

Becoming a Resilient Scientist

SERIES

Workbook II: Understanding Cognitive Distortions & Imposter Fears

Dr. Sharon L. Milgram
Director NIH OITE
Bethesda, MD

This workbook is intended to accompany the summer 2021 lecture
***Becoming A Resilient Scientist Series Part II:
Understanding Cognitive Distortions & Imposter Fears.***

It is most effective when it is used after attending/watching the workshop lecture.
The exercises in this workbook are here to help you process and solidify what you've learned
in the lecture and to provide you with additional resources



OITE@mail.nih.gov



@sharonmilgram & @NIH_OITE



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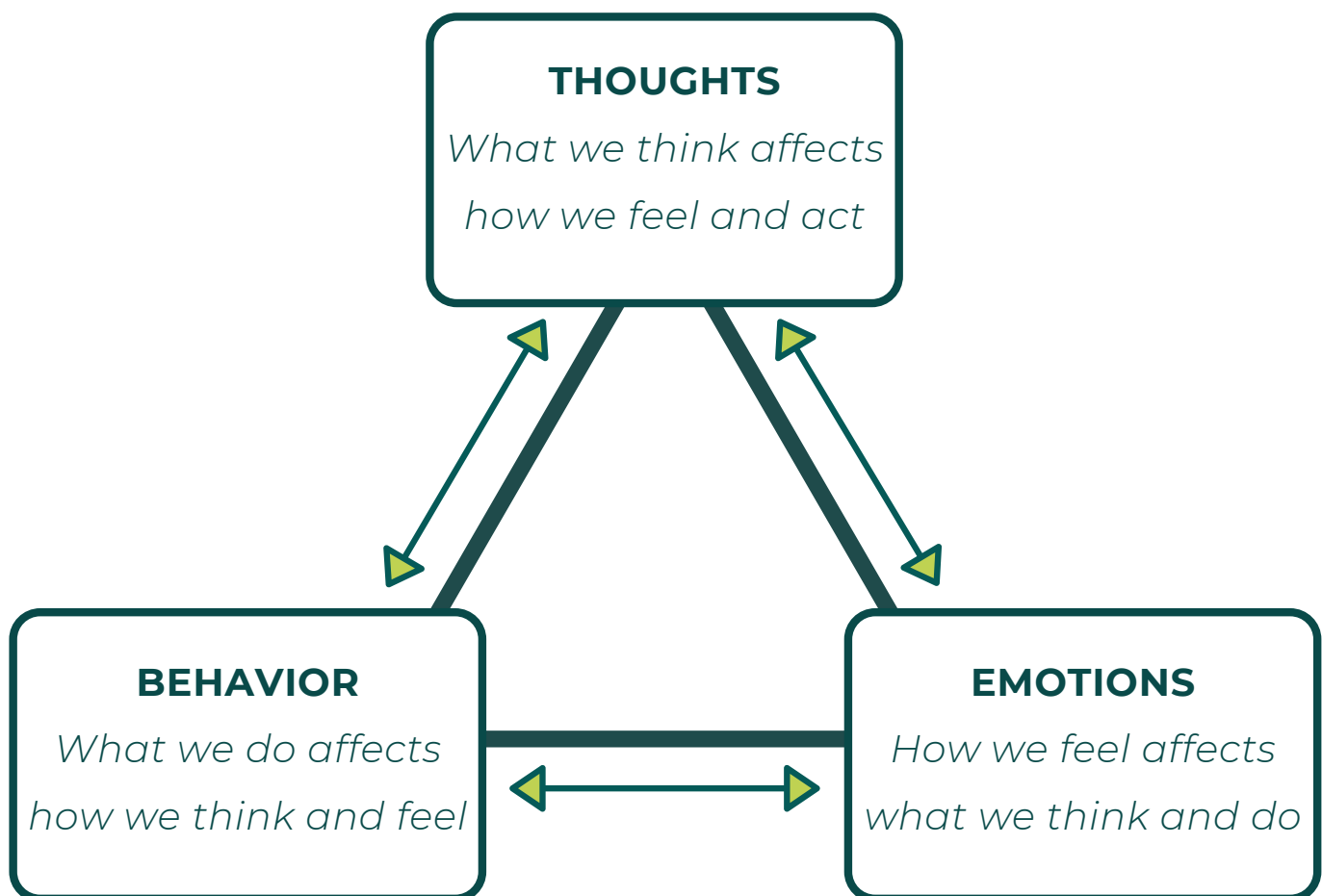
COGNITIVE DISTORTIONS

AN OVERVIEW

To become resilient,
we have to understand our **distorted self-talk**.



Our **thoughts impact our feelings**,
and thus **affect our behavioral reactions**.¹



¹ <https://beckinstitute.org/cognitive-model/>

COGNITIVE DISTORTIONS

AN OVERVIEW

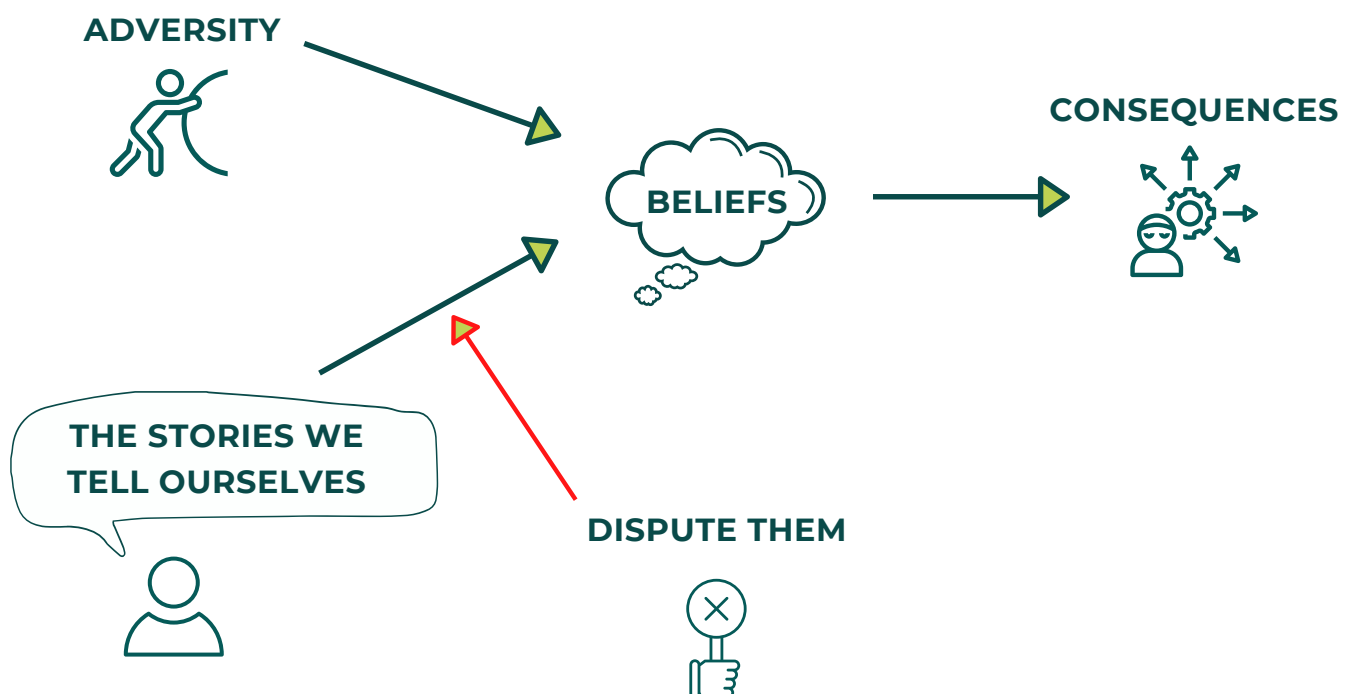
Often, when we are stressed, our
perceptions become distorted and dysfunctional.



Adversity and **false stories we tell ourselves** can lead to a **change in our beliefs.**

Our beliefs may cause us to suffer from **negative behavioral consequences.**

But if we learn to **dispute the falsehoods** we tell ourselves,
we can learn to **combat adversity**,
and benefit from a **positive change** in our consequential behavior



TYPES OF COGNITIVE DISTORTIONS

COGNITIVE DISTORTION	DESCRIPTION	EXAMPLE
All-or-Nothing Thinking	Your performance is either perfect or it is a complete failure	Your lab meeting presentation went well; however, you stumbled on a question. Therefore, you view the lab meeting presentation as a failure.
Catastrophizing	You exaggerate the implications of a set-back or mistake.	You forget to put your samples into the freezer and have to throw them away the next day. Therefore, your PI will never write you a recommendation letter and you will never get into grad school.
Minimizing (Discounting the Positive)	You downplay the importance of your accomplishments, positive qualities, or positive experiences.	Your PI congratulates you on receiving a travel award to go to a conference. You tell her everyone probably got one.
Jumping to Conclusions (Mind-Reading/ Fortune-Telling)	You make assumptions about what someone else is thinking or you anticipate that things will turn out badly , convince yourself that they will, and act accordingly .	Your PI is grumpy and ignoring you today; you assume it's due to you taking so long yesterday to set up your experiment and buffers. You're sure you won't get the scholarship your mentor suggests you apply for, so you don't work very hard on the application.
Emotional Reasoning	You assume that your emotions reflect reality, and reason or draw conclusions from how you feel .	You made a terrible mistake today and feel stupid; You then tell yourself (and others) "I am an idiot". You feel like you don't belong and tell yourself "I don't belong".

TYPES OF COGNITIVE DISTORTIONS

COGNITIVE DISTORTION	DESCRIPTION	EXAMPLE
Overgeneralization	You view a single negative event as a predictable pattern for the future.	Because you struggled on your first journal club presentation you assume you will always struggle in journal club. You also assume you will not do well in other areas of your internship.
Personalization	You blame yourself for something you are not entirely (or at all) responsible for.	Your supervisor gives you brief instructions on how to analyze data for a morning meeting. He forgets to point out one critical step, and you don't analyze the data correctly. You take all the blame for what happened and feel bad about yourself.
Should Statements	You criticize yourself using rigid fixed language that does not accurately reflect the nuances of a situation. (Should, must, ought)	You tell yourself "I am a grad student, so I <u>should</u> know how to read a paper; or I am a postdoc, so I <u>ought</u> to be able to figure this technique out on my own. This only serves to make you feel bad about yourself.
Mental Filter	You pick out a single negative detail and dwell on it.	You enjoy your research and get along with your lab group, but you had a poor interaction with your mentor. When you think or talk about your time in the lab, you focus on this one negative experience, ignoring all of your positive experiences.
Labeling	Form of generalization: Assigning a person's action to their disposition rather than looking the situation.	When your lab mate snaps at you, you tell yourself it is because he is a jerk rather than realizing that he was in a hurry and possibly under stress.

JOURNALING EXERCISE I

ENCOUNTERING ANT_s

When you are having **automatic negative thoughts**, write them down.

Write whatever comes to mind, try not to filter.



Look back and see what you wrote. What **stories** are you telling yourself?

Identify the cognitive distortions in your negative thoughts.



JOURNALING EXERCISE II

EXPLORING IMPOSTER FEARS

Similar to cognitive distortions, **imposters fears**
(also called *imposter syndrome* or *imposter phenomenon*)
lead to a feeling that you **don't belong** and make you feel like:

- You are a fraud
- Your success is due to luck, which leads you to discount your achievements
- You have to work hard on tasks that are easy for everyone else

In **what situations** do you experience imposter fears?
How does that fear hold you back or **undermine** you?

YOU ARE NOT ALONE

Google **accomplished individuals** and try to find those who also suffer from **experiencing imposter fears**. List some individuals who surprised you when acknowledging their imposter fears. Explain why it was surprising to you. Then remind yourself that **you are not alone!**

(We started the list for you!)

Individual	Why it's surprising
Maya Angelou	Poet, novelist, and civil rights activist. She was awarded National Medal of Arts and the Presidential Medal of Freedom . She once said, "I have written 11 books, but each time I think, 'Uh-oh, they're going to find out now. I've run a game on everybody, and they're going to find me out.'"
Serena Williams	Serena is the former number one tennis player in the world.
Howard Schultz	Schultz was the CEO of the largest coffee-house chain the world (Starbucks) and is estimated to be worth \$4.3 billion dollars.

DEALING WITH COGNITIVE DISTORTIONS & IMPOSTER FEARS

REMEMBER **HATS**

H – Hear your negative self-talk



A – Appreciate that you have a choice



T – Talk to yourself compassionately



S – Seek help and access resources



HATS EXERCISES

H – Hear your negative self-talk

Write down your negative thoughts and identify the distortions so you can work on tackling it (*You practiced this on page 5*).

A – Appreciate that you have a choice and fact-check it

Think of this as a pros/cons list. Create two columns, support and against, and list your evidence for the thoughts you are having (*You forgot to put your sample in the freezer. Can you redo the experiment? Can the experiment still be successful?*).

The event and type of negative self-talk or distortion:

Evidence in support	Evidence against

(continued on next page)

HATS EXERCISES

T – Talk back like a realistic giraffe

Instead of harsh self-talk, talk to yourself in a compassionate way as you would talk to a friend (*How would you talk to your friend who forgot to put their sample in the freezer? What would you say to a friend when they are down and engaged in cognitive distortion?*).

What you would say to your friend:

Now give yourself the same kind of compassion. What can you tell yourself now?

S – Seek help and access resources

Look for resources on your campus that can help

Resources available on my campus:

Seek help and find a therapist: <https://www.psychologytoday.com/us/therapists>

GROWTH MINDSET EXERCISE

DEALING WITH COGNITIVE DISTORTIONS & IMPOSTER FEARS

Growth mindset can help you **overcome** cognitive distortions & imposter fears.

Rewrite these fixed mindset thoughts using growth mindset language.

"I give up! I tried three times to get this abstract written and it's still no good."

"I'm feeling down and my experiment probably won't work, so I'll just check out during lab today."

"Her poster is so much better than mine; mine will never look that good."

"I'm not a good public speaker – I don't want to do this presentation."

"I'm really good at using PowerPoint."

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GROWTH MINDSET EXERCISE

DEALING WITH COGNITIVE DISTORTIONS & IMPOSTER FEARS

Growth mindset can help you **overcome** cognitive distortions & imposter fears.

Rewrite these fixed mindset thoughts using growth mindset language.

"Lab math is just too hard."

"I won't raise my hand and ask because my question is probably a bad one anyway."

"I'm SO stupid for making that mistake."

"I won't know what to ask during the informational interview - I'll probably say something foolish."

"I just lose my temper sometimes, sorry."



JOURNALING EXERCISE III

ACKNOWLEDGING OUR COGNITIVE DISTORTIONS

What **distortions** drive the **stories** you tell yourself – at school and at home? Are you more of a **jackal**, a **giraffe**, or an **ostrich**?

Why do you think that is, and **what shifts** would you like to explore for yourself?

What will you do moving forward to **change** your unhelpful self-talk?

ADDITIONAL RESOURCES

HELPFUL PUBLICATIONS & WEBSITES

Cognitive Distortions

Burns, D. D., & Beck, A. T. (1999). Feeling good: The new mood therapy.

Burns, David D. (1980). The Feeling Good Handbook: Using the New Mood Therapy in Everyday Life. New York: W. Morrow.

Imposter syndrome

Clance, P.R. (1985). The impostor phenomenon: Overcoming the fear that haunts your success (p. 25). Atlanta: Peachtree Publishers.

<https://time.com/5312483/how-to-deal-with-impostor-syndrome/>

<https://www.apa.org/science/about/psa/2018/09/imposter-syndrome>

Growth Mindset

Dweck, C. S. (2008). Mindset: The new psychology of success. Random House Digital, Inc..

When it matters and how to know if it matters or not

<https://www.mindsetkit.org/>

<https://hbr.org/2016/01/what-having-a-growth-mindset-actually-means>

<https://www.psychologytoday.com/us/blog/click-here-happiness/201904/15-ways-build-growth-mindset>

https://www.future-ed.org/wp-content/uploads/2019/06/Final-report_Teacher-Mindsets.pdf