

Guy's and St Thomas' NHS Foundation Trust **NHS** June 17<sup>th</sup> 2008 **NH&M** National Institute for Health Research

Festschrift  
for  
Sheila Henderson  
***Co-occurrence of developmental disorders***  
Dido Green

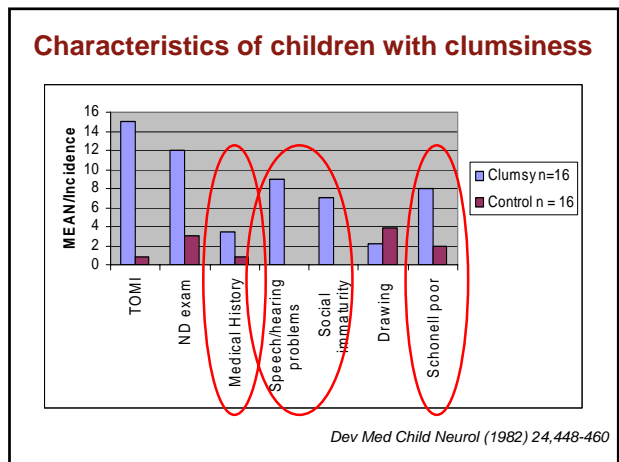
Oxford Brookes University

1981-1983  
1982  
Henderson & Hall  
**Concomitants of Clumsiness in Young Schoolchildren**  
*Dev Med Child Neurol, 24,448-460*

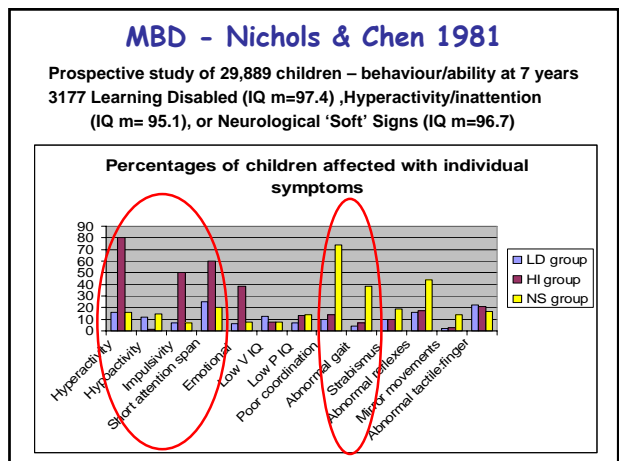
**Characteristics of children with clumsiness:**

Age 5 ½ to 7 years:

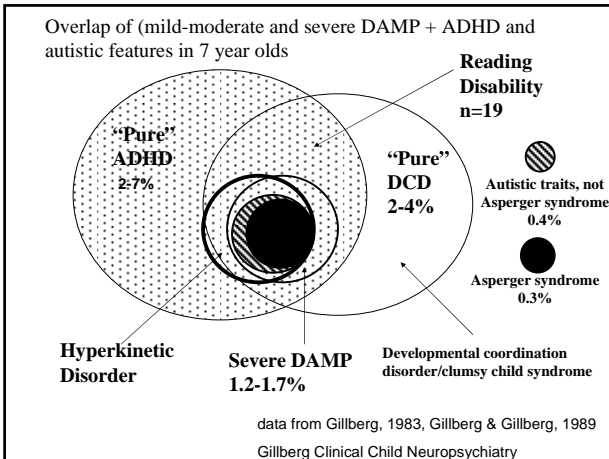
- 5/16 with higher IQ – isolated motor problem
- 5/16 lowered IQ – considerable social and behavioural disorders; clumsiness only one of many difficulties
- 6/16 normal IQ and mixed ability; with a wide range of scores on motor and neuro-developmental tests.



1981  
Nichols and Chen  
***Minimal Brain Dysfunction***



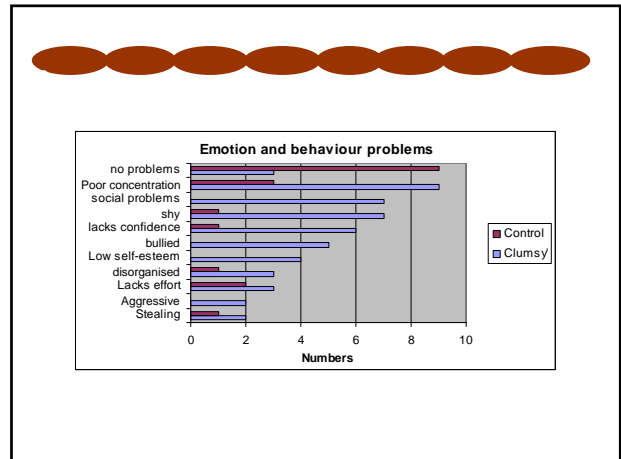
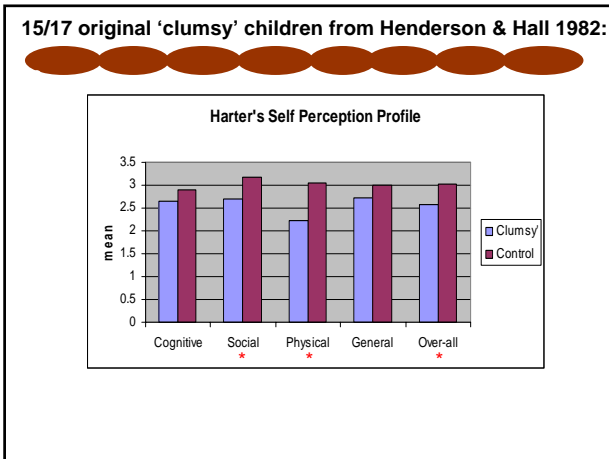




1991  
Losse, Henderson, Elliman, Hall, Knight, Jongmans

**Clumsiness in children-Do they grow out of it? A 10 year follow-up study**

*Dev Med Child Neurol, 33,55-68*



1994  
Hellgren, Gillberg, Bagenholm, Gillberg

**Children with deficits in attention, motor control and perception (DAMP) almost grown up: Psychiatric and Personality Disorders at Age 16**

*JCPP, 35, 1255-1271*

Age 16  
Psychiatric and personality disorders much more common in DAMP group

↓

58% had poor outcome at age 22  
*Rasmussen & Gillberg, 2000, JAACAP*

1994: Shoemaker, Kalverboer: *Special Issue of APAQ, 11, 130-140*.  
**Social and Affective Problems of Children Who Are Clumsy! How early do they begin?**

1997: Miyahara et al: *JADD, 27 597-603*

**Brief Report: Motor Incoordination in children with Asperger Syndrome and Learning Disabilities**

2001: Hill: *IJLD, 36, 149-171*

**Non-specific nature of specific language impairment: a review of the literature with regard to concomitant motor impairments**

2003: Jongmans, Smits-Englesman, Shoemaker: *JLD 528-527*

**Consequences of Comorbidity of DCD and LD for severity & pattern of perceptual-motor dysfunction**

2005: Cummins, Piek, Dyck *DMCN, 47, 437-442*

**Motor coordination, empathy & social behaviour in school aged-children**

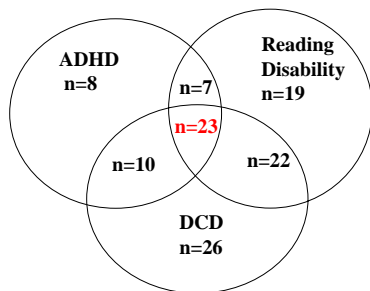
1998

Kaplan, Wilson, Dewey, Crawford

**DCD may not be a discrete disorder**

*Human Movement Science, 17, 471-490*

Schematic diagram of the overlap of DCD, ADHD and Reading Disabilities n=115



From Kaplan, Wilson, Dewey, Crawford (1998)

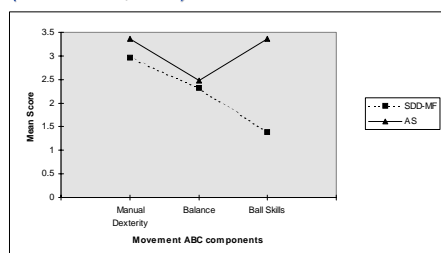
2002

Green, Baird, Barnett, Huber, Henderson

**The severity and nature of motor impairment in Asperger's Syndrome: a comparison with Specific Developmental Disorder of Motor Function**

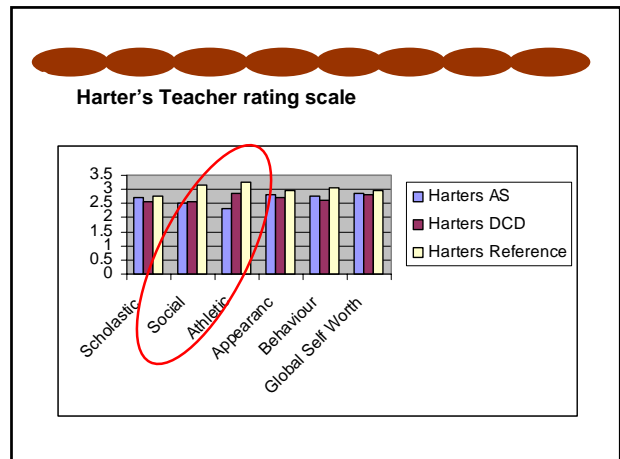
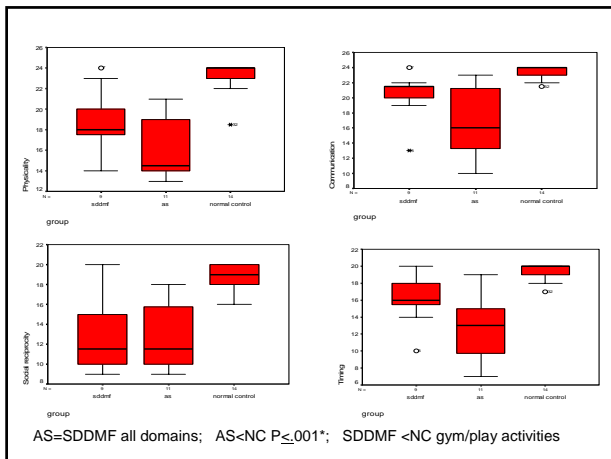
*JCPP, 43, 1-14*

Profile of Movement ABC Scores  
 DCD (SDD-MF; n=9) & AS children (n=11)  
 (Green et al., 2002)



**Social Behaviour Scale (Green 1998)**

- **Physicality**
  - Gestures, Gazes, Distances, Turns, Postures, Touches
- **Social Reciprocity**
  - Initiates, Involves, Respects, Collaborates, Welcomes
- **Communication**
  - Asks, Answers, Focuses, Clarifies, Thanks/Apologises, Concludes
- **Timing Skills**
  - Timing Response, Speaks Fluently, Takes Turns, Times Duration, Completes

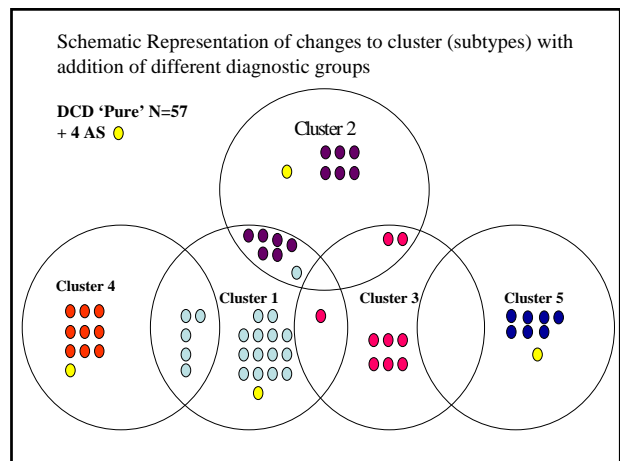
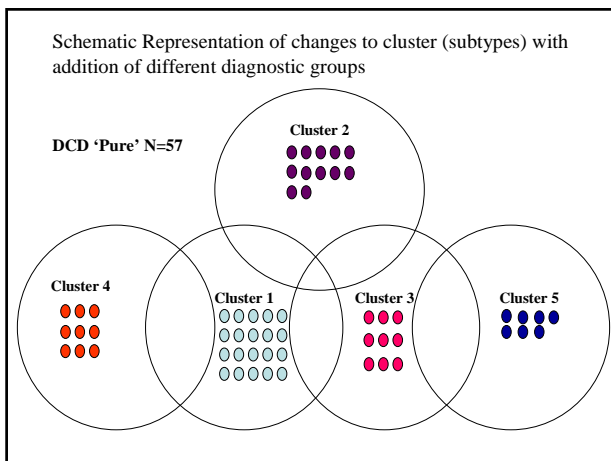
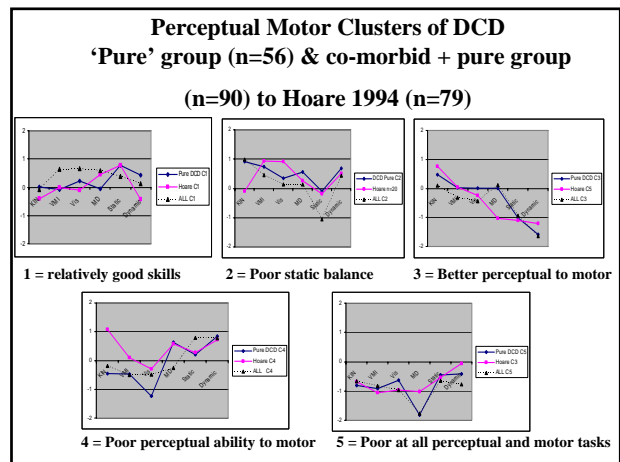


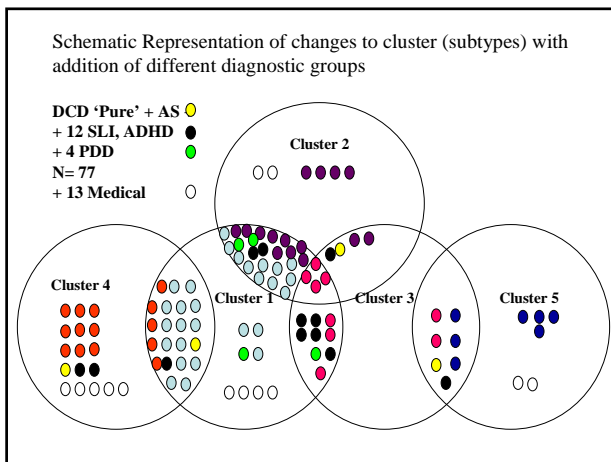
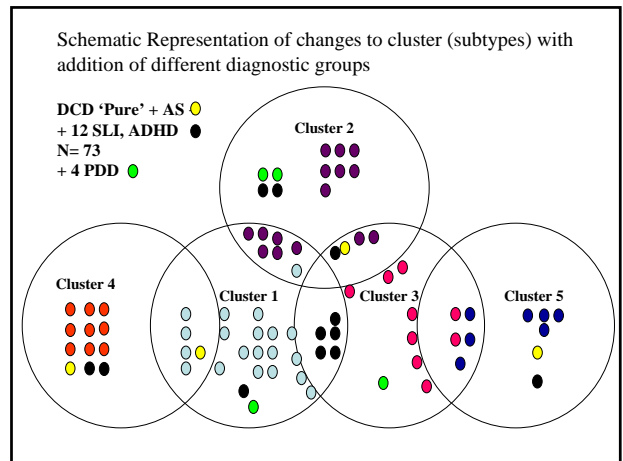
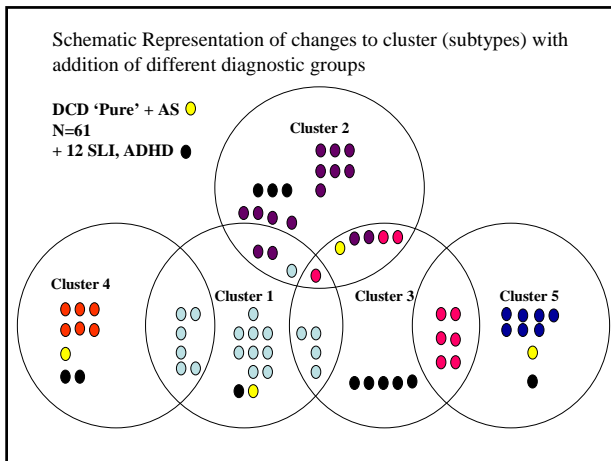
2006

Green

**A quantitative and qualitative study of the nature of Developmental Coordination Disorder**

Unpublished PhD thesis,  
University of Leeds



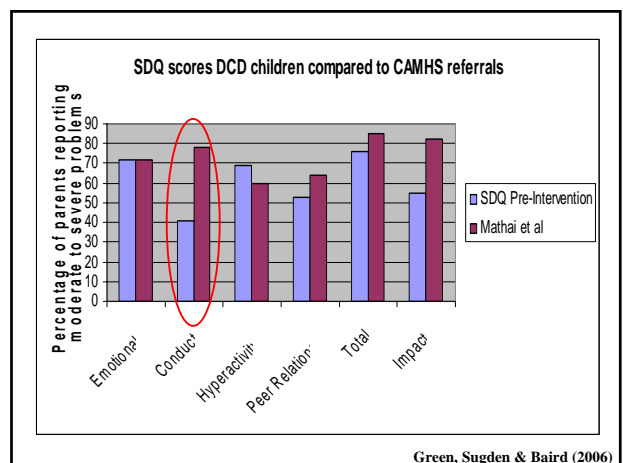
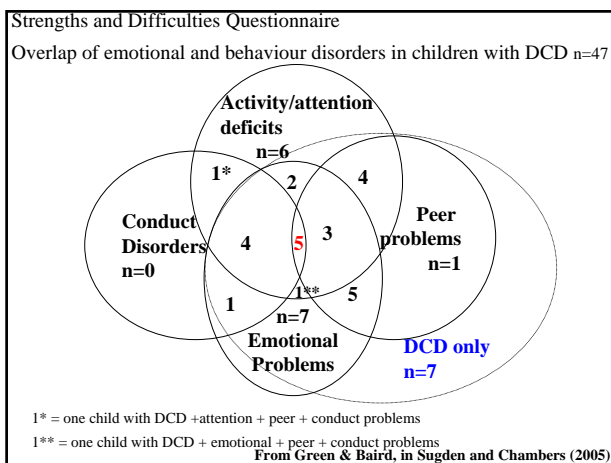


2006

Green, Chambers & Sugden

**A pilot study of psychopathology in Developmental Coordination Disorder**

*Child: Care, Health and Development, 32 (6) 741-750*

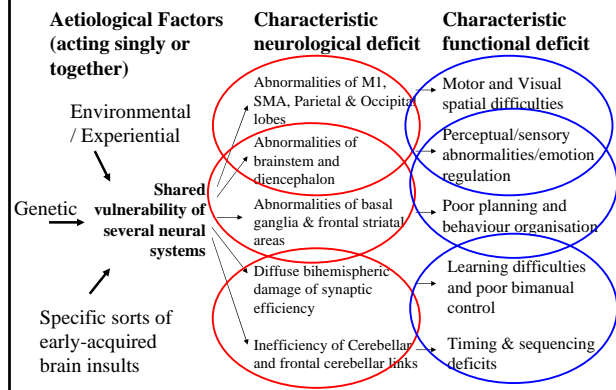


**DCD+ Change in the degree of motor deficit from pre- to post-intervention by association with social and emotional difficulties on SDQ (n=42)**

	1 Activity++	2 Emotional++	3 Peer ++	4 Few problems	Total
Same/ Worse	3	2	6	3	14
Progress	9	6	7	6	28
	12	8	13	9	42

**Chi<sup>2</sup> /Fisher's Exact *df* (3) = 1.587 *p*>0.05**

### Multiple Primary Deficits in DCD



### The end of the beginning

### Acknowledgement

I would like to thank Dr Sheila Henderson for having set a high standard for research in the field of movement disorders and especially for having provided the encouragement and support for my initial research in this area.