

## MYTHBUSTER

# COGNITION AND MENTAL HEALTH: SORTING FACT FROM FICTION



### INTRODUCTION

Cognition is an area that is often overlooked when it comes to self-care, clinical care, mental health and even our understanding of how we function.

When it is considered, it is also often misunderstood.

This mythbuster has been created for you to share with young people, their families, carers and significant others in their lives. It aims to tackle some of the most common and harmful myths about cognition in the mental health space, and to replace these with a better understanding of what cognition is and how it can affect young people.

### TERMINOLOGY FUNCTIONAL RECOVERY

Functional recovery refers to helping young people reconnect with the rest of their lives. It has a particular focus on employment goals and educational goals, with the broader aims of connecting young people with their communities and broader society.

### WHAT IS COGNITION?

Neurocognition (henceforth referred to as cognition) refers to thinking skills including problem-solving, concentrating, thinking quickly, reasoning, judging, planning, learning and remembering – among others. These skills are necessary for us to be able to function and make sense of the world around us.<sup>1</sup> They help us to plan and execute our daily activities as well as communicate with other people.<sup>1,2</sup>

Social cognition refers to social thinking skills. These include the perception, processing and interpretation of social information, such as people's intentions, feelings and thoughts.

### WHO EXPERIENCES COGNITIVE DIFFICULTIES?

We all experience difficulties with our thinking from time to time.

Our thinking can be impacted when we're tired, stressed, over or under stimulated by our environment, by our diet and exercise, and by being unwell – or for reasons we can't immediately pinpoint.

Some groups of people experience more difficulties with their thinking than others. They might occur over many cognitive domains, impact many different skills, occur over a long period of time, and they might even occur when the person is functioning at their best.

## MENTAL ILL-HEALTH AND COGNITIVE DIFFICULTIES

Young people with mental ill-health can experience difficulties in their thinking, irrespective of their diagnosis. For young people diagnosed with psychosis, difficulties can often be severe and widespread, with consequences for functioning and well-being.<sup>3</sup> Approximately 75% of young people diagnosed with psychosis experience some form of cognitive impairment.<sup>2</sup>

Additionally, young people with mental ill-health are more likely to have neurodevelopmental disorders than the general population – including attention deficit hyperactivity disorder (ADHD), autism spectrum disorder (ASD) and intellectual disability (ID). Cognitive impairment is a diagnostic or associated feature of neurodevelopmental disorders, so these young people are at increased risk of experiencing cognitive difficulties.<sup>2</sup>

## HOW DOES COGNITIVE IMPAIRMENT AFFECT YOUNG PEOPLE?

Young people with cognitive difficulties often have a reduced ability to manage and adapt to the demands of day-to-day life, which can significantly disrupt:

- functioning at work or school;
- social functioning;
- physical health and well-being;
- independent functioning;
- treatment engagement and recovery; and
- psychological well-being.<sup>4</sup>

## WHAT ARE THE MOST COMMON MYTHS ABOUT COGNITION AND HOW IT RELATES TO MENTAL HEALTH?

There are many myths about cognition and how it relates to mental health. Below are some of the common myths, and the reasons why these are not true and cause harm to young people experiencing both mental ill-health and cognitive difficulties.

### MYTH COGNITION IS ABOUT IQ

Cognition does not refer to intelligence. They're related, but they're not the same thing.

Intelligence is broadly defined yet, in general, it's used as an index of one's general capacity to acquire knowledge and adapt to their environment. This requires a broad range of cognitive skills.<sup>5</sup> Cognition does not refer to academic skills, either. Academic skills include one's ability in reading, mathematics and written expression. As with intelligence, this requires a broad range of cognitive skills, but difficulties in academic achievement can occur without cognitive impairment.

Rather, cognition encompasses broad areas of functioning, as discussed in the 'What is cognition?' section of this resource.

### WHY IS THIS MYTH HARMFUL IF A YOUNG PERSON BELIEVES IT?

The myth that cognition refers to IQ could lead young people to consider cognition as a fixed and inherent quality, which could negatively impact on their self-esteem and lead to losing hope for their recovery and future functioning. It could also mean they lose motivation to participate in academic activities.

### WHY IS THIS MYTH HARMFUL IF OTHER PEOPLE BELIEVE IT?

Believing that cognitive difficulties relate to low IQ could also result in friends and family having lower expectations of a young person, and thus not empowering the young person to learn new strategies to compensate or improve their cognition. People at all levels of intelligence have the capacity to learn, but they may learn at different rates and in different ways. While some young people may be assessed as having low IQ, this does not mean that they do not have notable cognitive strengths – for example, they may be great at solving puzzles, remembering facts about a particular topic, or working with numbers.



## MYTH COGNITIVE SKILLS ARE FIXED

Our cognitive skills develop throughout childhood and adolescence, but are not fixed and can continue to change throughout adulthood. Fluctuations in cognitive functioning from day to day (or even hour to hour) are normal, whether or not we're experiencing mental ill-health. This is related to factors like how much sleep we've had, our diet, exercise, stressors, levels of stimulation and the time of day.

Our cognitive strengths and weaknesses are also related to our learning and thinking styles – certain styles will better suit some tasks than others. We might be particularly strong in one area but weaker in another, and that is okay.

As well as these individual fluctuations in cognitive functioning, we know that cognitive skills can be strengthened and improved with the right supports.

It's important to be realistic about recovery or improvements in cognition, as recovery trajectories vary and some young people with mental ill-health will experience persistent cognitive difficulties. But it's also important that young people, families and services have hope for the capacity to improve.

## MYTH I CAN'T DO ANYTHING ONCE I HAVE THESE DIFFICULTIES

Research shows that there is great variation in the impact and longevity of cognitive difficulties.

The impact on cognition may be:

- minor, fleeting and resolve naturally;
- minor, fleeting and benefit from some simple adjustments;
- longer lasting, requiring strategies aimed at improving the brain's functioning; or
- longer lasting and best addressed with compensation strategies, including use of the person's strengths to compensate for areas of difficulty.

The care team can develop individual treatment options and strategies to promote optimal functioning and participation in the activities that are important to the young person.

## WHY IS THIS MYTH HARMFUL IF THE YOUNG PERSON BELIEVES IT?

This myth runs the risk of feeding into feelings of hopelessness about the future, which is a risk factor for mental ill-health, risk-taking behaviour and suicidal ideation.

## WHY IS THIS MYTH HARMFUL IF THE YOUNG PERSON BELIEVES IT?

This myth can reduce a young person's motivation and engagement. For example, if a young person believes cognitive skills are fixed, they may not engage with strategies tailored to their strengths or aimed at improving their functioning. If they perceive deficits to be permanent and improvements unattainable, this might also impact on their self-esteem and identity (which in turn can impact on their mental health). It might also impact on their willingness to seek help.

## WHY IS THIS MYTH HARMFUL IF OTHER PEOPLE BELIEVE IT?

If a young person's loved ones believe that cognition is fixed, this might impact their ability to provide hope for the future. The supports around young people remind them of strategies they can use to support their recovery and that things can improve over time. Believing that cognitive skills are fixed can undermine this important role, and also impact on a young person's self-esteem.



## MYTH YOU ONLY NEED COGNITIVE SKILLS TO STUDY

Cognitive skills are involved in all of our daily activities. You need these skills for a whole range of life tasks like cooking, working, making friends, planning trips – the list goes on!

At work, you might need to follow instructions, plan the sequence of tasks required of you, remember meeting times, comprehend many different documents or research papers, interact with your colleagues and manager, and interpret their actions. Cooking a meal, you need to plan a trip to the shops to purchase ingredients, follow instructions in a recipe, stay focused on what you are doing, sequence tasks to ensure all parts of the meal are ready at the same time, and remember to turn off cooktops or ovens. Reading this section alone has required skills of concentration, reasoning and comprehension.

### WHY IS THIS MYTH HARMFUL IF THE YOUNG PERSON BELIEVES IT?

Thinking about cognition as relevant only to academic goals may mean that young people dismiss interventions that will actually help with their day-to-day functioning, which has flow on effects for functional recovery, identity, self-esteem and social connection.

### WHY IS THIS MYTH HARMFUL IF OTHER PEOPLE BELIEVE IT?

Dismissing the relevance of cognition to daily functioning may mean that those supporting the young person do not see the importance of the strategies the young person is utilising. Recognising when a young person is using cognitive skills can help loved ones to support and encourage them.

## MYTH YOU CAN'T LOOK AFTER YOUR COGNITIVE WELL-BEING, THERE'S NO POINT TRYING

While we don't often talk about cognitive health, it is something we can nurture and continue to improve on throughout our lives, the same way we might exercise to look after our physical health or see a counsellor to look after our mental well-being.

Looking after our cognitive health might involve ensuring that we:

- get enough sleep and exercise;
- get adequate nutrition;
- speak to someone if we're worried about substance use; and
- use adaptive strategies, where necessary (in particular in situations where we might already feel stressed), to reduce us feeling overwhelmed and assist our performance.

### WHY IS THIS MYTH HARMFUL IF THE YOUNG PERSON BELIEVES IT?

The myth that there is nothing that we can do to promote our own cognitive well-being might mean that young people don't engage in strategies to look after it. It might also mean that they don't engage in daily activities they enjoy, which can also negatively impact on their mental health. Being aware of the things we can do to promote cognitive well-being supports functional recovery and helps young people to feel like active participants in their recovery.



## MYTH ONLY PEOPLE WITH MENTAL ILL-HEALTH STRUGGLE WITH THEIR COGNITION

Everyone struggles with their cognition from time to time. Even writing this document has required adaptations to enable us to complete it: after several hours of researching and writing, we found it difficult to concentrate. To remedy this, we could make adjustments such as going somewhere quiet to read the relevant research, using a highlighter to note the important content, talking the aims of the document through with a colleague, or taking a break and coming back to it later or the following day.

When we haven't slept or eaten well, when we are stressed or anxious, or when under the influence of substances (e.g. alcohol), we might find some tasks more difficult as well.

However, mental ill-health and neurodevelopmental disorders, which are also likely to co-occur, are both associated with higher risk of experiencing cognitive difficulties.

### WHY IS THIS MYTH HARMFUL IF THE YOUNG PERSON BELIEVES IT?

This myth gets in the way of accepting that difficulties with cognition are part of life for everyone. It sets up an unrealistic expectation of how we should function in the world, which may impact on self-esteem when someone doesn't meet these (unrealistic) standards. Stigma about mental ill-health might also prevent someone from seeking help for cognitive difficulties, which has implications for early detection, treatment and functional outcomes.

### WHY IS THIS MYTH HARMFUL IF OTHER PEOPLE BELIEVE IT?

Loved ones may fail to empathise with the experience of the young person and may miss opportunities to provide support through sharing similar struggles.

## MYTH COGNITION HAS NOTHING TO DO WITH MY MENTAL ILL-HEALTH

Cognitive difficulties are a core symptom of mental ill-health, with bidirectional impact. Bidirectional, in this case, means that cognitive difficulties can affect mental health and that mental ill-health can affect cognition. They also impact on functioning, which influences mental health recovery.

It is important for young people and families to understand the relationship between cognition and mental ill-health, and be supported to disclose any difficulties to schools or workplaces – where they feel safe and supported to do so – so that they understand the impact on particular areas of functioning, including social interactions,

## MYTH COGNITIVE STRATEGIES ARE FOR PEOPLE WHO CAN'T MANAGE WELL ENOUGH OTHERWISE

Adolescence is a time of exploring, adjusting and tackling multiple development tasks. Learning ways to manage the demands of everyday life and our own self-care (including physical, mental and cognitive health) are part of this process.

While some people will be more susceptible to cognitive difficulties, we all need strategies to assist us to perform our daily tasks. You might be surprised to learn that everyday adaptations that we use – such as keeping a diary or using a post it note – are practical strategies that help us with our cognitive functioning. They support us to function more effectively when our lives are busy. With time, we have all learned these helpful skills and everyone utilises them.

### WHY IS THIS MYTH HARMFUL IF THE YOUNG PERSON BELIEVES IT?

Viewing cognitive strategies in this negative way may lead young people to believe there is something wrong with them or that they are 'broken' in some way, which can impact on self-esteem and compound mental ill-health. It may also get in the way of utilising strategies that could assist with getting back to their regular routine and activities, and impact on their openness to continually learning new ways to manage in the world (i.e. a growth mindset).

### WHY IS THIS MYTH HARMFUL IF OTHER PEOPLE BELIEVE IT?

This myth may lead to people in the young person's life viewing the young person as broken, which may diminish both their and the young person's sense of hope about the future, and impact the young person's self-esteem.

and can make the necessary adaptations to support the young person's continued engagement.

However, remember that severity of mental ill-health does not always match severity of cognitive difficulties.

### WHY IS THIS MYTH HARMFUL IF THE YOUNG PERSON BELIEVES IT?

This myth might mean that young people don't seek support and treatment for cognitive difficulties with their treating clinician. Failure to address cognitive difficulties has negative consequences for functional outcomes and mental health recovery.



### **MYTH MY COGNITIVE DIFFICULTIES ARE A CONSEQUENCE OF MY MENTAL ILL-HEALTH**

While cognitive difficulties are a core symptom of mental ill-health, the impact is bidirectional. Cognitive difficulties can exacerbate mental ill-health, and often precede the onset of mental ill-health. This relationship is complex, and research shows that early functional recovery – for example, returning to school or work – is a more important predictor of long-term health and functioning than early symptomatic recovery.<sup>6</sup> Thus, identifying and addressing cognitive difficulties as early as possible is critical for the best functional outcomes.

#### **WHY THIS MYTH IS HARMFUL IF THE YOUNG PERSON BELIEVES IT?**

The young person might fail to engage in strategies to support their cognitive functioning if they believe that these difficulties will disappear when their mental health improves, which has consequences for their recovery.

#### **WHY IS THIS MYTH HARMFUL IF OTHER PEOPLE BELIEVE IT?**

This myth might mean that family members focus only on improvements to mental health symptoms at the expense of cognitive functioning, which has negative consequences for a young person's functional recovery.

### **MYTH THE COGNITIVE DIFFICULTIES WILL GO AWAY ONCE MY MENTAL HEALTH IMPROVES**

Recovery trajectories relating to cognition vary. Cognitive difficulties might be one of the last things to improve, and/or the young person may not return to their previous level of cognitive functioning. Some people will have persistent difficulties – but even when this is the case, people still lead meaningful lives. There are several treatment avenues available and the earlier these are taken up, the better for the young person's functioning and recovery.

#### **WHY IS THIS MYTH HARMFUL IF THE YOUNG PERSON BELIEVES IT?**

This myth might mean that the young person won't prioritise strategies for their cognitive functioning, but focus on their mental health symptoms, which can have a long-term impact on functional outcomes. Cognitive strategies will be very important to support a young person's return to work or study as soon as possible.

#### **WHY IS THIS MYTH HARMFUL IF OTHER PEOPLE BELIEVE IT?**

Family members may be focused on reducing mental health symptoms at the expense of adaptive strategies to support cognitive functioning.

### **MYTH COGNITION PROBLEMS ARE LAZINESS**

Cognitive difficulties can be a symptom of mental ill-health. The person has no more control over them than they do over hallucinations or low mood. It should not be assumed that a young person who is struggling to manage a task, like a school assignment, is doing it intentionally – for example, just being 'lazy'.

#### **WHY IS THIS MYTH HARMFUL IF OTHER PEOPLE BELIEVE IT?**

This myth can reduce a young person's access to supports, with family, friends, teachers or colleagues interpreting behaviours or difficulties negatively and responding through this lens. This in turn can increase a young person's distress, impact on relationships and negatively impact on their self-esteem, which can further compound mental ill-health.



## MYTH WEED HELPS ME FOCUS

Some young people may use substances – such as alcohol, cannabis, methamphetamines or non-prescribed medications – as a means to cope with their symptoms. Subjectively, young people may report improvements with their cognition following substance use, but research suggests that objectively it often causes further deterioration in thinking.<sup>7</sup> For example:

- Cannabis may not affect cognition in the long-term, but it is associated with poorer cognitive functioning in the present.<sup>8</sup>
- Alcohol is harmful to the brain and cognition – particularly if used in high amounts. It affects attention, verbal learning, visuospatial processing and memory in adolescents.<sup>9</sup>

Substance use during adolescence is especially harmful because the brain is undergoing significant development.

### WHY IS THIS MYTH HARMFUL IF THE YOUNG PERSON BELIEVES IT?

Young people may continue to use substances, with detrimental impacts to their thinking skills, daily functioning and developing brain. These can all have long-term consequences. Even short-term impacts can have long-term consequences, for example missing opportunities to participate in activities that are important to the young person or vocational opportunities. These impacts can further contribute to mental ill-health.

## MYTH COGNITIVE DIFFICULTIES MEAN THE YOUNG PERSON ALSO HAS DIFFICULTIES WITH SOCIAL COGNITION AND VICE VERSA

Social cognition and neurocognition (referred to in this mythbuster as 'cognition') are certain types of cognition. A person can have poor social cognition and strong neurocognition; or weaker neurocognition and strong social cognition.

## MYTH COGNITION ISSUES ARE CAUSED BY MEDICATION

There is mixed evidence on this topic, which may reflect the fact that medications affect people differently and can depend on dosage and the use of more than one medication at a time. Most research demonstrates:

- small positive or insignificant effects of antipsychotic medications on objective cognitive functioning;<sup>10</sup>
- antidepressants have a modest, positive effect on certain aspects of cognition for people experiencing depression;<sup>11</sup> and
- sedatives, such as benzodiazepines (e.g. Valium), used over long periods can be most impairing.<sup>12</sup>

Subjective experiences reported by young people taking medication are highly variable, not just across cognitive impairment, but also across dulled emotions, reduced motivation and sense of self.<sup>13</sup>

### WHY IS THIS MYTH HARMFUL IF THE YOUNG PERSON BELIEVES IT?

This myth may reduce medication adherence. This highlights the importance of checking in with the young person about their subjective perceptions of the effects of medication<sup>7</sup> both on their cognition and regarding any side-effects they are experiencing. It's important to remember that because people respond to medication differently, an individual's experiences may not reflect the overall findings of research. Listen to young people about their experiences while also presenting them with information about the evidence.

Young people and their significant others can speak to their care team about the impacts of medication, as abrupt cessation may have negative side-effects and consequences.

### WHY IS THIS MYTH HARMFUL IF OTHER PEOPLE BELIEVE IT?

Family members and supports may feel that they have 'lost' the young person they previously knew, and they too may attribute changes to the young person's medication. Doing so may have implications for a young person adhering to medication. The young person and their supports should understand the evidence for including medication in treatment, while feeling supported to share their experiences with the treating team.



## FOR FAMILY MEMBERS, SIGNIFICANT SUPPORTS

### **MYTH THE YOUNG PERSON IS RUDE AND UNINTERESTED IN HELP**

Young people experiencing cognitive difficulties may find it hard to concentrate, remember important details about your life, respond appropriately to verbal cues, or come up with the words they are looking for to respond to your questions. They may fidget or draw when you're trying to talk to them, and appear distracted.

These are not signs that the young person is uninterested or doesn't care about you or your conversation. They might need longer to think about their answers, or strategies to help them to remember important things. Sometimes grounding strategies, which may look like distraction, are ways young people are able to focus on the task at hand.

If they forget something that family members or a loved one thinks is important, try not to take it personally – it likely isn't a measure of how they value you, but more likely a direct result of cognitive difficulties. The only way you can know is by having a conversation with the young person about it.

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### **WHY IS THIS MYTH HARMFUL IF OTHER PEOPLE BELIEVE IT?**

This myth can reduce a young person's access to supports, with family, friends, teachers or colleagues interpreting behaviours or difficulties negatively and responding through this lens. This in turn can increase a young person's distress, isolation and diminish their sense of hope about their future.

### **MYTH THE YOUNG PERSON SEEMS STONED ALL THE TIME**

Young people report being 'zoned out' – for example, 'I zone out in class' and 'It's all a bit of a blur' – and being overwhelmed with sensory input as a consequence of their cognitive difficulties. What might appear as being under the influence of substances may simply be a symptom of their cognitive difficulties and coping mechanisms.

On top of that, mental ill-health has a complicated relationship with substance use. There are many factors which interact to contribute to mental ill-health, substance use and cognitive difficulties. It is always best to explore the young person's experiences without judgement.

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### **WHY IS THIS MYTH HARMFUL IF OTHER PEOPLE BELIEVE IT?**

Assuming they are under the influence of substances without checking is unhelpful and stigmatising. It may mean that the young person doesn't receive the support that they need, may further isolate them and contribute to their distress. Even if they are substance-affected, a non-judgemental approach exploring their experiences will be more likely to engage them and offer opportunities to address their needs.





## **MYTH I NEED TO WORK OUT WHY THEY ARE THIS WAY TO BE ABLE TO HELP. I FEEL LIKE THERE'S NOTHING I CAN DO TO HELP**

You don't need to know the exact cause of a problem to be able to provide support. Young people may attribute their difficulties to a broad range of experiences, including lack of relevant life experience and skill acquisition. Ask the young person about their experiences and what works for them, rather than attributing all difficulties to their diagnosis.

Clinicians – if you believe a difficulty is related to mental ill-health or the young person's experiences, explain your thinking to them so they can better understand your treatment plan. Check if they agree with your interpretation, and clarify any discrepancies in your understanding.

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### **WHY IS THIS MYTH HARMFUL IF OTHER PEOPLE BELIEVE IT?**

This might result in family members and supports focusing on the diagnosis and finding the reasons why, rather than the relationship and offering support – or feeling helpless and not offering support at all. An empathic response – including active listening, following up strategies recommended by the young person's treating team, focusing on strengths, empowering the young person and instilling hope – may be the most helpful things that you can do.

### **CONCLUSION**

The majority of people who experience mental ill-health will experience some cognitive difficulties, which are linked to poorer functioning in daily life. Cognitive difficulties can also be a symptom of mental ill-health. Knowing the facts about how cognition relates to mental health can help young people to understand their experiences and help people around them to support their recovery.

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