CASER

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Child Assessment Service Epidemiology and Research Bulletin

CAS Epidemiological Report on Developmental Coordination Disorder from 2007 to 2009

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Introduction

Developmental Coordination Disorder (DCD) is a developmental disorder in motor coordination. The impairment significantly interferes with the person's academic achievement or activities of daily living including self-care and leisure, and is not solely explicable in terms of general intellectual retardation or any general medical or neurological condition (e.g. cerebral palsy or neuromuscular disease) and does not meet criteria for a Pervasive Developmental Disorder.[1]

In the past, the condition has been described under different terminology, such as congenital maladroitness, clumsy child, minimal brain dysfunction, developmental apraxia and developmental dyspraxia. It was not until the 1994 consensus meeting in London, Ontario[2], the term 'Developmental Coordination Disorder was agreed to be used. According to international estimates, prevalence of DCD among children aged 5-11 years ranges between 6-10%[3] with a higher prevalence in boys than girls. In a recent UK cohort study, the prevalence was 1.8 to 4.9%.[4]

Children with DCD often present with slower mastery of gross and/or fine motor skills and difficulties in self care tasks. They have problems with academic tasks such as writing, copying, participating in physical education especially gymnastic class, and poor performance in leisure activities such as sports and playground activities. These children are more prone to have low self-esteem, behavioural and emotional difficulties, and obesity due to inactivity. Co-morbidities are also common. Attention Deficit Disorder / Attention Deficit Hyperactivity Disorder (ADD/ADHD), Reading Disorder (RD), Specific Language Impairment (SLI) frequently co-occur with symptoms of DCD.[5-8]

Profile of Children with DCD at Child Assessment Service (CAS)

The present epidemiological report on children with DCD includes data collected in CAS from January 2007 to December 2009. The Diagnostic Criteria for Research Version 10 (DCR-10,WHO, 1993) was adopted. A child with DCD would have significant functional difficulties in academic life or daily living as reported by their parents and teachers, significant motor coordination problems measured by standardized tests of fine and gross motor function, and no evidence of neurological conditions from the medical history and clinical examination. All children with confirmed DCD have normal intelligence. The Bruininks Oseretsky Test of Motor Proficiency (BOTMP) was used as the standardized test for assessing gross and fine motor deficit. For fine motor deficit, the fine motor composite scores cutoff for DCD was 2 standard deviations below the chronological age, and 1 to 2 standard deviations for those at risk. For gross motor deficit, the gross motor subtests cutoff for disorder and at risk group was 1.5 standard deviations and 1 standard deviation respectively. Writing difficulties were measured by using the local validated Handwriting Test.

Figure 1. Number of cases diagnosed from 2007 to 2009

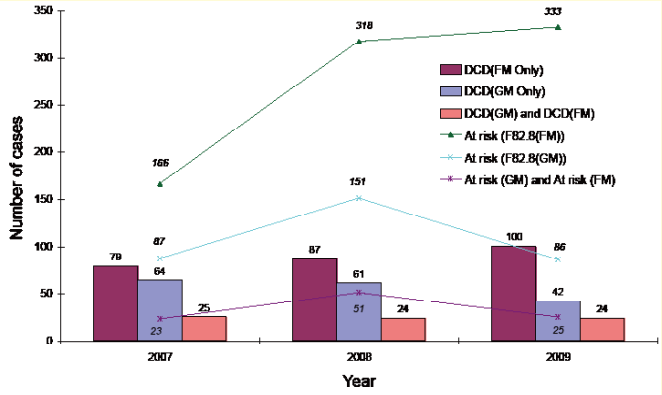
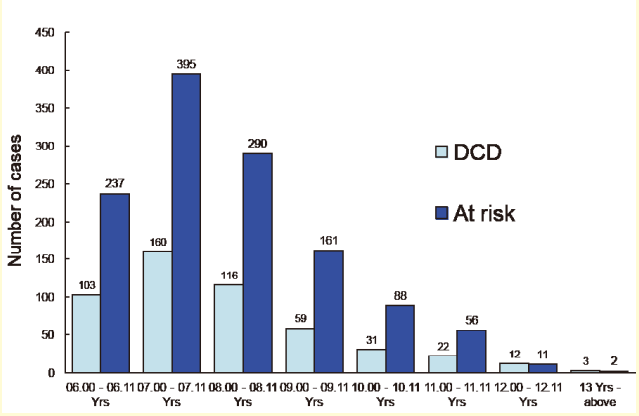


Figure 2. Age at which diagnosis was made



In the above three year period, a total number of 506 children were diagnosed to have DCD and 1240 at risk for DCP. In the DCD group, 266 (52.6%) have problems in fine motor coordination, 167(33%) in gross motor coordination and the remaining 73(14.4%) in both. In the at risk group, 817 (65.9%) have problems in fine motor coordination, 324 (26.1%) in gross motor coordination and 99(8%) in both (Figure 1). Overall, the average male-to-female ratio was 2.6:1 for the DCD group and 3:1 for the at risk group. The profiles of the DCD and the at risk group are very similar, and we believe that they represent the same condition with different severity level and need similar intervention and support.

We have more children with fine motor difficulties as compared to those with gross motor difficulties. This may be because children with fine motor problems encounter difficulties in academic performance and activities of daily living for which parents are more likely to seek for assistance. Children with gross motor problems and difficulties in sports and recreational activities may be of less of concern to their parents and teachers in our local setting.

Age at Diagnosis

Around 75% of these children were diagnosed at their early primary school years, between 6 to 9 years old. Many of them have functional difficulties in their preschool years, and as they enter into school age, their difficulties become more obvious with the increased demand in academic work. As the stringent criteria for DCD is adopted, and also the need to identify functional deficit, the diagnosis of DCD is often made after school years (Figure 2).

Sources of Referral

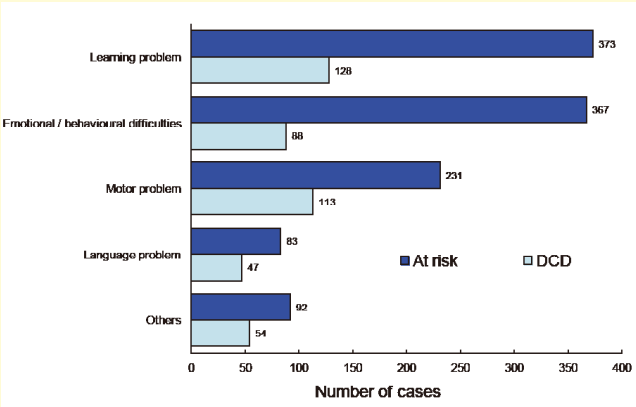
Majority of these children (34%) were referred by their family physicians in the private sector. The Department of Health was the second major source of referral accounting for 27.9% of the cases. 19.2% was from Family Health Service (FHS) and 8.6% from Student Health Service (SHS). Many children have difficulties in preschool years and were identified at the Developmental Surveillance Programme at FHS, and others at the regular annual medical checkup for school children at SHS. Referrals from medical partners in the Hospital Authority (HA), including paediatricians and doctors at general out-patient clinics, accounted for another 13.8%. It seems that parents are becoming more aware of developmental and behavioral problems in their children, and actively seek medical advice and referral for assessment. Besides parents, school teachers are often the first to notice children's motor difficulties, and 10.4% of the referral comes from educational psychologists in schools and the Education Bureau.

Reasons for Referral

Learning problem was the most common reason for referral in both the DCD and at risk group. While motor problem ranked second in the DCD group, emotional/ behavioural difficulties was more frequent than motor problem as the referral reason in the at risk group. Local parents tend to show more concern about the interference on academic performance and behaviour rather than the motor difficulties per se. Moreover, as DCD is highly associated with learning and behavioural difficulties, many of these children may present with these comorbid conditions while their motor difficulties might

have been overlooked by their parents and teachers (Figure 3).

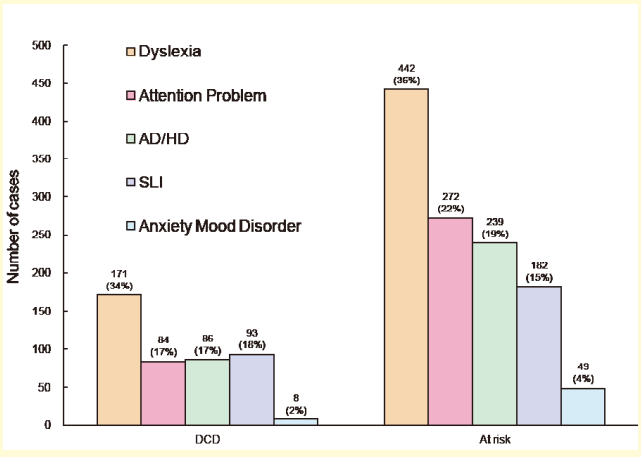
Figure 3. Primary referral reason by DCD/At risk



Comorbid Conditions

Over 60% of these children have comorbid conditions, and around 25% have more than one comorbid condition. Over one third has dyslexia, 34 to 41% has Attention Deficit Disorder/ Attention Deficit Hyperactivity Disorder (ADD/ADHD), 15 to 18% has specific language impairment (SLI), and 2 to 4% has mood and anxiety disorder (Figure 4).

Figure 4. Comorbidities by DCD/At risk



Local Services

In CAS, after comprehensive assessment, we provide interim support services for parents of children with DCD. “Information days to parents” aim to provide information on the clinical course of the developmental problem, advice on home program and accommodation, available school support and community resources. “Interim motor training groups” are for children with milder problem who may not need long term therapy.

For children in the DCD group and at risk group, 72% and 50% respectively were referred to occupational therapy, and 50% and 24% respectively to physiotherapy service at Hospital Authority. Many of these children have adjustment or learning problems at school, and around 40% of them were referred to Education Bureau for educational support and accommodations in school. The need for further therapy and support were similar in both the DCD and the at risk group.

Conclusion

The present data shows that DCD is a condition quite commonly found in school age children. In addition to motor difficulties, many of these children presented with academic and behavioural difficulties as a result of their motor problems, or as comorbid conditions. Children with motor difficulties, especially those with gross motor difficulties, may be under recognized.

In the Thematic Household Survey conducted in 2007 on Public Awareness and Attitude Towards Developmental Disabilities in Children, only 58.6% of the general public has ever heard of the condition DCD.[9] Further work on professional and public education will be needed to heighten the awareness of this salient condition so as to facilitate early identification and intervention. Parents and teachers who are working with these children everyday are usually the first persons to notice their functional difficulties with daily activities.

With rising awareness of the importance of physical fitness and public interest in athletic games and recreational sports, motor difficulties in this group of children may get more attention from parents and teachers. There are also on-going projects for better identification of these children and implementation of support in school. Yet, with more children being diagnosed, it would need further collaboration among health and educational professionals to pool up our resources in planning for early identification and more cost effective remediation and support for these children and their families. Early referral for comprehensive assessment followed by appropriate intervention can help to prevent the development of secondary social, emotional and behavioural complications.

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Perception of Competence in Daily Activities for Children with Developmental Coordination Disorder in Hong Kong

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Background

Children with developmental coordination disorder (DCD)[1] have difficulties with everyday tasks that require motor coordination, such as handwriting, dressing and sport.[2] With the increasing trend in client-centred practice and the use of cognitive approach to improve functional skills of children with DCD, young children's own perception of competency in performing daily activities and their goals for intervention is receiving more importance in formulating realistic goals for rehabilitation. Developmental models of self-understanding have shown that the physical and active aspects of self are the greater areas of self-knowledge for a child in early and middle childhood.[3] While few studies have actually examined developmental changes in perceived physical competence, researchers believe that children begin to compare their performance with that of their peers at or around 6 years old.[4]

The Perceived Efficacy and Goal Setting System (PEGS)

The Perceived Efficacy and Goal Setting System (PEGS) was developed after careful review of the limitations found in other self-report measures. PEGS is a pictorial scale validated as a method to assess 6-9 years old children with disabilities on perception of their own competence in performing daily activities such as self-care, school related and leisure activities, and to identify goals for therapy.[5] However, the original PEGS is an English version that had not yet been culturally adapted.

Purpose of Study

To examine the validity and reliability of the Perceived Efficacy and Goal Setting System for the children aged 6-9 with developmental coordination disorders in Hong Kong.

Procedures

The study was a cross-sectional research study that consisted of three stages. The first stage was the translation of the original PEGS into Chinese and modification of some of the PEGS cards. The second stage was to examine the linguistic and content validity of the Chinese PEGS by using an expert panel review method. The third stage was a study of the discriminating ability of the Chinese PEGS for children with and without DCD. The Chinese PEGS was administered to 26 children of aged 6-9 years who were diagnosed to have DCD by Occupational Therapists and Physiotherapists in the Child Assessment Service of Hong Kong. It was also being administered to 26 individually matched children without DCD who were studying in the mainstream primary schools in Hong Kong. Test-retest reliability was performed by repeating the same procedures for 5 DCD and 6 non-DCD children. Parents of the children were also invited to fill in the Caregiver Questionnaires that contained the same items as the cards in the child's version.

Results

The descriptive statements of the complete set of 60 PEGS cards, and the alternative wording suggestions for the PEGS cards in the manual were translated into Cantonese. Two pairs of PEGS cards were modified so that they were more relevant to the Chinese culture. One set of card was changed from cutting food with a knife to using chopsticks in eating (Figure 1), and another set from playing baseball to playing badminton (Figure 2).

Figure 1.

Original picture card

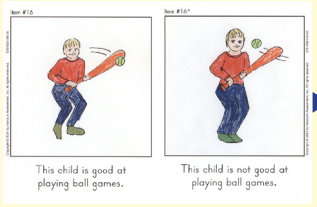
Perceived Efficacy and Goal Setting System (PEGS). Copyright © 2004 NCS Pearson, Inc. Reproduced with permission. All rights reserved.

Modified picture card

Perceived Efficacy and Goal Setting System (PEGS). Copyright © 2004 NCS Pearson, Inc. Chinese translation copyright © 2010 NCS Pearson, Inc. Reproduced with permission. All rights reserved.

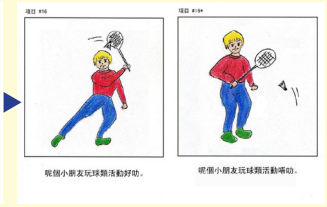
Figure 2.

Original picture card



Perceived Efficacy and Goal Setting System (PEGS). Copyright © 2004 NCS Pearson, Inc. Reproduced with permission. All rights reserved.

Modified picture card



Perceived Efficacy and Goal Setting System (PEGS). Copyright © 2004 NCS Pearson, Inc. Chinese translation copyright © 2010 NCS Pearson, Inc. Reproduced with permission. All rights reserved.

Table 1 showed the demographic characteristics of the DCD group and the non-DCD group. The sex, age and grade distribution in the DCD group were the same as those in the non-DCD group as they were purposely matched for the study.

Results showed that the Chinese PEGS had high content validity (percent agreement = 80-100%), internal consistency (r = 0.75-0.87) and test re-test reliability (r = 0.907-0.945, $p < 0.01$). Furthermore, there were significant differences in the mean PEGS scores between the DCD group and non-DCD group both for the children and caregivers (child: 65.96 vs 79.15, caregiver: 55.96 vs 79.31) ($p < 0.001$) (See Table 2). The response from Hong Kong children were similar to findings in Canadian children on scale "All About Me", which was the predecessor of PEGS (mean scores for child: 64.50 vs 85.29).[6]

Table 1. Demographic characteristics of the subjects

	DCD Group (N=26)		Non-DCD Group (N=26)	
Areas	Frequency	%	Frequency	%
Sex				
Male	17	65.0%	17	65.0%
Female	9	35.0%	9	35.0%
Age				
7	10	38.5%	10	38.5%
8	10	38.5%	10	38.5%
9	6	23.0%	6	23.0%
Grade				
1	1	3.8%	1	3.8%
2	10	38.5%	10	38.5%
3	10	38.5%	10	38.5%
4	5	19.2%	5	19.2%
School Type				
Activity Teaching	10	38.5%	18	69.2%
Conventional Teaching	16	61.5%	8	30.8%
Caregiver's Education				
Primary	2	7.7%	0	0.0%
Secondary	14	53.8%	7	27.0%
Tertiary	9	34.6%	19	73.0%
Missing Data	1	3.8%	0	0.0%

Table 2. Comparison of the mean PEGS scores between the DCD group and the non-DCD group for the child and caregiver

	DCD Group (N=26)		Non-DCD Group (N=26)		
Group	M	SD	M	SD	P value
Child	65.96	12.60	79.15	7.49	< 0.001
Caregiver	55.96	11.38	79.31	8.35	< 0.001

Conclusions

These findings suggest that children with DCD have significantly poorer perception of competence on their daily functions than children without DCD. The Chinese PEGS could be used as one of the valid measures to distinguish between children with and without motor impairments. It was interesting to note that for the item "playing video games", low item-total correlation was found from both the caregivers (r = 0.10) and children's (r = 0.20) perspectives in the DCD group. This implied that children with DCD might not necessarily have problems in playing with the video games. The validity and reliability of the translated Chinese PEGS were established in the study. Its clinical use as a self-perception assessment tool for the local children to identity their goals for therapy is recommended. The total PEGS scores can also be used as an outcome measure for intervention programmes.

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Local Study Highlight

Validation of Cantonese version of Developmental Coordination Disorder Questionnaire for Early identification of Students with Developmental Coordination Disorder in School

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According to a recent study by Hong Kong Polytechnic University (PolyU), the Cantonese version of Developmental Coordination Disorder Questionnaire (DCDQ-HK) can be used for early identification of students with Developmental Coordination Disorder (DCD) in schools.

The Developmental Coordination Disorder Questionnaire (the DCDQ) is a brief parent questionnaire designed to screen for coordination disorders in children, aged 5 to 15 years. It was originally developed in the late 1990's at the Alberta Children's Hospital in Canada.[1] A revision has been developed - the DCDQ'07 - a 15-items parent questionnaire, which is available on web and easily filled in by parents.[2]

In 2010, an evaluation study on intervention programs for local students with DCD in school was conducted by PolyU. In order to identifying potential students with DCD, the DCDQ was used. Because there is no local DCD screening test available, the first part of this study was to validate a Cantonese version of DCDQ (DCDQ-HK).

Seven Po Leung Kuk Primary Schools participated in the project. Between June to July 2010, a total of 373 children were recruited. It consisted of 238 typically developing children, and 81 children suspected of having motor clumsiness/DCD. Mean age of children was 7.15 ± 1.7 y/o, with 226 boys and 147 girls. Three measurements were used:

(1) Parent questionnaire - The DCDQ-HK was translated following the guidelines developed by Beaton et al[3] for cross cultural adaptation of instruments. The DCDQ'07 was translated from English into Cantonese, adapting items to Hong Kong context and culture. A forward-back translation process was followed to adapt the DCDQ'07 from English to Cantonese.

(2) Motor Performance: The standardized test "Bruininks-Oseretsky Test of Motor Proficiency" (BOT-2) was used to delineate motor performance level of children. The BOT-2 is a norm-referenced test and is consisted of 4 domains subdivided into 8 subtests and composed of 53 items.[4] The subtests are: Fine Motor Precision, Fine Motor Integration, Manual Dexterity, Bilateral Coordination, Balance, Running speed and Agility, Upper-Limb Coordination and Strength. Completing the whole BOT-2 takes about one hour. It was shown to have good inter- and intra-rater reliability (0.98 and 0.99, respectively). The 53 test items were organized as eight test stations and were administered by trained physiotherapy students and physiotherapists.

(3) Teacher questionnaire: teachers of 60 typically developing children and children identified as having motor clumsiness/DCD (n = 81) were invited to fill the portion of "Self-care" and "Social" of the questionnaire 《小一學生之學習情況量表》[5] developed by Education Bureau to reflect daily functioning level of the child.

In this study, motor clumsiness / suspected of DCD was considered when the children's 'total motor composite' of BOT-2 were below the 17th percentile. For Parents and teacher questionnaires, only questionnaires that were at least 85% complete (missing 0 to 4 items) were included in the analysis.

Of the 373 children evaluated, 21.7% of them were suspected to have DCD/motor clumsiness (i.e. < 17th percentile on BOT-2 total motor composite).

The DCDQ-HK demonstrated good internal consistency among the 15-items (Cronbach's α

= 0.895). DCDQ-HK score of children with DCD was at 44.2 ± 13.1, which was significantly lower ($p < 0.05$) than scores of typically developing children (53.5 ± 12.7), thus demonstrating good discriminative validity of DCDQ-HK. Receiver operating characteristic (ROC) curves was used to determine the best cutoff scores of DCDQ-HK in identifying children with DCD. Using 15 percentile as DCDQ cutoff, sensitivity of 87.3% and specificity of 25% was denoted, representing a high degree of accuracy that the DCDQ-HK identified children with DCD (i.e. high sensitivity).

Children identified as having DCD by BOT-2 test scores (n = 81) were invited to fill in the DCDQ-HK again 3 weeks later. Thirty valid questionnaires were received. The test re-test reliability was found to be high (ICC = 0.83).

Results from the teacher questionnaire, however, were less favorable. When asked about gross and fine motor and coordination of children, teachers were able to observe and report that children with DCD have significantly lower scores than those of typically developing children ($p < 0.05$). However, teachers did not denote any difference in self-care and social skills between children identified as having DCD and typically developing children.

Overall, the results showed that the DCDQ-HK had strong equivalency to the original DCDQ'07. The questionnaire has strong consistency among test items. Construct validity is evident with score of children with DCD or suspected of having DCD being significantly different (lower) than the scores of children without DCD. Sensitivity of DCDQ-HK, which refers to the percentage of children who are DCD, was high (87.3%). This result provided evidence of the validity of DCDQ-HK, and supports its use as a screening tool for DCD in Hong Kong.

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Recent Publications and Scientific Presentations

Publications

Leung C, Cheung J, Lau V, Lam C. Development of the Preschool Developmental Assessment Scale (PDAS) on children's social development. Res Dev Disabil 2011;32(6):2511-8.

Wong SW, McBride-Chang C, Lam C, Chan B, Lam FW, Doo S. The joint effects of risk status, gender, early literacy and cognitive skills on the presence of dyslexia among a group of high-risk chinese children. Dyslexia 2012;18(1):40-57. doi: 10.1002/dys.1434.

Scienti ic Presentations

The following presentations were conducted between January 2011 and December 2011:

腦癱兒童的發展特質
長江腦癱兒童康復與殘疾預防項目成果總結研討會暨引導式教育技術交流活動
姚劉佩香
二零一一年十二月二十七日
廣州

Training strategies for common handwriting problems in Hong Kong children on 10 December 2011at Hong Kong Polytechnic University by CHUI Mun-yee.

「腦」力早操 – 前期語言社交訓練
九龍城民政事務處 – 社會福利署 – 建設健康九龍城協會 – 循道衛理楊震社會服務處合辦
「一樣、不一樣」自閉症幼兒管教研討會
二零一一年十一月十九日
張秀萍

新手上路 – 認識自閉症幼兒的特徵及需要
九龍城民政事務處 – 社會福利署 – 建設健康九龍城協會 – 循道衛理楊震社會服務處合辦
「一樣、不一樣」自閉症幼兒管教研討會
二零一一年十一月十九日
陳淑儀醫生

Handling emotional and behavioral problem for children with special needs on 12 November 2011 at Benji's Centre by TSANG Yee-ha, Lucia.

Harmonic parenting relationship on 12 November 2011 at United Centre of Emotional Health and Positive Living (UCEP) by CHAN Tsz-ting.

自閉症/亞氏保加症學童的診斷方法；認識視覺學習策略支援自閉症/亞氏保加症學童 on 3 November 2011 and 1 December 2011 at Diploma in Special Education (Special Learning Needs Education Course in Autism/Asperger's Syndrome) by LAM Ling.

Understanding the aim, scope, and procedures on screening and assessment of oral language functions in pre-school and school age children on 1 November 2011 at Thematic course on education of students with hearing impairment and speech and language impairment, The Hong Kong Institute of Education by CHAN Wai-ki, Amy.

Understanding typical and disordered development in speech sound system (phonology) in children. How can teachers identify children with speech sound system problems in schools? on 27 October 2011 at Thematic course on education of students with hearing impairment and speech and language impairment, The Hong Kong Institute of Education by CHEUNG Sau-ping, Pamela.

Balance performance in children with severe to profound grade hearing impairment on 22-23 October 2011 at Hong Kong Physiotherapy Association Conference by WONG Pui-shan, Teresa, LEUNG Yuk-wa, Eva, POON Yuen-ching, Candice, LEUNG Yim-fan, LAU Pui-heung, Beverley.

Neurodevelopmental aspects of pediatric sleep on 15-16 October 2011 at 36th Annual Meeting of Japanese Society of Sleep, Kyoto, Japan, by Dr DOO Sylvia.

Diploma in Special Education, Special Education (Specific Learning Difficulties in Reading and Writing) on 13 October 2011 and 20 October 2011 at HKU SPACE by Dr CHAN Fung-ying, Dorothy.

Developmental Coordination Disorder and Learning Disabilities on 10 October 2011 at M.Ed. course, Department of Educational Psychology, Faculty of Education, The Chinese University of Hong Kong by CHUI Mun-yee.

Dyslexia on 3 October 2011 at Master course of Educational and Child Psychology, Hong Kong Polytechnic University by Dr LAM Chi-chin, Catherine.

Cognitive rehabilitation for school children on 21 September 2011 at OTCOC Commissioned Training Program for OT 2011/2012 Integrating Executive Functions into the Practice of Occupational Therapy (Seminar), Institute of Advanced Allied Health Studies, Hospital Authority by CHAN Yau-kam, Donna.

Behavioral therapy: understanding children's behaviour and managing children's behaviour on 2 September 2011 at Education Bureau by CHEUNG Man-ching, Jasmine.

Conducting research in clinical settings on 13 July 2011 at International Conference on the Educational Neuroscience of Mathematical Cognition, Department of Psychology, University of Hong Kong by CHAN Mee-yin, Becky.

Understanding typical and disordered development in speech sound system (phonology) in children. How can teachers identify children with speech sound system problems in schools? on 24 June 2011 at Thematic course on education of students with hearing impairment and speech and language impairment, The Hong Kong Institute of Education by CHEUNG Sau-ping, Pamela.

Understanding the aim, scope, and procedures on screening and assessment of oral language functions in pre-school and school age children on 23 June 2011 at Thematic course on education of students with hearing impairment and speech and language impairment, The Hong Kong Institute of Education by CHAN Wai-ki, Amy.

Accommodation for students with specific learning disabilities（讀寫困難學生的校內及公開考試調適需知）on 9 June 2011 at Certificate in Special Education, HKU SPACE by CHAN Mee-yin, Becky.

Autism Spectrum Disorder – Hong Kong perspective on 5 June 2011 at Joint Annual Scientific Meeting 2011, Hong Kong Paediatric Society and American Academy of Pediatrics in conjunction with Hong Kong Paediatric Nurses Association by Dr LIU Ka-yee, Stephenie.

The community accommodation for children with special needs in Hong Kong on 5 June 2011 at Joint Annual Scientific Meeting 2011, Hong Kong Paediatric Society and American Academy of Pediatrics in conjunction with Hong Kong Paediatric Nurses Association by Dr LAM Chi-chin, Catherine.

Validating Chinese WPPSI-R for low functioning preschool-aged Cantonese speaking children in Hong Kong: A cohort study on 4 June 2011 at Hong Kong Psychological Society Annual Conference 2011 by LAU Wai-yee, Kelly, CHAN Mee-yin, Becky, YU Shiu-man, Effie.

Effectiveness of group cognitive behavior treatment for childhood anxiety in community clinics on 24-27 March 2011 at 31st Annual Conference, Anxiety Disorders Association of America, New Orleans by LAU Wai-yee, Kelly, CHAN Kwok-ying, Charlotte.

自閉症/亞氏保加症學童的診斷方法；認識視覺學習策略支援自閉症/亞氏保加症學童 on 24 March 2011 and 5 May 2011 at Diploma in Special Education (Special Learning Needs Education Course in Autism/Asperger's Syndrome), HKU SPACE by LAM Ling.

Understanding typical and disordered development in speech sound system (phonology) in children. How can teachers identify children with speech sound system problems in schools? on 25 February 2011 at Thematic course on education of students with hearing impairment and speech and language impairment, The Hong Kong Institute of Education by CHEUNG Sau-ping, Pamela.

Understanding the aim, scope, and procedures on screening and assessment of oral language functions in pre-school and school age children on 24 February 2011 at Thematic course on education of students with hearing impairment and speech and language impairment, The Hong Kong Institute of Education by CHAN Wai-ki, Amy.

Workshop on the Hong Kong Cantonese Oral Language Assessment Scale (HKCOLAS) at The University of Hong Kong on 18 February 2011:

- **Administering HKCOLAS & Test of Hong Kong Cantonese Grammar** by NG Kwok-hang, Ashley
- **Textual Comprehension Test** by CHAN Yvonne Binva
- **Word Definition Test** by MAN Yuk-han, Yonnie
- **Lexical-Semantic Relations Test & Expressive Nominal Vocabulary Test** by CHAN Wai-ki, Amy
- **Nonword Repetition Test & Hong Kong Cantonese Articulation Test** by CHEUNG Sau-ping, Pamela

A classroom with no difficulties on 18 February 2011 at Diocesan Boys' School by Dr LIU Ka-yee, Stephenie.

Accommodation for students with specific learning disabilities (讀寫困難學生的校內及公開考試調適需知) on 17 February 2011 at Certificate in Special Education, HKU SPACE by CHAN Mee-yin, Becky.

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