THEORY OF MIND IN AUTISM

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Theory of Mind (ToM)- is defined as the ability to recognize, understand and infer other people’s mental states (their thoughts, beliefs, desires, intentions, etc.), and the ability to use this information to interpret what they say, make sense of their behavior and predict what they will do next. (Howlin, Baron-Cohen & Hadwin, 1999)
Social Cognition is one form of intelligence that allows us to interpret and respond to social information through interpersonal communication, written expression, sharing space or interpreting thoughts and actions of fictional characters.

Perspective Taking is a person’s understanding of another’s point of view; the ability to consider the contents of other people’s minds.

Mindblindness is a deficit in ToM in that one is unable to perceive that others have thoughts and feelings. (Baron-Cohen, 1995)
SOCIAL COGNITION

- I - Initiation of Language
- L - Listening with Eyes and Brain
- A - Abstract and Inferential Language
- U - Understanding Perspective
- G - Getting the Big Picture
- H - Humor and Human Relatedness

(Winner, 2007)
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PERSPECTIVE TAKING

- Step 1 - Common Space
- Step 2 - Thoughts about other person
- Step 3 - Own thoughts are framework
- Step 4 - Monitor and Modify

(Winner, 2007)
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(Baron-Cohen, 1995)
SOCIAL COGNITION

THEORY OF MIND

MINDBLINDNESS

PERSPECTIVE TAKING
ToM is embedded into all social interactions
# Mental State Terms Examples

<table>
<thead>
<tr>
<th>Think</th>
<th>Know</th>
<th>Guess</th>
<th>Idea</th>
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</thead>
<tbody>
<tr>
<td>Want</td>
<td>Tell</td>
<td>Indicate</td>
<td>Like</td>
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<tr>
<td>Understand</td>
<td>Forget</td>
<td>Intend</td>
<td>Mean</td>
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<tr>
<td>Show</td>
<td>Agree</td>
<td>Worry</td>
<td>Plan</td>
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<tr>
<td>Aware</td>
<td>Recognize</td>
<td>Hesitate</td>
<td>Try</td>
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WHY IS THEORY OF MIND IMPORTANT??
By 12 mos
- Understands that they and someone else are attending to the same thing (joint attention)
- Read people’s actions as directed at goals and as driven by desires

2-3 yrs.
- Pretend and understand pretense
- Begin to understand they are different from others

4-7+ yrs
- Development of ToM- realize that people’s minds contain different sets of information based on their different experiences
- Learn how to manipulate other’s minds through own actions and aware of how others might try to manipulate them
- Become more empathetic and responsive to needs of others and anticipate, respond and encode, decode our own and other’s intentions (Westby, 2012)
Inability to understand one’s and other people’s feelings
Inability to take into account what other people know
Inability to negotiate friendships by reading and responding to intentions
Inability to read listener’s level of interest in one’s speech
Inability to detect a speaker’s intended meaning (intentions)
Inability to anticipate what other’s might think of one’s actions
Inability to understand misunderstandings
Inability to deceive or understand deception
Inability to understand the reasons behind people’s actions
Inability to understand “unwritten rules” or conventions (Baron-Cohen, 1999)
ASSESSMENT

- Need to assess the extent to which a child possesses social understanding, insight and sensibility, and the extent to which he or she takes the feelings and thoughts of others into account.

- **Skills to assess:**
  - Understanding of nonverbal communication
  - Emotion understanding/recognition
  - First-order beliefs (what children think about real events)
  - Second-order beliefs (what children think about other people's thoughts)
  - Understanding of false-belief (comprehension of another’s wrong belief) 

(Muris, et al., 1999)
This is Sally. This is Anne.

Sally has a basket. Anne has a box.

Sally has a marble. She puts the marble into her basket.

Sally goes out for a walk.

Anne takes the marble out of the basket and puts it into the box.

Now Sally comes back. She wants to play with her marble.

Where will Sally look for her marble?
To treat mind-blindness you must change UNDERSTANDING

Target skills:
- Understanding and recognizing feelings and emotions
- Awareness that others have their own state of mind
- Reading of nonverbal communication/cues
- Create awareness/review different perspectives of others
- Practice social situations/role play/rehearse
- Support abstract concepts with scripts and visual aids (Howlin, Baron-Cohen, & Hadwin, 1999)
UNDERSTANDING EMOTIONS

- Recognizing Nonverbals/Facial Expressions
- Recognizing Emotion from schematic drawing
- Identifying “situation-based” emotions
- Identifying “desire-based” emotions
- Identifying “belief-based” emotions

(Howlin, Baron-Cohen, & Hadwin, 1999)
UNDERSTANDING INFORMATIONAL STATES

- Simple visual perspective taking
- Complex visual perspective taking
- Understanding the principle that “seeing leads to knowing”
- Predicting actions on the basis of a person’s knowledge
- Understanding false beliefs

(Howlin, Baron-Cohen, & Hadwin, 1999)
UNDERSTANDING PRETENSE

- Sensorimotor Play
- Emerging Functional Play
- Established Functional Play
- Emerging Pretend Play
- The pretend-real distinction
- Established pretend play

(Howlin, Baron-Cohen, & Hadwin, 1999)
REFERENCES

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