

Including Theory of Mind (ToM) in Therapy from a Neurodiversity-Affirming Perspective

Kristen Secora, PhD, CCC-SLP; University of Tennessee, Knoxville



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?

Humor, irony, sarcasm

Figurative language, idioms

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

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

- Awareness of lying and manipulating others' mental states Awareness of involuntary lies and little white lies
- Nonliteral Language

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
- Awareness of little white lies for social reasons

Understanding/recognizing social faux pas

ToM Abilities Relate to Language

Mental State Vocabulary

imagine don't know believe pretend feelings:

mad, sad suppose worried, intend expect proud etc.

Syntax: Sentential complements

"She thought that the earth "He said that the earth was

Narrative Comprehension

Stories provide context for character motivations, intentions, emotional and cognitive reactions; not just a series of events

Don't know Predict **Embarrassed** Ornaghi et al., 2011; Taumoepeau et al., 2019

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

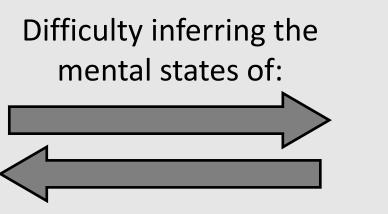
Decades of ToM research framed as 'deficits' has lead to harmful stereotypes of autistic people (Holt et al., 2022)

- There is a lack of evidence for assumptions of Fundamental deficit in ToM for all autistic
- 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

Double Empathy Problem (Milton, 2012)





Neurotypical People

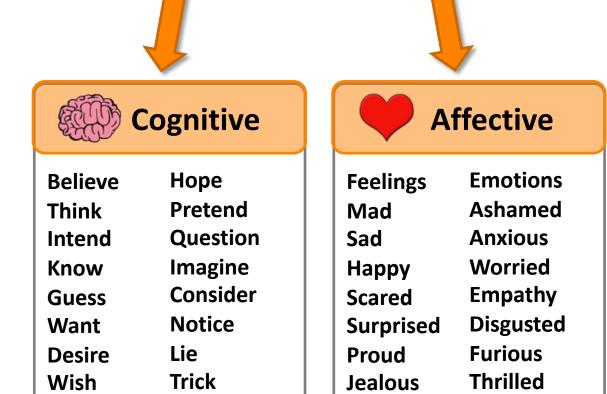
Mixed-neurotype interactions are rated as having "less rapport" than same-neurotype interactions (Crompton et al., 2020)

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



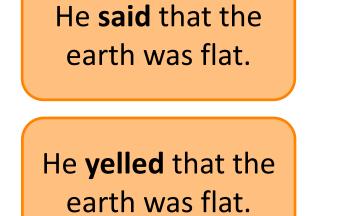
Disappoint

Verbs of Communication

Durrleman & Delage, 2020; Durrleman et al., 2022

He **thought** that the earth was flat. He **expected** that

the earth was flat

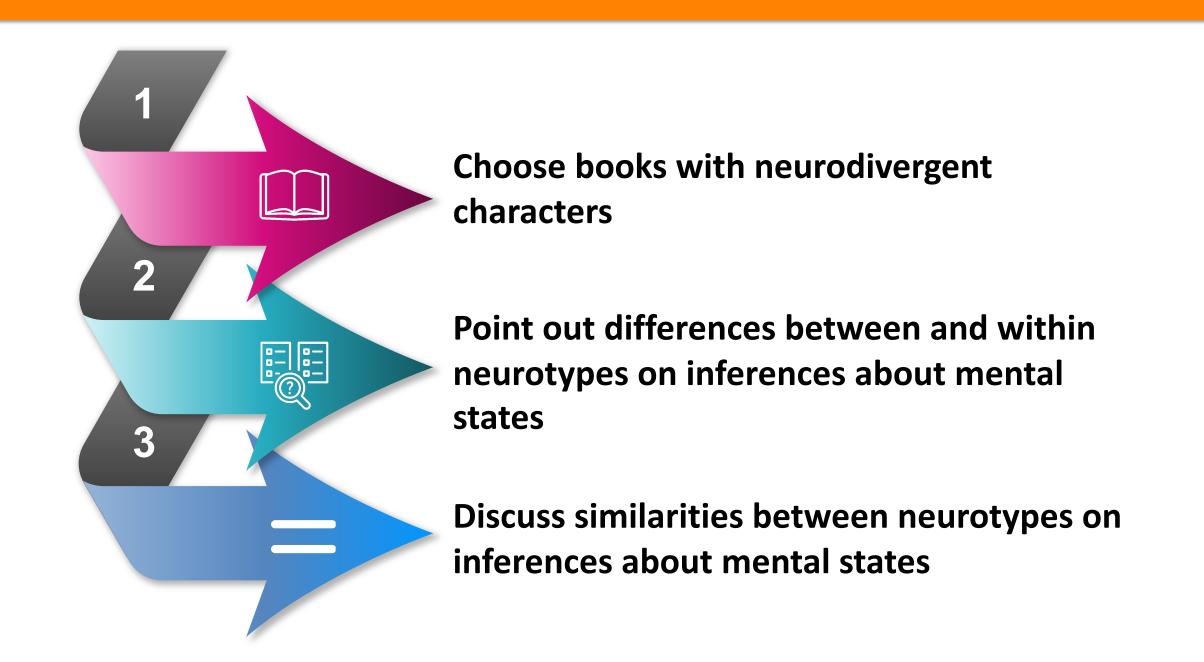


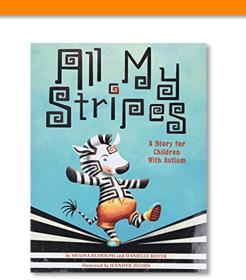


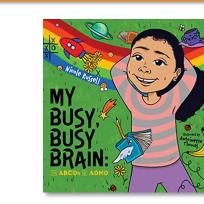
Use thought bubbles to make abstract cognitive states more concrete. Find books with thought bubbles in the illustrations or use sticky notes to add your own.

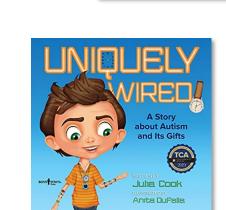
Wellman & Peterson, 2013; Hoyos et al.,. 2020

ToM Can be Targeted within Literacy-Based Activities

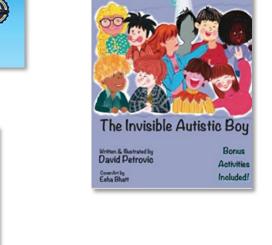












Conclusions

- 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

Crompton, C. J., Sharp, M., Axbey, H., Fletcher-Watson, S., Flynn, E. G., & Ropar, D. (2020). Neurotype-matching, but not being autistic, influences self and observer ratings of interpersonal rapport. Frontiers in Psychology, 11. Davies, H. (2022). 'Autism is a way of being': An 'insider perspective' on neurodiversity, music therapy and social justice. British Journal of Music Therapy, 36(1), 16–26. https://doi.org/10.1177/13594575221090182

de Villiers, J. G., & de Villiers, P. A. (2014). The role of language in theory of mind development. Topics in Language Disorders, 34(4), 313–328. https://doi.org/10.1097/TLD.000000000000000037 A., & Yergeau, M. (2019). Empirical failures of the claim that autistic people lack a theory of mind. Arch Sci Psychol, 7(1), 102–118. https://doi.org/10.17605/OSF.IO/3R2QY Gernsbacher, M. A., Stevenson, J. L., & Dern, S. (2017). Specificity, contexts, & reference groups matter when assessing autistic traits. PLoS ONE, 12(2). https://doi.org/10.1371/journal.pone.0171931 Holt, A., Bounekhla, K., Welch, C., & Polatajko, H. (2022). "Unheard minds, again and again": autistic insider perspectives and theory of mind. Disability and Rehabilitation, 44(20), 5887–5897

Milton, D. E. M. (2012). On the ontological status of autism: The "double empathy problem." Disability and Society, 27(6), 883–887. https://doi.org/10.1080/09687599.2012.710008 Ruffman, T., Slade, L., & Crowe, E. (2002). The relation between children's and mothers' mental state language and theory-of-mind understanding. Child Development, 73(3), 734–751. https://doi.org/https://doi.org/10.1111/1467-8624.00435

Tompkins, V., Farrar, M. J., & Montgomery, D. E. (2019). Speaking your mind: Language and narrative in young children's theory of mind development. In Advances in Child Development and Behavior (Vol. 56, pp. 109–140). Academic Press Inc. https://doi.org/10.1016/bs.acdb.2018.11.003

Walker, N., & Raymaker, D. M. (2021). Toward a neuroqueer future: An interview with Nick Walker. Autism in Adulthood, 3(1), 5–10. https://doi.org/10.1089/aut.2020.29014.njw

Contact Information & References

Kristen Secora: ksecora@utk.edu



Speaker disclosures:

Financial: Salaried fulltime assistant professor at the University of Tennessee Knoxville Nonfinancial: none to report



Ruffman et al., 2002

de Villiers & de Villiers, 2014

Tompkins, 2019