

# Challenges In Reading Comprehension For Individuals With Autism

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# SOME DEVELOPMENTAL FEATURES OF AUTISM THAT IMPACT READING

- JOINT ATTENTION
- SOCIAL REFERENCING
- THEORY OF MIND

# JOINT ATTENTION

- SHARING A FOCUS OF ATTENTION ALLOWS A CHILD TO ACQUIRE SKILLS THAT ARE LEARNED THROUGH SOCIAL OBSERVATION AND INTERACTION
- ACTIVE ENGAGEMENT AND SHARING INVOLVES FOLLOWING THE ATTENTION OF OTHERS
- THIS IS THE BASIS FOR SOCIAL IMITATION AND MODELING THE BEHAVIORS OF OTHERS

# JOINT ATTENTION

- WAYS TO SHARE ATTENTION WITH OTHERS
  - POINTING
  - SHOWING
  - MONITORING THE GAZE OF OTHERS
  - COORDINATED LOOKS BETWEEN OBJECTS AND PEOPLE
  - LOOKING AT WHAT OTHERS ARE FOCUSED UPON
  - MONITORING THE EMOTIONAL STATES OF OTHERS
  - TAKING THE PERSPECTIVE OF OTHERS

# SOCIAL REFERENCING

- LOOKING AT OTHERS HELPS US GAUGE HOW THEY'RE REACTING OR FEELING ABOUT BOTH SOCIAL AND ENVIRONMENTAL CIRCUMSTANCES
- IT INVOLVES SEEKING OUT FACIAL EXPRESSIONS AND OTHERS' BODY LANGUAGE IN ORDER TO GATHER INFORMATION
- THIS IS BASED ON RECOGNIZING OTHERS AS INTENTIONAL AGENTS WITH THOUGHTS AND FEELINGS OF THEIR OWN

# SOCIAL REFERENCING

- RECIPROCAL RATHER THAN INSTRUMENTAL RELATEDNESS ALLOWS US TO TAKE THE PERSPECTIVE OF OTHERS
- THIS IS THE BASIS FOR SOCIAL THINKING AND SOCIAL COGNITION
- THIS SKILL PROMOTES THE LEARNING OF SOCIAL AND CULTURAL VALUES AND EXPECTED SOCIAL BEHAVIORS OF THE GROUP WE LIVE WITH
- IT HELPS US IDENTIFY THE IMPORTANT SOCIAL AND EMOTIONAL FEATURES OF A SITUATION

# SOCIAL REFERENCING

- BY OBSERVING AND IMITATING THE ACTIONS OF OTHERS, WE ENGAGE IN OBSERVATIONAL LEARNING AND BEGIN TO IMITATE WHAT WE SEE GOING ON AROUND US
- THIS PROMOTES THE DEVELOPMENT OF EMOTIONAL RESPONSIVENESS AND THE EXPRESSION OF FEELINGS
- THIS PROCESS BEGINS AT AROUND 6 MONTHS

# SOCIAL REFERENCING

- YOUNG CHILDREN BEGIN TO RECOGNIZE AND RESPOND TO THE VOCAL EXPRESSION OF EMOTION AND FEELING
- AT 2 YEARS OF AGE, CHILDREN TYPICALLY BEGIN TO IDENTIFY WHAT ACTIONS BRING ABOUT SIMPLE FEELINGS IN OTHERS
- AS CHILDREN MATURE, THEY ARE ABLE TO IDENTIFY MORE COMPLEX EMOTIONS LIKE GUILT AND SHAME



# THEORY OF MIND

- THIS INVOLVES THE ABILITY TO ATTRIBUTE MENTAL STATES (BELIEFS, DESIRES, AND INTENTIONS) TO BOTH ONESELF AND OTHERS
- IT CREATES THE POSSIBILITY OF UNDERSTANDING AND PREDICTING THE ACTIONS AND WORDS OF OTHERS
- IT ALLOWS FOR DRAWING INFERENCES AND READING BETWEEN THE LINES

# READING PROFILES AND HIGH FUNCTIONING AUTISM SYMPTOMATOLOGY

- ARTICLE IN THE JOURNAL OF AUTISM AND DEVELOPMENTAL DISORDERS IN APRIL, 2017, BY NANCY S. MCINTYRE ET AL.
- “A COMPREHENSIVE EXAMINATION OF READING HETEROGENEITY IN STUDENTS WITH HIGH FUNCTIONING AUTISM: DISTINCT READING PROFILES AND THEIR RELATION TO AUTISM SYMPTOM SEVERITY”

- MANY CHILDREN WITH AUTISM HAVE AVERAGE TO ABOVE AVERAGE INTELLIGENCE AND PARTICIPATE IN REGULAR EDUCATION CLASSROOMS
- 47% HAVE AVERAGE TO ABOVE AVERAGE INTELLIGENCE
- 25% HAVE BORDERLINE IQ
- 28% HAVE INTELLECTUAL DISABILITY

- MULTIPLE STUDIES SUGGEST THAT MANY KIDS WITH AUTISM HAVE READING DIFFICULTIES SIMILAR TO STUDENTS IDENTIFIED WITH READING DISABILITY
- WHILE THEY MIGHT BE ABLE TO DECODE WORDS, 33-65% OF THESE STUDENTS HAVE DIFFICULTY UNDERSTANDING THE MEANING OF WRITTEN LANGUAGE

- MANY CHILDREN WITH AUTISM STRUGGLE WITH READING COMPREHENSION EVEN THOUGH THEY HAVE AVERAGE OR ABOVE IQ
- THIS RAISES THE QUESTION OF WHETHER THE READING INSTRUCTION THEY RECEIVE IN REGULAR EDUCATION CLASSROOMS ADEQUATELY ADDRESS SKILL DEFICITS ASSOCIATED WITH BEING ON THE SPECTRUM

# THE DEVELOPMENT OF READING SKILLS

- IN INFANCY, VISUAL OBJECT RECOGNITION AND ORAL LANGUAGE SYSTEMS BEGIN TO EMERGE
- KIDS' VOCABULARY TYPICALLY GROWS 10-20 WORDS A DAY BY THE END OF THE 2<sup>ND</sup> YEAR
- AT 6 YEARS OF AGE, MOST CHILDREN HAVE GOOD KNOWLEDGE OF LETTER AND WORD SOUNDS (PHONOLOGY), BASIC RULES OF GRAMMAR, AND A VOCABULARY OF SEVERAL THOUSAND WORDS

- KIDS DEVELOP LETTER-SOUND CORRESPONDENCE AND ESTABLISH LETTER RECOGNITION THAT PROMOTES THE ABILITY TO DISTINGUISH INDIVIDUAL SPEECH SOUNDS
- DECODING GOES FROM SIMPLE TO MORE COMPLEX WORDS
- THEY LEARN THAT PREFIXES, ROOT WORDS, AND SUFFIXES ARE RELATED TO MEANING AND THE PRONUNCIATION OF WORDS

- THE ABILITY TO DISCRIMINATE SIGHT WORDS AND DECODE SOUNDS PHONOLOGICALLY LAYS THE FOUNDATION FOR CREATING MEANING FROM THE WORDS
- THE DEVELOPMENT OF THESE SKILLS CHANGE OVER TIME, AND THEY IMPACT READING COMPREHENSION AS CHILDREN AGE
- FOR YOUNG CHILDREN THE NEED TO DECODE WORDS IS PRIMARY AND THE RELATIONSHIP TO READING AND LISTENING COMPREHENSION IS LESS IMPORTANT THAN FOR OLDER CHILDREN



# THREE SUBGROUPS OF POOR READERS

- 1. POOR READERS ONLY WITH WORD RECOGNITION DIFFICULTIES (DYSLEXICS)
- 2. POOR READERS WITH ONLY LINGUISTIC COMPREHENSION PROBLEMS NOT ABLE TO CREATE MEANING FROM WORDS (POOR COMPREHENDERS OR HYPERLEXICS)
- 3. POOR READERS WITH DIFFICULTIES IN BOTH COMPONENTS

# SOCIAL COMMUNICATION DEFICITS ASSOCIATED WITH AUTISM THAT IMPACT READING COMPREHENSION

- DIFFICULTIES IN UNDERSTANDING THE AUTHOR'S INTENTIONS OR PURPOSE IN WRITING
- DIMINISHED SOCIALLY MEDIATED LEARNING AND EXPERIENCES
- PROBLEMS IN UNDERSTANDING SOCIAL NORMS AND EXPECTED BEHAVIORS THAT DIMINISH SOCIAL KNOWLEDGE AND THE PERSONAL NARRATION OF OTHERS

- OVERFOCUS ON DETAILS RATHER THAN GLOBAL MEANING CONTRIBUTES TO PROBLEMS IN RECALLING, RETELLING, AND COMPREHENDING STORIES
- WEAK CENTRAL COHERENCE
- DIFFICULTY IN SEEING THE FOREST FROM THE TREES
- PROBLEMS IN INTEGRATING INFORMATION FROM TEXT AND BACKGROUND KNOWLEDGE THAT LIMIT THE ABILITY TO DRAW INFERENCES

- RESTRICTED OR FIXATED INTERESTS LIMIT EXPOSURE TO EXPERIENCES AND DIMINISH LEARNING ABOUT A VARIETY OF TOPICS
- THIS CAN LEAD TO DIMINISHED VOCABULARY OUTSIDE THE SPECIFIC FIELD OF INTEREST
- A NARROW MODEL OF UNDERSTANDING THE WORLD DOES NOT ALLOW ONE TO COMBINE WRITTEN INFORMATION WITH BACKGROUND KNOWLEDGE IN ORDER TO GENERATE INFERENCES ABOUT THINGS NOT EXPLICITLY STATED

- DIFFICULTY IN DERIVING MEANING FROM CONTEXT
- LITERAL VS. FIGURATIVE LANGUAGE
- LACK OF IDENTIFICATION OR EMPATHY FOR CHARACTERS IN FICTION
- PROBLEMS IN PERSPECTIVE TAKING
- THEORY OF MIND DEFICITS
- CURIOSITY ABOUT THE LIVES OF OTHERS

# COMPENSATORY STRATEGIES TO BRIDGE THE GAP

- TEACH HOW TO ESTABLISH MEANING FROM CONTEXT
- PREVIEW READING MATERIAL IN ADVANCE AND DISCUSS THE BROAD PICTURE OF WHAT THE MATERIAL COVERS
- WORK ON IDENTIFYING WHAT INFORMATION IS SALIENT AND IMPORTANT FOR UNDERSTANDING AND REMEMBERING
- BREAK READING INTO SMALLER SECTIONS TO DIMINISH ATTENTIONAL AND MOTIVATIONAL CONCERNS

- PREVIEW VOCABULARY TO BE SURE THAT COMPREHENSION IS POSSIBLE
- UTILIZE AUDIO BOOKS TO SUPPORT ORAL RATHER THAN LEXICAL WEAKNESS
- IDENTIFY HOW A CHILD PROCESSES INFORMATION. UTILIZE MULTIPLE MODALITIES FOR TEACHING MATERIAL
- RELATE READING MATERIAL TO A STUDENT'S PERSONAL EXPERIENCE