

Overview/Purpose

Understanding the emotions (e.g., “affective Theory of Mind”, ToM) and cognitive states (“cognitive ToM”) of oneself and others is critical for positive academic and social outcomes (Lecce & Devine, 2022). Because ToM is related to a variety of linguistic structures, SLPs are positioned in a way to support the language components thought to underpin ToM abilities. Much of the previous research has investigated ToM abilities through a deficit lens, focusing primarily on autistic individuals, but also deaf/hard of hearing individuals (without native sign language exposure; Schick et al., 2007) as well as individuals with Down syndrome (Channell, 2020), and Developmental Language Disorder (Durrleman et al., 2019). Many SLPs may not be aware of the breadth of skills that fall under the label ToM or the potential harm that can be perpetuated by how they approach conversations about these topics.

Purpose:
ToM abilities are connected with language abilities and should be incorporated into therapy and literacy activities with individuals who have communication disorders; however, SLPs need to be cognizant of how to support neurodivergent individuals within these discussions.

What skills fall under ToM?

Cognitive ToM

- Thoughts, Beliefs, Intentions
 - Infer/predict thoughts, beliefs, or intentions
 - Understand causes of thoughts, beliefs, intentions
 - Predict behavior/communication based on thoughts, beliefs, and intentions
- Knowledge, Desires, Perceptions
 - Understand how people come to know things and have varying levels of certainty as a result
 - Awareness that people can have different desires or likes
 - Ability to follow one's gaze to infer their thoughts/desires
- Deception, Lies
 - Awareness of lying and manipulating others' mental states
 - Awareness of involuntary lies and little white lies
- Nonliteral Language
 - Humor, irony, sarcasm
 - Figurative language, idioms

Affective ToM

- Emotions
 - Awareness that different people can have different emotions
 - Predict/infer emotions, including mixed or conflicting emotions
 - Identify/regulate emotions in self and others
 - Understand the causes and consequences of emotions
 - Awareness that people can hide their true emotions
- Deception, Lies
 - Awareness of little white lies for social reasons
 - Understanding/recognizing social faux pas

ToM Abilities Relate to Language

<p>Mental State Vocabulary</p> <p>think, believe, pretend, know, forget, intend, imagine, wish, suppose, expect, don't know feelings: mad, sad, worried, proud etc.</p>	<p>Syntax: Sentential complements</p> <p><i>"She thought that the earth was flat."</i> <i>"He said that the earth was flat."</i></p>	<p>Narrative Comprehension</p> <p>Stories provide context for character motivations, intentions, emotional and cognitive reactions; not just a series of events</p>
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What is the Neurodiversity Framework?

- Neurodiversity: variations in neurocognitive functioning within the population (Singer, 1999)
- Neurodivergent: neurocognitive functioning for the neurominority that diverges, or is different, from that of the neuromajority (Walker & Raymaker, 2021)
- These neuroanatomical or neurophysiological differences contribute to an individual's identity and/or experiences as a person and thus represent differences in ways of being rather than deficits that should be 'fixed' (Davies, 2022)

ToM Research has Caused Harm to Autistic People

Decades of ToM research framed as 'deficits' has led to harmful stereotypes of autistic people (Holt et al., 2022)	There is a lack of evidence for assumptions of: <ul style="list-style-type: none"> Fundamental deficit in ToM for all autistic individuals Autistic people are uniquely impaired in ToM (Gernsbacher & Yergeau, 2019) 	Researchers and clinician may interpret the autistic response as a 'deficit' based on the assumption that the neurotypical response is 'correct.' (Gernsbacher et al., 2017)
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Double Empathy Problem (Milton, 2012)



ToM Skills Can Be Targeted with the Learner's Consent

- Neurodivergent individuals, including autistic people, have a right to agency and choice in therapy and should not be required to participate in ToM therapy without their consent (Donaldson et al., 2023; McDonald et al., 2022)
- Interventions should focus on the individual's subjective quality of life while respecting their neurodivergent identity and right to expression (den Houting, 2019)

ToM Skills Can Be Improved Via Intervention

Target Mental State Vocabulary	Target Sentential Complements
<p>Cognitive</p> <p>Believe, Think, Intend, Know, Guess, Want, Desire, Wish, Expect, Don't know, Predict, Hope, Pretend, Question, Imagine, Consider, Notice, Lie, Trick, Tease, Predict, Feelings, Emotions, Mad, Ashamed, Sad, Anxious, Happy, Worried, Scared, Empathy, Surprised, Disgusted, Proud, Furious, Jealous, Thrilled, Disappointed, Embarrassed</p>	<p>Verbs of Cognition</p> <p>He thought that the earth was flat.</p> <p>He expected that the earth was flat.</p> <p>Verbs of Communication</p> <p>He said that the earth was flat.</p> <p>He yelled that the earth was flat.</p>

Use thought bubbles to make abstract cognitive states more concrete. Find books with the illustrations or use sticky notes to add your own.

ToM Can be Targeted within Literacy-Based Activities

1 Choose books with neurodivergent characters

2 Point out differences between and within neurotypes on inferences about mental states

3 Discuss similarities between neurotypes on inferences about mental states

Conclusions

- SLPs can support the vocabulary, syntax, and narrative comprehension elements that are thought to support ToM development
- But SLPs must be mindful of *how* they approach incorporating ToM components within therapy and *who* they work on these skills with (not just autistic students)
- For individuals who want to learn about others' perspectives (i.e., who consent), discussions about others' thoughts and feelings should be viewed with a "difference" rather than "deficit" lens
- Children's literature can highlight different individuals' perspectives. SLPs should be purposeful about selecting books that feature neurodivergent characters and structuring discussions to highlight differences and similarities both between and within neurotypes

Select References

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