

# Research Summary

## More Than Words®

### The Hanen Program® for Parents of Children with Autism Spectrum Disorder

#### Program Summary

*More Than Words* – The Hanen Program® for Parents of Children with Autism Spectrum Disorder (ASD) is a family-focused, social-pragmatic intervention program for young children with ASD. *More Than Words* was adapted from *It Takes Two to Talk*® – The Hanen Program® for Parents of Children with Language Delays in order to meet the needs of children on the autism spectrum and their parents. The goal of *More Than Words*, like that of *It Takes Two to Talk*, is to empower parents to become the primary facilitator of their child's communication and language development, thereby maximizing the child's opportunities to develop communication skills in everyday situations. *More Than Words* addresses the needs of both non-verbal and verbal children with ASD under the age of five.

#### Program Features

The *More Than Words* Program has the following features:

- It is led by a Hanen Certified speech-language pathologist (SLP) who has received specialized training at a Hanen *More Than Words* certification workshop
- It is offered to groups of parents (up to eight families per program)
- It has three major components:
  - ◆ a pre-program assessment and baseline videotaping of parent-child interaction
  - ◆ a minimum of 17.5 hours (seven sessions) of group training for parents; and

- ◆ three individual video feedback sessions for each parent attending the program (parent-child interaction is videotaped by and reviewed with the SLP)
- It is supported by user-friendly resources for both parents and SLPs, including: parent guidebook, a DVD, detailed Leader's Guide and power point slides with video examples for use by the SLP group leader

#### Program Objectives

*More Than Words* has three objectives:

- i) Parent education
- ii) Early communication intervention; and
- iii) Social support for parents

**Parent education** – parents learn about their child's unique learning style and sensory preferences so they understand his strengths and challenges. They also learn basic concepts about communication and language – e.g., the significance of joint attention and its impact on communication development; the role of play; the need to manipulate the environment to motivate the child to communicate; the importance of the child's active participation in frequent, extended turn-taking episodes. Parents become familiar with the child's stage of communication, enabling them to set realistic communication goals and be more responsive to his communicative attempts.

**Early communication intervention** – parents learn to apply responsive interaction strategies to everyday interactions with their child. Strategies highlighted



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by the SLP for each parent are tied to the child's communication goals, which are developed collaboratively with the parents and modified over the course of the program. Effective intervention depends upon the parent learning to apply the strategies flexibly across contexts so intervention becomes a natural part of parent-child interactions. Video feedback sessions play a major role in helping parents modify their interactive behaviour and apply strategies consistently, thereby maximizing the child's opportunities to develop more effective communication skills.

Video feedback sessions include the following components:

- The parent tries out newly learned strategies in an everyday activity with his or her child;
- The SLP coaches the parent “on-line”, as needed, to help him/her apply strategies successfully; and
- Parent and SLP view the videotaped interaction together — the SLP provides feedback to the parent, guiding the discussion in order to increase the parent's awareness of his/her interactive behaviour and its impact on the child, as well as increasing awareness of the child's communication. The SLP also helps the parent identify metacognitive techniques that will facilitate consistent strategy use.

**Social support for parents** – In comparison with parents of children with other types of disabilities, parents of children with autism appear to be at greater risk for depression, anxiety, social isolation, fatigue and frustration, particularly with respect to obtaining accurate diagnoses and services. This increases their need for social support, which has been shown to have a positive impact on the well-being of the child and the family when the child has a disability (Crnic & Stormshak, 1997). However, there is some evidence that, for parents of chil-

dren with autism, this support is most helpful when it comes from those who have a knowledge and understanding of the child's unique challenges (Gray, 1992).

In *More Than Words*, parents gain both formal and informal social support. The SLP, whose multi-faceted role includes that of group leader, interventionist, coach and counselor provides more formal support. The parent group itself provides informal support through the sharing of experiences with individuals in similar situations who can genuinely empathize.

## Summary

To be effective, interventions for children with ASD must include certain universal elements, such as:

- Intervention should take place early in the child's life and should be intensive;
- Parents should be involved as participating partners and agents in their child's intervention;
- Intervention should target communication and play;
- Intervention should be based on the child's individual profile with clear goals; and
- A systematic approach to achieving these;

(National Research Council, 2001; Bryson, Rogers, & Fombonne, 2003)

*More Than Words* is designed to incorporate all of these key elements of intervention.

## Theoretical Basis

### Philosophical Foundation

*More Than Words* reflects a family-centered model of intervention, recognizing the child as part of a dynamic social system and the family as the most important element

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in a child's life. This philosophical orientation recognizes the interrelatedness of the family system in that any action or event affecting one member of the family unit affects them all (Brown, Thurman, & Pearl, 1993; Donahue-Kilburg, 1992). The *family* is considered to be the client in a *More Than Words* Program since it is widely recognized that successful treatment depends on family involvement and intensive intervention (National Research Council, 2001). Empowering parents to participate in their child's early intervention involves supporting and strengthening their capacity to access knowledge and gain practical skills, which in turn, bolsters their sense of self-efficacy in relation to fostering their child's development (Dempsey & Dunst, 2004).

## Theoretical Foundation

*More Than Words* is based on a social-pragmatic theory of language acquisition, which views the development of communication as occurring in the context of interaction between the child and his or her social environment (i.e., the important adults in his life). This theoretical approach is also known as social-interactionist intervention (Girolametto, Sussman & Weitzman, 2007). Within social-pragmatic theory, adult-child interactions may encourage or inhibit the child's communication development, depending on many factors, including the child's ability to provide clear behavioural cues and the responsiveness of the parent to the child's cues (Barnard, 1997; Bohannon & Bonvillian, 1997; Bruner, 1974; Stock, 2002).

Strategies taught in the *More Than Words* program focus on enhancing the child's social communication skills through everyday, naturally-occurring interactions with his caregivers. Within this social-pragmatic intervention program, parents and other caregivers are viewed as the primary facilitators of the child's communication and language development. They facilitate the

child's social communication and language skills by applying responsive interaction strategies and using environmental manipulation (Prizant & Wetherby, 1998).

In *More Than Words*, parents learn to become more responsive to their child's communication attempts and to provide prompt, positive and sensitive contingent input (Stock, 2002). They also learn to structure the child's environment to increase his motivation to communicate and to promote extended joint interactions. However, *More Than Words* does not adhere strictly to a "follow the child's lead" approach. There are situations when parents are also encouraged to take the lead (e.g. with a child who is difficult to engage, or who doesn't know how to play with toys, or who needs to expand his repertoire of play activities). Therefore, parents learn to use prompts to cue the child to interact and/or communicate at his level of competence. Parents are encouraged to take advantage of the many opportunities for communication that naturally take place during the child's day. In this way, *More Than Words* enables them to make intervention a continual and evolving process (Rossetti, 2001).

The following three clusters of responsive strategies are taught in a *More Than Words* Program:

1. **Child-oriented strategies** — observe, wait and listen; follow the child's lead by including his interests: comment or join in; be face to face.
2. **Interaction-promoting strategies** — encourage turn-taking within routines; cue or prompt your child to take a turn; intrude to get an interaction going and then follow your child's lead.
3. **Language-modelling strategies** — interpret your child's actions; say less (simplify, shorten sentences), stress (highlight important words), go slow and show (use visual aids); repeat; expand (Sussman, 2012).

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## Empirical Evidence of Efficacy of *More Than Words* – The Hanen Program® for Parents of Children with ASD

To date, there are three published studies examining the efficacy of *More Than Words*.

### **Study #1** *A Controlled Trial Comparing the Outcomes for Parents and Children resulting from Parents’ Participation in a More Than Words Program (McConachie , Randle, & Le Couteur, 2005)*

<p>Area of investigation</p>	<p>The study was conducted in order to determine whether:</p> <ol style="list-style-type: none"> <li>1. Parents who attend a <i>More Than Words</i> Program: <ul style="list-style-type: none"> <li>■ Use more facilitative interaction strategies;</li> <li>■ Are less stressed</li> </ul> <p>than parents who have not attended this program.</p> </li> <li>2. Children whose parents attend a <i>More Than Words</i> Program: <ul style="list-style-type: none"> <li>■ Have better language and communication skills;</li> <li>■ Have fewer behaviour problems</li> </ul> <p>than those whose parents have not attended this program.</p> </li> </ol>
<p>Research design and Subjects</p>	<p>This quasi-experimental study compared the outcomes of preschool-aged children with ASD or suspected ASD and their parents (49 mothers and two fathers), who attended a <i>More Than Words</i> Program under two conditions:</p> <ol style="list-style-type: none"> <li>i) Shortly after recruitment (immediate intervention)</li> <li>ii) When a program became available after the child’s difficulties had been identified (delayed control)</li> </ol> <p>The design made use of a naturally occurring control group.</p> <p><b>Subjects:</b> 51 preschool-aged children (24 – 48 mos) with ASD or suspected ASD.</p> <p><b>Intervention group:</b> 26 children, 17 diagnosed with autism (ASD), 9 not core autism (NCA - did not meet all criteria for diagnosis of core autism).</p> <p><b>Control group:</b> 25 children, 12 diagnosed with autism, 13 not core autism.</p> <p>Outcome measures were administered at recruitment (time 1) and approximately 7 months later (time 2), which was 4 months post-program.</p>
<p>Intervention</p>	<p>Parents attended the <i>More Than Words</i> Program, with each family receiving:</p> <ul style="list-style-type: none"> <li>■ 20 hours of instruction in groups of eight families</li> <li>■ three home visits (for parent and child) to monitor their progress and provide individualized coaching using videotaping and feedback</li> </ul>

## Results

### Increase in parent responsiveness

Parents in the intervention group scored significantly higher on the Joy and Fun Assessment than parents in the control group, when their children had a positive diagnosis of autism. The Joy and Fun Assessment (JAFA) is an observational checklist, which assessed parental use of nine interaction strategies learned in *More Than Words*. These included use of fun words (such as “whee!”), simplified language, expansions, fun physical contact, pretend games, turn-taking routines, imitations and expansions. Parents of children without a confirmed diagnosis of autism (NCA – not core autism) did not change significantly relative to the control group, raising the possibility that the impact of *More Than Words* is “. . . greater for parents of children with core autism, where the strategies introduced are particularly empowering, after they have struggled to capture the attention of their child, have found their child’s self-directed behaviour hard to interpret as communication and so may have felt unable to interact or play with their child” (McConachie et al., 2005, p. 339).

### Increase in child vocabulary

A significant difference was found between the experimental and control groups in terms of children’s vocabulary size, as measured by parental report on the MacArthur-Bates Communicative Development Inventory (CDI) (Fenson, Dale, Reznick, Thal, Bates, Hartung, Pethick, & Reilly, 1993).

### Social Communication Skills, Child Behaviour and Parental Stress

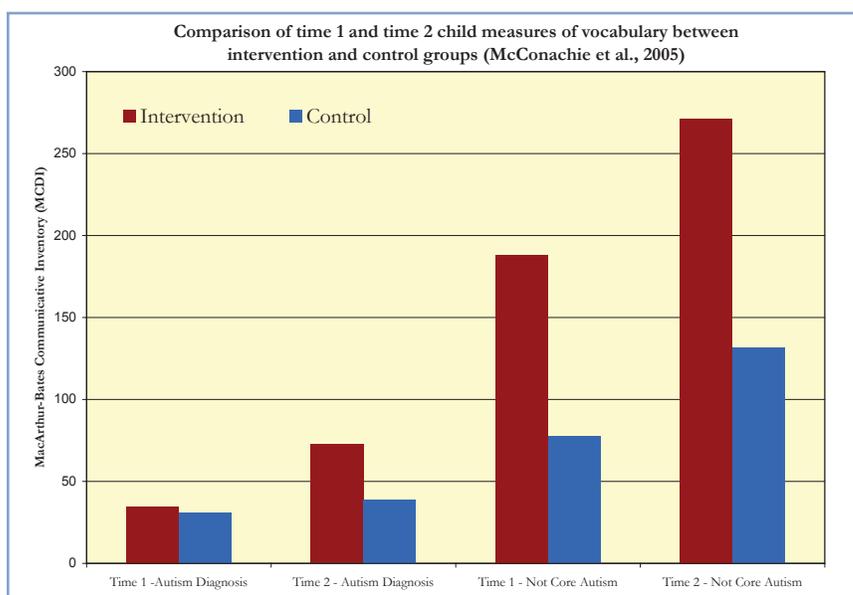
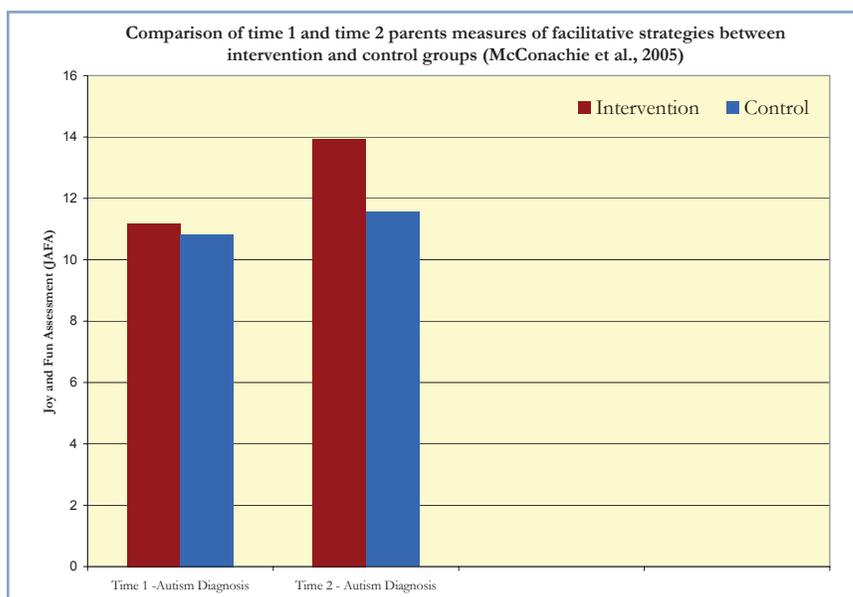
Social communication skills as measured by the Autism Diagnostic Observation Schedule (ADOS) (Lord, Rutter, DiLavore, & Risi, 1999) did not differentiate between the two groups of children at post-test. However, it is feasible that the study did not use sufficiently sensitive measures of dyadic interaction to examine outcomes in children’s joint engagement (Girolametto et al., 2007). There were no significant differences for child behaviour or parental stress between the two groups.

## Summary

This study had two key findings:

- Parents are able to learn and apply the interaction strategies that are likely to facilitate their child’s communication development, especially when the child has a confirmed diagnosis of autism
- The children whose parents attended *More Than Words* had larger reported vocabularies, regardless of whether they had confirmed or non-confirmed autism

These results provide preliminary evidence that *More Than Words* may positively impact parent-child interactions and early language skills in children with ASD.



**Study #2 Investigation of the effects of interactive intervention for children with ASD using case study methods (Girolametto, Sussman, & Weitzman, 2007)**

<p>Area of investigation</p>	<p>The study examined the outcomes of three children in relation to their social interaction skills following their mothers’ participation in <i>More Than Words</i>.</p> <p>The study had three aims:</p> <ol style="list-style-type: none"> <li>1) To confirm that parents used responsive interaction strategies following participation in the <i>More Than Words</i> program</li> <li>2) To replicate the previous findings of increased vocabulary development for children with ASD following the parent intervention; and</li> <li>3) To examine the children’s social interaction skills following the intervention.</li> </ol>
<p>Research design and Subjects</p>	<p>A multiple case study methodology was used to determine whether enhanced responsiveness, which is the underpinning of the social-interactionist model, is associated with hypothesized changes in social interaction skills (Girolametto et al., 2007).</p> <p>This study attempted to improve on the procedures used in the McConachie et al. (2005) study by using microanalytic techniques to code videotapes of mother-child interaction. Using a multiple case study design, it was hypothesized that there would be a positive relationship between parental responsiveness and social interaction skills for children with ASD.</p> <p>Three families of children with a confirmed diagnosis of ASD participated in the study. The children ranged in age from 2.8 – 3.2 yrs..</p>
<p>Intervention</p>	<p>Parents attended the <i>More Than Words</i> Program, consisting of eight group sessions and three individual videotaping and feedback sessions.</p>

**Results**

*Parents’ showed increased use of responsive interaction strategies*

Microanalytic techniques were used to investigate mothers’ responsive comments in two contexts – when the child communicated versus when the child was unengaged. All three mothers increased their rate of responsive comments during a play interaction and their gains exceeded those in the Aldred, Green and Adams study (2004), which utilized a similar coding system. The mothers also showed increases on the JAFA rating scale from pre to posttest, which equalled or exceeded the pre-established criterion established by McConachie et al. (2005), using this scale.

*Children demonstrated increases in vocabulary development*

Children’s vocabulary was measured by parent report on the CDI (Fenson, Dale, Reznick, Thal, Bates, Hartung, et al., 2003). and by using videotaped interaction. All three children made vocabulary gains as measured by the CDI. Their vocabulary gains exceeded those made by the intervention group in the McConachie et al. study (2005). The children’s posttest interaction showed that they were using an increased number of different words, which confirmed parent report on the CDI. Mothers reported subjective perceptions of increased vocabulary development on home visit surveys. Thus all three case studies replicated the posttest increases in

vocabulary observed in prior studies using this approach to intervention (Aldred et al., 2004; McConachie et al., 2005).

#### *Children demonstrated increases in social interaction*

The most important aim of the study was to examine the children's social interaction skills following their parents' participation in *More Than Words*. The data analysis focused on their rate of communicative acts, participation in social turn-taking episodes and initiation of social interaction. All three children made gains in the rate of communication acts, surpassing the gains made by the experimental group in Aldred et al., (2004). The children also increased their participation in social turn-taking episodes. Two of the three children showed increases in social initiations.

This study extends the findings of McConachie et al.'s (2005) study which did not report any gains in children's social interaction and initiation skills. It also replicates the findings of studies by Aldred et al. (2004) and Mahoney & Perales (2003), which examined similar interactive behaviours using rating scales (Girolametto et al., 2007).

## Summary

The findings of this study have important implications. Social-interactionist theory suggests that the more children are engaged in social interactions, providing them with opportunities to practice their social and linguistic skills, the more responsive input they receive from which they can deduce the rules of social interaction, discourse, and language. This suggests that, due to the synergistic nature of caregiver-child interaction, the changes observed in the children's interactive behaviour have the potential to facilitate further development gains in their communication development (Girolametto et al., 2007).

The limitations to this study include the absence of control groups or multiple data collection points. The lack of a control group prevents any conclusions from being drawn about the efficacy of this intervention approach. However, the outcomes highlight the potential of sensitive measures for detecting important changes in the social skills of this group of children.

**Study #3** *A Randomized Controlled Trial Comparing the Effects of the More Than Words Program with a “Business as Usual” Control Group (Carter, Messinger, Stone, Celimli, Nahmias, & Yoder, 2011)*

<p>Area of investigation</p>	<p>The goals of the study were to test whether participation in the <i>More Than Words</i> Program:</p> <ul style="list-style-type: none"> <li>(1) enhanced parental responsivity to their toddler’s actions, focus of attention and communication; and</li> <li>(2) increased communication in toddlers with symptoms consistent with ASD in comparison with a “business as usual” control group</li> </ul>
<p>Research design and Subjects</p>	<p>This randomized controlled trial was conducted at three project sites (cities in the south, southeast, and northeast United States), and families were recruited from specialty clinics, early intervention programs, pediatric and neurology practices, and the online Interactive Autism Network.</p> <p>The study measured children’s communication and parents’ responsivity at three points in time:</p> <ul style="list-style-type: none"> <li>Time 1: Prior to randomization</li> <li>Time 2: Five months post-enrolment in the <i>More Than Words</i> Program (at the end of the intervention period)</li> <li>Time 3: Nine months post-enrolment in the <i>More Than Words</i> Program (four months after the end of the intervention period)</li> </ul> <p><b>Subjects:</b> 62 children (51 boys and 11 girls) with a median age of 20.25 months who met criteria for autism spectrum disorders, and their parents.</p> <p><b>Intervention group:</b> 32 children who met criteria for autism spectrum disorders and their parents.</p> <p><b>Control group:</b> 30 children who met criteria for autism spectrum disorders and their parents.</p>
<p>Intervention</p>	<p>Over a 12 week period, parents attended the <i>More Than Words</i> Program, which included:</p> <ul style="list-style-type: none"> <li>■ 20 hours of instruction in a parent group</li> <li>■ three home visits (for parent and child) to monitor their progress and provide individualized coaching using videotaping and feedback</li> </ul>

**Results**

*Increase in parent responsiveness*

Parental responsivity was analyzed at Time 1, 2 and 3. Nonverbal responsivity was coded when a parent assisted the child during play, imitated the child’s actions with a similar object, expanded on the child’s play or responded to a request

from the child. Verbal responsivity was coded when a parent commented on the child’s current focus of attention, or verbally expanded on the child’s communication without being directive.

Parental responsivity was evaluated by measuring statistical significance and effect size. It has been argued that effect sizes provide more meaningful information than statistical signifi-

cance (Cohen, 1994) since they reflect real world outcomes and allow one to conclude whether “an observed difference is not only statistically significant but also important or meaningful ...” (University of Michigan School of Natural Resources and Environment, 2012).

While the main effect of the *More than Words* Program on parental responsivity did not reach conventional levels of statistical significance, effect sizes were in the medium to large range at both Time 2 and Time 3. This means that there was a significant difference in the level of responsiveness between the experimental and control groups after the program ended and four months later. The study’s authors commented that the magnitude of the effect sizes of the *More Than Words* Program on parent responsivity was consistent with findings in the McConachie et al (2005) study on *More Than Words* (see page 4) as well as with other studies on parent-mediated intervention (Green, Charman, McConachie, Aldred, Slonims, Howlin, Le Couteur, Leadbitter, Hudry, Byford, Barrett, Temple, Macdonald & Pickles, 2010). Given that *More Than Words* is a parent-implemented intervention, increases in parental responsivity and maintenance of these behaviours is critical since child change is dependent on parents’ applying and maintaining application of responsive strategies (Carter et al., 2011).

### *Child Outcomes*

#### *Significant treatment effect for children with low object interest*

There was a significant difference between experimental and control groups for children who played with a limited number of toys. Children who played with fewer than three toys at Time 1 showed gains in the following four areas:

- initiating joint attention
- initiating behavioral requests
- weighted intentional communication (scoring involved weighting communication according to whether it was nonverbal, single symbol or multiple symbol, with more advanced levels of communication being weighted higher)
- parent-reported gains in nonverbal communication

These gains were maintained for a four month period post intervention. It is significant that the children generalized the communication skills learned during interactions with their parents, who provided support as needed, to a new context with an unknown experimenter, who presented new toys and

did not provide any support.

The fact that these children’s gains were moderated by their initial toy play is important since toy play is a frequent context for parent-child interaction in responsivity-based treatments, and much of the child’s learning can take place within object-oriented joint action routines (Carter et al., 2011).

It is also important to note that children with greater interest in objects (who played with at least six toys at the time of randomization) did not show the same kind of progress, resulting in changes being made to the *More Than Words* Program to accommodate their more advanced play skills.

## Summary

The key findings from this study are:

- Parents who attended the *More Than Words* Program were more responsive to their children than parents whose children participated in “business as usual” treatments and they maintained their responsiveness four months after the program ended; and
- Toddlers who demonstrated minimal interest in toys before their parents attended the *More Than Words* Program showed significant gains in their communication, generalizing new skills to new contexts and strange adults and maintaining these changes for four months post-treatment.

These results confirm that *More Than Words* is an effective intervention for a challenging subset of children – those who show little interest in toys and who are typically very difficult to engage. In addition, it is important to note that, as a relatively low intensive intervention of 12 weeks, *More than Words* resulted in significant change in children with low object interest who maintained these improvements for four months. This is noteworthy given that many published interventions for children with ASD require an implementation of several months or even years (Dawson, Rogers, Munson, Smith, Winter, Greenon, Donaldson & Varley, 2010; Rickards, Walstab, Wright-Rossi, Simpson & Reddihough, 2009; Yoder & Stone, 2006) or focus on only one aspect of development such as imitation (Ingersoll, 2006; Kasari, Gulsrud, Wong, Kwon & Locke, 2010; Klein, MacDonald, Vaillancourt, Ahearn & Dube, 2009).

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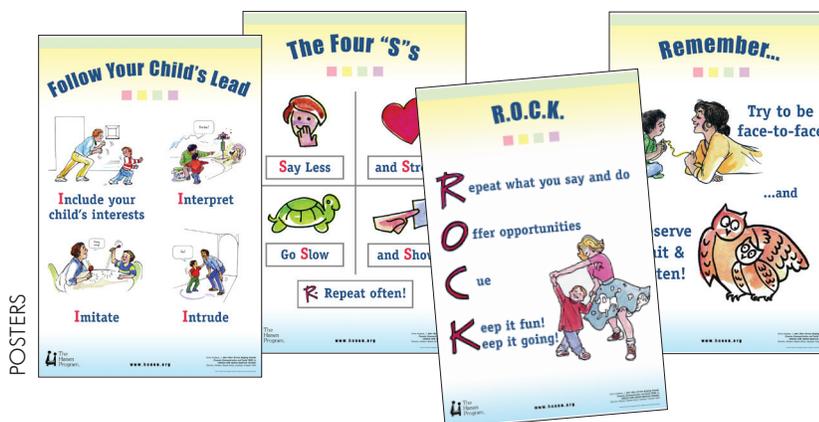
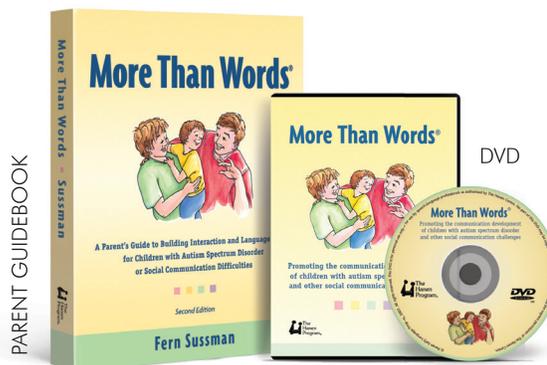
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## About the Author

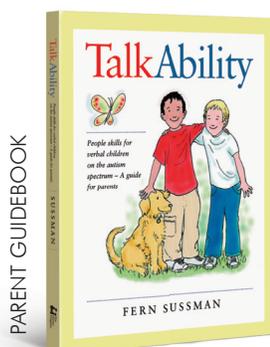
Fern Sussman is a speech-language pathologist and former Director of Autism Programs at The Hanen Centre. Combining her extensive expertise in the field of autism and parent training, Ms. Sussman developed two innovative Hanen programs to support parents of children on the autism spectrum. She is the author of *More Than Words®: A Parent's Guide to Building Interaction and Language Skills for Children with Autism Spectrum Disorder or Social Communication Difficulties* and *TalkAbility™: People Skills for Verbal Children on the Autism Spectrum – A Guide for Parents*.

## Available *More Than Words* Resources

For more information, contact The Hanen Centre or visit us online at [www.hanen.org](http://www.hanen.org)



## Related Resources



*TalkAbility provides a much-needed resource to parents of verbal children on the autism spectrum, as well as to the professionals who support them. This invaluable resource contains a wealth of practical strategies that can be built into everyday conversations and activities to help high functioning children on the autism spectrum develop the people skills they need to connect well with others.*

## Helping You Help Children Communicate

The Hanen Centre is a non-profit charitable organization founded in Canada in 1975. Our mission is to give the important people in a young child's life the knowledge and training they need to help the child develop the best possible language, social and literacy skills.

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