

Durham Conference 1998  
Psychobiology of Autism:  
current research and practice

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## **PATHOLOGICAL DEMAND AVOIDANCE SYNDROME**

### **Discriminant functions analysis demonstrating its essential differences from autism and Asperger's syndrome**

Descriptive accounts of PDA (Newson, 1989 and earlier) have suggested that, at face value, children diagnosed in this way are different in important respects from autistic/Asperger children; although it has always been posited that PDA is a pervasive developmental disorder. The summary of defining criteria shown here, originated in 1988, was hardly revised at all in 1995 except to include a brief note on language.

The differences suggested in the defining criteria add up to a markedly divergent overall presentation which without a separate name could only be described in vague terms as 'non-typical autism' or as 'pervasive developmental disorder not otherwise specified'. This is very unsatisfactory for parents, who do not recognise an autistic pattern in these children. It also contributes to inappropriate handling and educational methods, since PDA children respond best to very different approaches compared with those suitable for autistic and Asperger children. In particular, they do not respond to behavioural methods like autistic children, nor to rule-based approaches like Asperger children.

The data presented here are based on 90 children assessed and diagnosed by Elizabeth Newson and her team between November 1987 and February 1996, at the Child Development Research Unit, University of Nottingham until June 1994, and at the Early Years Diagnostic Centre, Ravenshead from September 1994, all having one of the three diagnoses under discussion. Diagnoses that were not clear-cut have been excluded, but otherwise the children form a random sample of those presenting with each diagnosis. 50 children were chosen with a diagnosis of PDA (from an available sample over the years of 120), comprising 28 boys and 22 girls. Two comparison samples, of 20 children each, represented classically autistic children and Asperger's syndrome (able and verbal autism); the autistic children comprised 19 boys and 1 girl, as did the Asperger children.

Since the clinical assessment methods used were highly similar, the data available in the case files were comparable. A standardised data collection form was used to collect information from the notes, and data points were analysed using Microsoft Excel 4.0 and SPSS 4.0 packages. Elizabeth Newson was responsible for the original diagnostic assessment reports and Kathryn le Maréchal (then Dent) for the analysis, with inter-rater reliability testing provided by an independent psychologist, Caroline Fleming.

A separate analysis of the PDA sample data, to substantiate the original description, has already been presented (Newson 1996). The comparative data presented here demonstrate the essential differences between PDA and the two autistic disorders that tend to be taken as paradigmatic of the pervasive developmental disorders. This suggests that the term 'autistic spectrum', used as almost synonymous with 'pervasive developmental disorder', can be misleading in neglecting these differences.

## DEFINING CRITERIA FOR DIAGNOSIS OF PATHOLOGICAL DEMAND AVOIDANCE SYNDROME

(with descriptive notes and comparison with autism)

### PDA CHILDREN

**1. Passive early history in first year:** often doesn't reach, drops toys, 'just watches'; often delayed milestones. As more is expected of him/her, child becomes 'actively passive', ie strongly objects to normal demands, resists. A few actively resist from the start, everything is on own terms. Parents tend to adapt so completely that they are unprepared for the extent of failure once child is subjected to ordinary group demands of nursery or school; they realise child needs 'velvet gloves' but don't perceive as abnormal. Professionals too see child as puzzling but normal at first.

**2. Continues to resist and avoid ordinary demands of life** Seems to feel under intolerable pressure from normal expectations of young children; devotes self to actively avoiding these. Demand avoidance may seem the greatest social and cognitive skill, and most obsessional preoccupation. As language develops, **strategies of avoidance are essentially socially manipulative**, often adapted to adult involved; they may include: \*Distracting adult: 'Look out of the window!', 'I've got you a flower!', 'I love your necklace!', 'I'm going to be sick', 'Bollocks! I said bollocks!' \*Acknowledging demand but excusing self: 'I'm sorry, but I can't', 'I'm afraid I've got to do this first', 'I'd rather do this', 'I don't have to, you can't make me', 'you do it, and I'll .....', 'Mummy wouldn't like me to'. \*Physically incapacitating self: hides under table, curls up in corner, goes limp, dissolves in tears, drops everything, seems unable to look in direction of task (though retains eye contact), removes clothes or glasses, 'I'm too hot', 'I'm too tired', 'It's too late now', 'I'm handicapped', 'I'm going blind/deaf/spastic', 'my hands have gone flat'. \*Withdrawing into fantasy, doll play, animal play: talks only to doll or to inanimate objects; appeals to doll, 'My girls won't let me do that', 'My teddy doesn't like this game'; 'But I'm a tractor, tractors don't have hands'; growls, bites. \*Reducing meaningful conversation: bombards adult with speech (or other noises, eg humming) to drown out demands; mimics purposefully; refuses to speak. \*(As last resort) Outbursts, screaming, hitting, kicking, trashes room; best construed as panic attack.

**3. Surface sociability, but apparent lack of sense of social identity, pride or shame.** At first sight normally sociable (has enough empathy to manipulate adults as shown in 2); but ambiguous (see 4) and without depth. No negotiation with other children, doesn't identify with children as a category: the question 'Does she know she's a child?' makes sense to parents, who recognise this as a major problem. Wants other children to admire, but usually shocks them by complete lack of boundaries. No sense of responsibility, not concerned with what is 'fitting to her age' (might pick fight with toddler). Despite social awareness, behaviour is uninhibited, eg unprovoked aggression, extreme giggling/inappropriate laughter or kicking/screaming in shop or classroom. Prefers adults but doesn't recognise their status. Seems very naughty, but parents say 'not naughty but confused' and 'it's not that she can't or won't, but she can't help won't' - parents at a loss, as are others. Praise, reward, reproof and punishment ineffective; behavioural approaches fail.

### AUTISTIC/ASPERGER CHILDREN

Seems much more abnormal much earlier; lack of social response and lack of empathy alert parents, together with poor body language and stereotypic behaviour.

Can be reluctant, but ignores or shuts out pressure in a non-social way, without acknowledging others' needs. Has very few conscious strategies for avoidance. Doesn't adapt particular strategy for particular person. Doesn't have enough empathy to make excuses, and usually not enough empathic language either. Direct, not devious.

Because of lack of social empathy, autistic children (even Asperger children) don't purposefully manipulate, though people around them may feel manipulated by the situation or by fate. They give no impression of sociability, except with questions or statements about their preoccupying interests from verbal children. They may become more sociable in time, but seldom develop real (natural) social empathy.

**4. Lability of mood, impulsive, led by need to control.** Switches between loving and violent behaviour for no obvious reason; or both at once ('I hate you' while hugging, nipping while handholding). Very impetuous, has to follow impulse. Switching of mood may be response to perceived pressure; goes 'over the top' in protest or in fear reaction, or even in affection; emotions may seem like an 'act'. Activity must be on child's terms; can change mind in an instant if suspects someone else is exerting control. May apologise but re-offend at once, or totally deny the obvious. Teachers need great variety of strategies, not rule-based: novelty helps.

Autistic children are seldom impulsive; they work to (their own) rules, and parents learn what will upset them. They do not put on an act for someone else until very much older, if then. Rules, routine and predictability help.

**5. Comfortable in role play and pretending:** some appear to lose touch with reality. May take over second-hand roles as a convenient 'way of being', ie coping strategy. Many behave to other children like the teacher (thus seem bossy); may mimic and extend styles to suit mood, or to control events or people. Parents often confused about 'who he really is'. May take charge of assessment in role of psychologist, or using puppets, which helps co-operation; may adopt style of baby, or of video character. Role play of 'good person' may help in school, but may divert attention from underachievement. Enjoys dolls/toy animals/domestic play. Copes with normal conventions of shared pretending. Indirect instruction helps.

Inflexibility, lack of symbolic and imaginative play and lack of empathy all make it very difficult for autistic children to pretend (other than by arranging miniature objects), or to take roles more fully than by simple echoing - though Asperger children may learn 'scripted' roles, with difficulty and without fluency. Indirectness confuses.

**6. Language delay, seems result of passivity:** good degree of catch-up, often sudden. Pragmatics not deeply disordered, good eye-contact (sometimes over-strong); social timing fair except when interrupted by avoidance; facial expression usually normal or over-vivacious. However, speech content usually odd or bizarre, even discounting demand-avoidant speech. Social mimicry more common than video mimicry; brief echoing in some. Repetitive questions used for distraction, but may signal panic.

Language is both delayed and deviant, non-existent in many. Even Asperger children show very disordered pragmatics of language, poor eye contact and social timing, little facial expression or gesture.

**7. Obsessive behaviour** Much or most of the behaviour described is carried out in an obsessive way, especially demand avoidance: as a result, most children show very low level achievement in school because motivation to avoid demands is so sustained, and because the child knows no boundaries to avoidance. Other obsessions tend to be social, ie to do with people and their characteristics; some obsessively blame or harass people they don't like, or are overpowering in their liking for certain people; children may target other individual children.

Autistic children are also obsessive, but less so with social topics. They are not obsessively focused on demand avoidance, and do not use obsessions for manipulative purposes. Order, arrangements and perceptual fascinations.

**8. Neurological involvement** Soft neurological signs are seen in the form of clumsiness and physical awkwardness; crawling late or absent in more than half. Some have absences, fits or episodic dyscontrol. Not enough hard evidence as yet.

Some comparable involvement in autism; less in terms of crawling and episodic dyscontrol.

Elizabeth Newson 1988  
Revised 1995  
Second revision 2000

TABLE 2

Line chart comparing the three groups for ten variables found to be discriminant functions

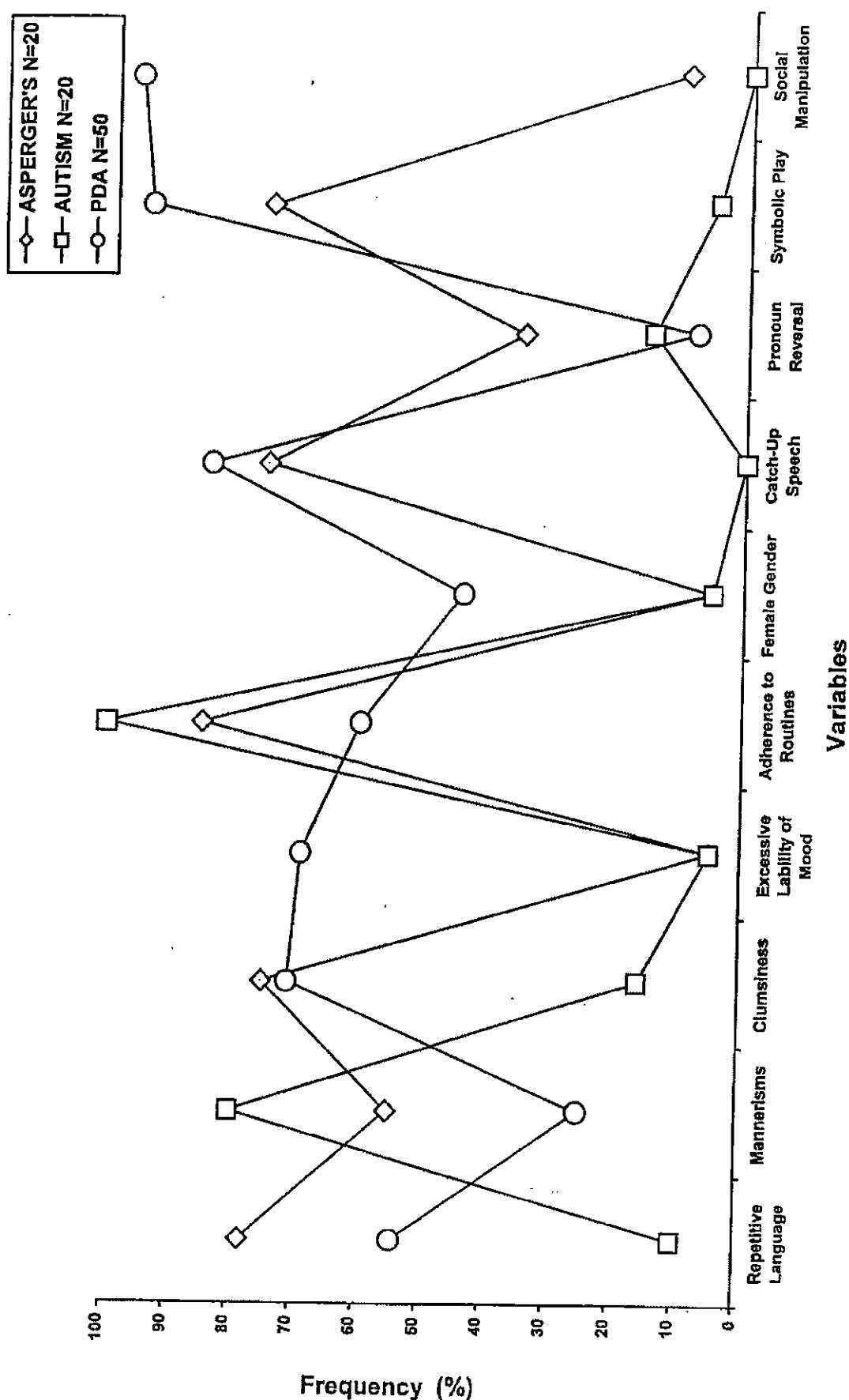
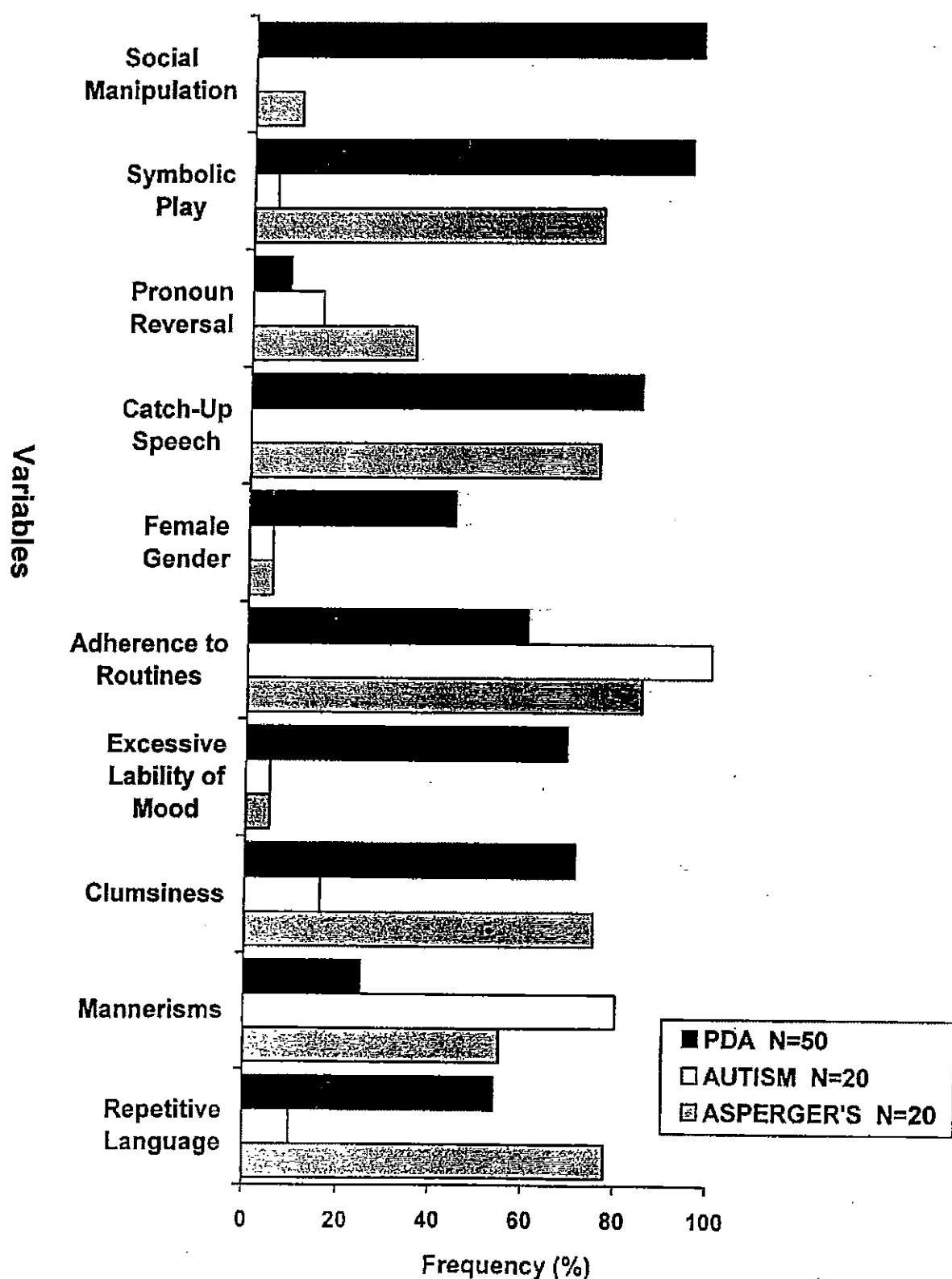


TABLE 3

Histogram comparing the three groups for ten variables found to be discriminant



**TABLE 4**

**COMPARING PDA CHILDREN WITH AUTISTIC/ASPERGER  
CHILDREN TOGETHER**

(using crosstabs data plus data from discriminant functions analysis; p less than or equal to 0.001 in all cases)

**PDA children are LESS likely:**

- ....to have caused anxiety to parents before 18 months of age
- ....to show stereotypical motor mannerisms
- ....to show (or have shown) echolalia (non-social)
- ....to show speech anomalies in terms of pragmatics
- ....to show (or have shown) tiptoe walking
- ....to show compulsive adherence to routines

**PDA children are MORE likely:**

- ....to be female\*
- ....to resist demands obsessively (100%)
- ....to be socially manipulative (100% by age five)
- ....to show normal eye contact
- ....to show excessive lability of mood
- ....to show social mimicry (includes gestures and personal style)
- ....to show role play (more extended and complete than mimicry)
- ....to show other types of symbolic play

\* The larger sample of 120 PDA children from which this sample of 50 was randomly drawn in fact shows equal numbers of boys and girls, and presumably is a more reliable indicator. Increased risk for girls in PDA compared to autistic disorders has always been apparent, even when the earliest N was only 12. Compare quoted sex differences in developmental dysphasia (3 boys: 1 girl) and dyslexia (also 3 boys: 1 girl).

## REFERENCES

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