



Canadian
Consortium for
**Early Intervention
in Psychosis**

Promoting Recovery With Cognitive Health Interventions in Early Psychosis

A brief review of evidence-based interventions



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Disclosures

Tania Lecomte, Ph.D.:

1. None other than grant support (SSHRC, CIHR, IUSMM foundation)

Martin Lepage, Ph.D.:

1. Consulting fees/advisory board members: Boehringer Ingelheim, Janssen
2. Speaker's honoraria: Boehringer Ingelheim, Janssen, Lundbeck, Otsuka
3. Grant/research support: CIHR, diaMentis, Douglas Foundation, FRQS, Ministère des Relations Internationales, Otsuka-Lundbeck Alliance, Roche



Learning Objectives

After participating in this session, participants will be better able to;

- Assess the evidence supporting the use of cognitive health interventions in psychotic disorders
- Better understand what intervention is effective for what problem
- Appreciate the need for proper training for effective implementation

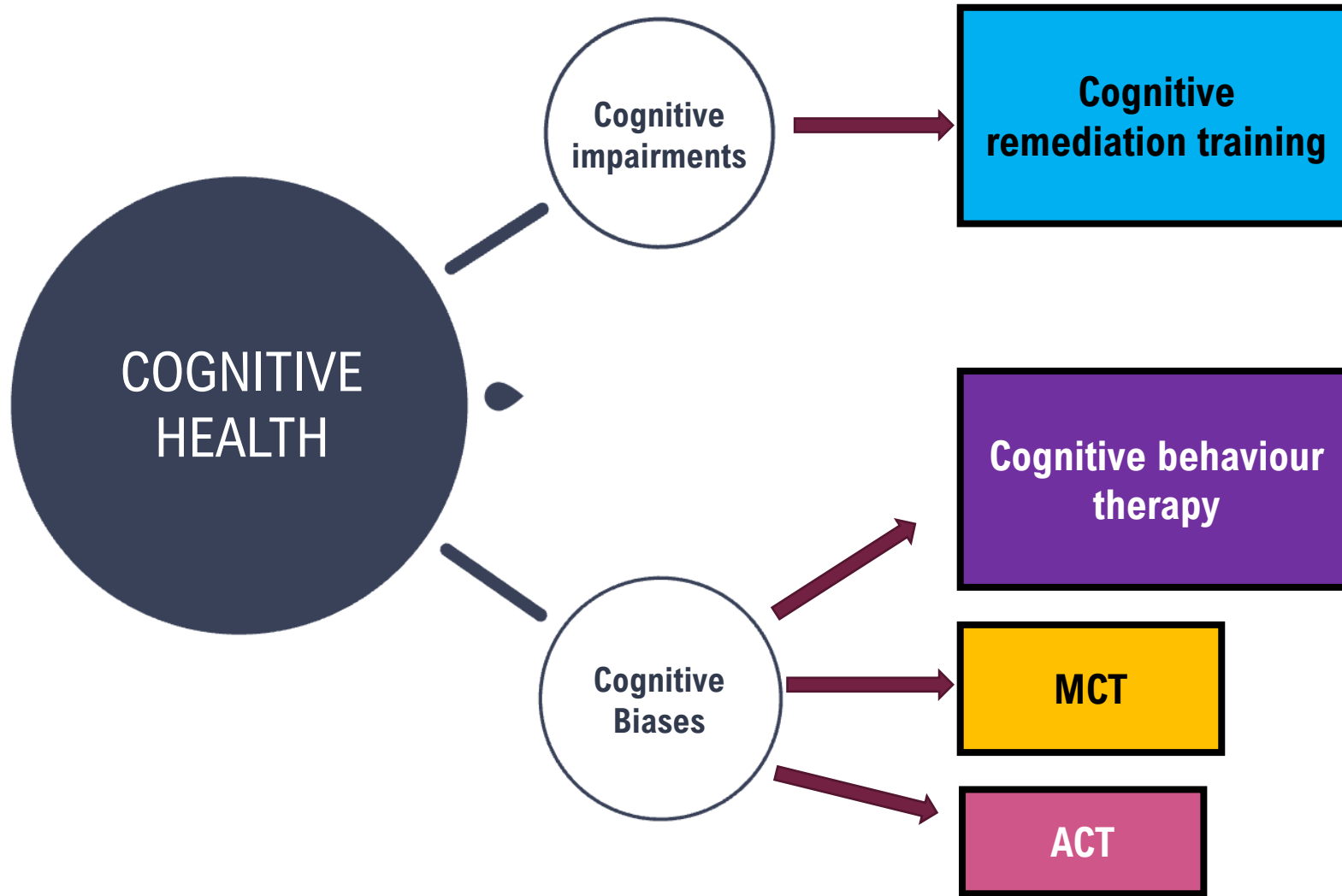


What do Cognitive Psychotherapy and Cognitive Training Target in Early Psychosis?

- Positive symptoms:
 - Medication response is not optimal in all - many still experience delusional thoughts and/or hallucinations (between 30-40%).
 - Focus on cognitive biases and cognitive strategies linked to positive symptoms
- Negative symptoms:
 - Poor motivation, anhedonia, defeatist beliefs
- Other symptoms and impairments:
 - Anxiety (social anx), depression, emotion regulation (transdiagnostic), memory, attention, reasoning and problem solving
- Other recovery goals:
 - Work/school integration, social inclusion/interactions, romantic relationship development, family issues.



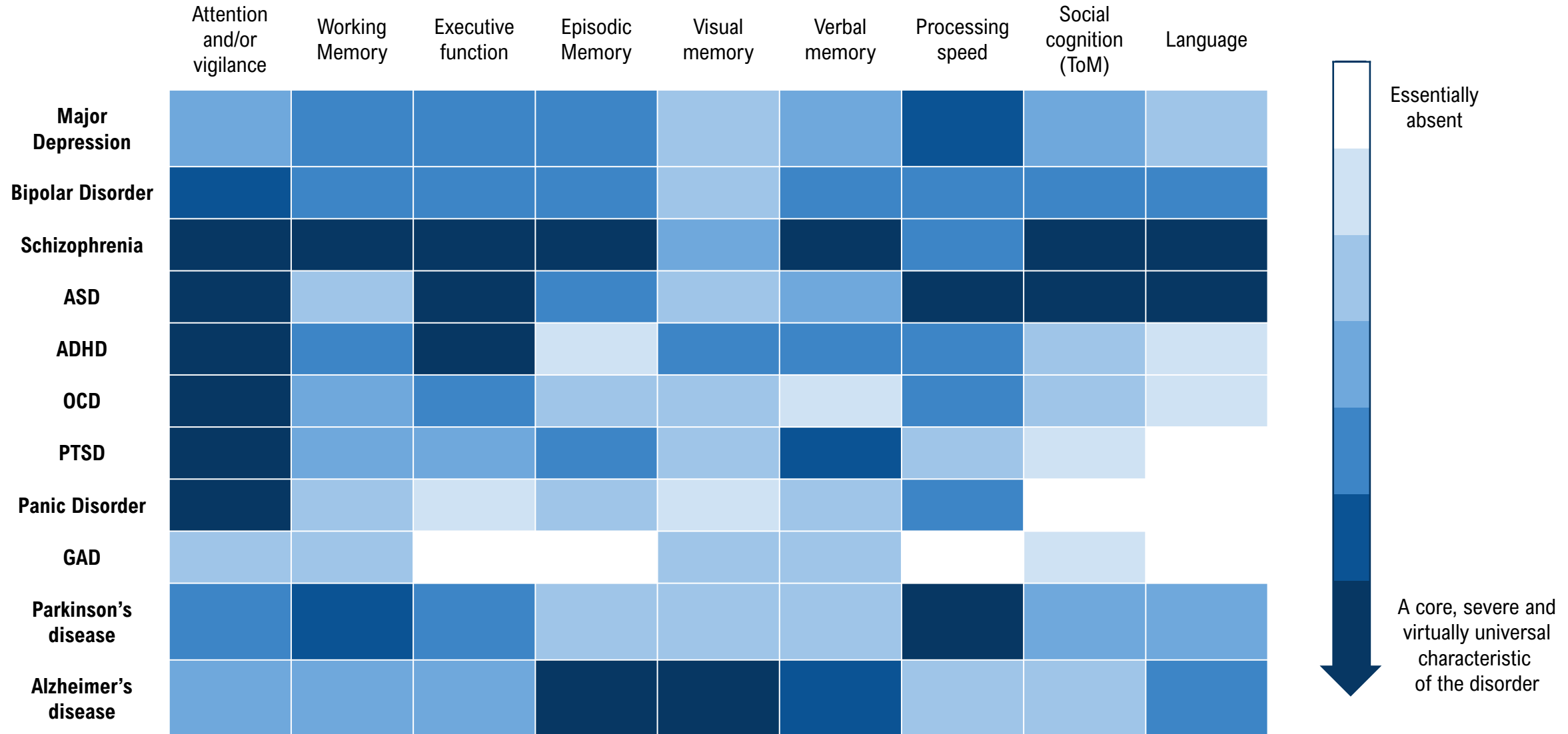
Therapeutic Options



Cognitive Impairments



Cognitive Impairment Across Psychiatric Disorders



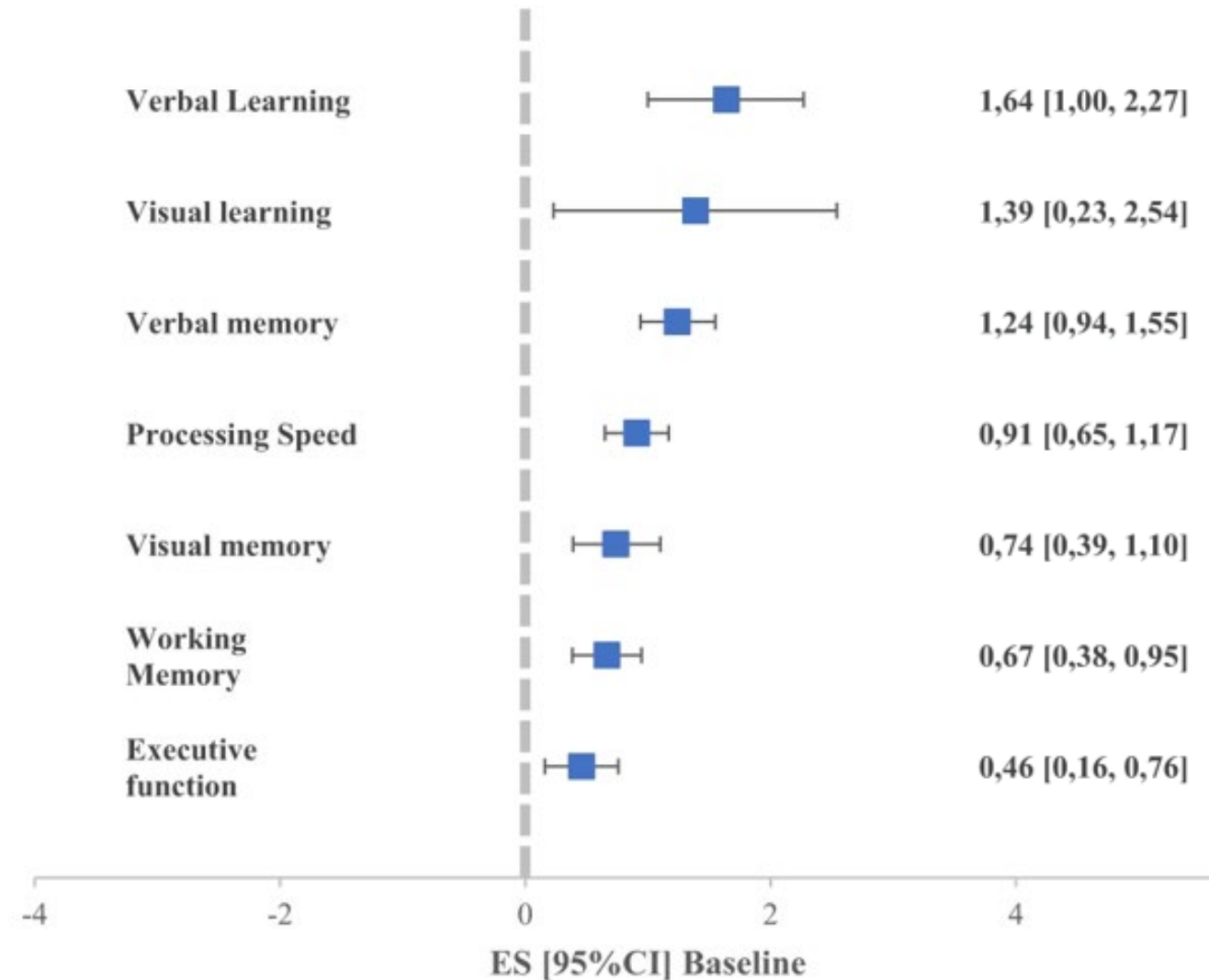
First Episode Psychosis and Cognitive Capacity

People with a FEP exhibit significant cognitive impairments

54 longitudinal studies

3925 FEP patients

1285 control subjects



Values greater than 0 indicate greater deficits in FEP group.

Why Cognition Matters in First Episode Psychosis?



Associations
with clinical
trajectories



Associations
with functioning



Window into
the brain



Cognitive Remediation



Action-Based Cognitive Remediation (ABCR)



Drill and practice
computer tasks



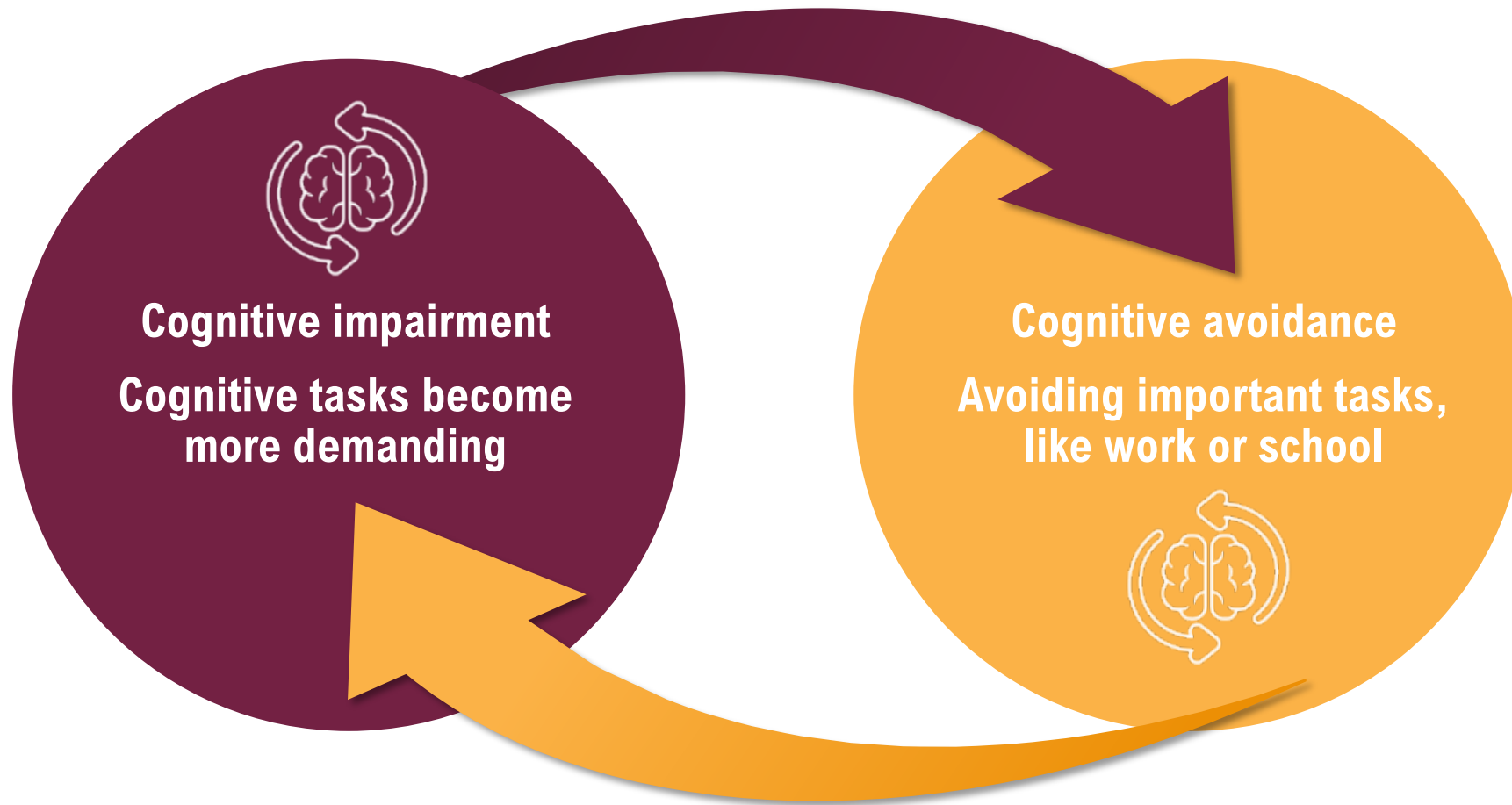
Discussion of
cognitive strategies



Real-life-related
role-play



Cognitive Remediation Ultimately Targets the Avoidance of Cognitively Challenging Tasks



Capacity – Cognitive Remediation

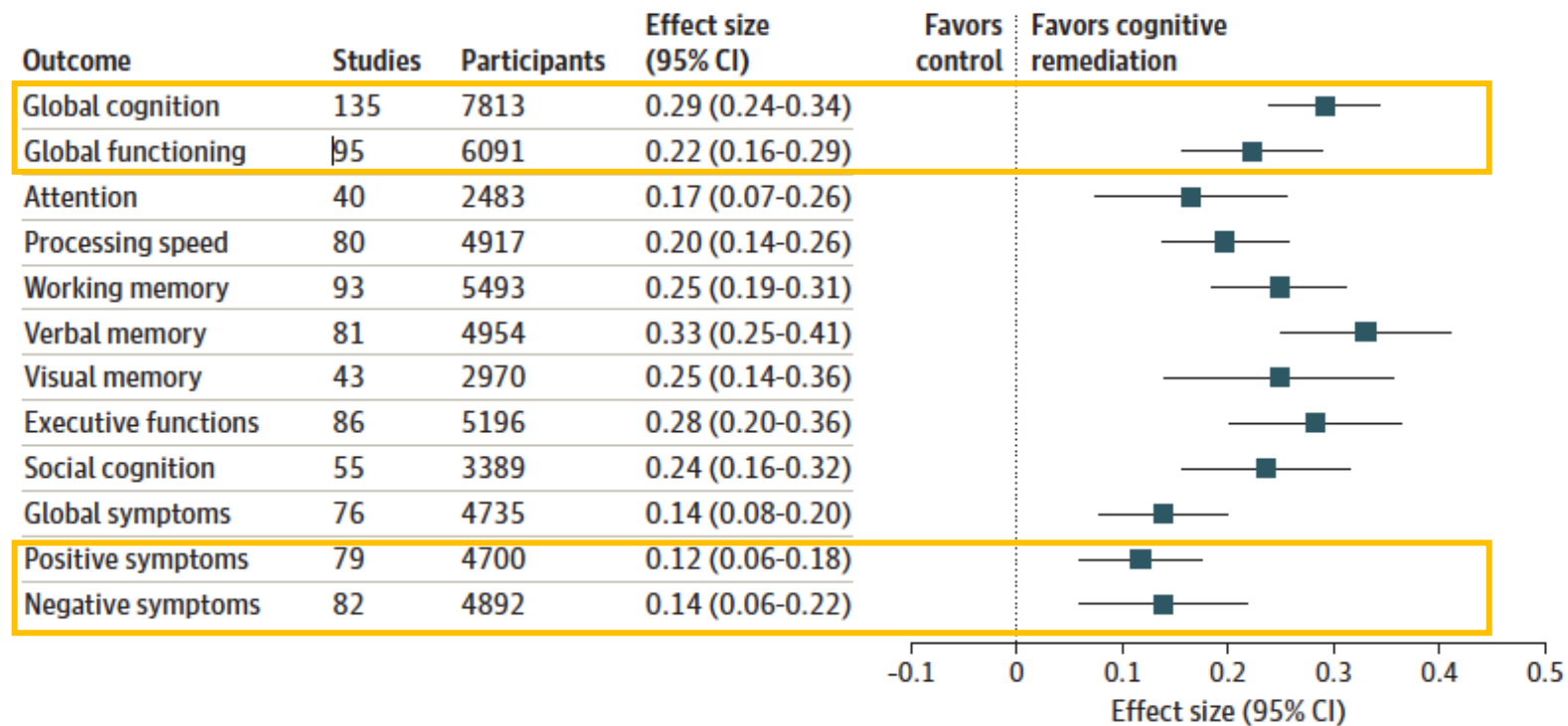


130
studies

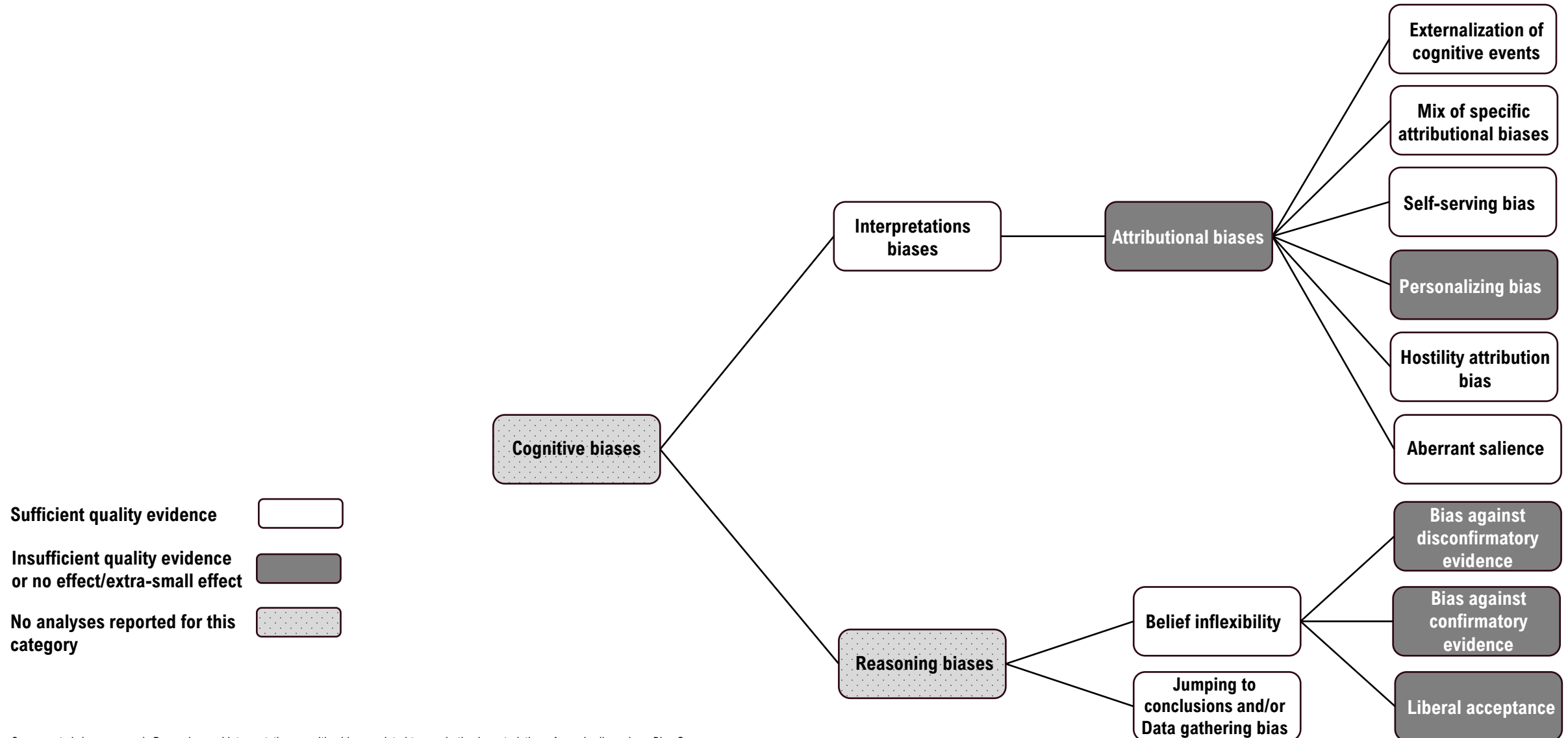


8851
participants

Figure 2. Effects of Cognitive Remediation



Most Studied Cognitive Biases in Psychosis



Reasoning and Interpretation Cognitive Biases Found in Psychosis

Bias	Meaning
Arbitrary reference (jumping to conclusions)	Person doesn't take the time to gather sufficient information prior to making a decision.
Attribution	Negative events are always blamed on others (external, stable and global attribution).
Overgeneralisation	The smallest hint or detail will confirm the belief.
Selective abstraction	The person focuses only on information confirming the belief.
Belief inflexibility	Person won't change their mind even with proof.



Other Biases

- Memory biases
 - Only remember what fits my current mood or belief
 - Can build false beliefs while revisiting the past, depending on current state
- Emotion recognition biases
 - Recognize emotions that fit my mood – tend to attribute symptom-congruent emotions to neutral stimuli
- Attention biases
 - Selectively give more attention to threatening stimuli
 - Notice only people who are looking at them



Cognitive Behaviour Therapy for Psychosis



What is CBT for Psychosis?

- It is an adaptation of the CBT approach designed by A.T. Beck (in the 50's) for depression, and also partly based on his case-study from 1952.
- Has re-emerged, initially in the UK, from experimental and cognitive psychologists' findings regarding specific **cognitive biases** in psychosis and schizophrenia.



What is CBT for Psychosis?

Philosophy:

- Help modify dysfunctional beliefs (thoughts) and behaviors by using specific cognitive and behavioral techniques, in the context of a working alliance.
- The idea behind it is that irrational thoughts or beliefs help maintain symptoms through specific assessments of situations, which lead to dysfunctional behaviors and emotional distress.



The ABC Model

Antecedents

What's the situation?



Beliefs

Thoughts?

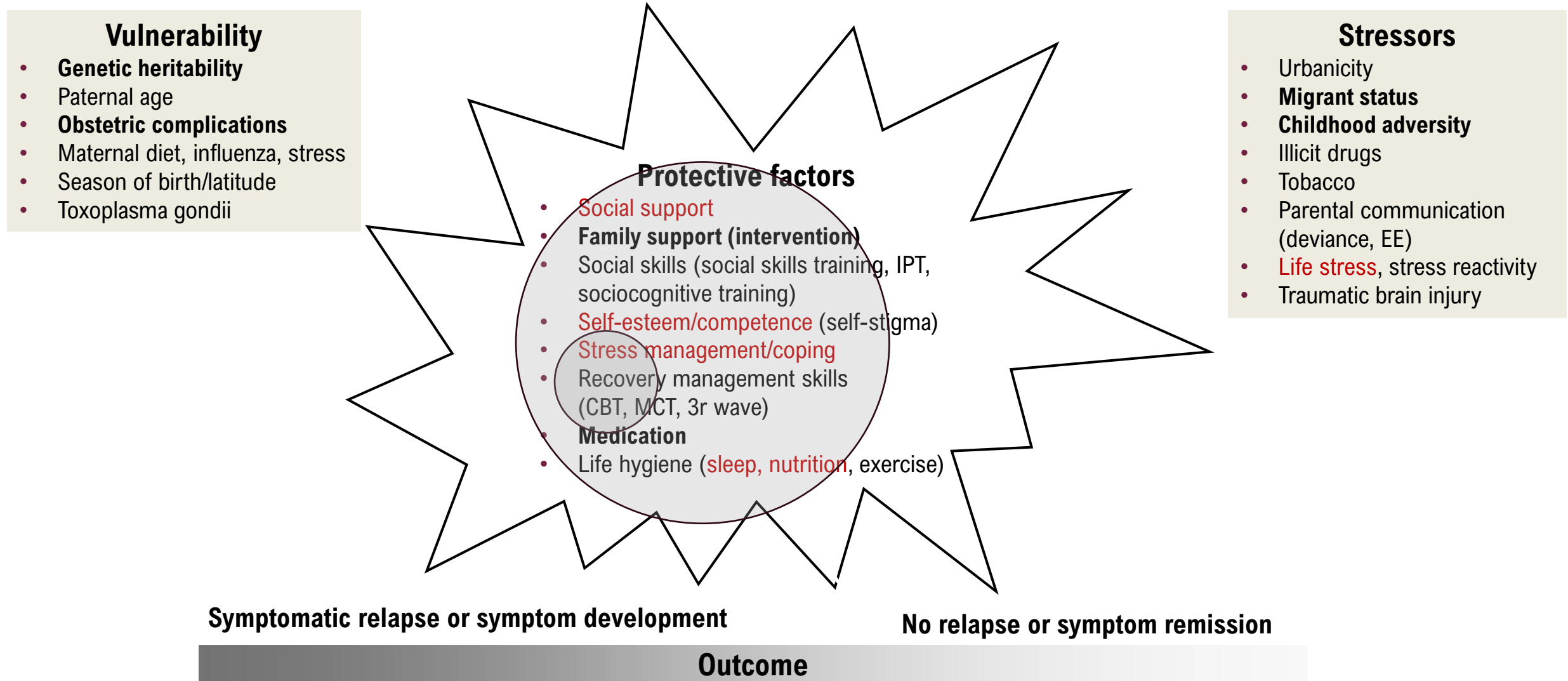


Consequences

*Emotions and
behaviors triggered*



CBTp in Stress-Vulnerability - Protective factors model



Group Studies



Studies suggest that group CBTp is as effective as individual CBTp, and even more so for those with a first episode of psychosis, adolescents or people who are marginalized and isolated,



In fact, our own group CBTp studies found large effect sizes for overall symptoms (small-moderate for positive symptoms), as well as large effects on self-esteem, and coping (linked with strong group cohesion).

In person or via group teletherapy.



Advantages of Group Interventions?

Socialization

Experience

Normalization

Save time and money

Effect is exponential



How Does it Work?

First, need to create a strong relationship (alliance, group cohesion) that will be collaborative – via questions, empathy, creating a safe environment;



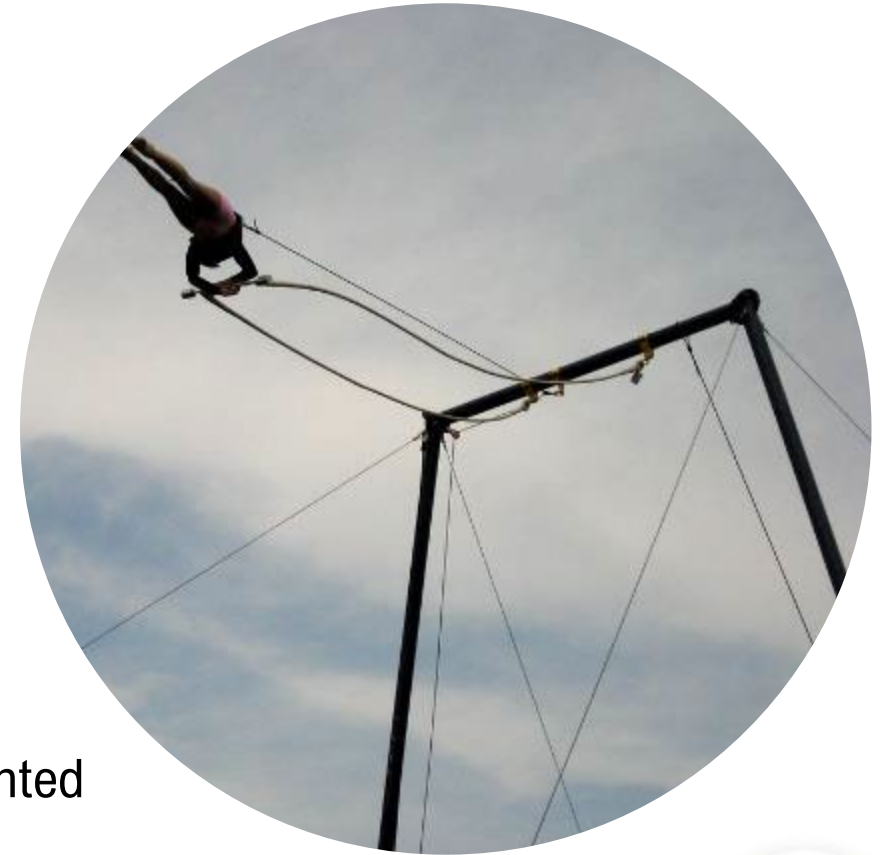
Only after this, is it possible to start using certain techniques to help change how one sees their experiences;



When change in perception is not possible, then we focus on coping strategies to decrease distress; a safe environment;



CBTp is typically time-limited and goal/recovery oriented



**Staying on the
fence**



CBTp Techniques Most Widely Used with Clients with Delusions and Hallucinations

Normalization:

Formulation/offer alternate understanding:

Socratic questioning

Check the facts

Seek alternatives:

Modify attributions

Set agenda and use homework



CBTp Techniques - Cont'd

3 Cs: Catch, Check it, Change it

Français : les 3 Rs: Repère, Revois, Remplace

Explore and practice coping skills

Prepare staying-well plan



The goal, ideally...

Is to improve metacognition by

bringing the person to realize
when he/she is wearing tinted
glasses...

and that perception is not the
same as reality.



1/13 second exposure, f16, ISO100

Metacognitive Training



[Our Research](#)

[Interventions](#)

[Metacognitive Training \(MCT\)](#)

[Our Research Team](#)

[Donate](#)

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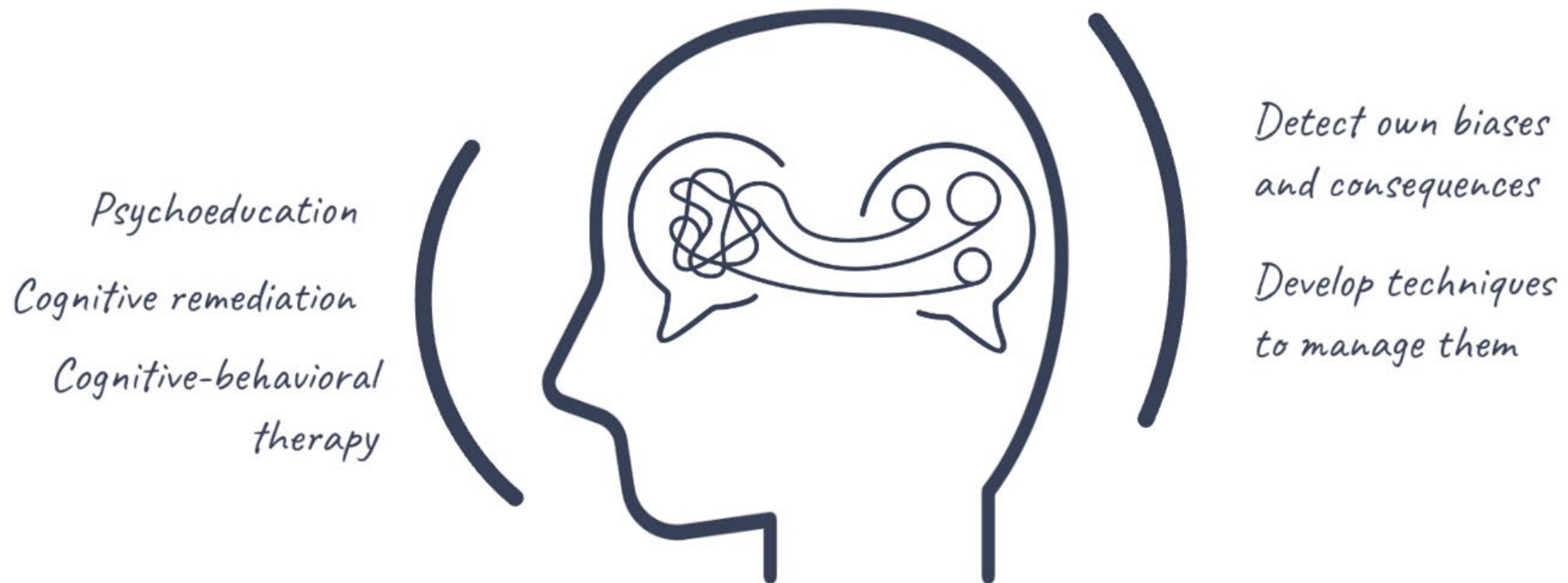
[English](#) / [Metacognitive Training \(MCT\)](#) / Metacognitive Training (MCT) for Psychosis

Metacognitive Training (MCT) for
Psychosis

Metacognitive Training (MCT) for Psychosis



Biases – Metacognitive Training (MCT)



Examples of Cognitive Biases – Jumping to Conclusions



JUMPING TO CONCLUSIONS (JTC)

The tendency to make hasty decisions or reach conclusions with insufficient information.



What Might be Presented in this Picture?

Metacognitive Training 2 - Jumping to Conclusions I



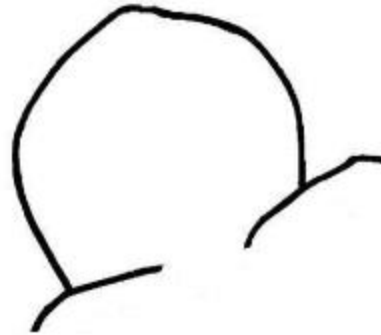
How confident are you?

Do you want to make a decision yet?



What Might be Presented in this Picture?

Metacognitive Training 2 - Jumping to Conclusions I



How confident are you?

Do you want to make a decision yet?



What Might be Presented in this Picture?

Metacognitive Training 2 - Jumping to Conclusions I



How confident are you?

Do you want to make a decision yet?



What Might be Presented in this Picture?

Metacognitive Training 2 - Jumping to Conclusions I



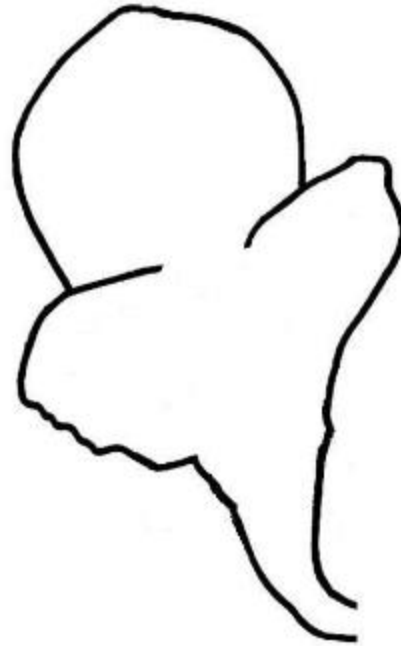
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Do you want to make a decision yet?



What Might be Presented in this Picture?

Metacognitive Training 2 - Jumping to Conclusions I



How confident are you?

Do you want to make a decision yet?



What Might be Presented in this Picture?

Metacognitive Training 2 - Jumping to Conclusions I



How confident are you?

Do you want to make a decision yet?



What Might be Presented in this Picture?

Metacognitive Training 2 - Jumping to Conclusions I



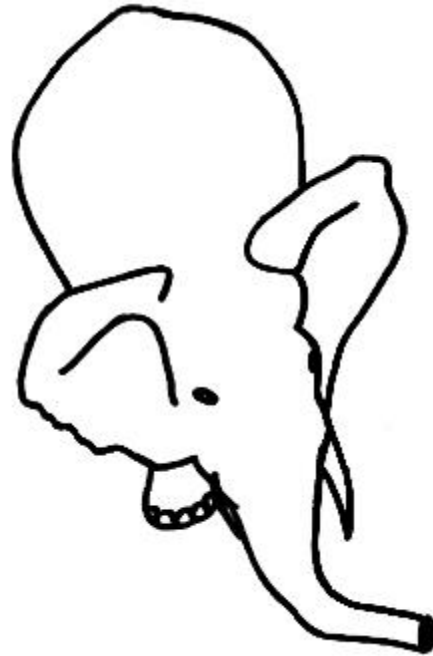
How confident are you?

Do you want to make a decision yet?



What Might be Presented in this Picture?

Metacognitive Training 2 - Jumping to Conclusions I



How confident are you?

Do you want to make a decision yet?



Biases – Metacognitive Training (MCT)

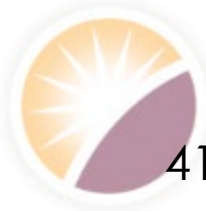
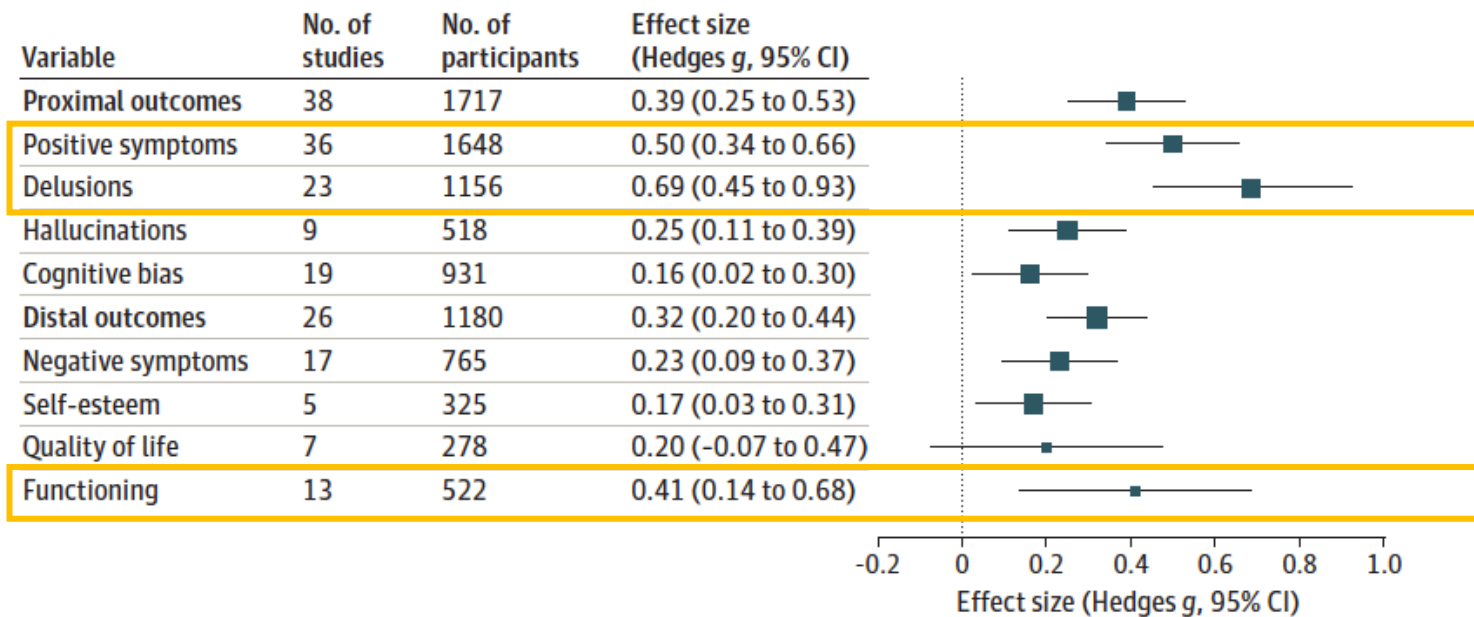


40
studies



1816
participants

Figure 2. Effect Sizes of Metacognitive Training for Proximal and Distal Outcomes



Third Wave Approaches

- When it is impossible to change a thought – you can learn to accept it, live with it, and decrease the distress associated with it
- Third wave therapies in psychosis focus on:
 - Acceptance
 - Compassion (self-compassion)
 - Defusion (stepping away from thoughts)
 - Emotion regulation
 - Mindfulness

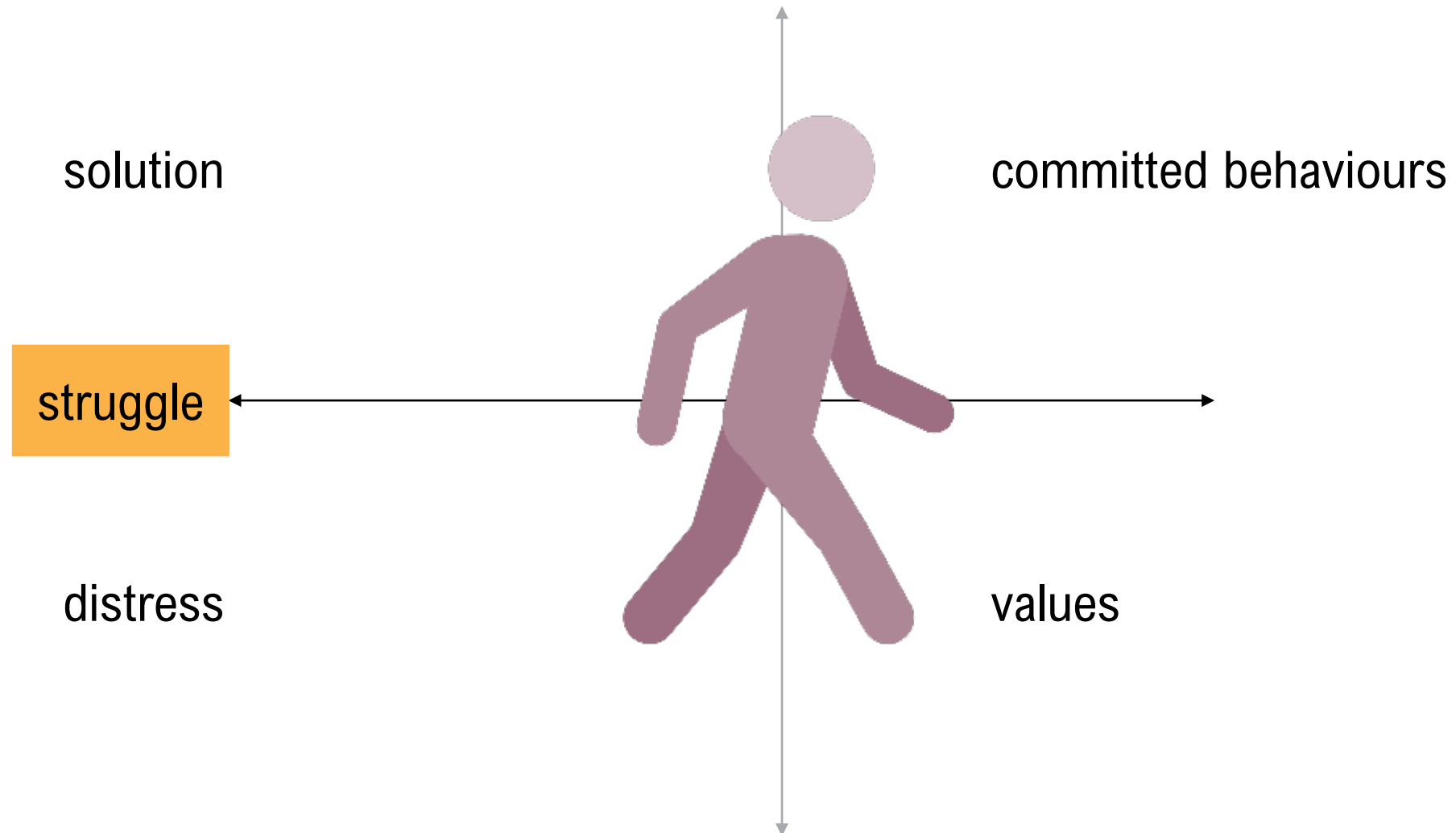


Mindfulness in Psychosis

- Mindfulness is not just meditation – several easier strategies to propose
- Mindfulness = being in the present moment
- Long-term “esoteric” meditations are not recommended for psychosis



ACT Matrix



Virtual Reality

VR can be used in therapy to increase the effects of the therapy - as we have done in CAM+VR for social anxiety in early psychosis (with large effect sizes).

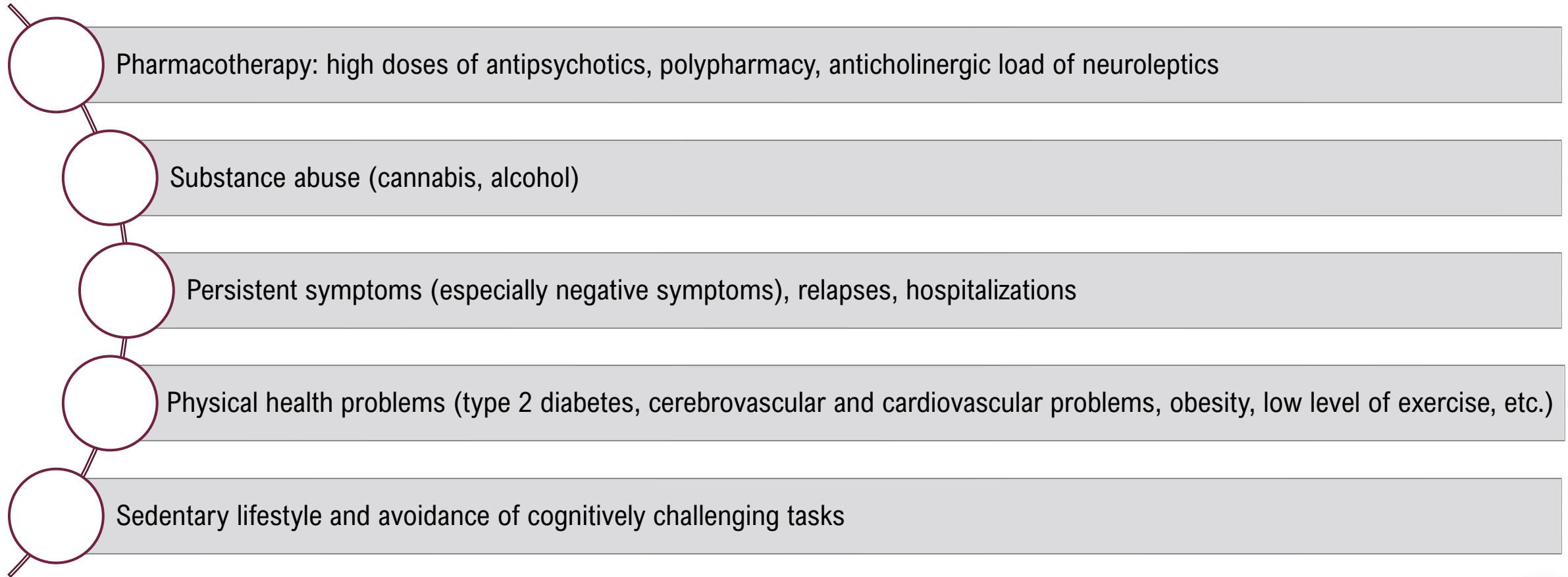


Classroom (intervention)

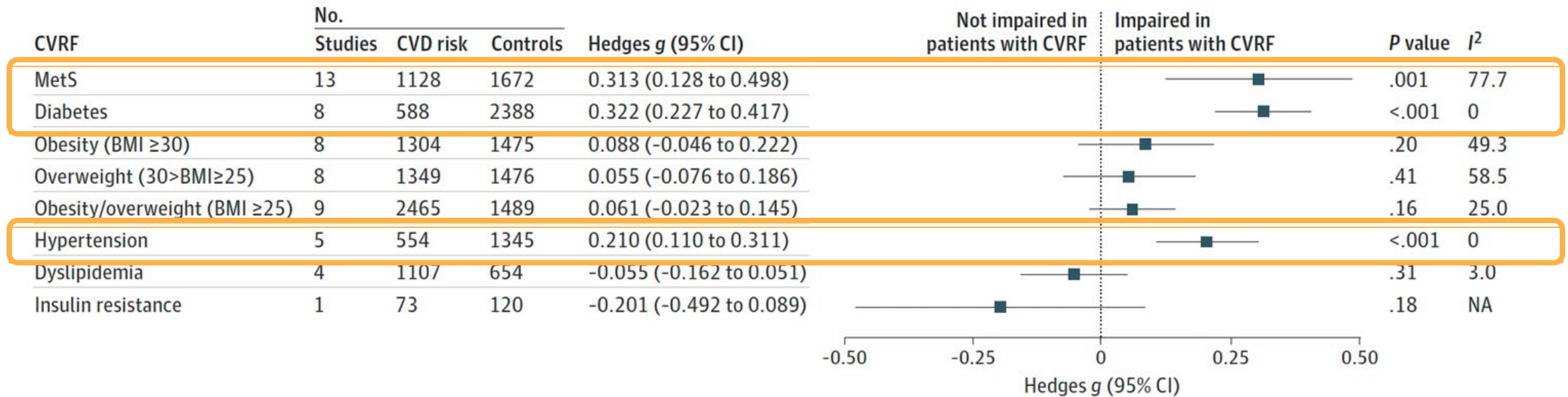


Factors Influencing Cognitive Health

Malleable Factors Affecting the Evolution of Cognitive Capacity (or how to avoid cognitive decline)



Meta-Analysis on Cardiovascular Risk Factors and a Global Measure of Cognition in Schizophrenia



BMI indicates body mass index (calculated as weight in kilograms divided by height in meters squared); CVD, cardiovascular disease; MetS, metabolic syndrome; NA, not applicable.



Are Cognitive Issues are Always an Issue?



Factors that influence our cognitive functioning and flexibility:



nutrition



sleep



exercise



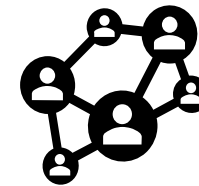
education



stress



medication



social context
(isolated or group beliefs)



How Can we Make Cognitive Health Interventions More Accessible?

The E-Cog training platform



CYPSY 27 - 2024

Implementing E-Cog

Martin Lepage, PhD, McGill University

Ana Elisa Sousa, PhD, Douglas Research Centre

Caroline Dakoure, MSc, Douglas Research Centre

Christy Au-Yeung, PhD candidate, McGill University

Katie Lavigne, PhD, Douglas Research Centre

Delphine Raucher-Chéné, PhD, MD, McGill University

Geneviève Sauvé, PhD, Université du Québec à Montréal

Let's go!



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[About Us](#)

[All Certifications](#)

[Help Center](#)

Welcome to E-Cog

Learn about [our certifications](#) or [login](#) to access your modules

The iCogCA Implementation Trial

A multi-site trial to deliver and assess remote cognitive interventions to individuals with psychosis across Canada

- 390 participants
- 5 sites
- 2 interventions:



Metacognitive Training for psychosis targeting cognitive biases.



Action-Based Cognitive Remediation for improving cognitive functioning in psychosis.



The iCog Pilot

Aim: to assess participants' and therapists' perspectives on the feasibility, acceptability, and engagement in a videoconference delivery of group psychosocial therapies for SSD patients' cognitive health.

- **28 participants**; 75% completion rate
- All reported **positive experience with therapy**
- **2/3 not bothered by remote setting**
- **77% trusted confidentiality** of the info shared
- **Technology did not appear to impede participation** significantly
- **Satisfactory therapist-related levels of engagement**



Schizophrenia Research: Cognition

Volume 28, June 2022, 100230



Remote group therapies for cognitive health in schizophrenia-spectrum disorders: Feasible, acceptable, engaging

Daniel Mendelson ^{a b}, Élisabeth Thibaut ^{a c}, Geneviève Sauvé ^{a d}, Katie M. Lavigne ^{a e},
Christopher R. Bowie ^f, Mahesh Menon ^{g h}, Todd S. Woodward ^{g i}, Martin Lepage ^{a c 1} ,
Delphine Raucher-Chéné ^{a j k 1}

Show more

Add to Mendeley Share Cite

<https://doi.org/10.1016/j.scog.2021.100230>

Under a Creative Commons license



THE PROBLEM

Training mental health professionals to use new treatments is **challenging**



high-quality interventions can have a **meaningful impact** on individuals struggling with mental health



We can **shorten the gap** and connect new treatments and the people needing them!





THE SOLUTION

E-Cog: an online learning platform for mental health professionals & specialists

1

Engaging
online
learning
experience

2

Expert
coaching &
supervision

3

New
treatments
dissemination

THE SOLUTION

E-Cog Features



Engaging & interactive e-learning experience

Technological structure ensuring customization, optimal user experience, data security, accessibility, and gamification.



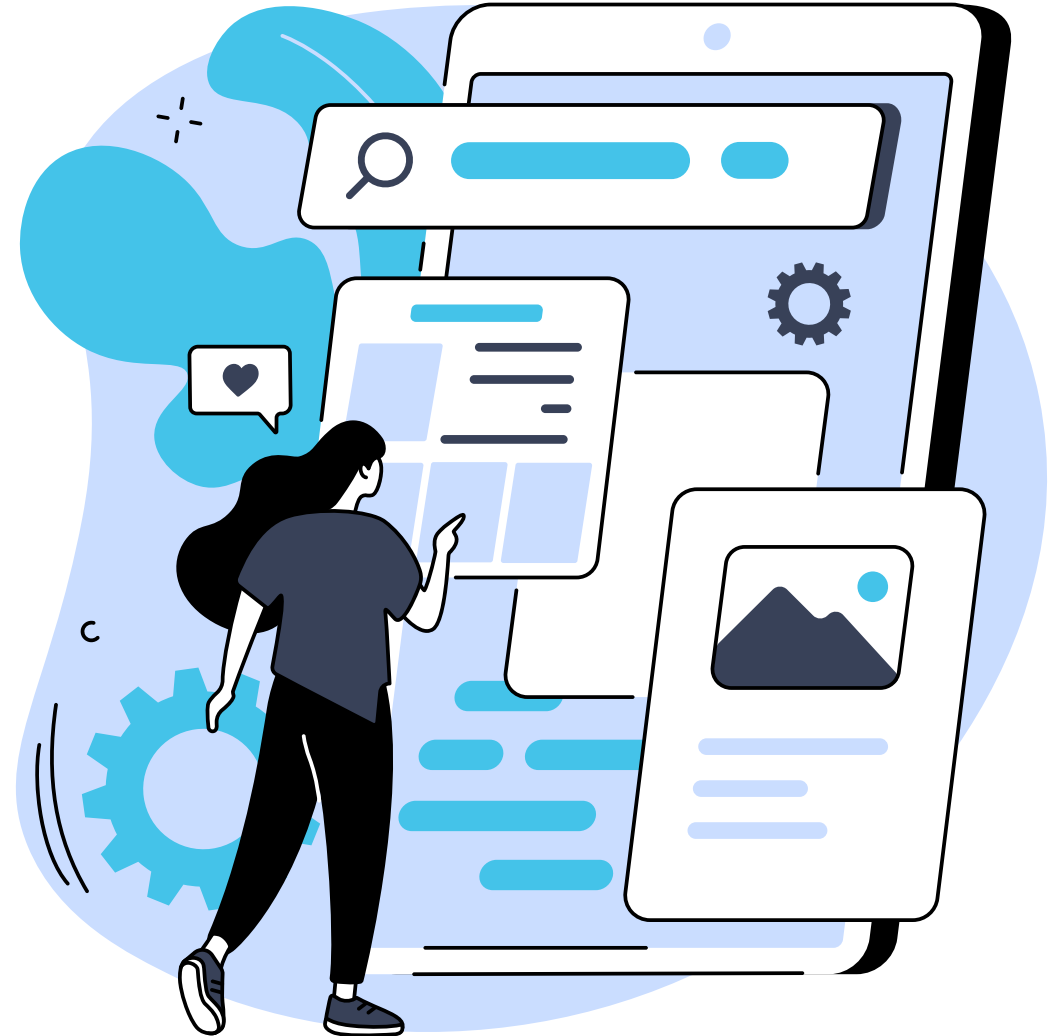
Developed by experts to experts

Content and technical components piloted at different stages of development to enhance final delivery quality.



An evidence-based training tool

Feasability, acceptability and efficacy of **E-Cog** will be assessed within the **icogCA** multi-site implementation trial



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Action-Based Cognitive Remediation for Psychosis

[Enroll Now](#)

Metacognitive Training for Psychosis

[Enroll Now](#)

📄 Action-Based Cognitive Remediation Training

Section 1. Principles of ABCR

✓ Getting Started

👤 2 Topics

✓ Introduction

✓ Module Overview

✓ 1.1. Principles of ABCR

Section 2. Delivering ABCR

✓ 2.1. Delivering ABCR

✓ Bonus Content: ABCR Q&A with Chris Bowie and Tammy Vanrooy

✓ 2.2. Acknowledgments

Section 3. Practice & Feedback

✓ 3.1. Practice & Feedback

Section 4. Final Assessment

Introduction

Action-Based Cognitive Remediation Training > Getting Started > Introduction

Introduction

Dr. Chris Bowie

Creator of Action-Based Cognitive Remediation

1 Section 1.
Principles of ABCR

2 Section 2.
Delivering ABCR

3 Section 3.
Practice &
Feedback

Use the left menu to
navigate between sections



Digital Health Technologies

INTRODUCTION

✓ Getting Started

✓ 2 Topics

Section 1. Digital Health Technologies

✓ 1.1. Digital Health Technologies

Section 2. Security & Confidentiality

✓ 2.1. Security & Confidentiality

Section 3. Remote Evaluation and Interventions

✓ 3.1. Remote Evaluation and Interventions

Section 4. Implementation of Virtual Groups

✓ 4.1. Implementation of Virtual Groups

Digital Health Technologies > 1.1. Digital Health Technologies

Digital Health Module

CONVINCING EVIE'S SUPERVISOR



Ok, Eve. I am convinced that it is a good idea to offer digital health services in our clinic. However, I still have some concerns...

How should Evie respond?

Sure!
What is concerning you?

You have nothing to worry about!



[See references](#) | [See discussion](#)



26%

Digital Health Module: Security & Confidentiality

IMPORTANT TERMS

Now, drag to the drop zone the term that best matches the definition below:

Drop Zone

DEFINITION #1
The ability to protect sensitive information from being accessed by unauthorized people.

✓ Submit

INTEGRITY

CONFIDENTIALITY

AUTHENTICATION

INFORMATION SYSTEM

SECURITY MEASURES

▶

↺

🔊

⚙️

🗉

Cognitive Health

SECTION 1. DEFINITIONS

✓ Pre 1.1. Question

✓ 1 Quiz

✓ 1.1. Cognitive Health

✓ 1 Topic

✓ 1.2. Cognitive Domains

✓ 2 Topics

✓ 1.3. Cognitive Capacity

✓ 2 Topics

✓ 1.4. Cognitive Impairments

✓ 3 Topics

✓ 1.5. Cognitive Biases

✓ 4 Topics

✓ 1.5.1. Cognitive Biases

1.5.2. Cognitive Biases –
Relationship with Clinical Symptoms
and Functional Outcomes

1.5.4. Quiz – Cognitive Biases

Cognitive Health > 1.5. Cognitive Biases > 1.5.4. Quiz – Cognitive Biases

COGNITIVE BIASES

Below you will find several scenarios in which a cognitive bias may be manifesting. For each one, please drag the bias that best corresponds to the scenario to the drop zone.

Brad loves to play soccer. Whenever his soccer team wins, he believes it is only because of his hard work and skills. But whenever his team loses he blames the outcome on factors like unfair calls or bad weather.



✓ Submit



E-Cog: Learning Environment (Other resources – Library, Forum, Materials, User Support)

The screenshot shows the E-Cog Library interface. On the left, a sidebar lists the 'Cognitive Health' module with sections: 'Getting Started' (3 Topics), 'Module Introduction' (Module Overview, Section Introduction), 'SECTION 1. DEFINITIONS' (Pre 1.1. Question, 1.1. Cognitive Health, 1.2. Cognitive Domains, 1.3. Cognitive Capacity, 1.4. Cognitive Impairments). The main content area displays 'Module 1. Cognitive Health' and 'Section 1. Definitions'. It includes a note about a symbol indicating where to access articles and a list of references for this module. The references are:

1. Anderson, L. A., & McConnell, S. R. (2007). Cognitive health: an emerging public health issue. *Alzheimer's & dementia: the journal of the Alzheimer's Association*. [Link here](#)
2. Saperstein, A. M., Medalia, A., Belk, I., & Dixon, L. B. (2020). Addressing cognitive health in coordinated specialty care for early psychosis: Real-world perspectives. *Early intervention in psychiatry*. [Link here](#)
3. Saperstein, A. M., Medalia, A., Malinovsky, I., Belk, I., & Dixon, L. B. (2020). Toolkit for assessing and addressing cognitive health in early psychosis: Evaluation of feasibility and utility in a coordinated specialty care setting. *Early Intervention in Psychiatry*. [Link here](#)

Below the references, the 'Cognitive Domains' section is partially visible.

The screenshot shows the E-Cog Materials page for 'ABCR Training - Material'. It features a search bar and a list of files. The files are:

- ABCR Manual** (2021_Learnings_Adapted_ECogCA_April_2020.pdf, 5.1 MB) - Download
- ABCR Manual, 2021, In-person** (6 MB) - Download
- In-person ABCR (ENQ)** (30 MB) - Download
- Manual ABCR (ENQ)** (30 MB) - Download

The page also includes a sidebar with a list of sections: 'Section 1. Principles of ABCR' (Getting Started, 1.1. Principles of ABCR), 'Section 2. Delivering ABCR' (2.1. Delivering ABCR, Bonus Content: ABCR Q&A with Bowie and Tammy Vannoy, 2.2. Acknowledgments), 'Section 3. Practice & Feedback' (3.1. Practice & Feedback), and 'Section 4. Final Assessment' (4.1. Final Assessment).

The screenshot shows the E-Cog Forum page. The breadcrumb trail is 'Home > Forums > Cognitive Health > 1.3. Cognitive Capacity'. A notice states: 'This topic has 1 replies, 1 topic, and was last updated 8 months, 1 week ago by IT administrator.' Below this, a post by 'adrianus' is shown, dated 'December 27, 2023 at 8:21 pm'. The post content is: 'Please do not hesitate to ask any questions you may have regarding the "1.3. Cognitive Capacity" lesson below.' The post has 1 reply, which is visible at the bottom of the screenshot.

The screenshot shows the E-Cog User Support page. It features a 'Frequently Asked Questions' section with the following questions:

- What is the difference between a certification and a module?**
Modules include content videos, interactive content slides, quizzes and a final assessment. Certifications are awarded when all modules relevant to the certification are completed.
- Can I review the content after I've completed the module?**

Below the FAQ section is a 'Send Us a Message' form. The form includes fields for 'Your name', 'Your email', 'Subject', and 'Select category'. The 'Your name', 'Your email', and 'Subject' fields are marked as required. The 'Select category' field has a dropdown menu with the option 'Please choose an option--'. A 'Send message' button is at the bottom of the form.



Developed by experts to experts

The ADDIE Model

Gavarkovs et. al, 2019

A framework for creating instructional content

- **Specific steps** for designing online training
- **Widely used in remote education** since the 70's
- Widely recognized as an **optimal model for designing and evaluating** learning content
- A valuable source of good teaching Practices in Online Education (meta-analysis by Spatioti et al., 2022)

ANALYSIS



Overall Goal



Implementers profiles



Learning objectives



Factors affecting implementation

DESIGN



Learning units



Learning activities



Technological architecture, user experience, interface

DEVELOPMENT



Pedagogical material



Web development



Collecting pilot data

IMPLEMENTATION



Didactic training



Weekly supervision



Technical support



Quality control of delivery

EVALUATION



Quantitative data analysis



Qualitative interviews w/ practitioners

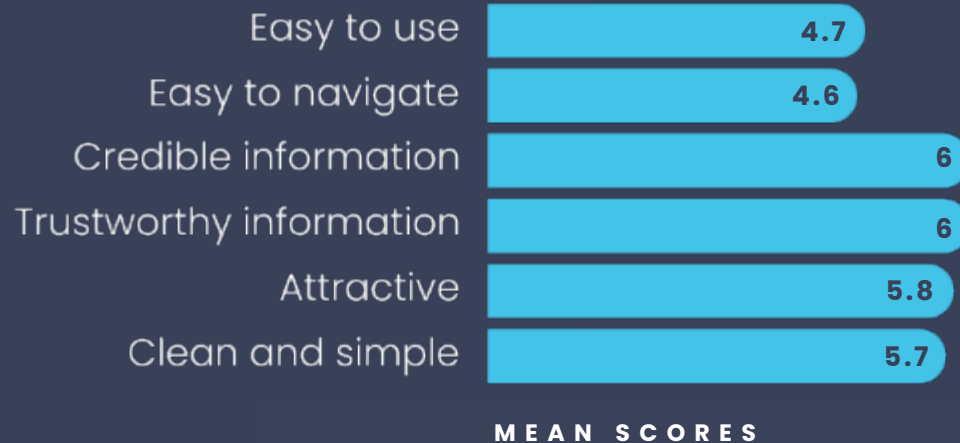
E-Cog Pilot Results



Clinical psychologists,
trainees and staff (N = 9)

How much do you agree with the following
regarding
the E-Cog learning environment?

1 = STRONGLY DISAGREE, 6 = STRONGLY AGREE



How likely are you to...

Recommend
an E-Cog
certification



Visit the website/
complete another
certification



NEUTRAL

LIKELY OR
VERY LIKELY

ROADMAP

What Comes Next



Summer 2024

**Beta testing w/
real-world users**



Fall 2014

**1st submission - protocol
paper**



> Future

**2nd submission –
implementation
paper**

For CBTp – An Online Professional Training and University Course is Being Developed

- Based on similar principles – 45 hours of training (funded by Université de Montréal).
 - 15 hours – basic CBTp-informed care
 - basic therapeutic skills when working in psychosis
 - Theories and models used in CBTp
 - CBTp basic techniques
 - Practice of CBTp skills and basic skills with online avatars and real-patient videos.
 - 15 hours: group CBTp
 - Group notions
 - Applying CBTp techniques in group context
 - Role-plays and live supervision
 - 15 hours: individual CBTp (for those allowed to conduct psychotherapy or aiming to)
 - More advanced notions
 - Working with complex cases (trauma, substance misuse, comorbidities)
 - Integrating second and third wave strategies
 - Role-plays, and supervision of real cases (to reach NACBTp requirements for certification)

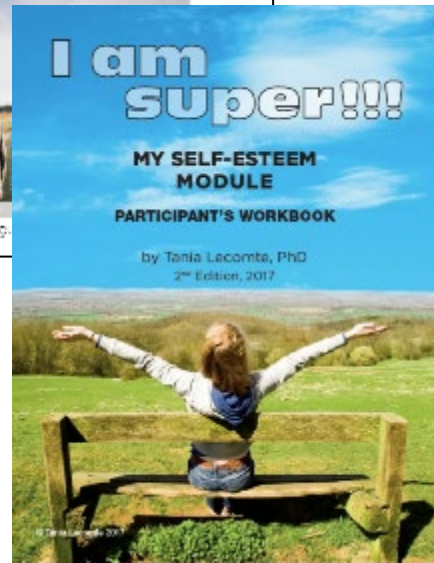


Our Treatment Modules (Both in French and English)

Power of two
**How to meet someone and develop a
romantic relationship**



by Tania Lecomte, Ph.D., 2017



**I am
super!!!**

**MY SELF-ESTEEM
MODULE**
PARTICIPANT'S WORKBOOK

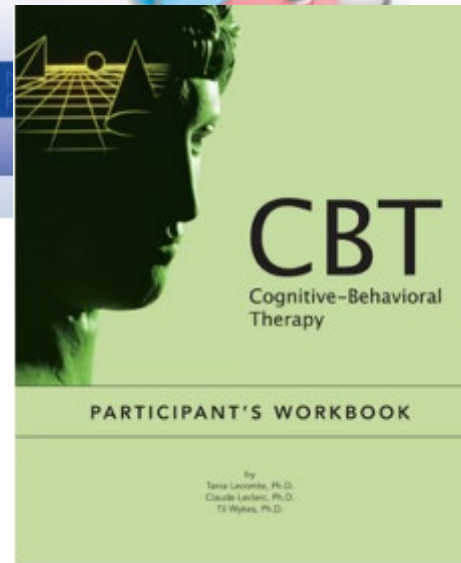
by Tania Lecomte, PhD
2nd Edition, 2017



WITH_CBT®

W ellness I nform T alk H elp

Psycho-education group
for relatives
WITH
a participant in the CBT Module



CBT

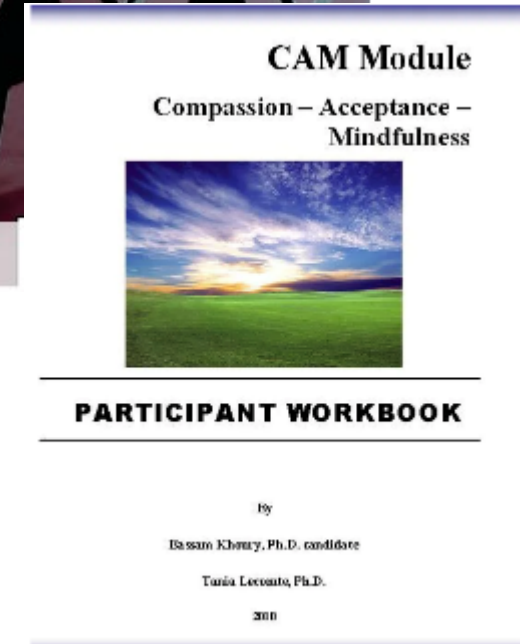
Cognitive-Behavioral
Therapy

PARTICIPANT'S WORKBOOK

by
Tania Lecomte, Ph.D.
Claude Lecomte, Ph.D.
Ti Wykes, Ph.D.



**CBT for supported
employment**



CAM Module

**Compassion – Acceptance –
Mindfulness**

PARTICIPANT WORKBOOK

by
Bassem Khoury, Ph.D. candidate

Tania Lecomte, Ph.D.

2018



Luc Vigneault
Tania Lecomte
et collaborateurs

**Préjugés, discrimination
et exclusion en santé mentale**



PERFORMANCE



À lire au complet dans le bain
avant que l'eau refroidisse...



**La TCC de groupe
pour le traitement
de la psychose**

Éditions L'Éclaireur



Éditions L'Éclaireur

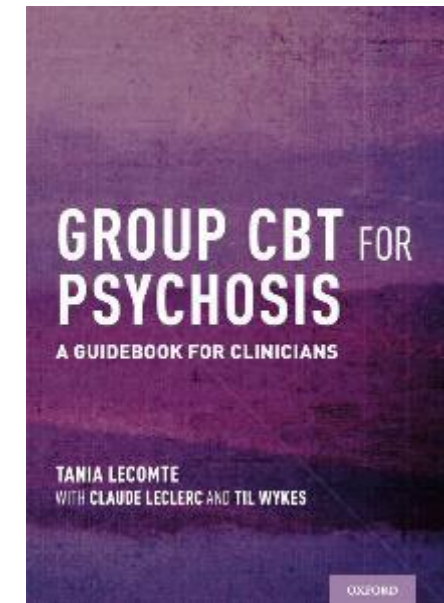
Merci !

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<https://www.lespoir.ca/>

<https://www.schizophrenianetwork.com/>



Martin Lepage, Ph.D.



E-Cog Website

www.e-cog.ca



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