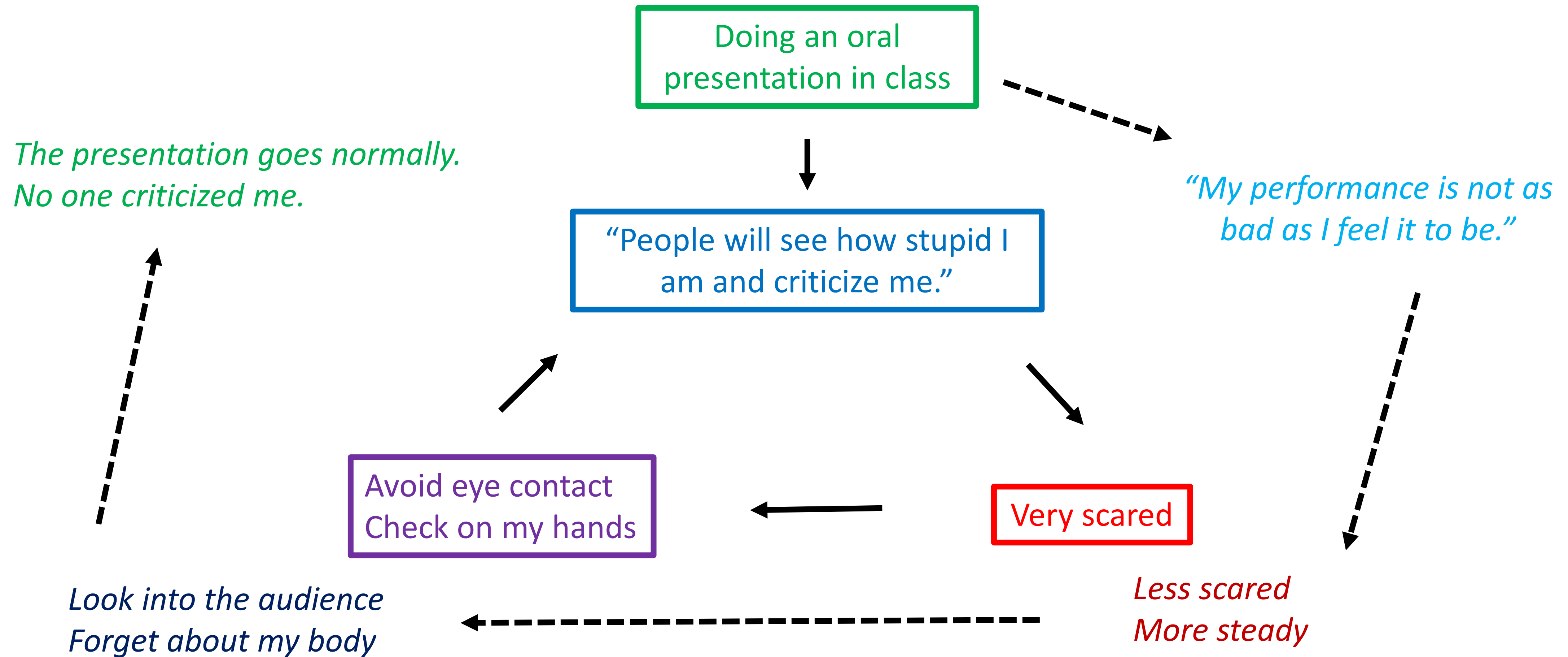

Thinking brain
Sensory brain
Emotional brain

Variety of behavioral interventions

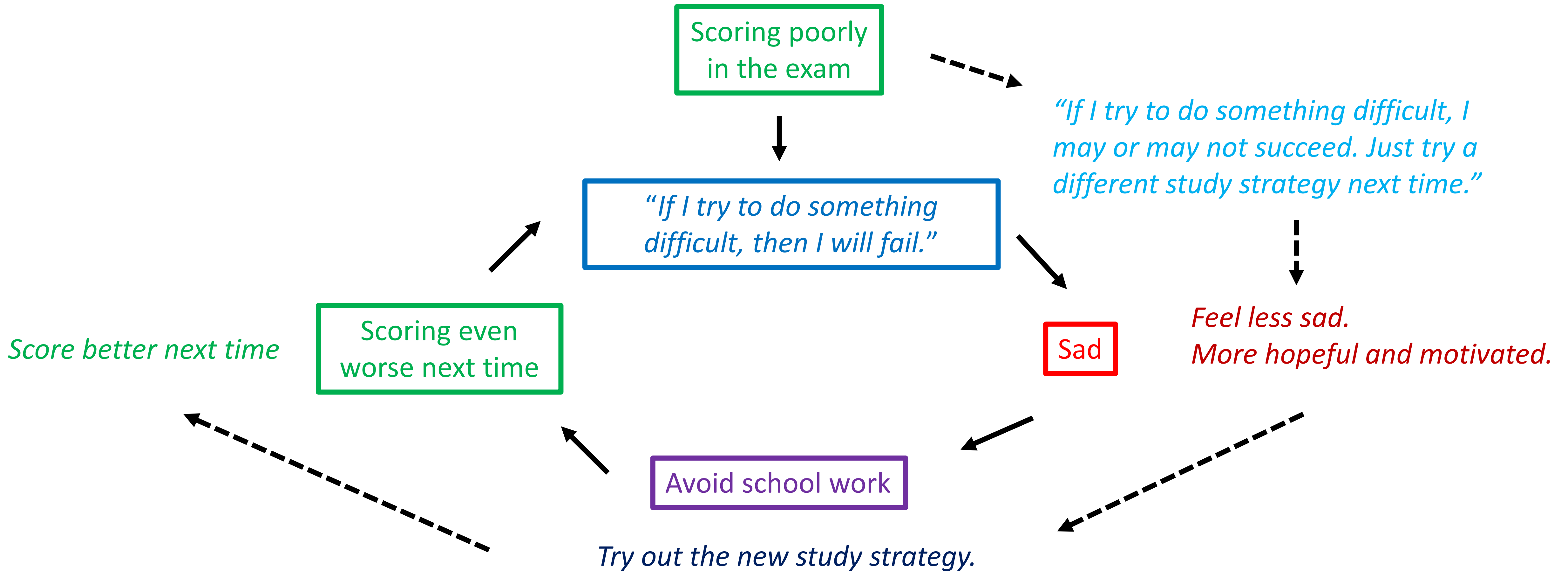
- **Relaxation training** (de-activate the body’s stress response)
  - Diaphragmatic breathing
  - Progressive muscular relaxation
  - Imaginal relaxation
  - Helpful for clients with stress- and anxiety-based difficulties

- **Behavioral activation** (re-activate daily activities)
  - Identifying client’s past interests
  - Activity scheduling
  - Helpful for client with depression or withdrawn behavior

Building a different life story



Building a different life story



Fundamental principles in CBT

1. CBT is based on an **individual and evolving conceptualization** of the client's problems in **cognitive terms**.

- Therapy is based on the cognitive model.
- Conceptualization as the therapy anchor.
- It is updated the more we know about the client.

Fundamental principles in CBT

2. CBT requires a sound **therapeutic alliance**.

- All the basic counseling skills apply (accurate empathy, positive regard, etc).
- Treat the client the way you would like to be treated.

Fundamental principles in CBT

3. CBT emphasizes **collaboration and active participation**.

- Making decisions together with client.
- Carefully designing homework suitable for the client.

Fundamental principles in CBT

4. CBT is **goal oriented and problem focused**.

- Establishing therapy goals and focus on them.

Fundamental principles in CBT

5. CBT **initially emphasizes the present**.

- May work on the past, e.g. childhood upbringing for clients with personality difficulties.

Fundamental principles in CBT

6. CBT is **educative**, aims to teach the patient to be her **own therapist**, and emphasizes **relapse prevention**.

- Building self-reliance.
- Prepare for rainy days.

Fundamental principles in CBT

7. CBT aims to be **time limited**.

- Therapy should not go on for years.
- Exception for severe mental disorders.

Fundamental principles in CBT

8. CBT sessions are **structured**.

- Introductory (mood check, setting an agenda)
- Middle (reviewing homework, work on the agenda, setting new homework)
- Final (eliciting feedback)

Fundamental principles in CBT

9. CBT teaches patients to **identify, evaluate, and respond to their dysfunctional thoughts** and beliefs.

Fundamental principles in CBT

10. CBT uses a **variety of techniques** to change thinking, mood, and behavior.

- Therapy techniques can be varied.
- All adhere to the cognitive model.

CBT extensions

- CBT is a “school” of therapy, which is based on the cognitive model.

- Other therapies falling under this school include (but not limited to):
  - Mindfulness-based Cognitive Therapy
  - Dialectical Behavior Therapy
  - Acceptance and Commitment Therapy
  - Schema Therapy
  - Compassion Focused Therapy

Thank you for your time!

Suggested reading:

Beck, J. S. (2011). *CBT: basics and beyond.* Guilford Press.

Bennett-Levy, J. E., Butler, G. E., Fennell, M. E., Hackman, A. E., Mueller, M. E., & Westbrook, D. E. (2004). *Oxford guide to behavioural experiments in cognitive therapy*. Oxford University Press.