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*Autism and Other Autism Spectrum  
Disorders (ASD) or Pervasive  
Developmental Disorders (PDD)*

Institute for Development  
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# *OUTLINE*



- **Concept and Diagnoses of Autism and other ASD/PDD**
- **Developmental Psychopathology of Autism and Ohta' Stageing**
- **Treatment of Autism including Cognitive Developmental Therapy**



# **Concept and Diagnoses of Autism and other ASD/PDD**

# *Earlier Descriptions about Autism Spectrum Disorders*




***Kanner L. , 1943***

***“Autistic Disturbances of Affective  
Contact”***

***(1944 Early infantile autism)***

***Asperger, H., 1944***

***“Autistisch Psychopathen im  
Kindersalter”***



*Three myths of autism  
based on psychoanalytic theory*

- 1. “Autism”; defense against parents esp. mother.*
- 2. good or excellent potential intelligence.*
- 3. no brain biological problems.*



## *Declining of the three myths and Appearance of new concept*

- *Declining of the myths and Development of a new concept as brain dysfunction*
- *Defined as behavioral syndrome at present*

# *Historical Change of Terminology for Autism in Official Diagnostic Systems*

	DX System	Terms	Higher Category
1968	DSM-II	childhood type	Schizophrenia
1978	ICD-9	infantile autism	Psychosis
1980	DSM-III	infantile autism	PDD
1987	DSM-III-R	autistic disorder	PDD
1991	ICD-10	childhood autism	PDD → AS
1994	DSM-IV	autistic disorder	PDD → AS
2000	DSM-IV-TR	autistic disorder	PDD

ICD: International Classification of Diseases (WHO)

DSM: Diagnostic and Statistical Manual of Mental Disorders (APA)

PDD: Pervasive developmental disorders

AS: Asperger Syndrome



# *Diagnostic Criteria of [Childhood] Autism/Autistic Disorder*

- Qualitative impairments in reciprocal interaction
- Qualitative impairments in communication
- Restricted, repetitive, and stereotyped patterns of behavior, interests and activities
- Developmental abnormalities must have been present in the first 3 years for the diagnosis to be made

(ICD-10 WHO , 1994; DSM-IV-TR APA, 2000)



# *Abnormal Behaviors frequently associated with Autism*

## In Childhood

hyperactivity, sleep disturbance,  
oversensitivity to sounds, abnormalities in  
eating etc

## After Adolescence

inertia, self-injurious behavior(SIB), aggressive  
behaviors, catatonia, obsessive-compulsive  
disorder(OCD) like behavior, mood disorders  
(depression, bipolar disorders, “mood swings”),

# *Pervasive Developmental Disorders*

## *ICD-10*

- Childhood autism
- Atypical autism
- Rett's syndrome
- Other childhood disintegrative disorder
- Asperger's syndrome
  
- Overactive disorder associated with mental retardation and stereotyped movements
- Other pervasive developmental disorders
- Pervasive developmental disorder, unspecified

## DSM-IV-TR

- Autistic disorder
- Rett's disorder
- Childhood disintegrative disorder
- Asperger's disorder
  
- Pervasive developmental disorder NOS



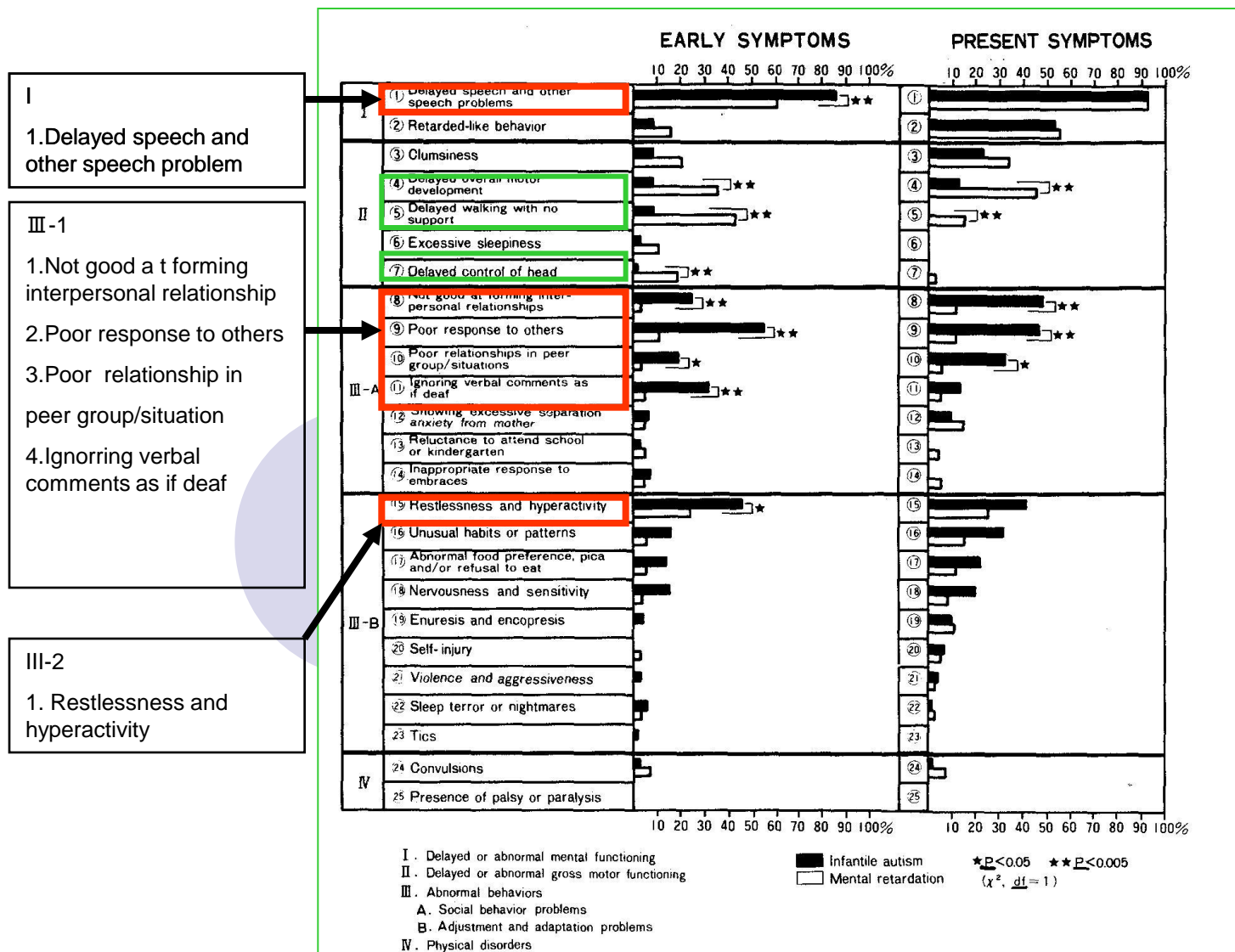
# *Intelligence and cognition*

- Since autism is a behavior syndrome, each autistic child have different intelligence
- Cognitive skills are usually uneven
- Intelligence develops with age

# Savant Syndrome



# Early Symptoms of Autism



**Fig. 3.** Frequency of item responses for early and present symptoms of infantile autism and mental retardation.

(Ohta et al. 1987)



# *Social Interaction Types in Adult Life*

- Aloof Subgroup
- Passive Subgroup
- Active-but-Odd subgroup
- Subgroup with Stilted Interaction

(Wing, L. 1992)

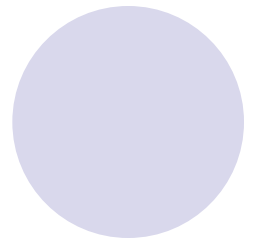
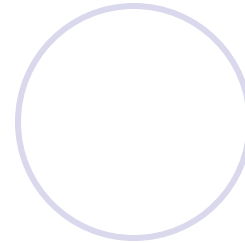
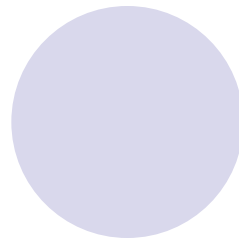
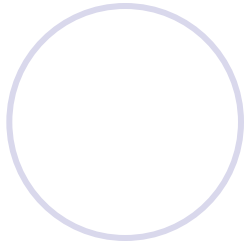
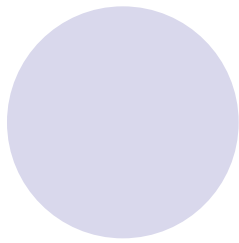
# Wing's Subgroups and Ohta Staging

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	III-2>	III-1<	Total (%)
Aloof	4	18	22 (45.8)
Passive	9	3	12 (25.0)
Active-Odd	13	1	14 (29.2)
Total	26	22	48

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$p < .00001$   $\chi^2 = 22.014$   $df = 2$

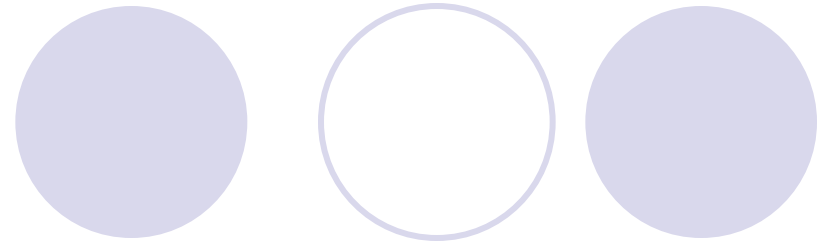


### **Present Social Situation**

	<b>Male</b>	<b>Female</b>	<b>Unknown</b>	<b>Total</b>	<b>%</b>
Employed	56	9	3	68	18.4
Public/private workshop	75	14	5	94	25.5
Institution	172	37	8	207	56.1
	300	50	16	369	

(Autism Society Japan 1992)

# Prevalence of PDDs

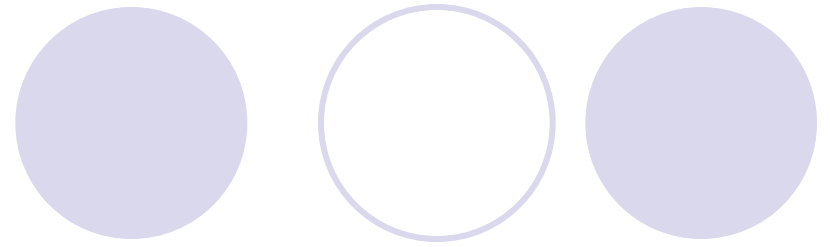
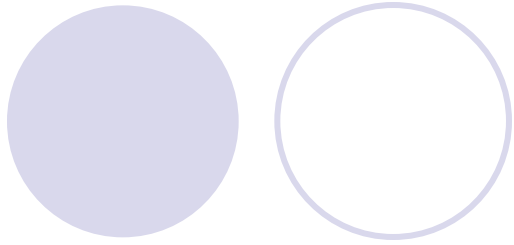


*Previous*

*Present reports  
abroad*

Typical Autism	4, 5~7	17~40↑
Other PDDs	2 ~5	27~46↑
All PDDs	6, 7~12	~100~↑
Ratio of + MR	75~80%	22~49%↓

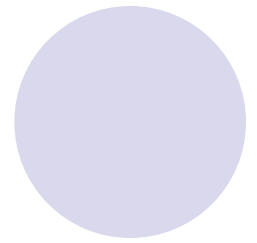
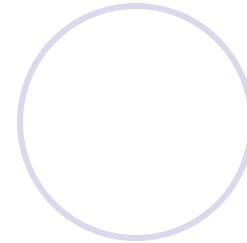
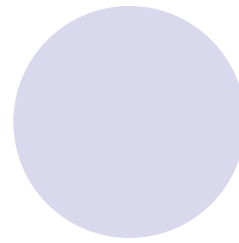
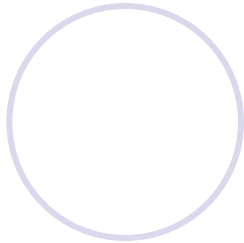
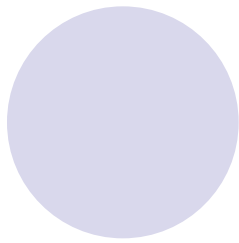
*(Per 10,000 child population)*



*Etiology of ASD*

# Cumulative Ratio of Epilepsy in Course of Autism

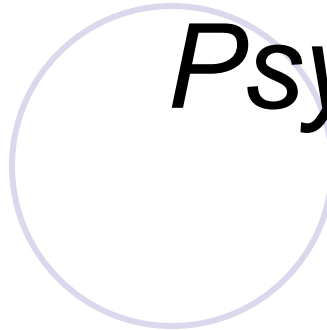
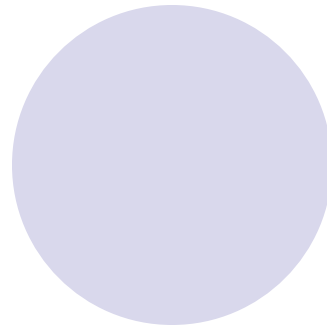
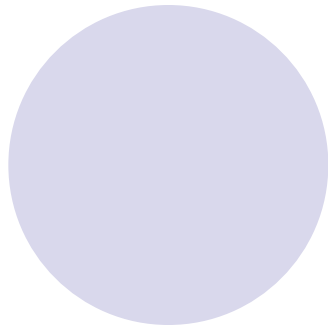
	Year	Ratio(%)	Number of subjects	Number of subjects with epilepsy	Mean age of subjects (Range)
Keyakinosato	1993	33.3	60	20	25yr (18° 38yr)
Kawasaki et al.	1988	30.1	209	63	14 (10-22)
Shimizu et al.	1987	25.0	100	25	14 ( 5-27)
Gillberg et al.	1987	26.1	23	6	- (16-23)
Kobayashi et al.	1985	14.4	90	13	16 (12-27)
Matsumoto et al.	1982	12.1	91	11	14 ( 9-22)
Lotter et al.	1974	20.0	30	6	- (16-18)
Rutter et al.	1974	28.1	64	18	22
Kanner	1971	18.2	11	2	- (29-39)



# Ratio of Concordance in Twin Studies of Autism

Reporters	Year	MZ		DZ	
Folstein & Rutter	1977	4/11	(0.36)	0/10	(0)
Steffenburg et al	1989	10/11	(0.91)	0/10	(0)
Ritvo et al	1985	22/23	(0.96)	4/17	(0.24)
Smalley et al	1988	9/11	(0.82)	2/9	(0.22)
Wakabayashi et al	1981	3/8	(0.39)	0/2	(0)
Total		48/64	(0.75)	6/48	(0.13)
			(Nakane 1998)		

*Developmental  
Psychopathology  
in Autism*



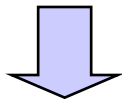


## *Major Findings on Standard Psychological Tests*

1. autistic children reject tasks not due to "autistic shell", but due to difficulty of tasks
2. IQ scores of autistic children distribute from within normal range to severely retarded level ; recently ratio of autistic children with normal intelligence are gradually increasing.
3. Wechsler tests show a characteristic profile in their course of development
4. IQ scores are remarkably stable, regardless clinical changes in behavior
5. obtained IQ scores are predictive of later adjustment

# *Three Crisis Points of Cognitive Development in Preschooler*

1. differentiation of "means" and "end" in Non-symbolic period or Sensory-motor period
2. finding of "name", that is, everything has its own name
3. formation of basic concepts, including concepts of relationships such as comparison, spatial concepts



Children are acquired "concept of Inclusion" about 7 to 8 years (Piaget)



***STAGE OF COGNITIVE DEVELOPMENT  
(Ohta's Staging)***



# ***STAGE OF COGNITIVE DEVELOPMENT (Ohta's Staging)***

Stage I Non-symbolic representation

Stage I-1 Non active requesting behaviors

Stage I-2 "Crane phenomenon" most frequent behavior

Stage I-3 Various request behaviors including  
speech, gesture and/or pointing

Stage II Emergence of symbolic functioning

Stage III Explicit existence of symbolic functioning

Stage III-1 Understanding "object names"

Stage III-2 Understanding "concepts of relationship"

Stage IV Intuitional thinking (4,5-7,8yrs)

(End of the preoperational period)