

UNDERSTANDING AUTISM SPECTRUM DISORDER

DIAGNOSIS AND LATEST
FINDINGS

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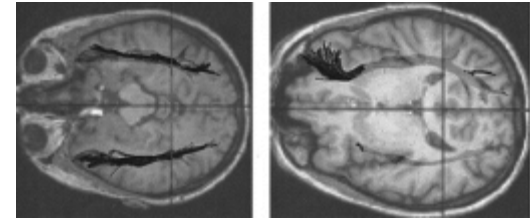
AGENDA

Autism Spectrum Disorder (ASD)

- Cause
- Diagnosis
- Symptoms

Treatment of ASD

ASD BASICS



Neuro-developmental disorder

Most Recent CDC data on ASD prevalence and Cause:

- Increasing rate of diagnosis in the past 10 years
- 1 in 68 in USA / 1 in 108 in Wisconsin
- Boys affected 4-5 times more than girls
- 10% of children with ASD also has a diagnosis of another genetic disorder
- About half of the children with ASD has average IQ
- No single etiology identified, although multiple risk factors have been associated with ASD

WHY THE INCREASE?

There is no definite answer

Possible reasons:

- More accurate diagnosis
- Increased awareness
- Unknown interaction between genetic dispositions and environmental factors

HOW IS ASD DIAGNOSIS MADE?

Qualified professionals with specialized training

- Developmental pediatricians
- Psychologists
- Neuropsychologists
- Team of professionals

Diagnostic process:

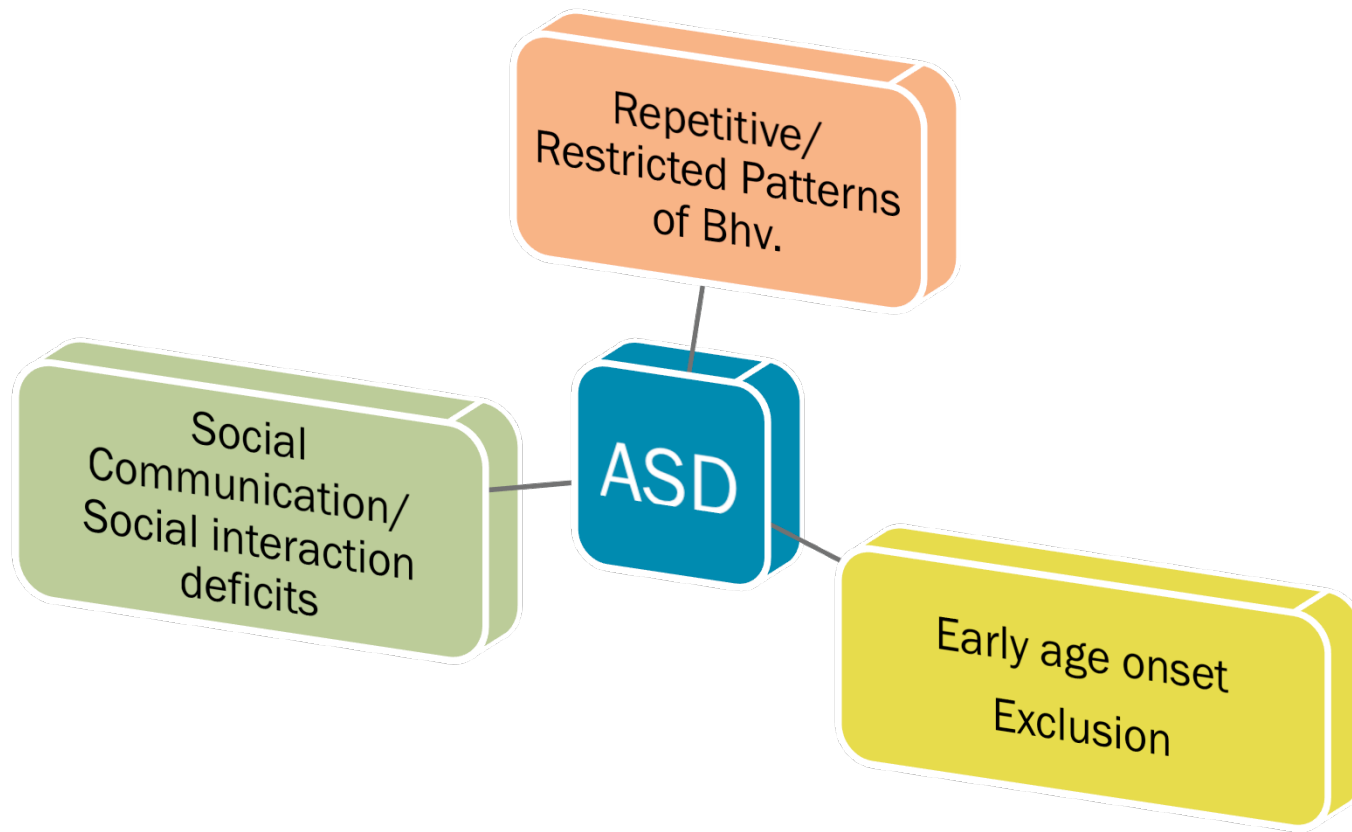
- Structured play-based observation
- Parent/ teacher interview
- Rating scales
- An accurate Diagnosis can be made as early as 18 months of age
- Using well-established and internationally recognized diagnostic manual (e.g., DSM)

HOW DOES AUTISM LOOK LIKE?

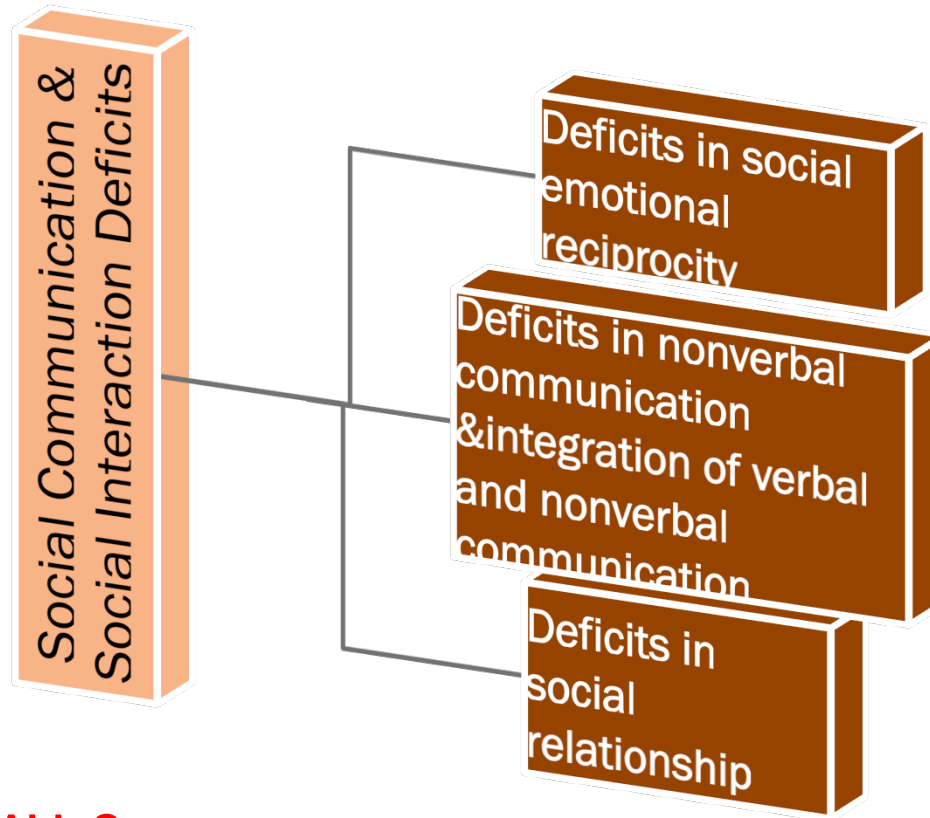
- No two individuals “look” the same
- Autism symptoms are on a wide spectrum
- Symptom manifestation can change with age
- Symptom configurations can vary
- Children with ASD do not usually have physiological differences (e.g., no facial abnormality, no physical disability)



ASD DIAGNOSTIC CRITERIA



SOCIAL DEFICITS



MUST MEET ALL 3

SOCIAL DEFICITS: EXAMPLES

Social Reciprocity:

Lack of social sharing/
showing of interest

Lack of reciprocal
conversation skill

Nonverbal Communication

Lack of eye
contact

Inconsistent or
inappropriate eye contact

Poor integration
of verbal
nonverbal comm.

Social Relationship

Lack of social
interest

Difficulty sharing
imaginative play

Difficulty adjusting
bhv to suit social
contexts

SOCIAL DEFICITS

- Lack of eye contact
- Lack of social reciprocity

REPETITIVE/ RESTRICTED/ STEREOTYPED BEHAVIORS

- Stereotyped speech/ motor movement/ use of objects
- Excessive adherence of routines; ritualized verbal or nonverbal behavior; insistence on sameness
- Highly restricted, fixated interests that are abnormal in intensity
- Sensory abnormality (hypo- or hyper reactivity, sensory seeking)

MUST MEET 2

OTHER CRITERIA

- Early on-set
- Not due to global developmental delay and cognitive disability

TAKE HOME MESSAGE

Autism Is:

- Neuro-developmental disorder.
- Complex
- A way of living and viewing the world
- Treatable

Autism is NOT:

- a choice made by parents/ child. It can happen to any family
- Caused by parenting style
- Something that the child will “grow out of”
- Cured by medication or medical procedures



ABA-BASED AUTISM TREATMENT

Core Challenges of ASD

- ✓ Deficits in reciprocal social interaction skills
- ✓ Deficits in communication skills
- ✓ A pattern of stereotyped and repetitive behaviors and interests
- ✓ Also common among children with ASD:
- ✓ Delays in cognitive skills
- ✓ Delays in daily living skills
- ✓ Delays in motor skills

Goals of ABA Treatment

- ✓ Improve socialization skills
- ✓ Improve communication skills
- ✓ Improve functional, meaningful, and developmentally appropriate play skills
- ✓ Improve thinking skills and attending skills
- ✓ Improve adaptive skills and coping skills
- ✓ Reduction of aggressive, disruptive, destructive, other problem behaviors

ABA-BASED AUTISM TREATMENT: THE BASICS

Basic Teaching/ Learning Unit

- Instruction → response → Feedback
(AKA: S – R – S discrete trial training procedure)
- Skills are broken down into small and basic teachable component
- Skills are taught in an explicit manner
- A single skill gets adequate repetition for mastery
- First stage:
 - Building a strong rapport between child and therapist
 - Compliance
 - Attention
 - Imitation

AT EAP MALAYSIA

- Founded and supervised by an international service provider Wisconsin Early Autism Project.
- Over the last 10 years, EAP has worked with over 300 individuals from 30 different countries.
- Provides evidence-based treatment: Applied Behavioural Analysis (ABA). Comprehensive curriculum covers Early Learner Skills, Communication and Language, Play and Social Skills, Daily Living Skills and Pre-Academic Skills.
- ABA-based comprehensive treatment. Each child's programme has a team of therapists and Supervisor. Additionally bimonthly supervision from a Senior Supervisor and once every 6 months Progress Review with a WEAP doctorate level Supervisor. This is to ensure the quality of the programme we provide.
- Programmes are either center or home based as well as half-time or full-time.

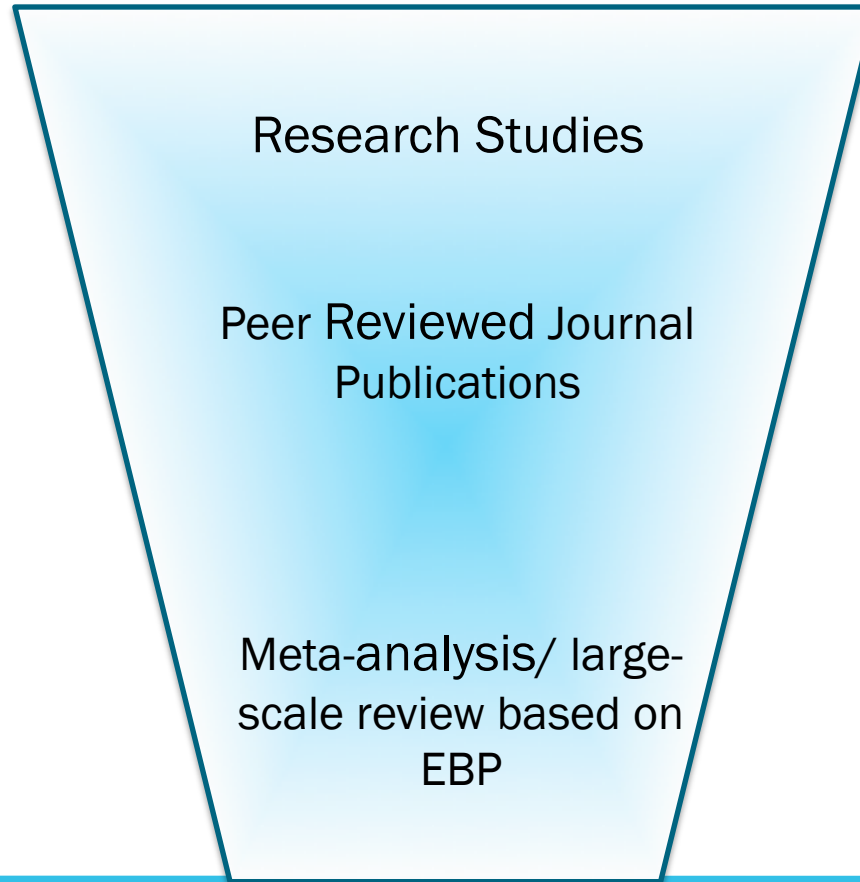
EVIDENCE-BASED TREATMENT OF ASD



EVIDENCE BASED PRACTICE (EBP) IN AUTISM TREATMENT

- What is considered “evidence”?
- How do you know it’s good evidence?
- What “evidence” exist for autism treatment?

GETTING TO GOOD EVIDENCE



GOOD EVIDENCE

- Research design: Is the outcome a stroke of luck or really because of the treatment?
- Measurement of dependent variables: What types of information is telling the outcome story?
 - Multiple sources: including direct observation/testing, and indirect reporting.
 - Use valid and reliable measures

GOOD EVIDENCE

- Measurement of independent variable: How treatment is done? Is it done correctly and consistently?
 - Sufficient details
 - Measures of implementation accuracy and consistency
- Participants: Be sure that they have ASD
 - Valid diagnostic tools and process

GOOD EVIDENCE

- **Generalization and maintenance effects**
 - The effect of treatment lasts across time, environments, with different people...
- **Developing skills and decreasing problems**
 - Beyond just keep the child content and quiet. Developing skills is important!

EVIDENCE-BASED PRACTICE EXAMPLES

- Based on National Autism Center Findings:
- **3 classifications for treatments reviewed**
- Established: Sufficient evidence to confidently determine that the treatment produces favorable outcomes for individuals with ASD
- Emerging: One or more studies suggest effective treatment. Additional high quality studies needed to draw firm conclusion on effectiveness
- Un-established: Little or no evidence to draw conclusion on treatment effectiveness.

TIPS FOR CHECKING EVIDENCE

- When a treatment claims to be effective...

Ask for:

- A research article published in peer reviewed journal about the treatment. The article should include the following components: Participants, Methods, Design, Measurement, Results, and Discussion.
- Intensity level: ABA research supports at least 20 and more hours one-on-one treatment/ wk for the first 1 to 2 years.
- Description of treatment curriculum—examples of how treatment target is identified and treatment implemented
- How does the program measure outcomes? Any direct measures?
- Supervision protocol: supervision must be consistent and regular
- Staff's experience level: how long have they worked in autism treatment? How many children have they worked with

EVIDENCE BASED PRACTICE: EXAMPLES

Established	Emerging	Un-established
<ul style="list-style-type: none">• ABA-based treatment• Social Stories• Modeling	<ul style="list-style-type: none">• Augmentative and alternative communication devices• Technology-based Intervention	<ul style="list-style-type: none">• DIR/ Floor Time• GF CF diet• Sensory intervention• Facilitated communication
<p>This is not an exhaustive list.</p>		

TRUST-WORTHY ON-LINE INFORMATION

- Center for Disease Control and Prevention (CDC, USA)–Autism facts:
<http://www.cdc.gov/ncbddd/autism/data.html>
- National Autism Center–Autism resources and information: <http://www.nationalautismcenter.org/>
- Autism Speaks–autism advocacy organization (USA):
<http://events.autismspeaks.org/site/c.nuLTJ6MPKrH/b.7917321/k.AE7E/About.htm>
- American Psychological Association (APA)-general information on psychology (USA):
<http://www.apa.org/topics/autism/>

EXAMPLES OF HIGH QUALITY PEER REVIEWED JOURNALS

- Journal of Intellectual and Developmental Disability
- Journal of Applied Behavior Analysis
- Journal of Autism and Developmental Disability
- Research in Developmental Disabilities
- Research in Autism Spectrum Disorders
- American Journal on Mental Retardation
- Journal of Consulting and Clinical Psychology
- Behavior Modification

THANK YOU FOR LISTENING!



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