

Assignment module B

Managing DCD

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What are the needs for children with DCD as seen by the parents?

This study aims to talk to parents of children with DCD to look at how services are currently provided in Norway and what their potential needs are.

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Introduction

Background:

Developmental Coordination Disorder (DCD) affects around 6% of school age children. Deficits in motor function are seen. DCD is associated with difficulties in learning, behaviour and psychosocial adjustment that persist into adulthood (Zuiden, 2007).

This study is carried out in Norway. It is part of the education on DCD at the University of Wales, Newport.

This study aims to talk to parents of children with an indication for DCD. It aims to look at how services currently are provided in Norway and what potential need for support the parents experience in relation to their children's everyday life.

The goal is to increase knowledge about the needs of children for intervention and to give some suggestions of what can be done in Norway. Hopefully this leads to better support for these children in the future.

This required a brief questionnaire to check if their child is in this group and followed up by finding out a little about their experiences.

In December 2006 this project was started.

The first challenges were finding a hypothesis, a theme, the "just right parents". You find a description of the process below.

Most documents are produced in both Norwegian for the parents and for achieving the goal with this project and English for communicating with my tutor, the study group and for this assignment.

Hypothesis:

There is little support for children with DCD in Norway

Listening to parents concerns is important.

Children need support at ADL; home, school and/or play and leisure time.

It is natural that an Occupational Therapist (OT) is part of intervention.

Question:

What are the needs, as seen by the parents?

What can be done in Norway for children with DCD?

This project may just give partially the answers I am looking for.

Description of the process:

In order to plan this study I had to go through several processes. These presented some difficulties.

With Birgitta Fjøsne, former head of the Norwegian Dyspraxia Foundation, ideas were discussed about possible themes and questions for this project.

One issue was gaining access to families. I used several methods for this:

- OT colleagues, via the OT internet network (in Norway), were asked if they could help me to contact parents of children with DCD to participate in the project, none answered my query.
- The Norwegian OT Association could not help either.
- The website www.ergoterapiforbarn.no was updated with a "DCD – Dyspraxia" link.

It was difficult because DCD is not known as a diagnosis in Norway and it was exciting if there would be enough parents to take part and how they could be traced.

It was a challenge to decide what “criteria” to use for who should take part. A revised version of Developmental Coordination Disorder Questionnaire (DCDQ) (Wilson, 2000) was used to check for DCD with parents. After permission was received to use the new questionnaire (which can be used with younger children), it was translated. It was tried out on three children before it was used for finding the “right” parents. The ones whom children scored with “an indication on or suspected DCD” could take part in this project.

Ethical rules for research were checked and applications for permission made. The ethical board gave permission to do this project.

The search for parents was announced on the website of “Norsk Dyspraksi Forening”, the Foundation for Premies, the Norwegian Association for OT and “Ergoterapi for Barn”. The Foundation for Premies also published the announcement in their magazine.

I searched for parents with children with coordination problems, and who were born between 1994 and 2003. The children of the 20 parents who made contact were sent the DCDQ by mail.

The next challenge was constructing questions. Some questions should be possible to score and they needed to be in the context of the hypothesis.

Part 1: project, participants and answers

20 Parents participated in this project.

Their children’s motor skills were scored with the DCDQ, and they were put into groups to indicate whether there was an indication of DCD or suspected DCD.

16 Parents answered the DCDQ and 15 of these children seemed to have some indication of DCD. Their parents are the population used for this project and they were sent the questionnaire for the project.

Data collection:

13 were returned in time. The data collection in this study is from 13 questionnaires.

Age of children:

Their children were between 6,11 and 13 years old. Mean age is 9.68 year.

7 of them had a Dyspraxia diagnosis, none of them had a DCD diagnosis.

Gender:

There were 10 boys and 3 girls in the final group.

Part 2: Questionnaire for this project

The questionnaire was divided in the sections A, B and C

Section A contained open questions, section B simply required “yes” or “no” answers and section C was tick box assessing the parents’ needs.

See appendix I for the complete questionnaire.

Part 3: Conclusions from the data collection of the Requirement Analysis

A. Open questions:

Most parents got worried about their child's coordination when the child was very young. Half of the parents were worried by one year of age or younger and 12 parents answered that they became worried when their child was younger than 4 years old. Just one parent said that he became worried about coordination when his child was nine years of age.

Of the 13 children in this project – 53% had a diagnosis of Dyspraxia. None of them had a DCD diagnosis.

In addition to above many of the children had some other diagnosis, e.g. motor delayed, poor vision, specific language problems, Dyslexia, Motor developmental dysfunction.

Dyspraxia/DCD was mentioned to the parents at different places by different people, e.g:

- Healthcare personnel
- In the children neurological department
- On the internet
- Centre for speech difficulties
- Attended courses
- Speech-therapist
- During training as OT
- Special school
- Someone else

Three parents were dissatisfied with the help they received, 6 parents were quite dissatisfied and four were just about satisfied. All together 9 of the 13 parents (69,2%) were dissatisfied with the help they received.

No one was really satisfied.

Some comments: one parent wrote that she had to do far too much herself and one parent wrote that when they lived in Finland she was very satisfied with the help she received, but in Norway she is dissatisfied.

There were different answers on which professionals provided useful support, e.g:

- Neurological department of a Children's Hospital
- Hospital
- School / Special teacher
- Special pedagogic services in school
- Finland: health workers - OT's (SI training) and physiotherapist
- Community based healthcare (school-physiotherapy, Community OT)
- Physiotherapist
- OT
- Speech therapist
- Optometrist
- Psychological educational services
- Manual therapist
- Kindergarten aid

Some comments from parents:

- Difficult to evaluate the benefits of each intervention
- Several professionals had pointed out the problems without offering any useful help.
- Evaluation by an OT in private practice had prompted the parents to seek help in public services, without luck.
- They had to find their own information and help.
- The conclusion following the evaluation offered many suggestions, but it had only looked at the verbal part of the problem, and motor function in relation to writing.

B. These questions are about what kind of support the parent are in need of for their child now, or expect to need in the future.

92% Need help with further evaluations. One parent did not respond.

Notes:

Need for special OT training

Just if the expertise exists

All parents say their child needed help in school

Note:

With the right knowledge

53.85% need counselling at home. One parent did not respond.

84.62% need help for future needs. Two parents (15.38%) did not respond

15.38% need help for changing the environment. Three parents (23.08%) did not respond.

46.50% need for support and understanding from other parents. Three parents (23.08%) did not respond.

Other needs as mentioned by the parents:

Understanding the diagnosis in the Public health system

Need for technical aids, and being met with understanding from officials working in this area (4x)

Sensory issues

Diet /weight

Counselling in relation to anxiety issues

Training motor problems, vision, social skills

Public financial support to pay for alternative training like therapy riding

Follow up from private physiotherapy

Counselling as to benefit rights from social services

Financial support

More relevant information on this diagnosis

Overall conclusion of this part:

Nearly all parents need help both now and in the future.

They wish a greater knowledge and understanding of this diagnosis, both among professionals and other parents.

They name several times the need for technical aids and financial support.

They have different ideas of the other needs, see list above.

C. These questions are about how much professional support the parents need for everyday activities for their child.

The activities are based on activities of daily living (ADL), divided into requirements at home, in school, at play and at leisure time.

The parents were asked to put a cross against the most appropriate answer, where

1 was "No need"

2 was "Slight need"

3 was "Need"

4 was "Great need"

Then slight need + need + great need was aggregated for a percentage calculation, called "need".

This number tells something about what is needed (not how much it is needed).

The overall percentage for need for help in the different activities of daily living, divided into requirements at home, in school and at play and at leisure time, is counted too.

The need of help for activities of daily living, as seen by the parents:

At home	No need	Slight need	Need	Great need	NEED
Dress/undress	69.2%	15.4%	15.4%	0	30.8%
Eating /eating situation	61.5%	30.8%	7.7%	0	38.5%
Use of cutlery	61.5%	23.1%	0	15.4%	38.5%
Sitting at the table	61.5%	15.4%	7.7%	15.4%	38.5%
Washing hands	69.2%	7.7%	7.7%	15.4%	30.8%
Shower	53.8%	15.4%	15.4%	15.4%	46.2%
Drying body	53.8%	30.8%	0	15.4%	46.2%
Independent at toilet visits	46.2%	15.4%	23.1%	15.4%	53.8%
Walk up stairs	92.3%	7.7%	0	0	7.7%
Walk down stairs	92.3%	0	7.7%	0	7.7%
Sleep/ bedtime-situation	69.2%	15.4%	7.7%	Don't know 7.7%	23.1%
Put on shoes	53.8%	23.1%	7.7%	15.4%	46.2%
Tying shoelaces	38.5%	23.1%	0	38.5%	61.5%
Buttoning buttons	46.2%	23.1%	7.7%	23.1%	53.8%
Using a zip	46.2%	23.1%	15.4%	15.4%	53.8%
Organizing him- or herself	15.4%	23.1%	15.4%	46.2%	84.6%
Social activities with family	30.8%	38.5%	23.1%	7.7%	69.2%
Social activities outside family	7.7%	30.8%	23.1%	38.5%	92.3%

Total home: 823.2:18= 45.73%

At school	No need	Slight need	Need	Great need	NEED
Reading	23.1%	46.2%	23.1%	7.7%	76.9%
Writing	7.7%	30.8%	30.8%	30.8%	92.3%
Math	38.5%	15.4%	15.4%	30.8%	61.5%
Copying from blackboard	15.4%	23.1%	23.1%	23.1% Don't know 15.4%	69.2%
Concentration	15.4%	7.7%	38.5%	38.5%	84.6%
Throw/ catch ball	15.4%	23.1%	38.5%	15.4% Don't know 7.7%	76.9%
Right books and equipment for school	23.1%	7.7%	38.5%	30.8%	76.9%
Time management	15.4%	15.4%	38.5%	30.8%	84.6%
Sitting at desk without disturbing the class	30.8%	46.2%	7.7%	15.4%	69.2%

Total school: 692.1:9= 76.9%

In play and leisure time	No need	Slight need	Need	Great need	NEED
Ball play	30.8%	7.7%	38.5%	23.1%	69.2%
Biking without support wheels	69.2%	7.7%	0	23.1%	30.8%
Skip rope	15.4%	0	46.2%	38.5%	84.6%
Swimming	30.8%	30.8%	30.8%	7.7%	69.2%
Make friends	7.7%	38.5%	38.5%	15.4%	92.3%
Keep friends	0	53.8%	23.1%	23.1%	100%
Doing homework	23.1%	15.4%	23.1%	30.8% Too young 7.7%	69.2%
Understand the rules of games	15.4%	30.8%	46.2%	7.7%	84.6%
"Manage" the motor challenges of games	23.1%	0	38.5%	38.5%	76.9%

Total play and leisure time: 676.8:9= 75.2%

Appendix II shows these tables.

Conclusions:

All parents need support for their children in one or more activities of daily living (ADL). The parents experience an overall need for help for their child, from slight to great need, in many of their child's ADL, at home, in school and at play and leisure time.

Most parents said that their children need most help at school.

76.9% of parents say their children need more or less help on school activities.

The next ADL area they need help at is play and leisure time (75.2%) and at least at home (45.73%).

Considering home situation, at least 50% of the parents tell their children need slight to great help in these ADL activities at home:

- social activities outside the family (92.3%)
- organizing him- or herself (84.6%)
- social activities with family (69.2%)
- tie shoelaces (61.5%)
- buttoning buttons (53.8%)
- using a zip (53.8%)
- independent at toilet visits (53,8%).

Some need for help with dressing/undressing, eating/eat situation, e.g. 30.8% has slight need for help for using cutlery, 15.4% have great need for help for this and 38.5% need help for sitting at the table. This show that there are a lot needs on daily activities at home too.

They need help in concentration, in organizing themselves and in social activities, especially outside the family.

Few parents (7.7%) seemed to need help for their child using the stairs.

A lot of help is needed at social skills and social activities:

- Keeping friends (100%)
- Making friends (92.3%)
- Social activities outside family (92.3%)
- Skipping (84.6%)
- Organizing him- or herself (84.6%)
- Understand rules of games (84.6%)
- Manage the motor challenge of games (76.9%)
- Throw/catch ball at school (76.9%)
- Ball play in leisure time (69.2%)
- Social activities with family (69.2%)
- Swimming (69.2%).

All parents said their children need help in keeping friends.

Assumptions:

Probably less need for support at home, since parents find their own solutions.

The mean age of 9.68 explains probably less need for support on e.g. using the stairs, buttoning and tying shoelaces.

Other comments that parents made:

Nice that you do this project!

My child presents general lack of enjoyment in mastering physical activities.

He is over sensitive to sounds. School concerts disturb his mental balance and so on.

It has been a major problem that nobody has addressed these issues because they were atypical and not clearly defined. As a result time has passed and made intervention difficult. Another major problem is the length of time it takes from asking for an evaluation to actually getting it.

The parents find that it is their responsibility to start and push the whole process in getting help for their children and for any progress to occur. They find it difficult to figure out the right public services to contact. This is so even for those working in the Health Services.

Hope you find a treatment program for these children here in Norway, this is not satisfactory.

My boy was diagnosed as mentally retarded by a psychologist using the WISC 3 which is a test not suitable for children with motor and speech difficulties, so us parents had to fight fist and tooth for a long time...

The evaluation of our child has not been thorough enough in relation to looking into alternative diagnosis common with these symptoms; we suspect that an additional condition from the autism spectrum could be present. This is not met with much understanding, but those voicing any opinion are not especially familiar with this diagnosis either. I do not doubt that he is suffering from this condition by many-called Developmental Dyspraxia..., he fills all the criteria, and still has a few additional ones, therefore my suspicion of something in the autism spectre. Lots of good and useful information on English pages on the net, but my English is not perfect so it is sometimes difficult to decipher the information. I have read that dyspractic children are oversensitive to sound and temperature, and rarely has the one problem but often an additional diagnoses of an autistic related nature. Have not been able to get a confirmation on that score. I get rather distraught when there are conflicting information, and no one seem to know where to go to get the right/formal diagnosis and information/help in relation to this diagnoses.

The conclusions reflect the overlapping nature of DCD and the need not to only concentrate on ADL. Many of these children have social, organisational and attentional difficulties impacting on ADL and education.

Early intervention seems to be important.

Part 4: Evidence for intervention for children with DCD

Evidence are often in conflict with each other, there is confusion about the efficacy of the various methods (Sugden, Dunford, 2007).

A look at research and literature, from the last 7 years, gave some evidence for intervention.

Parents:

The perspective of parents is often overlooked.

For parents it is difficult to get their child assessed, to know which pathway they should follow to affirm their worries and get the necessary support for their child.

Parents challenged to deal with their child's limitations (Missiuna et al, 2006).

Parents are of opinion that their children's impairments restrict their participation in society (Segal et al., 2002).

For parents it is difficult to access services for children with DCD. They are frustrated and alone in this process (Rodger, Mandich, 2005).

There is an evolution over time in the concerns that parents have, from motor and play concerns in the early years, to self-care, academic and peer problems in middle childhood, to significant challenges with self-esteem and emotional health in later childhood (Missiuna et al, 2007).

It is important to understand that the impact of DCD relates to developmental age and environmental expectations (Missiuna et al, 2007).

Sugden and Chambers (1998) suggest that to work with teachers and parents is a way forward with all but the most severely affected children. In the book of Geuze (2007) David Sugden describes the Parent Teacher Intervention Programme. This seems to be a good model for intervention.

Intervention:

There are many alternative approaches with little validity or extensive research, such as Dore, Sunflower and Brain Gym.

Some improvement, but not in motor skills, is seen with Omega 3 supplementation (Richardson, 2002, 2005). Additional research is needed.

The deficit orientated, bottom-up, approaches, e.g. Sensory Integration, Sensorimotor approaches, Bobath, show little evidence (Polatajko, Cantin 2005, 2007). More evidence is found on the performance orientated approaches, the top-down models, e.g. Task based approaches (Schoemaker) and Cognitive approaches (Polatajko, Sugden and Henderson). These models include the focus on the environment. A shift from a deficit-oriented to a performance oriented perspective seems to be appropriate.

Also the client-centred approaches, goal based by the child, seems to be effective.

At the Leeds Consensus (2006) David Sugden pointed that task oriented approaches using cognitive methods, incorporating ecological and dynamical perspectives have a good theoretical base (Sugden, 2006).

Niemijer, Schoemaker, Smits-Engelsman (2006) find that teaching principles may be used with success in therapeutic situations. Providing clues on how to perform a task, asking children about a task, and explaining why a movement should be executed in a certain way were related to better movement performance.

Difficulties experienced may in part be due to an impaired ability to use cognitive strategies to solve performance problems. Cognitive Orientation to daily Occupational Performance (CO-OP) is a verbally-based approach to help children to cope with this difficulty.

It is based on the premise that cognition plays an important role in the acquisition of occupational skills and the development of occupational competency. CO-OP is an individualized, client-centred approach focused on strategy-based skill acquisition, developed for use with children who have occupational performance deficits.

The results of the study of Sangster et al (2005) support the use of a cognitively-based approach.

Bernie and Rodger (2004) found that the use of cognitive strategies is more related to the individual child and intervention goal than to age.

Intervention that focuses on enabling children to choose their own functional goals in the area of physical activity has important implications for enabling participation and building social networks (Mandich, Polatajko, Rodger, 2003)

Children who received CO-OP tended to experience greater long-term maintenance of their motor goals and acquired strategies (Miller et al, 2001). CO-OP seems to have a carry-over, (parts of) what is learned can be used into other tasks, situations or environments.

Intervention approaches should be targeted to the levels of activity, participation, and prevention of secondary impairments (Missiuna, Rivard, Bartlett, 2006)

A multi-level approach to treatment is recommended, providing a more complete representation of motor development at different levels of function, behavioural, neuro-cognitive and emotional (Wilson, 2005)

Schoemaker et al (2003) show an improvement for children in both quality of handwriting and performance, by using the Neuromotor Task Training (NTT), a task-oriented treatment programme.

Pless et al (2000) find that these children, at 5-6 year, do not benefit from group motor skill intervention.

Both teachers and parents can give effective intervention for many children. Children who do not improve may have difficulties that are more complex and which require specialist therapy (Sugden, Chambers, 2003)

Dunford et al (2004) find that less than a third of referrals to OT for DCD actually have the diagnosis. This suggests that referrers need more training and guidance. To assist referrers they suggest a triage procedure with a checklist.

The Perceived Efficacy and Goal Setting System (PEGS) is an instrument that enables children to reflect on their ability to perform everyday occupations and to identify goals for intervention. This can help the child to set goals for therapy and to incorporate the perspectives of parents and teachers (Missiuna et al, 2006)

Parents and children seem to have a high level of agreement about their competences, but they can disagree about the priority of these tasks for intervention (Missiuna, Pollock, 2000)

At the Leeds Consensus (2006) Missiuna spoke about family and community based approaches and on changing the demands of the environment at the same time as assisting the child. Changing the context and environment in which the child performs seems to be an important part of intervention.

Notes:

The unclear aetiology, the heterogeneity of the diagnosis and the overlapping conditions makes this debate complicated and give space for competing theories.

One approach to intervention will be successful for one person, not for another.

Some will need more help than others.

Reflective practice and evaluation will be the key to effective intervention approaches.

Feder and Majnemer (2007) find that failure to attain handwriting competency often has far-reaching negative effects on both academic success and self-esteem. Handwriting difficulties do not resolve without intervention. It affects between 10-30% of school-aged children. They point that legible handwriting remains an important skill that deserves greater attention from educators and health practitioners.

Further research on intervention approaches is needed.

Part 5: Occupational Therapy for children with DCD

OT works with children who have difficulties playing and performing activities or can develop these difficulties. The goal is for the child to have a meaningful existence, feeling included, and participating in activities. The aim is to prevent further health-problems and reduce strain on parents and other caregivers.

OT supports the child's ability to develop through purposeful activities. The OT uses play, and other activities, directly in training and therapy, and indirectly by adapting the environment and using technical appliances.

Relevant measures used in OT:

Training the activities of daily living, e.g. bicycling, dressing, eating and writing.

Adapting and facilitating activities. OT can apply for technical appliances like writing tools, computer equipment, remote controls, and communication equipment.

Training of functions, necessary to master complex activities.

Working on attitudes and passing on knowledge.

Through talks with people close to the child stimulate attitudes and actions that can enhance the child's development and participation. Advice about development promoting activities and training programs.

Planning, formulation and environmental adaptations, to enable children to participate and be active. This could be advice on home, school and Nursery adaptations, or use of technical appliances to ease the parents nursing and care (www.netf.no).

Mandich, Polatajko, Rodger (2003) point out that children with DCD experience difficulty participating in the typical activities of childhood. Ziviani and Muhlenhaupt (2006) point out that the primary goal of OT is to enable participation by children in play, learning and social experiences

OT should to focus on occupational performance issues for children with DCD, facilitating the understanding of parents and the need for early intervention.

A performance oriented approach is recommended and treatment goals need to be child-chosen.

The longer term implications of DCD e.g. handwriting and organisational skills, should be addressed or alternative strategies given.

Part 6: Conclusions from study

There is little support for children with DCD in Norway.

Most parents were not satisfied with the support they got. It was hard to obtain a formal diagnosis or treatment. This is the same as found in literature.

Literature shows that listening to parents is important!

Children need support at ADL; home, school and/or play and leisure time.

OT should be part of a multidisciplinary intervention for the child with DCD.

Parents experience a huge need for professional help on many of the daily life activities, both at home, at school and in play and leisure time. This implies all kind of activities of daily life, also the organisational, planning and social part of activities.

There is a lot that can be done for children with DCD in Norway, see part 9.

Part 7: Discussion and recommendations for intervention for children with DCD in Norway

Basic needs:

DCD as a common diagnosis. Using internationally the same terms and definitions makes it easier to communicate about intervention and assessment.

To learn from the experiences in other European countries.

To use effective and evidence based information and models for intervention

Take part in international discussions on this diagnosis.

Approaches, some ideas:

Helping the child, the parents and the teachers to understand why some activities are difficult

Meeting the individual with an understanding and positive attitude

Interdisciplinary working would be best, this should include both Health and Educational professionals, the parents and the child.

Cognitive approaches to learn specific activities. This gives a better long term effect.

Adapted equipment and environmental modifications at home and school.

Assessing and advising teachers and parents. This is an economical way of using therapists, it prevents long waiting lists, gives quick short term benefits and probably some long term benefits too.

Reflective practice. A holistic and dynamic view.

Plan goals for therapy and interventions together with the child and their family.

Allow for the child's perceived self-competence and willingness to engage in physical activity.

Awareness of the psychological effects of DCD on the child and how it affects the family as a whole

Actions, some proposals:

DCD diagnosis is not common in Norway, therefore increasing the knowledge on DCD will be the first step, both to Educational and Health professionals, including family doctors for when they see children with DCD and psychiatrists who may see children with ADHD or autism (Kirby, 2007).

Referrers and those who decide about the financial part of Health and Educational support and decision makers should get this information and they should join the congress (see below).

One idea is making information sheets, e.g. for parents (Missiuna et al, 2006) and teachers and probably a leaflet for young people, as done in Solihull, UK (Smith, 2007).

Other ideas are publishing articles about DCD in papers and in professional journals in Norway or making a film about how DCD affect children (Payne, 2007, Smith, 2007). This can be done at information evenings at schools or at the Health Centres.

It seems essential that there should be practical suggestions, advice and eventually training for teachers. This can be done at the schools at a meeting for teachers (Iersel, 2004, Payne, 2007).

Assessment and advice services seem a good way of using the resources of professionals. Advice after assessment can include advice for teachers in the classroom, practical things that the child and family can do at home to improve skills, strategies to help with self care skills and advice for play and leisure (Payne, 2007).

Since listening to parents is important (Missiuna et al, 2007a) development of parent support groups should be in priority. This can be done by learning of experiences from other countries, e.g. the Netherlands (Houten, 2007), and the United Kingdom (Payne, 2007).

When the diagnosis is more known concrete actions can be planned to improve support, e.g.:

Making lists of adaptations and possible compensations.

Advice for at home.

Advice for communication.

Start social skills groups in school.

Making lists with kit/approaches, in Norwegian, for the different age groups (e.g. 3-5 years, 6-9 years, 10-12 years, 13-15 years). In class (writing, organisation, number of work, homework), at the playground, etc..

It seems to be valuable to make guidelines for assessment and intervention for children with DCD (Rogers, Mandich, 2005) in Norway, like they do in the Netherlands (Houten, 2007).

In the book of Reint Geuze (2007) there is information about the Parent-Teacher Intervention Programme (Sugden), an effective and low costs programme to use in support for children with DCD.

Many books on DCD/Dyspraxia offer practical information and tips, both for in the classroom and at home. Some have also advice on supporting parents (Addy, 2006, Boon, 2001, Drew, 2005, Eckersley, 2004, Iersel et al, 2004, Kirby, 1999, Portwood, 1999 Ripley et al 1997).

There is need to create a Norwegian DCD working team. One person should be a central coordinator. This team could meet one day twice a year and work on developing directives for assessing and intervention based on international consensus of diagnosis and assessment (Houten, 2007). They can work out the proposals described here, eventually delegate to others and probably making small projects out of this.

Another step forward is the multidisciplinary 3-days congress on DCD in Oslo, May 2008, with 7-8 speakers from Norway, the Netherlands and the United Kingdom, for parents, Health and Educational professionals.

Themes at this congress:

- the perspective from the child / parent
- diagnosis, assessment and intervention (PEGS, NTT, COOP).
- At the end there will be a discussion "Development of intervention models for children with DCD in Norway".

A course in CO-OP, by Helene Polatajko, October 2008 is planned too (www.ergoterapiforbarn.no, under "kurstilbud").

This assignment will be published on www.ergoterapiforbarn.no.

The searching motors for this site will change, so all looking for DCD or Dyspraxia can find this information.

Part 8: Evaluation of this study

Strength:

The project gave the answers I looked for.

This study shows the need to improve intervention for children with DCD in Norway. It gives an insight in evidence based intervention methods and concrete proposals about what can be done in Norway to create a better support for children with DCD are given.

The results of this study show the same as seen in literature and conclusions of research internationally.

It shows that parents feel the need for professional support on daily life activities.

Compared to international research and within the framework of this study quite a large group of parents were taking part.

Using the DCDQ was a good method for finding the parents. It is succinct, easy to administer and score, and provides information on the existence of motor difficulties in children (Wilson et al, 2000).

Limitations:

Probably this was a too large project for this education.

It was difficult to find parents because DCD is not known as a diagnosis in Norway

One parent could not answer the questions about school; her child was at an alternative school system, where they did not divide into these subjects.

The conclusions are based on the mean age. Research on specific ages will surely give other results. This can be done in another research. This questionnaire and/or data collection can be used or more parents at each age level can be interviewed. It will show the needs at specific ages and tells more about what kind of interventions should be provided at the different ages.

Future:

For more evidence there could be a research with more participants.

It is interesting to get to know more about the needs of these children at school and what could be done for them within the Norwegian Educational system.

It probably could be interesting to highlight the activities of daily living one by one.

The DCDQ can be used for future research.

This study can be seen as the start of a bigger research project.

More research is needed, both in Norway and internationally.

Epilogue

The study is done by Sylvia van Zuiden, OT for Children Health, Dutch living in Norway.

It is part of a master education on DCD at the University of Wales.

Hereby I would like to thank all the people who helped me, especially the participating parents and all the children in my OT practice who have given me experience and personal growth during the last 10 years.

June 2007
Sylvia van Zuiden

Conclusion / Summary

This project is about the needs for children with DCD as seen by the parents and what kind of support could be given. It looks at how services are currently provided in Norway and what their potential needs are. OT can play a role in a multidisciplinary intervention. Some discreet proposals for support for children with DCD in Norway are given. One step forward in Norway is a multidisciplinary congress, May 2008.

More research is needed.

APPENDIX I: Questionnaire for this project

Requirement analysis in relation to intervention strategies for children with DCD

A

1. At what age did you start to worry about your child's coordination?
2. a. Does your child have a diagnosis of Dyspraxia? b. Has your child been diagnosed DCD? c. If not, has your child been diagnosed with anything else? If so what diagnosis?
3. Where was Dyspraxia / DCD mentioned to you for the first time? (eg. other parents, teacher, friend, health professionals, internet, someone or something else).
4. How old was your child when it was diagnosed? Who gave the diagnosis?
5. Are you satisfied with the help you received? From 1 to 5, 1 is dissatisfied, 5 is very satisfied
6. Who has provided you with help that has been useful?

B.

If you are in need of more help/ support for your child, what kind of help do you need now (or expect to need in the future):	
Further evaluations	yes / no
Help in school	yes / no
Counselling at home	yes / no
Counselling for future needs	yes / no
Changing the environment	yes / no
Support and understanding from other parents	yes / no
Other	yes / no
Other	yes / no
Other	yes / no

C. What kind of professional help do you need for everyday activities for your child?

Cross for the answer alternative, which is the most accurate.

No need **Slight need** **Need** **Great need**
 1 2 3 4

Activities of daily living

At home	1	2	3	4
Dress/undress				
Eating /eating situation				
Use of cutlery				
Sitting at the table				
Washing hands				
Shower				
Drying body				
Independent at toilet visits				
Walk up stairs				
Walk down stairs				
Sleep/ bedtime-situation				
Put on shoes				
Tying shoelaces				
Buttoning buttons				
Using a zip				
Organizing himself				
Social activities with family				
Social activities outside family				

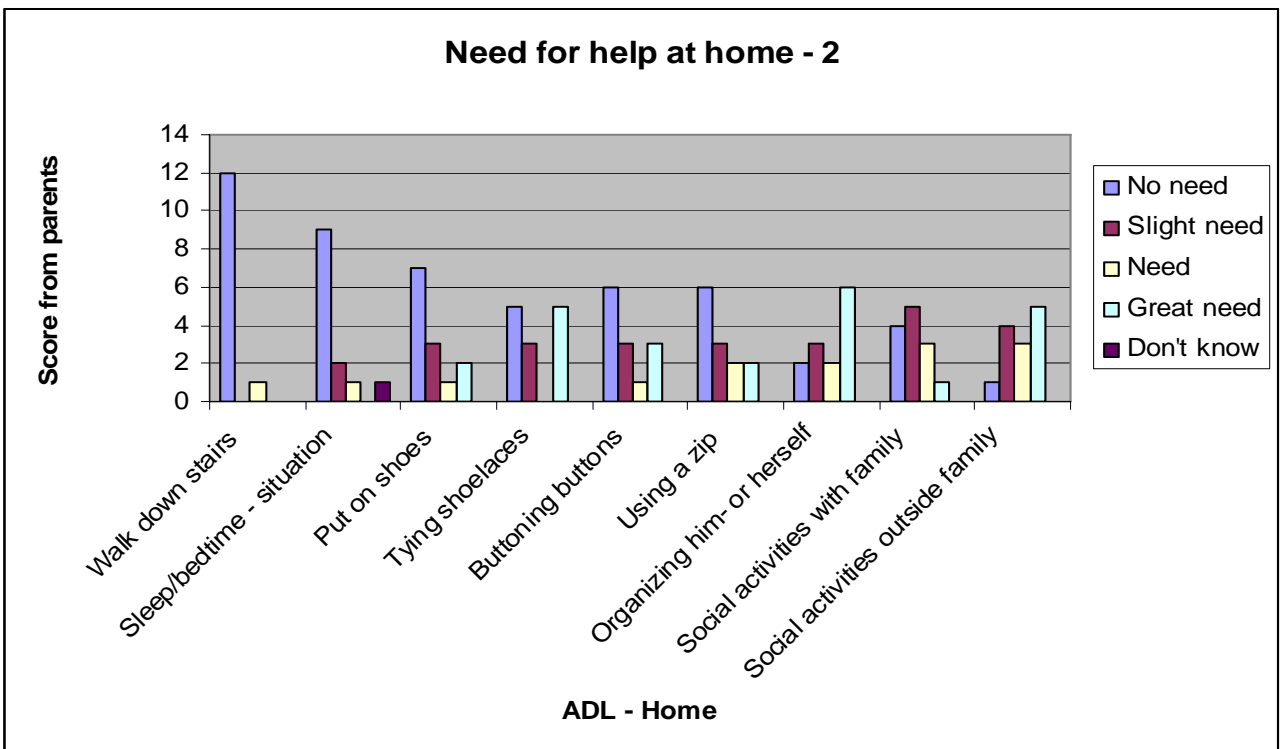
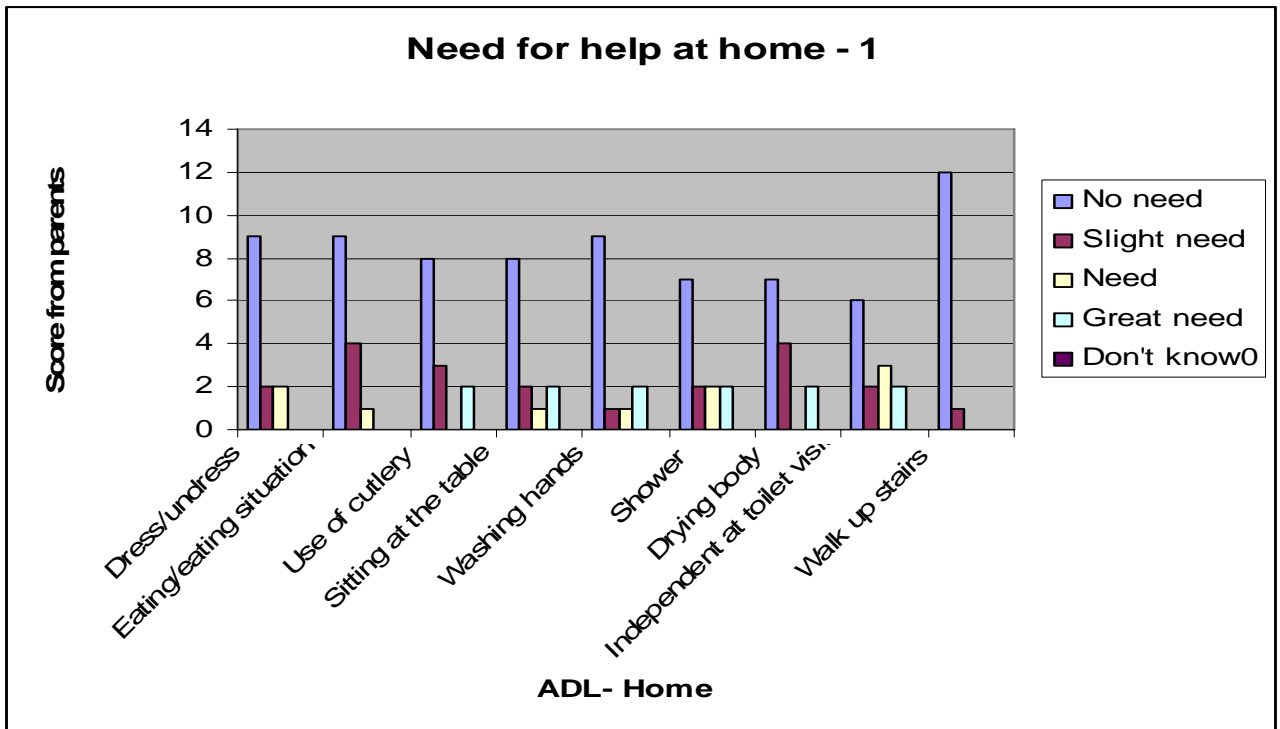
At school	1	2	3	4
Reading				
Writing				
Math				
Copying from blackboard				
Concentration				
Throw/ catch ball				
Right books and equipment for school				
Time management				
Sitting at desk without disturbing the class				

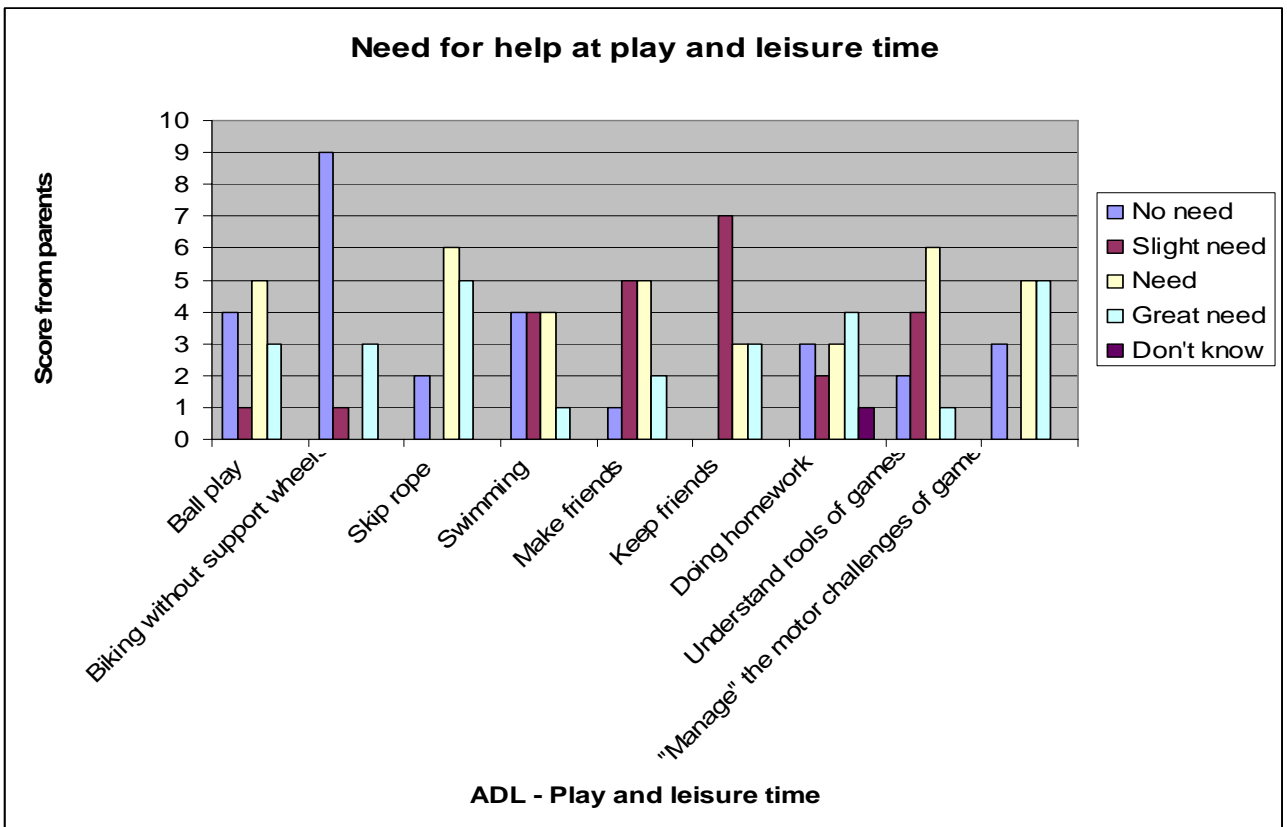
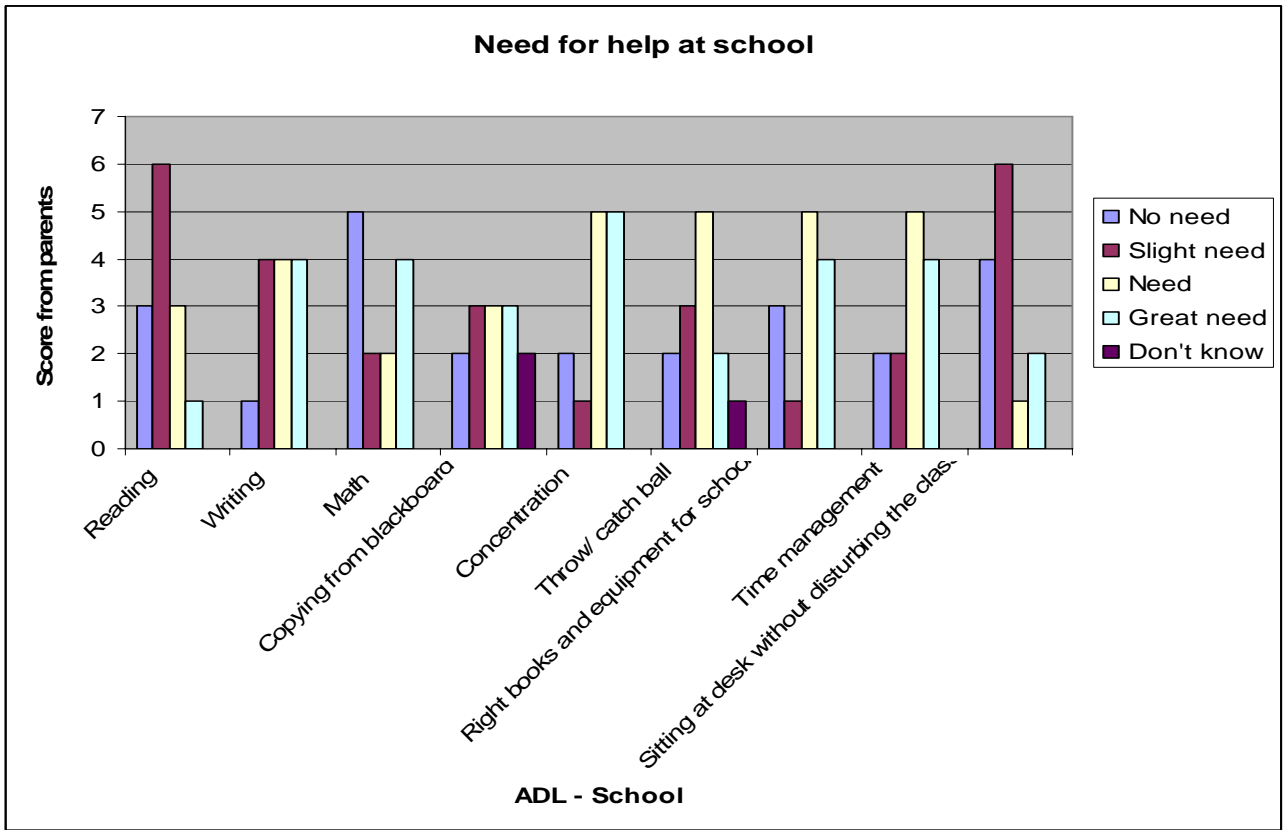
In play and leisure time	1	2	3	4
Ball play				
Biking without support wheels				
Rope jump				
Swimming				
Make friends				
Keep friends				
Doing homework				
Understand the rules of games				
"Manage" the motor challenges of games				

Other:

Comments:

APPENDIX II: The tables show the need for help on several activities for daily living; at home, school, play and leisure time.





Appendix III : OT for Children, source: www.netf.no, translated by Vivi Johannessen

Occupational therapy when everyday life becomes difficult.

The Occupational therapist (OT) works with children who have difficulties playing and performing other activities, or is in danger of developing these difficulties. This can be a child with developmental disorders, learning disorders, problems with coordinating sensory input with body-movements (sensory-motor problems) movement disorder, congenital or acquired deformities, psychiatric conditions, psycho-social disorders, multi handicapped, sensory loss and acute illness.

The goal is a life on their own terms

The goal is for the child to have a meaningful existence, experience appreciation; feeling included, and participates in activities. The aim being to prevent further health-problems and reduce strain on parents and other caretakers.

The basis being wishes and possibilities

The OT always starts with mapping the activity-choices of the child and parents, in play, physical challenges and socializing with others. The OT assesses the child's ability for activities, as well as the physical and social environment around the activities. This could be at home, in kindergarten, in School and other public buildings, playgrounds, residential and other outdoor spaces.

Through activity to activities

The OT supports the child's ability to develop through purposeful activities. The OT uses play, and other activities, directly in training and therapy, and indirectly by adapting the environment and using technical appliances.

Measures used in Occupational Therapy

Training the activities of daily living

The OT motivates and adapts for training, to enable the child to master activities like ball-games, bicycling, climbing, sand-play, construction, dressing and undressing, personal hygiene, eating and writing. The OT emphasizes that the individual child can participate with the other children in kindergarten, in the playground, in the schoolyard, in brass bands, in the swimming pool, to the cinema, and so on.

Adapting and facilitating activities

The OT gives advice as to how activities can be executed in a more simplified manner, for example by using clothes that are easier to put on. It may also be applicable to make an activity program which structures the day. To enable children with disabilities to participate in play and other activities, the OT apply for technical appliances like wheelchairs, tools, computer equipment, remote controls, and communication equipment.

Training of functions

OT training is aimed at functions necessary to master complex every day activities. The sense of touch, balance, hand function, movement and communication abilities are some of these functions. Play and daily activities are used in treatment. The treatment can be given individually or be part of the general program in kindergarten or school, in subjects like crafts and sports.

Working on negative attitudes and passing on knowledge

The OT can give the child increased insight into own possibilities and limitations and further knowledge in activity, health and the correlation between the child's functional problems and daily activities, how to master challenges, and it's possibilities.

Through talks with parents, siblings, teachers, classmates and other people close to the child, the OT stimulates attitudes and actions that can enhance the child's development and participation. Advice about development promoting activities and training programs can be included in the OT's work.

Planning, formulation and environmental adaptations

The OT gives advice on how to adapt home, school, kindergarten, leisure arenas and other facilities, to enable children to participate and be active. Advice on prevention of accidents, injuries and unfavourable strains is also part of the work. This could be advice on home, school and kindergarten adaptations, or use of technical appliances to ease the parents nursing and care. To enhance a child's activity and participation the OT gives advice to local authorities plans for playgrounds and other leisure arenas, traffic safety, schools, kindergartens and habilitation services.

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