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EPIDEMIOLOGICAL AND CLINICAL STUDY OF AUTISTIC CHILDREN IN YOGYAKARTA, INDONESIA

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INDEXING WORDS

autistic disorder; epidemiological study; prevalence; social interaction; Bryson's scale; CARS;
attachment relationship; communicative ability,

SYNOPSIS

This epidemiological study of autistic children was carried out in Yogyakarta, Indonesia.

The approaches considered included the analysis of cross - sectional data on non - verbal intelligence, social maturity behavior or adaptive skills test by using statistical or sampling controls. The 5,120 children studied were all Javanese. Doctors, nurses of Public Health Centers and school teachers assisted in assessing the above subjects. The Bryson's screening scale for evaluating autistic children was used. A total of 66 children who scored above 16 were identified.

Final diagnosis was done by means of CARS. Six children, who lived within Yogyakarta Municipality, were identified.

The prevalence rate of autism within the birth cohort who were born between June 1984 and May 1991 was 12 per 10,000.

Observations of the social interactions of 6 autistic and 6 normal children of equivalent mental age were carried out during a free play situation and reunion situation with mother and a stranger. A comparison of the two groups during social interaction made it clear that the autistic children showed more attachment, directed more social-interaction and more physical contact toward their mothers than to strangers during the reunion situation.

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INTRODUCTION

Epidemiology is the study of the distribution of disorders in a population, together with an examination of how the distribution varies within a particular environmental or other circumstance. This kind of study can be accomplished by counting the number to determine if the distribution of some specified circumstance or behavior is statistically associated with a specified circumstance. The result of the statistical association is then used as a link in the chain of the argument on causation.¹¹⁾ The Workshop on the Diagnosis of Autism and Related Disorders in 1983 summarized and successfully came to agreement on essential features of autism as follows : (1) social impairment, (2) delayed and deviant language, (3) repetitive, stereotypic or ritualistic behavior.^{6, 23)}

Onset at 36 months of age is one of the criteria for autism in commonly accepted diagnostic systems for identifying autism.^{2, 13, 14)}

Most studies on the prevalence of the autistic disorder in many countries found that there were fewer female cases than males.¹⁰⁾ According to Tsai et al (1983) males may have a lower threshold than female for brain dysfunction. Females have lower incidence of autism, but when autism occurs in the female, the symptoms are generally more severe than in the male.²⁰⁾

The epidemiological study in China (cited Tao, K.T, 1987) reported the rarity of autistic disorder. He found only two cases among the 4.5 million population in Nanjing.²⁰⁾ Hospital and clinical data lends only limited use for epidemiological purposes because many children with a psychiatric disorder do not receive hospital care (Rutter & Sandberg, 1985).¹¹⁾ An epidemiological study by Chung et al (1990) which was done in Hong-Kong, where the population is mostly composed of Chinese, reported almost same result with other countries, except that in Hong-Kong the age of children identified as autistic was lower; 77 % of the children were in the range of 3 - 4 years old, on the other hand only 7 % were above 7 years old.⁵⁾

In Japan, Tanoue and Oda (1988) found prevalence ratio of autistic children was 0.1395 % in Southern Ibaraki District.²²⁾ However, Ishii and Takahashi (1983) found the prevalence ratio of 0.16 % in Toyota City, Japan.⁸⁾ Sugiyama and Abe (1990) found the prevalence ratio is about 0.13 %.¹⁹⁾ All the studies on autistic disorder used DSM - III criteria and adopted cohort observation and the autistic disorders were followed up at least until the age of 6 years.

The primary social interaction of the very young child with the mother forms an attachment behavior on the part of the child. This type of tie is formed between the child and a specific person together in specific situation that continues along the life span (Ainsworth, M et al, 1978).¹⁾

Bowlby (1969)³⁾ considered attachment behavior should develop gradually in the early years of life through four phases. In the first phase, developing in several months of early life in normal children, the infant begins to respond selectively to people as compared to inanimate objects, although they do not differentiate specific individuals. In the second phase, the infant is capable of differentiating between the mother and strange individuals and direct more attention and proximity-seeking to the mother. In the third phase, the child shows distress in the absence of

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the mother and greater comfort in her presence. In the fourth phase, normal children of 4 to 5 years old, can tolerate separation from the mother for increasing length of time.

The critical time of the development of the attachment relationship in 12 to 24 month olds was observed (Ainsworth, Blehar, Waters, & Wall, 1978).¹⁾ The autistic child suffers from a disturbance in social relationship (Kanner, 1943; Wing, 1981).²⁴⁾ There is little evidence that autistic children differentiate between their mothers and other strange people or show any selective response to separation and reunion with their mothers (Sigman, & Ungerer, 1984).¹⁷⁾

The attachment relationship has been defined as the child's behavioral responses to separation and reunion with their mothers or caregivers. These behavioral responses were fretting during separation from the mother, and looking, smiling, vocalizing, or proximity-seeking directed toward the mother upon reunion. The duration of certain behavior patterns upon reunion and separation toward their mothers was assessed in order to describe how autistic children show their attachment behaviors.

This study was done to answer the following questions:

1. What are the differences between autistic children and non-autistic children ?
2. What is the prevalence ratio of the autistic disorder in Yogyakarta ?
3. What are the special features of autistic children in Yogyakarta ?
4. Do the autistic children direct a similar attachment relationship towards their mothers and strangers when compared with non - autistic children ?
5. Do autistic children respond differently to separation and reunion with mothers than non-autistic children ?

This study is the first epidemiological study on autistic children ever done in Indonesia.

Yogyakarta is located 600 km to the southeast of Jakarta. The size of the Province is almost 650 km square with a population of 3 million. Almost 35 % of the population is children under the age of 14.

In Yogyakarta Province there are 44 Extra-ordinary Schools or Specialized Schools for Disturbed Children under Government or Private Administration. The Extraordinary Schools cover 5 different kinds of disturbed children. Classification A is for children with impairment of vision (blindness), classification B is for children with impairment of hearing (deafness), classification C is for children with impairment of intelligence (mental retardation, autistic children), classification D is for children with physical impairment and classification E is for children with disturbances of behavior. Classification F is now planned to be open in the future for children with genius-level of intelligence. Classification C consists of two classes of abnormal mental development; educable class and trainable class. An autistic child may attend any one of the classes, depending on the child's intelligence, level of social - relationship and verbal communicative ability. Educable class consists of elementary and junior high-school. Students of this school is almost comparable to school for normal children. Up to now, autistic children have no special class. These children attend extra-ordinary schools mixed with retarded children. All of the children are taught in spelling, writing, drawing, playing with clay, gymnastics and are supported in developing relationships with each other.

METHODS AND SUBJECTS

I. Screening

I-1. The subjects were children aged between 4-7 years, who lived in the randomized area of Yogyakarta City. The total population in the target area was 95,339 inhabitants. The number of children below 12 years old was 35,179. The number of children, who had been screened by Bryson's screening test,⁴⁾ aged between 4 - 7 years old, was 5,120. The screening was done by a team of doctors, nurses and teachers who had been trained by a psychiatrist (Table 1). The records of these children were kept in the Office of Population Registration of Yogyakarta City.

I-2. In the first stage, screening was done on children of 4 to 7 years old who lived in the randomized area using Bryson's screening test. Children who had score of 16 or above were collected. This screening test consists of 19 items reflecting social behavior, language and repetitive behavior as well as academic achievement. Each behavior is rated on a three point scale (0, 1, 2) and specific examples of those abnormal behaviors were described (see Appendix II).

Table 1 Total number of children 4-7 years old.

No.	Area	Children (yrs)		Sex	
		0 -12	4 - 7	F	M
1	Mergangsan	9,040	1,475	718	757
2	Tegalrejo	11,408	1,663	913	750
3	Umbulharjo	14,731	1,982	984	998
		35,179	5,120	2,615	2,505

The screening was done by a psychiatrist, clinical psychologist, doctor in psychiatric training, doctor of the Community Health Center, nurse of the Community Health Center and teachers trained in using Bryson's screening test. Members of the screening team were asked to complete the entire questionnaires for all children living inside the target area. Case selection was based on the total score on the questionnaire and on evaluation of the pattern of responsiveness across the main categories of social, language and repetitive behaviors along with examples of the disturbances provided. All selected cases had two or more items in at least two of the main categories and had a total score at least 16 of the possible 38. Parents of selected cases were given brief description of the study and agreed that their children may be evaluated on the social behaviors. These children were identified as high-risk group and needed further direct observation.

I-3. The number of children who scored 16 or above on Bryson's screening test was 66. In the second stage, these children were evaluated by a psychiatrist and a clinical-psychologist using CARS (Schopler, 1986).¹⁵⁾

I-4. A score of 30 or above in CARS is needed to diagnose a child as suffering from autistic disorder. Schopler's rating scale, CARS, is a 15 items behavioral rating scale used to identify a

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child with autism . To score the CARS, each of the 15 items is given a rating from 1 to 4 (see Appendix I). After the child has been rated on each of this 15 items, a total score is computed by summing the individual ratings. The child's final diagnosis was based on information from all 15 items. Children with a score below 30 was diagnosed as non-autistic, while scores ranging from 30 to 36.5 were considered to indicate mild to moderate autistic and scores ranging from 37 to 60 indicate severe autistic.¹⁵⁾

The 66 families of selected children were contacted to arrange an appointment for an assessment of the children and interview with parents, teachers or other intimate family members. The visits were done in the child's home. Usually the home was visited twice by us. The psychiatrist assessed the child, the clinical-psychologist interviewed the parent. The parent interview focused on the developmental history and current medical status of the child. All available information on each child (e.g. direct observation, parent interview, medical and school record) was reviewed by us to determine who met the combined criteria of autistic disorder. Those cases on which we agreed were included in the target group as autistic disorder.

II. Observation of attachment relationship

II-1. Observation was done during a free play , separation and reunion situation with mother and stranger of the attachment relationship of 6 autistic and 6 normal children as a control group of equivalent mental age, socio-economic level and parent education.

II-2. The attachment relationship of the autistic and control group were video recorded. The mother and the child were brought into a room, 4 x 4 m. The room contained two chairs, one for the mother and one for the stranger. The room had a one way glass mirror for observation of the attachment relationship of the child. All children were tested with their mothers.

The assessment situation of the attachment relationship is composed of 6 episodes, each completed in 2 minutes. The first episode, the mother and child enter into the room and the mother sit on the chair, and is being inhibited from initiating interaction with the child, but is allowed to respond naturally to the child overtures. The child is permitted to play alone with a set of toys for two minutes. Child's response can be sitting, standing near, touching the adult, looking at , smiling vocalizing, fretting or proximal to the mother. Smiling, vocalizing and fretting were coded only when accompanied by looking at the mother or the stranger. In the second episode, the stranger enters into the room, she sits on the chair in front of the mother. The mother and the stranger are instructed not to initiate interaction with the child, but may have interaction with each other. In the third episode, the stranger leaves the room and the child's responses upon this separation are observed. The mother and child remain in the room. The fourth episode is a reunion with the stranger. The fifth episode begins with the leaving of mother who has been staying in the room and keeping the stranger and the child remain in the room. Observation of the responses by the child to the separation from the mother is done. The sixth episode is reunion with the mother as she enters into the room and sit on the chair. During the reunion responses of the child are recorded and the mother and stranger allow the child to do what

ever he or she likes. Observation was also done when the child stood near the door, from which the mother and the stranger come in and go out. The duration of all behaviors were calculated from the video records. The data consisted of duration of behaviors in terms of seconds. The individual attachment relationship was computed for autistic and normal children.

III. Communicative Ability of Autistic Children

A scale of verbal communicative ability of autistic children had been invented. The scale covers 4 degrees of ability to speak and to speak to other people with scores from 1 to 4.

- Score 1. Normal verbal communication, fluent conversation, age and situation appropriateness, clear awareness toward other members.
- Score 2. Slightly abnormal verbal communication and slight speech retardation both in qualitative and quantitative aspect. Almost all speech can be understood and is meaningful; however some echolalia of words and sentences may occur sometimes. Some non-meaningful words may be used.
- Score 3. Moderately abnormal verbal communication. Can speak as much as 5 meaningful words, but most words are non-meaningful. There are strange pronunciation, echolalia of pronouns and inappropriate expression in regard to time and situation.
- Score 4. Severely abnormal verbal communication. Mute, or no speech. Only vocalization such as infantile squeels, sounds or noises can be generated.

RESULTS

Screening of autistic children by means of Bryson's test and CARS

Sixty six children had Bryson's score of 16 or above. The distribution of scores among these 66 children is shown in Table 2.

Table 2 Distribution of Bryson's Score Among Children (n=66)

Bryson's Score	Sex		Total
	F	M	
16 - 21	14	40	54
22 - 27	0	5	5
28 - 33	2	3	5
34 - 39	1	1	2
	17	49	66

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Table 3 Distribution of CARS's Score Among Children (n=66)

CARS Score	Sex		Total
	F	M	
15 - 29.5	15	45	60
30 - 36.5	1	0	1
37 - 60	1	4	5
	17	49	66

In the next, those selected cases were assessed using CARS's rating scale and 6 children, as a result, were found to have CARS's score larger than 30. They were diagnosed as autistic children. In the Table 3, the distribution of the scores in CARS among 66 children is shown.

The distribution of the CARS score for 6 autistic children is shown in Table 4 and in Fig.2.

Table 4 Distribution of CARS's Score Among Autistic Children (n=6)

CARS's Score	Sex		Total
	F	M	
15 - 29.5	0	0	0
30 - 36.5	1	0	1
37 - 60	1	4	5
	2	4	6

The autistic children were composed of 4 males and 2 females with mean chronological age of 90.6 months (SD = 4.9). The mean developmental quotient was 36.2 (SD = 5) and the mental age was 33 (SD = 5.1) (Table 8).

Table 8 Psychometric Data Among Autistic Children (n=6)

No.	Sex	C.A. Months	Non-Verbal IQ WISC-R	Non-Verbal M.A. Miller-Palmer
1	F	84	38	32
2	M	90	40	36
3	F	94	38	36
4	M	84	28	24
5	M	95	42	40
6	M	96	31	30

Comparison of Bryson's scores and CARS scores between autistic and non-autistic children

By using the Kolmogorov-Smirnov Two Sample Test¹⁶⁾ a comparison was done between the autistic and the non-autistic groups. The result showed that the autistic and the non-autistic children differed significantly in Bryson's total score ($p < 0.05$) and CARS total score ($p = 0.01$). In the two scales, autistic children scored significantly higher than non-autistic children (see Fig.1, Fig.4 and Fig.7).

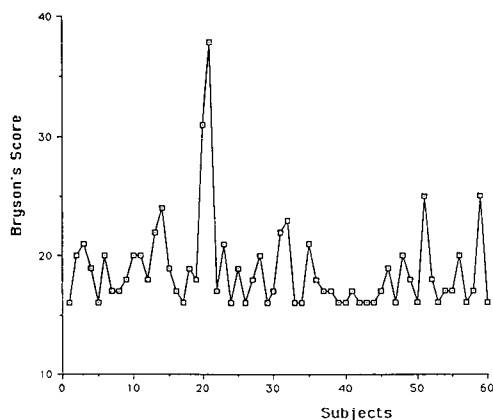


Fig. 1 Distribution of Bryson's Score Among Non Autistic Children ($n=60$)

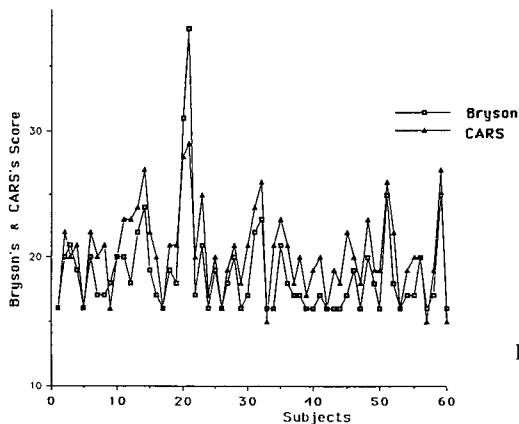


Fig. 4 Distribution of Bryson's and CARS's Score Among Non Autistic Children ($n=60$)

The high correlation was found between Bryson's and CARS scores in 60 non-autistic children ($r = 0.82$) (Fig. 5).

Also, the high correlation was found between the two in 6 autistic children ($p > 0.008$; $r = 0.92$) (Fig. 6).

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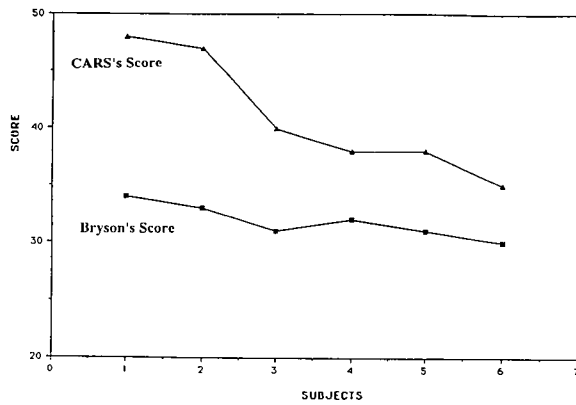


Fig. 7 Distribution of CARS's and Bryson's Score Among Autistic Children (n=6)

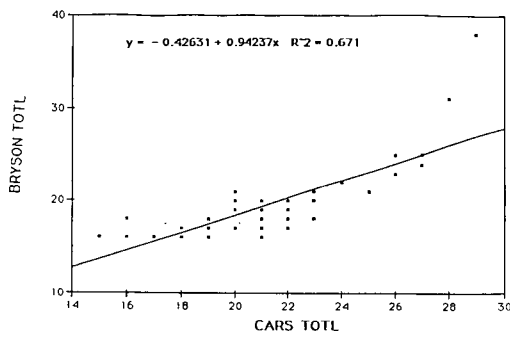


Fig. 5 Correlation Between Bryson's and CARS's Score Among Non Autistic Children (n=60)

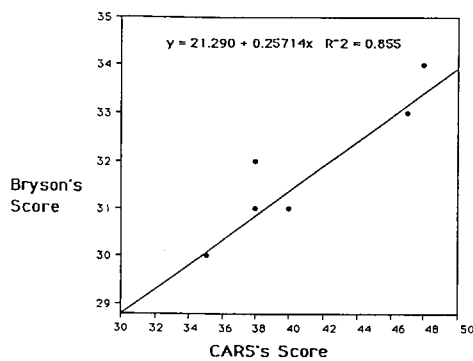


Fig. 6 Correlation Between Bryson's and CARS's Score Among Autistic Children (n=6)

Table 5 Distribution of CARS's Score Among Non Autistic Children (n=60)

CARS Score	Sex		Total
	F	M	
15 - 29.5	15	45	60
30 - 36.5	0	0	0
37 - 60	0	0	0
	15	45	60

Table 6 Distribution of Bryson's Score Among Non Autistic Children (n=60)

Bryson's Score	Sex		Total
	F	M	
16 - 21	14	40	54
22 - 27	0	5	5
28 - 33	0	0	0
34 - 38	1	0	1
	15	45	60

Prevalence

The six children who were identified by CARS as having autistic disorder were composed of four male and two female children. The total population of children, aged 4 to 7 years is 5,120. The prevalence ratio of autistic disorder is 12 per 10,000.

A CARS score for an autistic girl was 35, and she was diagnosed as having moderate autistic disorder. CARS scores of 4 autistic boys and an autistic girl were ranged between 38 - 48, and they were diagnosed as severe autistic disorder (see Appendix I : Fig.2 and Fig.3). The ratio of male to female autistic disorder was 2 : 1. The autistic child that scored highest in CARS was a male and the lowest was a female.

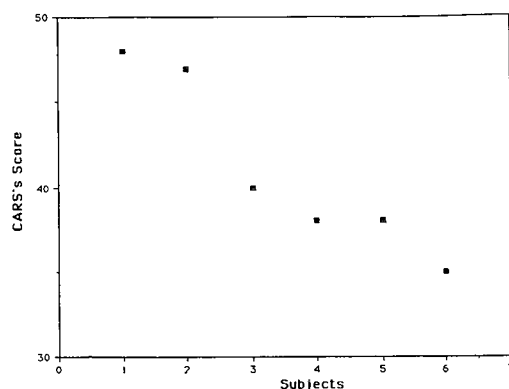


Fig. 2 Distribution of CARS's Score Among Autistic Children (n=6)

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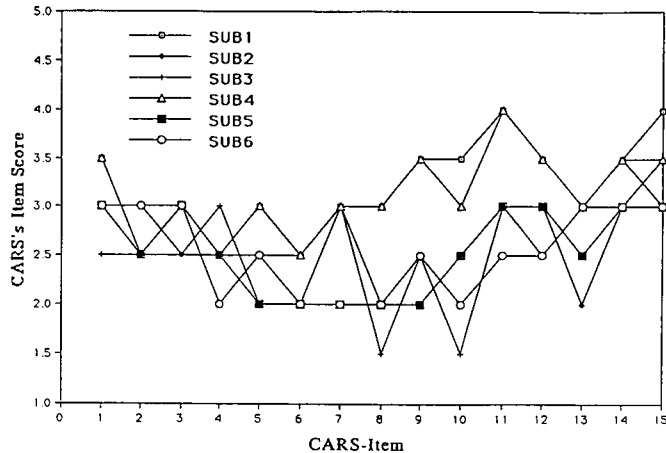


Fig. 3 Distribution of CARS- Item-Score Among Autistic Children (n=6)

Behavior characteristics of autistic children

Almost all of the autistic children presented deviant social attachment, deviant and non-communicative language, failure to develop reciprocal relationships and stereotyped repetitive ritualistic behaviors (Table 9).

Similarities of the autistic symptoms and signs in the group are prominent. The quality of social interaction included social aloofness in 3 boys, active but odd interaction in a girl and passive

Table 9 Social Behavior of Autistic Children (n=6)

Social Behaviors						
No.	Social Impairment		Language Impairment		Repetitive Behaviors	
	Insecure attachment	No reciprocal relationship	No speech	Deviant and non-communicative	Stereotypes	Rituals
1	+	-	-	+	+	+
2	+	+	+	+	+	+
3	+	+	-	+	+	+
4	+	+	+	+	+	+
5	+	+	-	+	+	+
6	past	+	+	+	past	+

interaction in a girl and a boy. Abnormal and non-communicative language was found in 3 boys and idiosyncratic use of words and phrases in 2 girls and in a boy. Stereotyped repetitive behaviors were found in all children and they showed complete absence of symbolic, imaginative activities.

Verbal-communicative ability of autistic children.

We assessed the communicative ability in the 6 autistic children using a scale which was invented by us. Table 10 shows the result for the 6 autistic children. A half of the children was rated as 3 and another half was rated as 4 as seen from the table.

Table 10 Communication Ability of Autistic Children (n=6)

No.	Sex	Score
1	F	3
2	M	4
3	F	3
4	M	4
5	M	4
6	M	3

1. Normal speech
2. Slightly abnormal speech
3. Moderately abnormal speech
4. Severely abnormal speech
No speech

Attachment relationship with mother and stranger in autistic and non-autistic children.

A comparison in duration of proximity-seeking, social behavior, separation and re-union toward the mother and toward the stranger was done to determine whether the autistic children differ in their attachment relationship with mother from non-autistic children. In all measures, the autistic children showed a strong preference for interaction with the mother in all episodes where the mother and the stranger were present or absent. The normal children showed less preference for interaction with the mother (Table 7).

The autistic children showed more proximity-seeking to the mother than to the stranger ($p = 0.058$) and more total social behavior to the mother than to the stranger ($p < 0.05$). Since in all measures, the autistic children showed more prominence for interaction toward the mother, our conclusion is that the autistic children can certainly have an attachment relations with their mothers.

The response of the autistic children during separation from the mother was compared with their response to separation from the stranger. Duration of fretting and standing near the door were compared for two separation episodes. It was observed that there was some distress manifested by the autistic children in the separation situation: autistic children ran after their mother when they left the room. In other words, the autistic children showed no specific attachment response. The autistic children's attachment behavior did increase significantly during reunion with the mother.

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Table 7 Social Interaction of Autistic and Normal Children (n=6)

Subject	Mother		Stranger		P
	$\bar{X}$	SD	$\bar{X}$	SD	
I Autistic Group (n=6)					
a. Prox. Seeking	175.33	165.04	49.19	72.19	0.058*
b. Soc. Behavior	253.50	208.31	54.41	68.12	0.023**
c. Separation	29.35	43.33	0.57	0.97	0.052*
d. Re-union	27.80	51.57	1.40	2.60	0.143 N.S.
II Normal Group (n=6)					
a. Prox. Seeking	172.33	216.10	20.50	46.87	0.061*
b. Soc. Behavior	192.50	205.25	59.00	91.81	0.088*
c. Separation	1.66	1.86	0.50	0.83	0.095*
d. Re-union	8.16	8.63	4.00	3.40	0.149 N.S.
p<0.01 *** p<0.05** p<0.1*					

The social behavior directed toward the mother during reunion with the mother was contrasted to that directed toward the stranger in reunion with the stranger. While the autistic children showed large increase in social behaviors directed to the mother during the reunion (mean: 27.80 sec), only a small increase was found towards the stranger (mean: 1.40 sec).

The difference between the above two increases was not significant (p =0.14). This would indicate that the autistic children do not show any specific response to the mother in the reunion episodes. Concerning with the responses during separation episodes, the autistic children demonstrated greater increase in their social behaviors directed to the mother (mean: 29.35 sec) than toward the stranger (mean: 0.57 sec). The difference between the above two increases was significant (p=0.052). This response of the autistic children to separation may indicate a specific attachment response to the mother (see Table 7).

DISCUSSION

The total number of children aged 4 to 7 years in our study in Yogyakarta, Indonesia, was 5,120. These children were assessed by Bryson's screening test. The number of children with the score of 16 or more in the Bryson's test was 66 (1.2 %). These children were suspected of developmental problems. This number seems greater than the number which can be suspected from the past reports. According to many reports, the prevalence rate of mental retardation is almost 1 %.^{7, 9, 19}) Approximately 80 % are mildly mental-retarded and are difficult to diagnose (Sugiyama, 1989).¹⁹) Among the 66 selected children, 6 children were diagnosed as autistic with CARS. The score in Bryson's test and in CARS are significantly correlated to each other. But, the Bryson's screening test is simple and uncomplicated to use. Therefore, we think

the Bryson's test is suitable for a screening which is aimed at applying to the great number of subjects, such as in our study.

Throughout the world, the prevalence of the autistic disorder is between 0.04 % to 0.16 % (Hoshino et al., 1980; Lotter, 1986; Wing et al., 1976; Ishii, Takahashi, 1983; Sugiyama and Abe, 1989).

In our study, the prevalence of the autistic disorder was 0.12 %. The diagnosis of the autistic disorder for all cases was made with agreement between psychiatrist and clinical-psychologist .

The autistic children showed severe impairments of social interaction, deviance and delays of language development and repetitive, stereotyped, ritualistic behaviors. These abnormalities found in the Indonesian autistic children had the same features found in autistic children in another countries.

The autistic children demonstrated more social behaviors toward their mother than toward the stranger, including proximity-seeking social behaviors in separation and re-union situations. It is concluded that the capacity in autistic children with their developmental level to differentiate mother from stranger is similar to that of normal children. While there are many developmental disturbances in the autistic children, it seems that the autistic children can develop the attachment to the mother. This means that the autistic children are capable of acquiring object permanence.^{1 2)} In normal children it has been thought to require elementary levels of object permanence in order to develop attachment.

We found that all the autistic children with an advanced level of object permanence did show the attachment. Thus, it can be said that the capacity to represent symbolically objects and people is related to the development of attachment. Normal children need lower degree of symbolization to develop attachment. The autistic children, however, need a higher degree of representation in order to develop the attachment relationship.

It was interesting to observe that the autistic children demonstrated close relationships with their mothers. Our observations are at a variance with previous reports from other countries which gave autistic children's poor attachment relation with a specific person^{1 8)} : it is very interesting to clarify whether this is culture-bound or not.

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- spinning around, twisting hands in front of face) 0 1 2
 Example :
3. Looks past or through people, or avoids direct eye contact with other 0 1 2
4. Unusually slow to attain toilet training, dressing, or other self help skills. 0 1 2
 Example :
5. Can speak only a single word or short phrases 0 2
6. Spends most of time on his/her own; has no interest in mixing with other children 0 1 2
7. Behaves as if deaf (but is not deaf), covers ears or becomes upset at certain noises 0 1 2
 Example :
8. Very clumsy or awkward; poor gross motor coordination (not due to obvious physical handicap) 0 1 2
 Example :
9. Echoes words, phrases, or complete sentences without regard to the meaning (repeats what is said to him/her) 0 1 2
 Example :
10. Extremely aloof and distant with both adults and children; "in a shell"; "very difficult to reach" 0 1 2
11. Over attentive to certain aspects of things (e.g., shininess, texture, colour, smell) 0 1 2
 Example :
12. Has failed one or more grades, is receiving resource help, or is in special class 0 2
 * Please specify which :
13. Can speak, but does not use speech for special purposes 0 1 2
14. Spends extended periods repeating simple activities (e.g., counting things, putting things in rows or piles, spinning wheels) 0 1 2
 Example :
15. Ability to read (decode) words is at least 2 grade levels above comprehension of what is read 0 2
16. Uses unusual voice (e.g., sing-song, whisper, squeaky, toneless, flat) which is not due to shyness 0 1 2
 Example :
17. Insist on special routines (e.g., doing things in rigid order); becomes overly upset with change 0 1 2
 Example :
18. Although generally slow, has surprisingly good memory

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for certain things (e.g., music, numbers, location of object) 0 1 2

Example :

19. Looks at objects out of corners of his/her eyes, or stares vacantly at or past objects (although sight is normal) 0 1 2
20. Other comments (include visual, hearing, or physical impairment) :