Cognitive Orientation to Daily Occupational Performance (CO-OP): Part III– The Protocol in Brief

Helene J. Polatajko
Angela D. Mandich
Cheryl Missiuna
Linda T. Miller
Jennifer J. Macnab
Theresa Malloy-Miller
Elizabeth A. Kinsella

Helene J. Polatajko, PhD, OT(C), is Professor and Chair, Department of Occupational Therapy; Professor, Department of Rehabilitation Science, Faculty of Medicine, University of Toronto, Toronto, Ontario, Canada; and Professor, Faculty of Education, The University of Western Ontario, London, Ontario, Canada. Angela D. Mandich, MSc, OT(C) is doctoral candidate, School of Kinesiology, and Instructor, School of Occupational Therapy, The University of Western Ontario. Cheryl Missiuna, PhD, OT(C) is Assistant Professor, School of Rehabilitation Science, and Co-Investigator, CanChild Centre for Childhood Disability Research, McMaster University, Hamilton, Ontario, Canada. Linda T. Miller, PhD, is Assistant Professor, School of Occupational Therapy, Faculty of Health Sciences, The University of Western Ontario. Jennifer J. Macnab, BA, is a doctoral candidate, Department of Epidemiology & Biostatistics, Faculty of Medicine, The University of Western Ontario. Theresa Malloy-Miller, MSc, OT(C), is Occupational Therapist, Thames Valley Children Centre, London, Ontario, Canada. All of the above authors are members of the Developmental Coordination Disorder Research Group. Elizabeth A. Kinsella, MAEd, OT(C) is doctoral candidate, Faculty of Education, The University of Western Ontario.

Address correspondence to: Helene J. Polatajko, PhD, OT(C), Department of Occupational Therapy, Faculty of Medicine, University of Toronto, 256 McCaul Street, Toronto, Ontario, Canada, M5T 1W5 (E-mail: h.polatajko@utoronto.ca).

[Haworth co-indexing entry note]: "Cognitive Orientation to Daily Occupational Performance (CO-OP): Part III-The Protocol in Brief." Polatajko, Helene J. et al. Co-published simultaneously in *Physical & Occupational Therapy in Pediatrics* (The Haworth Press, Inc.) Vol. 20, No. 2/3, 2001, pp. 107-123; and: *Children with Developmental Coordination Disorder: Strategies for Success* (ed: Cheryl Missiuna) The Haworth Press, Inc., 2001, pp. 107-123. Single or multiple copies of this article are available for a fee from The Haworth Document Delivery Service [1-800-342-9678, 9:00 a.m. - 5:00 p.m. (EST). E-mail address: getinfo@haworthpressinc.com].

SUMMARY. Parts I and II of this series introduced the Cognitive Orientation to daily Occupational Performance (CO-OP), a new approach to intervention that is based on the premise that cognition plays an important role in the acquisition of occupational skills and the development of occupational competency. Developed for use with children who have occupational performance deficits, CO-OP is an individualized, client-centred approach focused on strategy-based skill acquisition. This third paper in this series presents a brief description of the actual CO-OP protocol including its objectives, prerequisites and key features.

KEYWORDS. Cognitive approach, intervention, DCD, CO-OP

Cognitive Orientation to daily Occupational Performance (CO-OP) is an approach to intervention that uses the power of cognition to drive successful performance. The CO-OP approach is based on the premise that cognition plays an important role in the acquisition of occupational skills and, by extension, the development of occupational competency. Created for use with children who have occupational performance deficits, the CO-OP approach can be used to promote the acquisition of new skills and the improvement of existing skills. In CO-OP, intervention focuses on the use of cognitive strategies to solve performance problems and to develop occupational competency.

CO-OP developed as an intervention approach as a result of research being performed with children with Developmental Coordination Disorder (DCD).* These children (see Polatajko[1] for a description) appear to have difficulty with the motor aspects of performance, particularly when a novel motor task is to be performed. Traditionally, therapy for these children has focused on reducing the underlying motor impairment (see Mandich, Polatajko, Macnab, & Miller, this volume, for a description[2]). These approaches, based on sensory-motor (reflex-hierarchical) models of motor development, conceptualize

*Although to date CO-OP has only been formally investigated with children with DCD. Early experience with other clients suggests that, like other cognitive approaches, CO-OP is likely to have applications with other populations.

the motor performance problems of these children as stemming from some form of sensory, sensory-motor or sensory-integrative deficit and treatment is designed to ameliorate these underlying deficits. For the most part, these are physical approaches. During treatment, the child is actively engaged in a large variety of activities, often developmentally sequenced, that provide the sensory, sensory-motor, or sensory integrative experiences that are considered to be fundamental to motor performance. The assumption is that exposure to such activities will foster the development of these fundamental skills and consequently improve motor performance.[3]

CO-OP represents a different orientation to this traditional approach. In contrast with traditional approaches, CO-OP treatment is focused directly on occupational performance issues and is a verbal approach. During treatment, the child is actively engaged in solving performance problems and testing out solutions. The assumption is that performance is the result of the interaction between the child, the environment, and the occupation[4] and that cognitive strategies can be used to drive performance.[5]

CO-OP was developed in response to a need for an alternative to the established approaches to the treatment of children with DCD. For the most part, the more traditional approaches were quite costly and time-consuming, with treatments being lengthy and progress being slow. As well, there was mounting evidence that they were relatively ineffective.[2] Based on the results of a treatment outcome study in which the only positive effect found was for a direct skill-teaching task,[6] it was hypothesized that DCD was essentially a motor learning disability and that treatment should be approached from a skill acquisition or learning perspective, rather than a neuro-developmental perspective.[7]

The learning literature, in particular the cognitive behavior modification literature, was examined in search of a new approach to the treatment of the performance problems of children with DCD. As well, the contemporary motor literature was searched for a potential model of motor performance. Both bodies of literature supported the exploration of an approach embedded in a learning paradigm. The cognitive behavioral literature, particularly the work of Meichenbaum,[8] provided a potential framework. Verbal self-instruction, using the global problem solving strategy used by Meichenbaum in his cognitive behavioral approach was adopted as a cornerstone for the new approach. This was augmented by the mediational techniques of

Feuerstein and colleagues.[9,10] Finally the principles of client-centred practice espoused by the Canadian Association of Occupational Therapists[11] were embedded throughout. The result was the development of a new, child-centred, cognitive oriented approach to enabling occupational performance, called Cognitive Orientation to daily Occupational Performance, ''CO-OP,'' for short.

CO-OP has been under development since 1991. The initial version, called Verbal Self-Guidance (VSG),[12,13] stressed the verbal guidance aspect of the approach. Results of this original study were promising so it was decided to continue to develop and test the approach. Martini[14-16] demonstrated that the results could be replicated with a different therapist. Closer examination of the approach by Mandich[17,18] showed that verbal self-guidance was only one of the features of this approach; that there were a number of additional cognitive strategies used throughout the therapy. To emphasize the importance of cognitive strategies, the name was changed to CO-OP.

Continued use of the CO-OP approach, within a research paradigm, has reinforced the original findings and provided evidence of the effectiveness of the approach, with numerous children, across several therapists.[19] Experience with the training of therapists in the CO-OP approach has resulted in the elucidation of the key features of this approach and has allowed for the refinement of the treatment protocol. What is presented in this third paper in the series, is a brief description of this protocol- it is beyond the scope of this paper to present a full, in depth description of the protocol.*

THE CO-OP APPROACH IN BRIEF

Cognitive Orientation to daily Occupational Performance (CO-OP) is an individualized, client-centred approach focused on strategy-based skill acquisition. CO-OP is essentially a cognitive approach to solving daily occupational performance problems. While acknowledging that occupational performance is a complex multivariate phenomenon resulting from the interaction of person, environment and

*The reader is cautioned that, in the experience of the authors, a written description of the approach appears to be insuficient to allow for its proficient use. Experience with training therapists has highlighted the extent to which this approach represents a deviation from traditional perspectives and, therefore, requires hands-on-training.

occupation,[11,20-28] the CO-OP approach focuses on the primacy of cognition and strategy use in skill acquisition and the development of occupational competency. In CO-OP, a global problem-solving strategy is used to frame the development of domain specific strategies that enable successful task performance and promote skill acquisition. CO-OP is a highly verbal approach in which cognitive strategies are mapped onto performance to facilitate and support performance.

Objectives

CO-OP has three basic objectives:

- *Skill acquisition:* the child learns to perform the required or desired skills. In CO-OP, a client-centred approach is used to identify the skills to be learned. *The Canadian Occupational Performance Measure* (COPM)[24] is used with the child to identify the three skills that he/she needs to, wants to, or is expected to do at school, home, or play that will be the focus of treatment. The COPM is a self-report measure that allows children to rate both their level of performance and satisfaction when carrying out tasks that they need to do on a regular basis.
- *Cognitive strategy development:* the child learns to use a global problem solving strategy to frame the discovery of domain specific strategies that will solve performance problems and thereby, improve performance and promote skill acquisition.
- *Generalization and transfer:* the child uses the newly acquired skills and strategies beyond the treatment session, in everyday life, and these skills and strategies serve as a foundation for learning related skills and strategies.

Prerequisites

For the CO-OP approach to be successful, there are a number of prerequisites for all involved: the child, his/her parents and/or caregivers and the therapist.

To benefit from the CO-OP approach, the child must:

- have sufficient cognitive and language ability to respond to the COPM;
- be able to identify three occupational goals;
- be able to respond and attend to the therapist;

- have the potential to perform the task; and
- have the motivation to learn three skills.

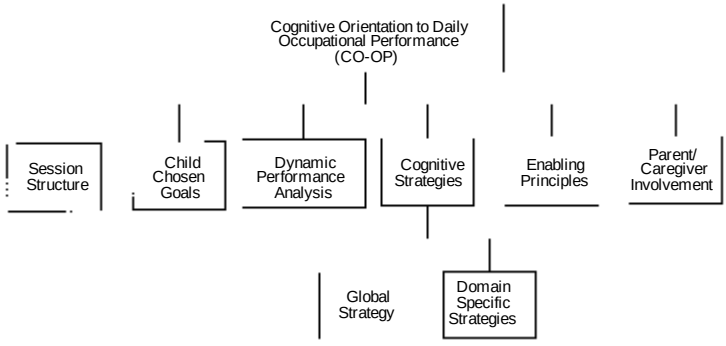
The approach is most successful if the parents and/or caregivers are involved and committed to implementing the approach beyond the treatment arena. Prior to beginning the intervention, it is ideal if therapists develop a partnership with parents, such that parents are committed to participating in the therapy sessions and to implementing CO-OP at home. It is important that parents understand the role that they play in helping their child acquire skills, develop cognitive strategies, and transfer and generalize these into everyday life.

To be able to implement the CO-OP approach successfully, the therapist must already bring with him or her effective communication skills, experience with the management of children with disabilities in a child-centered framework, excellent skills in task analysis, and a commitment to working with parents. In addition, the therapist must become proficient in the CO-OP approach.

KEY FEATURES OF THE CO-OP APPROACH

There are six key features to the CO-OP approach: session structure, child-chosen goals, dynamic performance analysis, cognitive strategies, enabling principles and parent/caregiver involvement (see Figure 1). Each is briefly described.

FIGURE 1. Key Features of CO-OP



Session Structure

In Cognitive Orientation to daily Occupational Performance (CO-OP) the therapy sessions are offered according to a structured format (see Figure 2). CO-OP is usually delivered over twelve, one-to-one sessions, each of approximately one hour in length. Parents and/or caregivers are encouraged to observe as frequently as possible, in order to encourage generalization and transfer. The therapy process is divided into five phases: Preparation, Assessment, Introduction, Acquisition and Consolidation.

Child-Chosen Goals

CO-OP is a child-centred approach. The child's perspective is of central importance throughout, beginning with the process of goal setting and continuing throughout the intervention. A child-centered approach is used for several reasons. First it is consistent with a general trend in health care recognizing that children should have a voice in the interventions that concern them[29-31] and second it is also consistent with the client-centered philosophy of occupational therapy.[11] Further, Meichenbaum[8] has emphasized the importance of the child as a collaborator in the cognitive behavioral approach. He declared, ''the children we treat have a great deal to tell us if we would only ask and then listen'' (p. 96). Finally having children choose their own goals ensures ecological relevance, which promotes motivation, transfer and generalization. A daily activity log is provided to the child in advance of the goal-setting session. The log helps children reflect upon the activities that they do each day. At the beginning of the assessment phase, the COPM is used to ensure that the goals that will be focused on during intervention are child-chosen.

Dynamic Performance Analysis

The third key feature of CO-OP is dynamic performance analysis (DPA), a dynamic and iterative process of performance analysis, as it happens. (For a detailed discussion of DPA, please see Polatajko et al.[32]) DPA was developed in concert with the CO-OP approach to allow for continuous evaluation of performance and to structure the problem solving process. DPA begins during the first session and continues throughout the intervention. The purpose of DPA is to solve performance problems by identifying where performance breaks down, identifying possible solutions and testing them out in a trial and error fashion.

FIGURE 2. Session Structure: CO-OP Intervention Protocol

Prior to Therapy	**Preparation** 1. Establish contact with parents 2. Orient parents to Cognitive Orientation to daily Occupational Performance (CO-OP) 3. Contract with parents to ensure resources and support 4. Provide Daily Activity Log 5. Check for child/parent and therapist prerequisites
Session 1	**Assessment** 6. Review child's completed Daily Activity Log 7. Administer Canadian Occupational Performance Measure (COPM) and identify three goals 8. Baseline child's performance using the Performance Quality Rating Scale (PQRS)
Session 2	**Introduction of Global Cognitive Strategy** 9. Introduce Global Cognitive Strategy: Goal-Plan-Do-Check 1. Therapist introduces the puppet, Commander GoalPlan DoCheck 2. Therapist maps Goal-Plan-Do-Check (GPDC) to a familiar task 3. Child maps Goal-Plan-Do-Check to a familiar task 4. Parents observe session and discuss application of GPDC at home
Sessions 3-11	**Acquisition** 10. Conduct Dynamic Performance Analysis: Ongoing 11. Facilitate the child's acquisition and application of the Global Cognitive Strategy: Goal-Plan-Do-Check 12. Guide discovery of Domain Specific Strategies (DSS) and mediate their application to skill acquisition 13. Apply Enabling Principles 14. Teach parents/caregivers about Goal-Plan-Do-Check and applicable Domain Specific Strategies 15. Educate parents/caregivers about their ongoing role in facilitating cognitive strategy use to promote skill acquisition
Session 12	**Consolidation** 16. Re-administer COPM 17. Re-administer baseline, using PQRS 18. Probe child for generalization and transfer of Global and Domain Specific Strategies: GPDC and DSS 19. Review and reinforce CO-OP approach, and cognitive strategy use with parents/caregivers

Dynamic performance analysis (DPA) is based on three assumptions regarding occupational performance: that *motivation* is a necessary prerequisite for successful performance; that an individual requires adequate *knowledge of a task* before he or she can successfully perform the task and that *occupational performance* is the result of the interaction of person, occupation, and environment.

- *Motivation:* In the motor learning literature, it has been well documented that an individual's motivation for participation in a task: (a) affects learning, (b) influences the acquisition of skill, task performance, and task persistence, (c) enhances the ability to deploy existing skills and knowledge, and (d) affects the willingness to continue when the task becomes exceedingly challenging.[33] If task motivation is not present, it will be very difficult, if not impossible, to carry out a valid performance analysis. In the CO-OP approach, motivation is ensured by the child-centred approach.
- *Task Knowledge:* Pressley, Borkowski and Schneider[5] have noted that a prerequisite to performance is an understanding of the task requirements. Brown, Pressley, Van Meter and Schuder[34] have provided evidence that task knowledge is integral to strategy development for performance. If at least rudimentary task knowledge is not present, it will also be difficult, if not impossible, to carry out a valid performance analysis. The study of the CO-OP approach by Mandich and colleagues[18] showed that task knowledge is often inadequate to support task performance in children with DCD, and that supplementing task knowledge results in improved performance.
- *Occupational Performance:* In the occupational therapy literature it is generally believed that occupational performance is the result of the interaction between the individual, the occupation and the environment.[11,20-28] Successful performance requires achieving a balance between the ability of the performer, and the supports and demands of the occupation and the environment. Competent occupational performance is considered to be the outcome of an interaction in which performer ability is in perfect balance with occupational and environmental supports and demands.[25,26] DPA focuses on identifying the specific imbalances that prevent successful performance. In CO-OP, a problem solving approach is used to identify the source of the imbalance and

potential strategies for solving the imbalance. The study by Mandich and colleagues[18] showed that with children with DCD, strategy use can solve performance problems.

Cognitive Strategies

The fourth key feature of Cognitive Orientation to daily Occupational Performance (CO-OP) is cognitive strategy use. Cognitive strategies are cognitive operations over and above the processes that are a natural consequence of carrying out a task.[5] They are strategic thinking processes aimed at accomplishing goals. In CO-OP, two kinds of strategies are used: a global strategy and domain-specific strategies.

A *global strategy is* a general executive strategy that focuses on increasing metacognitive awareness and training the individual to self-monitor and self-evaluate.[35] The global strategy utilized in CO-OP, Goal-Plan-Do-Check, is a problem solving strategy adopted from the cognitive behavioral work of Meichenbaum.[8,35] It is represented in the form of the mnemonic, Goal-Plan-Do-Check, developed by Camp, Blom, Hebert, and VonDoorwick.[36] The global strategy provides a structure within which the therapist or child can talk through the problems encountered in task performance. When using the Goal-Plan-Do-Check framework, the child is taught to use the following line of self-talk:

GOAL:	What do I want to do?
PLAN:	How am I going to do it?
DO:	Do it! (carry out the plan)
CHECK:	How well did my plan work?

Meichenbaum[35] points out that each stage of the Goal-Plan-Do-Check strategy facilitate an aspect of metacognitive thinking. For instance, determining the GOAL requires self-interrogation, the PLAN requires the child to self-monitor, the DO demands self-observation, and the CHECK fuels self-evaluation and self-reinforcement. Using this global framework, the child learns to talk him or herself through the task, and to develop metacognitive problem solving skills.

The Goal-Plan-Do-Check strategy is a central feature of the CO-OP approach to treatment. It is taught to the child during the second

intervention session, and reinforced throughout subsequent therapy sessions. It not only provides a global problem solving strategy for the child, but also provides a vehicle for discovering domain specific strategies. Some type of concrete reminder of this strategy, such as a puppet, is used throughout the intervention sessions. One example of this, Commander GoalPlanDoCheck is depicted in Figure 3.

Domain Specific Strategies are an array of specific cognitive strategies, which focus on facilitating or improving performance that are task, child, or situation specific. Mandich and her colleagues[18] identified eight domain specific strategies used in CO-OP: body position, task specification/modification, feeling the movement, verbal motor mnemonic, verbal rote script, verbal instruction, verbal self-instruction, and attention to doing.

During the CO-OP intervention, children are taught to talk themselves through occupational performance problems using the global cognitive strategy. This strategy is then used to frame the discovery of domain specific strategies that will enhance performance. The empha-

FIGURE 3. Commander GoalPlanDoCheck

sis during intervention is on helping the child to see how he or she can set goals, plan actions, talk him or herself through doing, and check outcomes. In other words, the focus is on metacognitive problem solving processes. The therapist helps the child to acquire occupational performance skills, by enabling the child's application of cognitive strategies to task performance.

Enabling Principles of CO-OP

A number of enabling principles have been developed for use in CO-OP to help the child learn to talk him/herself through occupational performance problems, use cognitive strategies, develop occupational skills and transfer and generalize learning. These have been drawn from general principles of learning, the literature on cognitive and mediation techniques, information about motor learning, and clinical experience with children with DCD.

Enabling principles are an integral part of the CO-OP therapeutic approach and are used throughout the therapeutic intervention. They are captured in 6 imperatives:

- *Make It Fun:* Experience with CO-OP indicates that therapists who are playful in their interactions with the children have the greatest success in getting children to use cognitive strategies and to improve occupational performance.
- *Promote Good Strategy Use:* Strategies form the bridge between abilities and skill acquisition. Pressley et al.[5] note that good strategy users have a number of characteristics in common. They suggest that effective use of cognitive strategies involves the coordination of several components including: sufficient task knowledge; a broad repertoire of strategies; and the realization that effort and strategy use affect performance. In CO-OP the therapist promotes good strategy use by: evaluating and supplementing the child's task knowledge as required, helping the child to develop a range of strategies, and guiding the child to see the connection between effort, strategy use and successful performance.
- *Frame It in Goal-Plan-Do-Check:* Throughout the intervention, the global strategy Goal-Plan-Do-Check provides the framework for solving performance problems. The therapist guides the child through the process of articulating the performance goal, devel-

oping a plan, carrying out the plan, and checking the effectiveness of the plan. The focus is on teaching the child to use the global strategy to talk himself or herself through performance problems.

- *One Thing at a Time:* Children learn best when one thing is presented at a time. While the therapist may identify a number of issues that need to be addressed, it is important to keep the child focused on only one thing and not to place excessive attentional demands on the child.
- *Work Toward Independence:* The nature of the interaction between the therapist and child changes over the course of CO-OP intervention. During the initial phases, the therapist takes the lead role in modeling the application of the strategy. As the child becomes more competent in strategy use, the therapist slowly relinquishes the lead role so that the child can take the lead in solving performance problems. Throughout the intervention, the child is encouraged to apply the strategies in everyday situations. This is done by discussing opportunities for transfer and generalization with the child and parents at each treatment session and by assigning ''homework'' to be done between sessions.
- *Guided Discovery:* Children remember best when they discover something themselves. Therefore, in CO-OP the emphasis is on child discovery of strategies to support performance. Using a combination of Meichenbaum's[8,35] scaffolding techniques, and the mediational techniques of Feuerstein and colleagues[10,37,38] the therapist guides the child to discover the strategies that will help him or her perform the chosen activities. The process of guided discovery is illuminated by four catch phrases: ''Ask, don't tell,'' ''guide, don't adjust,'' ''make it obvious,'' and ''bridge beyond.'' The therapist also helps the child to develop and test out plans (as part of the Goal-Plan-Do-Check strategy) for achieving goals. The process of guided discovery is an iterative one and occurs throughout the therapy.

Parent/Caregiver Involvement

Parent involvement in the CO-OP approach is crucial to promote the child's ongoing skill acquisition, strategy use, and generalization and transfer of learning. The therapist can promote parental involvement by ensuring that parents learn about the salient features of CO-

OP and the application of enabling principles. In this way the parent provides a critical link between the therapeutic setting and other environments. It has been recognized for some time now that involving parents in an intervention program promotes maintenance of learned behaviors and facilitates generalization and transfer.[39,40] Research indicates that students can achieve better outcomes at school when there is strong parental involvement.[41] Follow-up studies of behavior therapy have shown that children whose parents have been taught the behavioral techniques continue to improve and demonstrate transfer and generalization of improvement to areas that had not been specific treatment targets.[42]

In CO-OP, parents are required to observe Session Two, the session in which the global strategy is taught. They are then encouraged to help the child to practice applying the strategy before the next session. As well, parents are required to observe at least two additional treatment sessions and are strongly encouraged to participate in as many additional sessions as possible. Before each session begins, the therapist discusses, with the parent and child, the homework that was done. Examples are elicited of global and domain specific strategies that were used between sessions. Frequently parents use these opportunities to describe successes and discuss problems. At the end of each session, the strategies which emerged during treatment are reviewed and possible applications within the home and school environment are discussed.

CONCLUSION

CO-OP is a new approach to treatment for children with. In contrast to traditional approaches, CO-OP focuses directly on child-identified performance issues, and engages the child as an active problem solver and participant in the therapy process. Congruent with many contemporary ideas on skill development, CO-OP fosters the notion that performance is the result of the interaction between the child the environment and the occupation and that cognitive strategies can be used to drive performance. Use of the CO-OP approach, within a research paradigm, has provided evidence of the effectiveness of the approach with children with DCD. Further research is needed to investigate the use of CO-OP with other populations. This approach pre-

sents an alternative for therapists interested in a direct approach to the treatment of performance problems in children with DCD.

REFERENCES

1. Polatajko HJ. Developmental coordination disorder (DCD): Alias the clumsy child syndrome. In K Whitmore, H Hart, G Willems, (Eds.), *A Neurodevelopmental Approach to Specific Learning Disorders: The Clinical Nature of the Disorder* (pp. 119-133). London: MacKeith Press; 1999.

2. Mandich AD, Polatajko HJ, Macnab JJ, Miller LT. Treatment of children with developmental coordination disorder: What is the evidence? *Phys Occup Ther Ped*. 2001; 20(2/3), 51-68.

3. Gentile AM. The nature of skill acquisition: Therapeutic implications for children with movement disorders. In H Forssberg, H Hirschfeld, (Eds.), *Movement disorders in children* (pp. 31-40). New York: Karger; 1992.

4. Mathiowetz V, Haugen JB. Evaluation of motor behavior: Traditional and contemporary views. In CA Trombly, (Ed.), *Occupational therapy for physical dysfunction* (4th Ed.), (pp. 157-185). Baltimore: Williams and Wilkins; 1995.

5. Pressley M, Borkowski JG, Schneider W. Cognitive strategies: Good strategy users coordinate metacognition and knowledge. In R Vasta, (Ed.), *Annals of child development* (pp. 89-129). London, England: JAI Press; 1987.

6. Polatajko HJ, Macnab JJ, Anstett B, Malloy-Miller T, Murphy K, Noh S. A clinical trial of the process-oriented treatment approach for children with developmental co-ordination disorder. *Dev Med Child Neurol*. 1995; 37, 260-269.

7. Missiuna C, Mandich AD, Polatajko HJ, Malloy-Miller T. Cognitive Orientation to Daily Occupational Performance (CO-OP): Part I- Theoretical Foundations. *Phys Occup Ther Ped*. 2001; 20(2/3), 69-81.

8. Meichenbaum D. *Cognitive-behavior modification: An integrative approach*. New York: Plenum Press; 1977.

9. Feuerstein R, Haywood HC, Rand Y, Hoffman MB, Jensen MR. *Learning potential assessment device (L.P.A.D.) manual*. Jerusalem: Hadassah-Wizo-Canada Research Institute; 1986.

10. Haywood HC. A mediational teaching style. *The Thinking Teacher* 1987; 4, 1-7. John F. Kennedy Center for Research on Education and Human Development.

11. Canadian Association of Occupational Therapists. *Enabling Occupation: An occupational therapy perspective*. Ottawa, ON: CAOT Publications ACE; 1997.

12. Wilcox, A. L. Verbal self-guidance: An exploratory study with children with developmental coordination disorder. Unpublished master's thesis, The University of Western Ontario, London, ON Canada, 1994.

13. Wilcox A, Polatajko HJ. Verbal self-guidance as a treatment technique for children with developmental coordination disorder. (Abstract). *Can. J. Occup. Ther.* 1993; Supplement: 20-20.

14. Martini, R. Verbal self-guidance as an approach to the treatment of children with developmental coordination disorder: A systematic replication study. Unpublished master's thesis, The University of Western Ontario, London, ON Canada., 1994.

15. Martini R, Polatajko HJ. Verbal self-guidance in the treatment of children with developmental coordination disorder: A systematic replication study. (Abstract). *Can. J. Occup. Ther.* 1995;62:11.

16. Martini R, Polatajko HJ. Verbal self-guidance as a treatment approach for children with developmental coordination disorder: A systematic replication study. *Occup Ther J Res.* 1998; 18, 157-181.

17. Mandich, A. Cognitive Strategies and Motor Performance of Children with Developmental Coordination Disorder. Unpublished master's thesis, The University of Western Ontario, London, ON Canada, 1997.

18. Mandich AD, Polatajko HJ, Missiuna C, Miller LT. Cognitive strategies and motor performance in children with developmental coordination disorder. *Phys Occup Ther Ped*. 2001; 20(2/3), 125-143.

19. Polatajko HJ, Mandich AD, Miller LT, Macnab JJ. Cognitive Orientation to Daily Occupational Performance (CO-OP): Part II- The Evidence. *Phys Occup Ther Ped*. 2001; 20(2/3), 83-106.

20. Baum C. Client-centred practice in a changing health care system. In M Law, (Ed.), *Client-centred occupational therapy* (pp. 29-46). Thorofare, NJ: Slack Incorporated; 1998.

21. Christiansen CH, Baum CM. The occupational therapy context: Philosophy-principles-practice. In CH Christiansen, CM Baum, (Eds.), *Enabling function and well-being* (2nd Ed.), (pp. 26-45). Thorofare, NJ: Slack Incorporated; 1997.

22. Fisher AG. Uniting practice and theory in an occupational therapy framework- 1998 Eleanor Clarke Slagle Lecture. *Am J Occup Ther.* 1998; 52, 509-521.

23. Kielhofner G. Introduction ot the model of human occupation. In G. Kielhofner, (Ed.), *A model of human occupation theory and application* (2nd Ed.), (pp. 1-8). Baltimore, MD: Williams & Wilkins; 1995.

24. Law M, Baptiste S, Carswell A, McColl MA, Polatajko HJ, Pollock N. *Canadian Occupational Performance Measure*. (3rd Ed.). Ottawa, ON: Canadian Association of Occupational Therapists; 1998.

25. Polatajko, H. J. 1992 Muriel driver lecture. Naming and framing occupational therapy: A lecture dedicated to the life of Nancy B. *Can J Occup Ther.* 1992; 59, 189-200.

26. Polatajko HJ. The treatment of children with mild motor difficulties in OT: What do we know now? (Abstract). *Proceedings of 11th International Congress of the World Federation of Occupational Therapists, London, England* 1994; 856-858.

27. Reed KL, Sanderson SR. *Concepts of occupational therapy.* (2nd Ed.). Baltimore, MD: Waverly Press, Inc; 1983.

28. Yerxa EJ. Dreams, dilemmas and decisions for occupational therapy practice in a new millennium: An American perspective. *Am J Occup Ther.* 1994; 48, 587-589.

29. Deatrick JA, Woodring BC, Tollefson TL. Children should be seen and heard: chronically ill children should have a voice in treatment decisions. *Health Progress.* 1990; 71, 76-79.

30. Lewis MA, Lewis CE. Consequences of empowering children to care for themselves. *Pediatrician.* 1990; 17, 63-67.

31. Pittman KP. Awakening child consumerism in health care. *Pediatric Nursing*. 1992; 18, 132-136.

32. Polatajko HJ, Mandich A, Martini R. Dynamic performance analysis: A framework for understanding occupational performance. *Am J Occup Ther*. 2000;54, 65-72.

33. Dweck CS. Motivational processes affecting learning. *American Psychologist*. 1986; 41, 1040-1048.

34. Brown R, Pressley M, Van Meter P, Schuder T. A quasi-experimental validation of transactional strategies instruction with low-achieving second-grade readers. *Journal of Educational Psychology*. 1996; 88, 18-37.

35. Meichenbaum, D. Cognitive-behavior modification: Workshop presented at the Child and Parent Research Institute symposium. 1991.

36. Camp, B., Blom, G., Herbert, F., and Van Doorwick, W. Think aloud: A program for developing self-control in young aggressive boys. University of Colorado School of Medicine; 1976.

37. Feuerstein R, Rand Y, Haywood HC, Hoffman MB, Jensen MR. *Learning Potential Assessment Device (L.A.P.D.) manual*. Jerusalem: Hadassah-Wizo-Canada Research Institute; 1980.

38. Haywood HC. Bridging: A special technique of mediation. *The Thinking Teacher*. 1988; 4, 2-8. John F. Kennedy Center for Research on Education and Human Development.

39. Ross AO. *Psychological disorders of children: A behavioral approach to theory, research, and therapy*. New York, NY: McGraw-Hill Inc; 1974.

40. Ross AO. *Child behavior therapy: Principles, procedures, and empirical basis*. New York, NY: Wiley; 1981.

41. Willms JD. Indicators of mathematics achievement in Canadian elementary schools. In Statistics Canada and Human Resources Development Canada (Ed.), *Growing up in Canada. National longitudinal survey of children and youth*, (pp 69-82) Ottawa, ON Canada: Minister of Industry Catalogue No. 89-550-MPE, no. 1; 1996.

42. Lovaas OI, Koegel R, Simmons JQ, Long JS. Some generalizations and follow-up measures on autistic children in behavior therapy. *Journal of Applied Behavioral Analysis*. 1973; 6, 131-166.