

Autism Spectrum Disorder

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Objectives

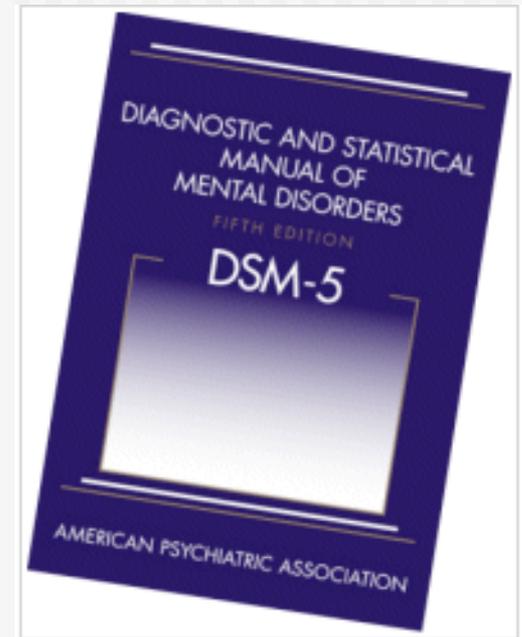
- 1) Be informed of the new criteria for Autism Spectrum Disorder (ASD) that is in the latest Diagnostic Statistical Manual (DSM 5)
- 2) Acknowledge recent information on the prevalence in autism
- 3) Orient on treatment for people identified with an autism spectrum disorder

DSM

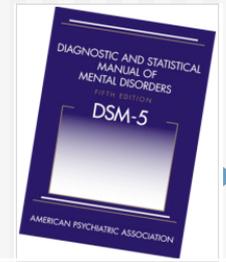
- The *Diagnostic and Statistical Manual of Mental Disorders* is one of the most important references for clinicians to make diagnoses
- Has mental health diagnoses, but also a variety of neurodevelopmental diagnoses
- No information about treatment
- Current version is the DSM-5
 - This changed from DSM-IV TR in May 2013

DSM-5

- “Autism Spectrum Disorders” has replaced “Pervasive Developmental Disorders”

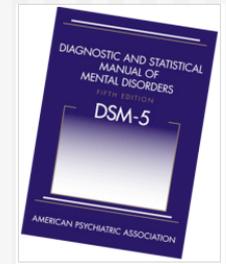


Important Change # 1



- The new classification system eliminates the previously separate subcategories including Asperger syndrome, PDD-NOS, childhood disintegrative disorder and autistic disorder.
- All of these subcategories has been folded into the broad term autism spectrum disorder (ASD).

Important Change #2

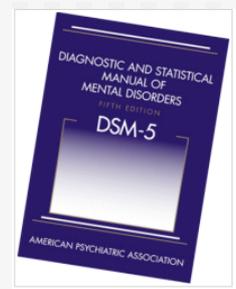


- Instead of three domains of autism symptoms (social impairment, language/communication impairment and repetitive/restricted behaviors), two categories are used:
 1. social communication impairment
 2. restricted interests/repetitive behaviors

DSM-IV TR versus DSM-5

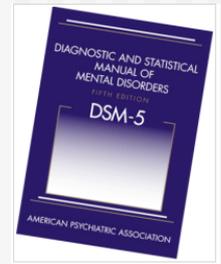
- Under the DSM-IV TR: a person could qualify for a diagnosis of Autism by exhibiting at least six of twelve deficits in social interaction, communication or repetitive behaviors.
- Under the DSM-5: for an Autism Spectrum Disorder diagnosis requires a person to exhibit three deficits in social communication and at least two symptoms in the category of restricted range of activities/repetitive behaviors.

Important Change #3



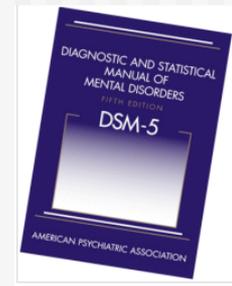
- Within the “restricted range of activities/ repetitive behaviors” category, a new symptom is included:
Hyper- or hypo-reactivity to sensory input or unusual interests in sensory aspects of the environment.

Important Change #4



- In addition to the diagnosis, each person evaluated is also described in terms of:
 - any known genetic cause (e.g. fragile X syndrome, Rett syndrome),
 - level of language and intellectual disability and
 - presence of medical conditions, such as seizures, anxiety, depression, and/or gastrointestinal (GI) problems.

Important Change #5



- A new category called Social Communication Disorder has been created. This will allow for a diagnosis of disability in social communication without the presence of repetitive behavior.

Children Will Be Less likely to Be Diagnosed with Some Type of Autism?

- In March 2012, a study presented by Yale autism expert Dr. Fred Volkmar suggested only 60% of those meeting current criteria for autism would still be diagnosed with the disorder under the proposed criteria

One experts opinion

- Dr. Allen Frances, editor of DSM-IV and emeritus professor at Duke: “The changes in the DSM 5 definition of Autism will result in lowered rates - 10% according to estimates by the DSM 5 work group, perhaps 50% according to outside research groups. This reduction can be seen as beneficial in the sense that the diagnosis of Autism will be more accurate and specific”

Dr. Frances continued

- “But advocates understandably fear a disruption in needed school services. School services should be tied more to educational need, less to a controversial psychiatric diagnosis created for clinical (not educational) purposes and whose rate is so sensitive to small changes in definition and assessment.”

Prevalence - CDC Report

- March 28, 2014 Morbidity and Mortality Weekly Report (MMWR) reported **1 in 68** children have autism spectrum disorder

(This is an increase from 1 in 88 children from research done in 2008)

- 1 in 68 is based on research from 11 sites across the US in 2010 in the CDC Autism and Developmental Disabilities Monitoring Network
- 1 in 42 boys, and 1 in 189 girls in this latest report

CDC Report

- Dr. Colleen Boyle from the CDC National Center on Birth Defects and Developmental Disabilities believes that clinicians are better at diagnosing Autism Spectrum Disorders, especially those without intellectual disability
- This recently published study relates 31% with intellectual disability IQ 70 or below, 23% considered borderline IQ 71 to 85, and 46% above 85 IQ in the sites that had data on IQ



Sam

- Sam is a 2 year old that likes doing his own thing.
- His mother relates that he has never been a cuddly infant. He does enjoy taking apart (but not putting together) any toy or kitchen item that has many parts or pieces.

Sam - Eating

- He only eats things that are spongy. He doesn't like fruits, most vegetables, meats or other foods - he likes pizza without toppings, breads, cakes and marshmallows.

Sam - Communication

- His parents biggest worry is that he doesn't say anything that makes sense. He mostly repeats lines out of context that he hears others say or from things he hears from the TV, sometimes days or months later.

Sam - Communication

- He cannot tell you what he wants without taking your hand to what he wants. He does not point or look to see where you are pointing.

Sam

- Mickey is diagnosed with autism.
- What would be best in a comprehensive program for Mickey?

Goals of Treatment for Autism

- Increase of appropriate verbal and nonverbal communication in home, school and work settings
 - ▷ Increase in IQ
- Social connectedness and interactions
 - ▷ Improvements in adaptive functioning (activities in daily living)
- Decrease or absence of stereotypical or unusual behaviors
 - ▷ Improvements in behavioral functioning
- Cessation of aggressive or disruptive behaviors (such as turning on and off lights)
 - ▷

Worthwhile Treatment?

- There are a lot of treatments that somebody thinks may work, but there is no evidence that they do
- There are some treatments that have a lot of research showing efficacy
- Families need to be careful and not spend energy, money and time on a treatment that has no evidence

Main Themes

- Educational systems including Early Intervention and School Programs
- Alternative and Complementary treatments
- Medications

Nonmedical Interventions for Children With ASD: Recommended Guidelines and Further Research Needs

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KEY WORDS

autism spectrum disorders, interventions, guidelines, standards

ABBREVIATIONS

ASD—autism spectrum disorder

EPC—Evidence-based Practice Center

HRSA—Health Services Resources Administration

PECS—Picture Exchange Communication System

TEP—Technical Expert Panel

abstract

OBJECTIVE: To use the findings of a systematic review of scientific evidence to develop consensus guidelines on nonmedical interventions that address cognitive function and core deficits in children with autism spectrum disorders (ASDs) and to recommend priorities for future research.

METHODS: The guidelines were developed by a Technical Expert Panel (TEP) consisting of practitioners, researchers, and parents. A systematic overview of research findings was presented to the TEP; guideline statements were drafted, discussed, debated, edited, reassessed, and presented for formal voting.

RESULTS: The strength of evidence of efficacy varied by intervention

For the Technical Expert Panel, and HRSA Autism Intervention Research - Margaret A. Maglione, Daphna Gans, Lopamudra Das, Justin Timbie, Connie Kasari, For the Technical Expert Panel, and HRSA Autism Intervention Research - Behavioral (AIR-B) Network. Nonmedical Interventions for Children With ASD: Recommended Guidelines and Further Research Needs. *Pediatrics* 2012;130;S169

Examples of Programs rated “Moderate”

- TEACCH
- PECS
- ABA/EIBT

TEACCH

- Treatment and Education of Autistic and Communication Handicapped Children (TEACCH)
- Established by Mesibov and Schopler at the University of North Carolina
- One of the oldest strategies with a worldwide following

TEACCH

- Based on a person's interest and motivation to learn in a structured environment
- Emphasis on visual learning modalities
- Identifies the individual's emerging skill sets and targets them
- OT and SLP are supported, PECS and floor time are accommodated
- Parents are co-therapists

PECS



- Helps those that are preverbal to build language skills through the use of pictures, encouraging them to initiate communicative interactions
- Functional acts initially reinforced
- Appears to augment language development



Early Intensive Behavioral Treatment (EIBT)

- Lovaas at UCLA in 1987 showed about half (9 of 19) of the children with autism who began intensive behavioral treatment prior to 4 years of age were fully included in regular education and showed significant gains in intellectual achievement (after 2 or more years of treatment)
 - (Lovaas OI, J Consult Clin Psychology. 1987; 55:3-9)
- Followup of these children showed sustained gains
 - (McEachin JJ, et al. Am J Ment Retard. 1993; 97:359-372)

Applied Behavioral Analysis (ABA)

- The Lovaas method is also now known as:
 - Applied Behavioral Analysis (ABA)
 - Discrete Trials (DT) or Discrete Trial Training (DTT)
 - Intensive Behavioral Interventions (IBI)
- Involves intensive social and language one-on-one sessions through the use of positive reinforcement, cost may prohibit equal access to such service

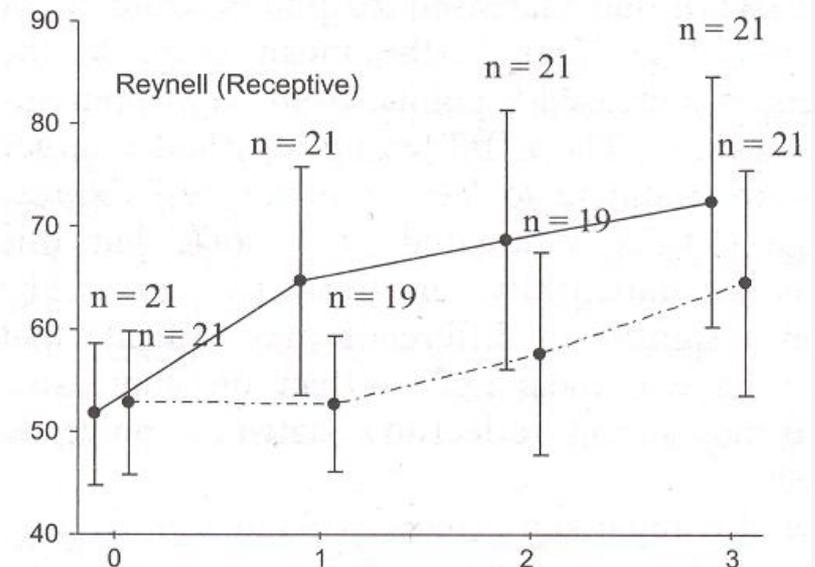
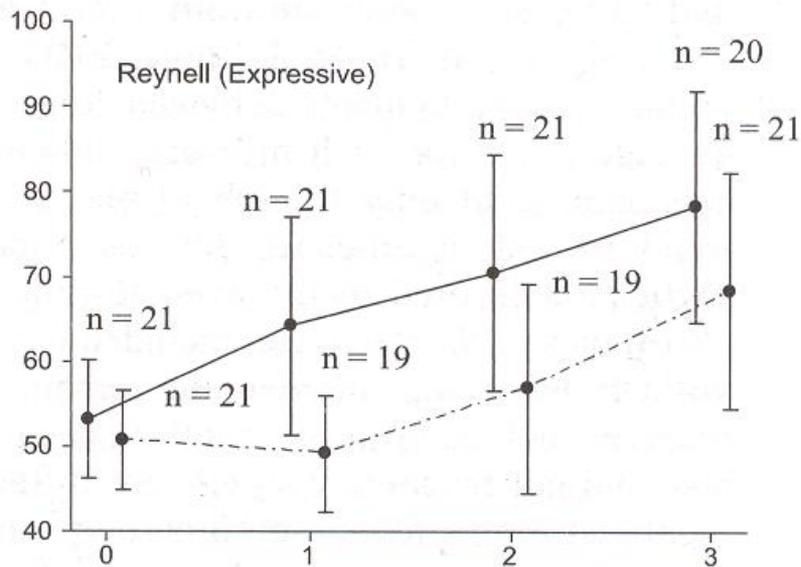
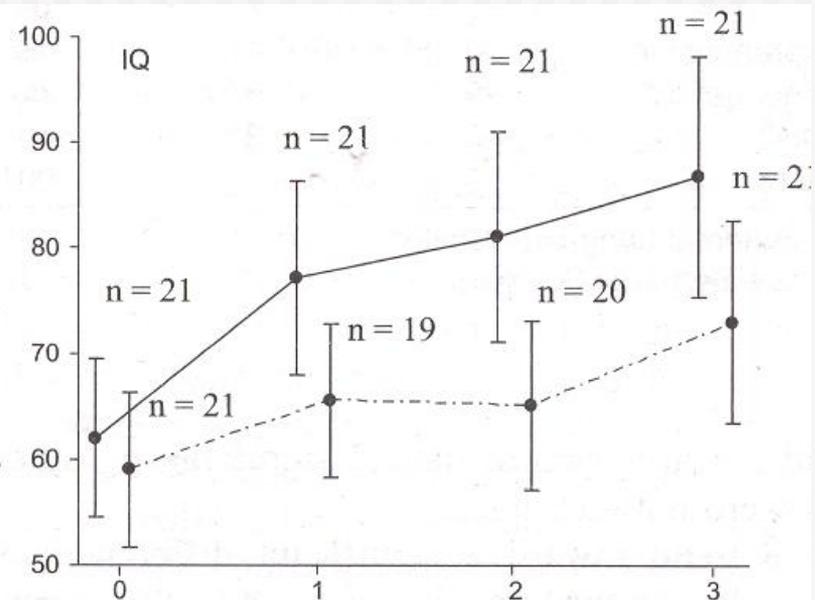
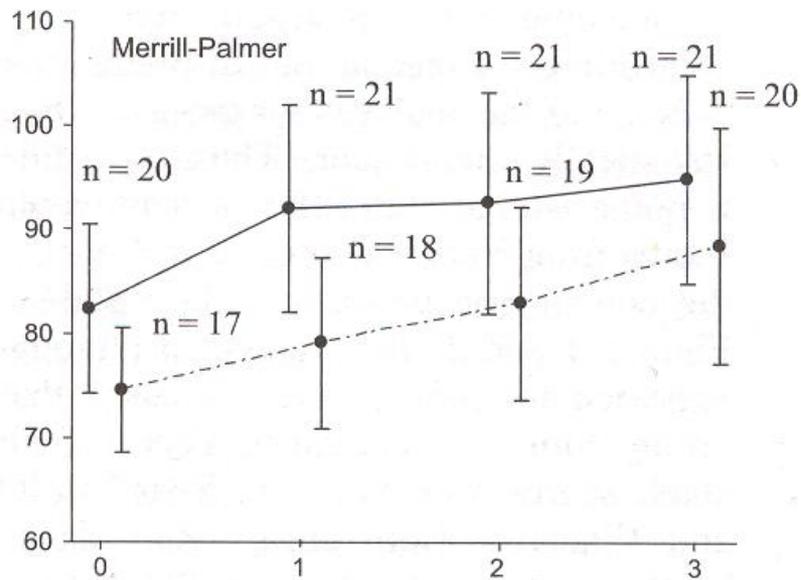
Applied Behavioral Analysis (ABA)

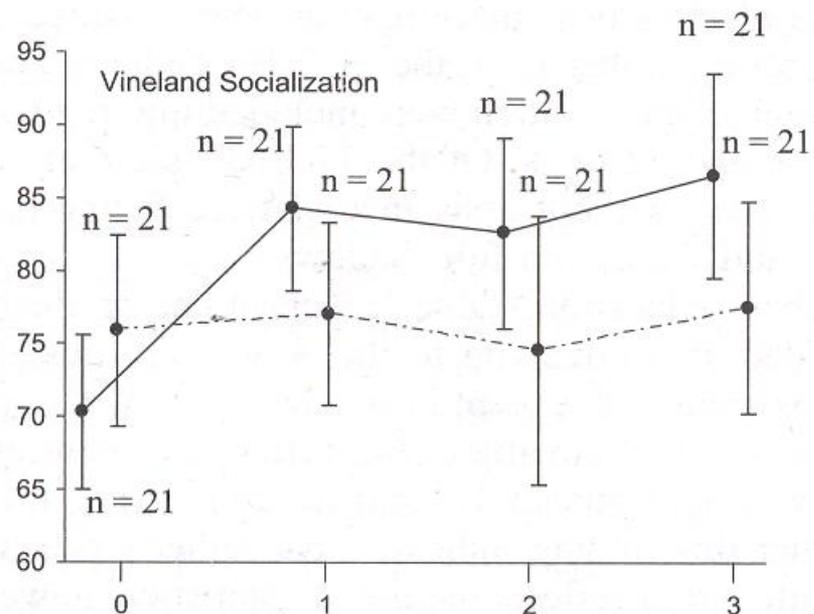
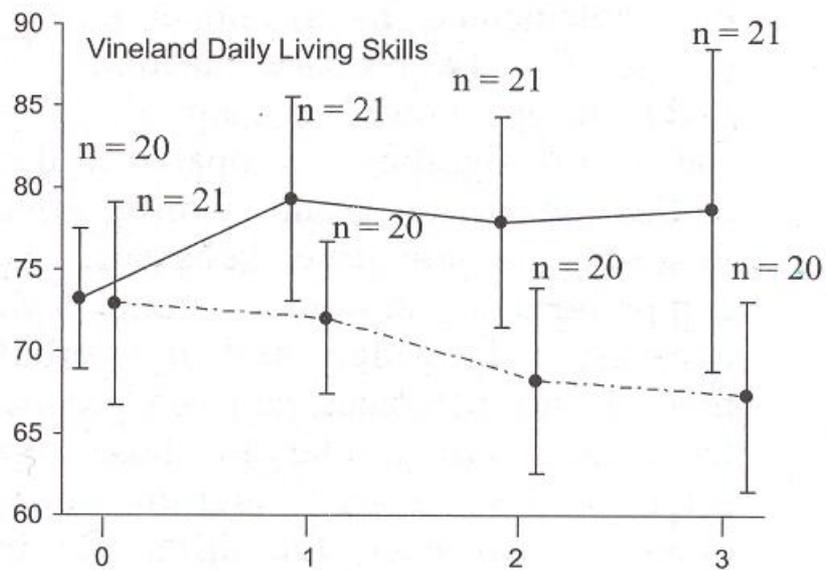
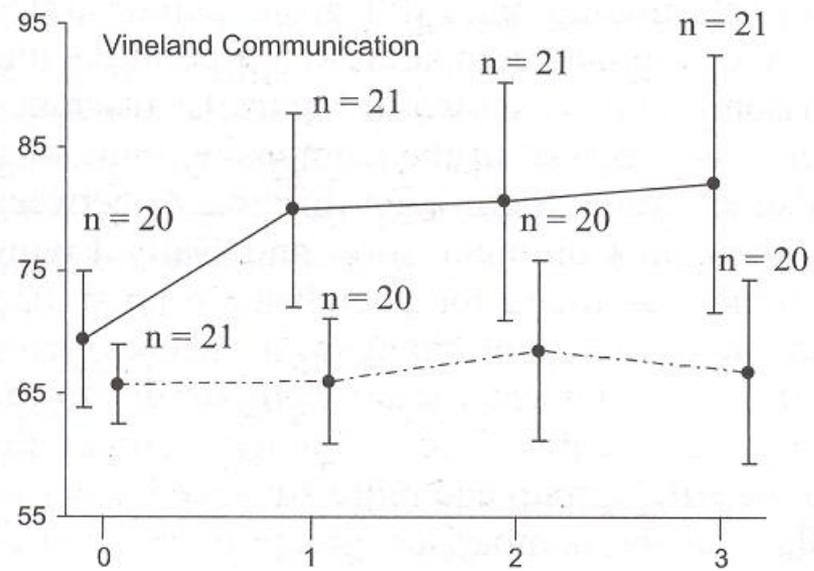
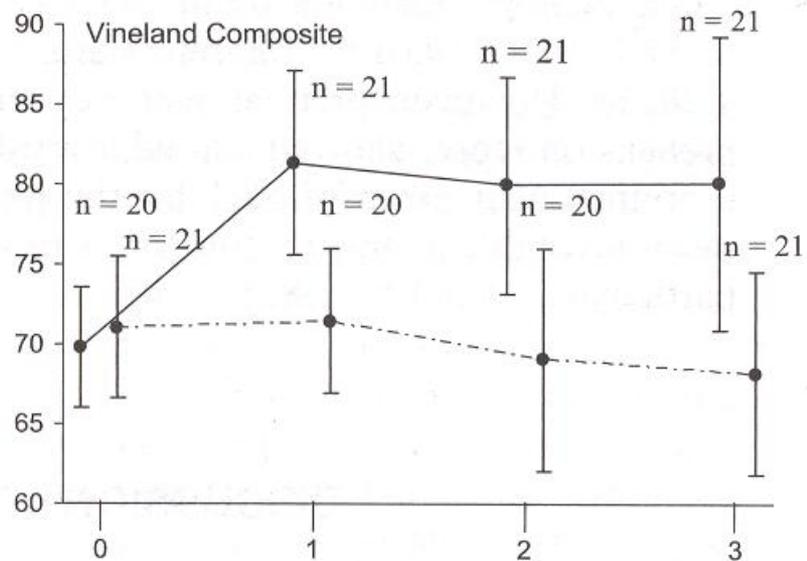
- Requires training in the intervention method
- Implementation of this treatment for 35 to 40 hours per week
 - One-on-one instruction
 - Peer play training session
 - Generalization activities
 - Inclusion into regular education classrooms
- Parent Training to foster acquisition and generalization of skills

Applied Behavioral Analysis (ABA)

- Example of Study in California
- 42 children split into
 - 35 to 40 hours of behavioral intervention 47 weeks per year for 3 or more years (ABA group)
 - Services from local public schools
- The two groups diverged in IQ (gain 25 in ABA versus 14 in comparison), receptive and expressive language measures, and Vineland scores

(Cohen. J Dev Behav Pediatr. 27: 145-155, 2006.)





Applied Behavioral Analysis (ABA)

- Six of the 21 ABA group children were fully included in regular education without assistance, 11 were included with supports
- One of 21 of the children in the comparison group was placed primarily in regular education
- Flaws - nonrandom assignment (parents could choose which group) with more educated and dual parents in the EIBT group

Services Mandated by IDEA

- Early Intervention services (in Hawaii - Department of Health: H-KISS)
- Special Education services (in Hawaii – Department of Education)

Both can provide

- Skills trainers
- Speech-Language therapists
- Special Educators
- Autism consultants

John

- John is a 22 year old man with an autism spectrum disorder who enjoys going to the mall.
- When he was going to school, he required three on one support in high school and had his own classroom because of his sudden and sometimes unpredictable bouts of violence.

John - Communication

- John uses a Picture Exchange Vocabulary System to communicate and is nonverbal.
- His daily/weekly schedule uses a Picture Exchange Vocabulary System to plan out his activities

John - Parental Interactions

- John sleeps on his mother's shoulder in his parents' bedroom.
- His parents, who are close to being 60 years old, are worried about who will care for him when they are gone.
- The family is Filipino, They feel that taking care of John is their own family business, not their relatives or others.

John - Issues

- When he is at home with his parents, he will sometimes strike out, and his mother needs to hide behind the couch until her husband gets home

John

- PECS is being used
- If ABA would have been done early in his life, would he have had a decrease in behavioral problems?
- Risperadone?
- How to have the family get some supports?

Developmental Disabilities Division, DOH

- Applies the Medicaid Waiver for I/DD that is used in many states
- Can provide case management, personal assistance, Adult Day Health (ADH), residential and other services
- Applies from children to elderly, but in Hawaii adaptive skills deficits need to be at least moderately affected

Summary

- DSM 5 criteria is active
- Prevalence is high – CDC relates 1 in 68
- M-CHAT is a good screen at 18 and 24 months of age
- TEACCH, PECS, ABA are all methods with evidence
- Early Intervention, School and DD systems are important supports to refer to

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