

Pervasive Developmental Disorders and Autism Spectrum Disorders: Are These Disorders One and the Same?

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The concept of pervasive developmental disorders (PDD) and autism spectrum disorders (ASD) closely resemble each other. Both ICD-10 and DSM-IV use the term PDD. The authors surveyed the perception of PDD/ASD and attitudes toward terminology. The subjects of this study were 205 medical/social-welfare professionals working in fields relating to developmental disorders. Questionnaires were mailed to site investigators at the collaborating institutes. With regard to what the scope of ASD and PDD encompasses, the answers were almost equally divided among three views: ASD and PDD are the same, PDD is wider in scope and ASD is wider. The terms PDD and autism were used in slightly different ways depended upon the situation. Our results demonstrate that the parameters of PDD and ASD are unclear and that the terms related to PDD/ASD are often used differently. Further studies are required to develop more clear and reliable diagnostic criteria for PDD.

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Key Words Autism, Asperger's Syndrome, Pervasive developmental disorders, Autism spectrum disorders, Diagnostic criteria.

INTRODUCTION

The term pervasive developmental disorders (PDD) first appeared in the ICD-10 in 1992.¹ Pervasive developmental disorders are a condition characterized by a clinical triad of impairment in social interactions; impairment in communications; and a restricted repertoire of activity and interests. The concept of the autism spectrum disorders (ASD) was proposed by Lorna Wing.^{2,3} In her view, ASD encompasses disorders ranging from severe autism with profound mental retardation to high-functioning autism and Asperger's syndrome. Wing regards these conditions as one continuous clinical entity.

The diagnostic criteria for autistic conditions have been controversial. In clinical practice, several different diagnostic criteria

have been used, including the ICD-10 and DSM-IV,⁴ as well as Kanner's,^{5,6} Gillberg's,^{7,8} and Wing's criteria.^{3,9} The criteria described in both the ICD-10 and the DSM-IV closely resemble each other, and both diagnostic systems use the term PDD. However, the terms used in these two widely accepted diagnostic systems to describe subcategories in PDD are not identical. Furthermore, clinicians worldwide have frequently used the term ASD. The diversity among the definitions of ASD and the disparate terms for autistic disorders could be factors that confuse not only the subjects with PDD and their families but also medical and welfare professionals.

In this study, we surveyed the perception of autism and related conditions as a clinical entity and attitudes toward terminology on these disorders among medical and social welfare staffs in this field.

METHODS

The subjects of this study were 205 medical and social welfare professionals working in fields relating to developmental disorders. These participants numbered 50 psychiatrists, 5 pediatricians (whose subspecialty was child psychiatry), and 149 non-

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medical doctors, most of whom were working at child guidance centers. All participants completed the questionnaire during the study period from July 1 to August 31, 2008. The authors provided three options for answering the questionnaire: online, email, or conventional mail. Questionnaires were mailed to site investigators at the collaborating institutes. The site investigators either physically distributed questionnaires to their colleagues or sent emails providing colleagues with the questionnaire's URL plus a login password. The purpose of this study was clearly

stated on the face sheet of the questionnaire; answering the questionnaire was deemed to be consent. All respondents participated in this study without any incentive. Similarly, all authors and subjects involved in this study declared themselves free of any conflict of interest relating to the study.

RESULTS

The question items and their results are summarized in Ta-

Table 1.

	Over all (N=205) N (%)	Psychiatrists (N=50) N (%)	The others (N=155) N (%)
Q1: What is your occupation?			
Psychiatrist	50 (24.4)	50 (100)	
Pediatrician	5 (2.4)		5 (3.2)
Other than medical doctor (e.g., psychologists, caseworkers, child guidance center counselors)	149 (72.7)		149 (96.1)
No answer given	1 (0.5)		1 (0.6)
Both the ICD-10 and the DSM-IV use the term PDD. However, there is a slight difference in the subcategories of PDD between these systems.			
Q2: Which of the following terms do you think is more appropriate?			
Childhood autism (Autism)	56 (27.6)	19 (38.0)	37 (24.2)
Autistic disorder	81 (39.9)	22 (44.0)	59 (38.6)
Both terms mean the same to me	25 (12.3)	5 (10.0)	20 (13.1)
I am not sure	41 (20.2)	4 (8.0)	37 (24.2)
Q3: Which of the following terms do you think is more appropriate?			
Asperger's Syndrome	120 (59.4)	32 (64.0)	88 (57.9)
Asperger's Disorder	31 (15.3)	9 (18.0)	22 (14.5)
Both terms mean the same to me	25 (12.4)	7 (14.0)	18 (11.8)
I am not sure	26 (12.9)	2 (4.0)	24 (15.8)
Q4: Which of the following statements do you most agree with?			
Autism spectrum and PDD are the same diagnosis	53 (26.2)	13 (26.0)	40 (26.3)
As a term, PDD has a wider scope than Autism Spectrum	61 (30.2)	18 (36.0)	43 (28.3)
As a term, Autism Spectrum has a wider scope than PDD	65 (32.2)	17 (34.0)	48 (31.6)
I am not sure	23 (11.4)	2 (4.0)	21 (13.8)
Q5: When you or your colleagues use the term PDD, what does that mean to you?			
A more extended meaning as a category specified in the ICD/DSM	119 (58.6)	32 (64.0)	87 (56.9)
A limited meaning as PDD-NOS (a subcategory of PDD)	27 (13.3)	8 (16.0)	19 (12.4)
Meanings will differ in accordance with specific situations	33 (16.3)	8 (16.0)	25 (16.3)
I am not sure	24 (11.8)	2 (4.0)	22 (14.4)
Q6: When you or your colleagues use the term autism, what does that mean to you?			
A more limited meaning as specified in the ICD/DSM (a subcategory of PDD)	101 (49.8)	24 (48.0)	77 (50.3)
An extended meaning as described by the autism spectrum	36 (17.7)	9 (18.0)	27 (17.6)
Meanings will differ in accordance with specific situations	47 (23.2)	14 (28.0)	33 (21.6)
I am not sure	19 (9.4)	3 (6.0)	16 (10.5)

This table shows the summary of the results. Overall group includes 50 psychiatrists whose results are separately analyzed and indicated in the table. PPD: pervasive developmental disorders, NOS: Not Otherwise Specified

ble 1. Based on the report by each site investigator, the estimated response rate of email attachments and conventional mail was determined to be 95 percent. However, several factors limited the ability to precisely calculate a response rate; specifically, some mailing lists used in this study contained a number of invalid addresses.

When surveyed about the use of the term autism, 39.9 percent of the all respondents preferred the term autistic disorder to autism, while 27.6 percent believed autism to be the more appropriate term. The number of respondents who believed Asperger's Syndrome a more apt term to describe the condition (59.4 percent) was much higher than those who supported the term Asperger's Disorder (15.3 percent).

With regard to what the scope of ASD and PDD encompasses, the survey answers were almost equally divided among three views: 1) that ASD and PDD are one and the same (26.2 percent); 2) that PDD is wider in scope (30.2 percent); and 3) that ASD is wider in scope (32.2 percent). The results of the terminology questions revealed that the terms PDD and autism were used in slightly different ways depended upon the situation; i.e., PDD for PDD or PDD-Not Otherwise Specified (NOS), and autism for autism or ASD. A further analysis of the results only from psychiatrists revealed similar tendency in all aspects.

DISCUSSION

The incidence and prevalence of PDD have been gradually increasing, most markedly since the late 1990s.¹⁰⁻¹² However, the reasons for this phenomenon have remained open to argument. Possible reasons for this spike in autism diagnoses include the diversity of diagnostic criteria, the difference in screening and diagnostic instruments used in respective studies, a growing societal awareness, an increased knowledge about PDD among parents, the introduction of the concept of an autistic spectrum^{2,9} and, above all, a genuine rise in numbers.^{11,12}

In Japan, the latest survey by Kawamura et al.¹³ demonstrated that the incidence of PDD was 1.81 percent. A notable characteristic of current trends in Japan is the increase of subjects being first diagnosed with PDD in adolescence, i.e., without any recognition of a possible PDD diagnosis noted in early childhood. This phenomenon might be explained by the increasing rate of high-functioning PDD and the relatively large proportion of PDD-Not Otherwise Specified (NOS).¹¹

Our survey results demonstrate that the parameters of PDD and ASD are unclear and that the terms related to autism are often used differently, depending upon the situations. The phenomenon of selecting a PDD diagnosis, as the wider clinical concept, according to particular circumstances could be an expression of consideration for the parents of subjects with autism in an effort to avoid surprising those parents; an autism diagno-

sis would be understood as much more serious than a diagnosis of PDD in general. The parents of adolescent autism cases could certainly be confused when the term autism is abruptly applied to their child by a medical professional.

Another possibility could be the uncertainty of diagnostic criteria for PDD/ASD. It is often difficult to diagnose marginal cases, and under-diagnosis and over-diagnosis of these conditions are common. Because the term PDD, as a higher-tier category, includes all three subtypes, including Asperger's syndrome and PDD-NOS,¹ for those subjects with less typical clinical symptoms, clinicians might prefer to diagnose PDD as a larger clinical entity.

The term PDD is based largely on a developmental view, whereas the term ASD is relatively based on a symptomatic view. Psychiatric disorders fundamentally consist of various factors such as developmental problems and psychological symptoms. Thus, it is presumable that such a dilemma in the distinction without a difference between PDD and ASD accounts for the confused situation regarding terminology of autism related conditions.

Despite an increasing public awareness about PDD, a considerable number of children remain undiagnosed. Although the over-diagnosis of PDD could be controversial, the earlier the diagnosis of PDD is made, the earlier necessary interventions can begin.

Lorna Wing wrote, "The problems of defining a sub-group with 'typical' autism among the wide spectrum of children with the triad of impairments of social interaction, communication and imagination are discussed and the value of such a sub-grouping questioned." and "The important point was that there were no clear cut borderlines between typical autism and other manifestations of triad."¹⁴ This view has been accepted universally. However, we are still demanded to distinguish the subjects with PDD, according to the ICD-10 or DSM-IV, from the marginal cases.

The lack of the universal gold standard of the clinical diagnosis of autistic conditions has been criticized. Further studies are required to establish the standardized diagnostic criteria for PDD.

CONCLUSION

Our results demonstrate that the concept of PDD and ASD are perceived somewhat differently and the terms related to autism are used in slightly different ways depending upon the situations by medical and social welfare professionals in Japan. It is often difficult to diagnose marginal cases with subtle manifestations of the triad of autism because of the uncertainty of diagnostic criteria for autistic conditions. More detailed diagnostic guidelines for autistic conditions are awaited.

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