

# Tailoring Social Competence Interventions for Children with Learning Disabilities

Karen Milligan<sup>1</sup> · Marjory Phillips<sup>2</sup> · Ashley S. Morgan<sup>2</sup>

Published online: 3 September 2015  
© Springer Science+Business Media New York 2015

**Abstract** Challenges in social competence are common in children with Learning Disabilities (LDs), particularly those who present with co-occurring mental health challenges (LD + MH). Social competence calls upon a complex set of skills, including social skills, perspective-taking abilities, and an understanding of the social environment. Successful enactment of these skills necessitates behavioral and emotion regulation, an area of weakness for many youth with LD + MH. Using a mixed-method design, the present study assessed the efficacy of a social competence group program for children with LD + MH (mean age = 11.4 years) in which group size, content, and structure are tailored to the child's level of emotion regulation, information processing abilities, and social competence goals. Quantitative measures completed by parents and coded behavioral observations completed pre- and post-treatment indicated significant gains in initiation and engagement in positive social interactions, foundational skills that support improvement in social competence. Qualitative interviews with parents, children and teachers suggested improvements in social self-concept, initiation, and emotion regulation. Tailoring treatment to the child's information processing and emotion regulation abilities, as well as 'in the moment' feedback, supported gains made and contributed to participants having a positive social experience. Directions for future research are discussed.

**Keywords** Learning disabilities · Social competence · Group intervention · Emotion regulation · Children and youth

## Introduction

Social competence refers to the ability to successfully and independently engage in social interactions, to establish and maintain relationships with others, and to have one's needs and desires met across diverse contexts (Stichter et al. 2012). Engaging in meaningful social relationships plays a foundational role in fostering mental health across the lifespan. Without supportive social relationships, children are more likely to experience low self-esteem (Sideridis 2007), loneliness (Valås 1999), social rejection (Bryan et al. 2004), and bullying and peer victimization (Mishna 2003), and are at greater risk for school failure (Parker and Asher 1987).

Social competence calls upon a complex set of skills and competencies, including age-appropriate social skills, regulation of behaviors and emotions, perspective-taking abilities, and an understanding of the social environment (Baumeister et al. 2005; Shechtman and Katz 2007). Information processes, including attention (Andrade et al. 2009), executive functions (Riggs et al. 2006), language abilities (McCabe and Meller 2004), and theory of mind (Fink et al. 2014) have also been associated with social competence and peer relations.

Information processing weaknesses are common among children with learning disabilities (LDs). Children with LDs have average to above average levels of cognitive ability but do not achieve in reading, writing, and/or math at a level that would be expected for their age or cognitive ability (Burke 2008). Given the link between information

✉ Karen Milligan  
karen.milligan@psych.ryerson.ca

<sup>1</sup> Department of Psychology, Ryerson University, 350 Victoria Street, Toronto, ON M5B 2K3, Canada

<sup>2</sup> The Integra Program, Child Development Institute, Toronto, ON, Canada

processing and social competence, many children with LDs experience significant challenge with social interactions.

In a meta-analysis of social skills research, Forness and Kavale (1996) found that 75 % of students with LDs have lower levels of social competence than typically developing children, as assessed by teachers, peers, and children themselves. Approximately 50 % of children with LDs are rejected, neglected, or victimized by peers (Baumeister et al. 2008; Mishna 2003), and many have impoverished and unstable friendships (Wiener and Schneider 2002; Wiener and Sunohara 1998), putting them at increased risk for co-occurring mental health challenges in addition to their LD (LD + MH).

Information processing challenges may underlie both learning and social competence difficulties, such as understanding sarcasm, reading body language, or recalling information about social situations (Bauminger et al. 2005; Elksnin and Elksnin 2004). Children with LDs may also lack the language skills necessary to put voice to their ideas and desires and to negotiate with peers (McCabe and Meller 2004). Challenges with attention have been associated with behavioral challenges in social interactions (Andrade et al. 2009). Further, many youth with LDs present with challenges within the domain of executive functions, which may impact on their ability to plan social interactions, execute their plans, monitor the success of their behavior, and flexibly shift their behavioral approach based on feedback from peers and the broader environment (Clark et al. 2002; Nigg et al. 1999).

Group-based social skills intervention has been identified as the treatment of choice for improving the quality of peer relationships of children with LD + MH, given that the group setting provides the opportunity to create more naturalistic and experiential peer interaction opportunities in which to teach and practice social skills (Mishna et al. 2010). While social skills groups for children with LDs have been associated with positive outcomes (e.g., improved social skills and self-esteem, decreased feelings of isolation), results of meta-analyses indicate an average effect size of .21 (Forness and Kavale 1996; Kavale and Mostert 2004), which is considered small in strength (Cohen 1988).

Improving the effectiveness of social competence programs for children with LD + MH may lie in tailoring treatment to their specific social competence and information processing needs. Gresham et al. (2001) have suggested that social competence challenges can arise due to a lack of knowledge of social skills (acquisition deficit), not being able to perform skills due to cognitive, emotional or behavioral factors (performance deficit or competing behaviors), or challenges with not being able to implement a skill with automaticity or fluency when needed (fluency deficit). Social competence researchers have further

suggested that intervention effectiveness may be improved if interventions are tailored to the unique information processing strengths and needs of the child (Cotugno 2009; Guli et al. 2013; Maag 2006; Stichter et al. 2012). Tailoring of social competence interventions may be particularly important for children with LDs, and in particular, for those that present with co-occurring mental health challenges (LD + MH). A recent study by Margari et al. (2013) found that almost 50 % of children with a specific learning disability met criteria for another psychological disorder, such as anxiety, attention-deficit/hyperactivity disorder (ADHD), and depression. Behavior problems are also more common in children with LDs (Lowe et al. 2007). This comorbidity is important to consider given that challenges with information processing are common, and may be magnified, when both LDs and mental health difficulties are present. For example, executive functioning deficits are more severe in the LD + ADHD comorbid population than in ADHD alone (Seidman et al. 2001).

The impact of information processing challenges on social competence also needs to be further understood within the context of emotion regulation, particularly when intervening with performance and fluency based social competence challenges. Emotion regulation is defined as the “extrinsic and intrinsic processes responsible for monitoring, evaluating, and modifying emotional reactions, especially in their intensive and temporal features, to accomplish one’s goals” (Thompson 1994, pp. 27–28). For children with LDs, the ability to manage and modify emotional reactivity is a significant contributor to social information processing (Bauminger and Kimhi-Kind 2008). Emotional reactivity is impacted by information processing (e.g., language, flexibility, processing speed, inhibition; Diamond 2013). From a neurobiological perspective, the presence of a strong emotional response limits a child’s ability to fully engage their cognitive abilities (e.g., impulse control, cognitive flexibility, social knowledge, perspective-taking abilities, social skills; Zelazo and Lyons 2012), which may already be weakened due to the presence of information processing challenges associated with the LD or mental health difficulty. Further, many children with LDs experience feelings of low self-esteem, failure, shame, and self-doubt associated with the school challenges they have experienced (Arthur 2003; Ginieri-Coccosis et al. 2013; Mishna and Muskat 2004), and as such may be more likely to interpret academic or social situations as threatening. To regulate these strong emotions, many children with LDs learn that avoiding activities and interactions reduces the experience of distress and discomfort. While effective in the short-term, this pattern of avoidance precludes children from engaging in skill-building opportunities (Chawla and Ostafin 2007; Ducharme and Harris 2005; Hayes et al. 1996). Social

competence interventions that take into account emotion regulation abilities have the promise of supporting children in accessing their full range of cognitive capacities which may in turn set the stage for learning and implementing social skills, thus promoting adaptive social interactions (Dollar and Stifter 2012).

Tailoring to the level of social competence challenge, information processing, and emotion regulation has been largely absent in intervention studies in the extant literature (Maag 2006). Further, a framework for tailoring treatment for children with LD + MH has not been posited, with many programs lacking a clear theoretical rationale (Kavale and Mostert 2004). Finally, norm-referenced measures with established reliability and validity have rarely been utilized in the extant literature (Kavale and Mostert 2004). The present mixed-method cohort (pre-post) study was undertaken to evaluate the impact of a social competence program specifically tailored to meet the unique needs of children with LD + MH on several social competence outcomes. We explored the impact of the program on parent- and teacher-rated social competence outcomes (e.g., Communication; Cooperation; Assertion; Responsibility; Empathy; Engagement; and Self-Control) and changes in social competence observed throughout the group. Qualitative interviews were completed to explore outcomes, as well as the processes that support or hinder social competence gains.

## Method

### Participants

Thirty-six children enrolled in the Integra Social Competence (SC) Group program were invited to participate in this study. Six children were unable to complete the group due to transportation problems, family issues, or other unspecified reasons. On this basis, the final sample included 30 children (mean age = 11.4 years,  $SD = 1.49$ ), consisting of 22 boys (mean age = 11.6 years,  $SD = 1.56$ ) and 8 girls (mean age = 10.9 years,  $SD = 1.19$ ). The sample was relatively diverse in terms of ethnicity (60 % White, 23.3 % Asian, 13.3 % European, and 1 % Latin). The study was conducted at an urban, community-based children's mental health center that is accessible to all children with diagnosed LDs and co-occurring mental health challenges. It is located in a middle- to upper-middle class area of the city, and as such, the population is largely reflective of this location, but includes some children from families from a lower socioeconomic (SES) level. Information on SES was not available for the participants.

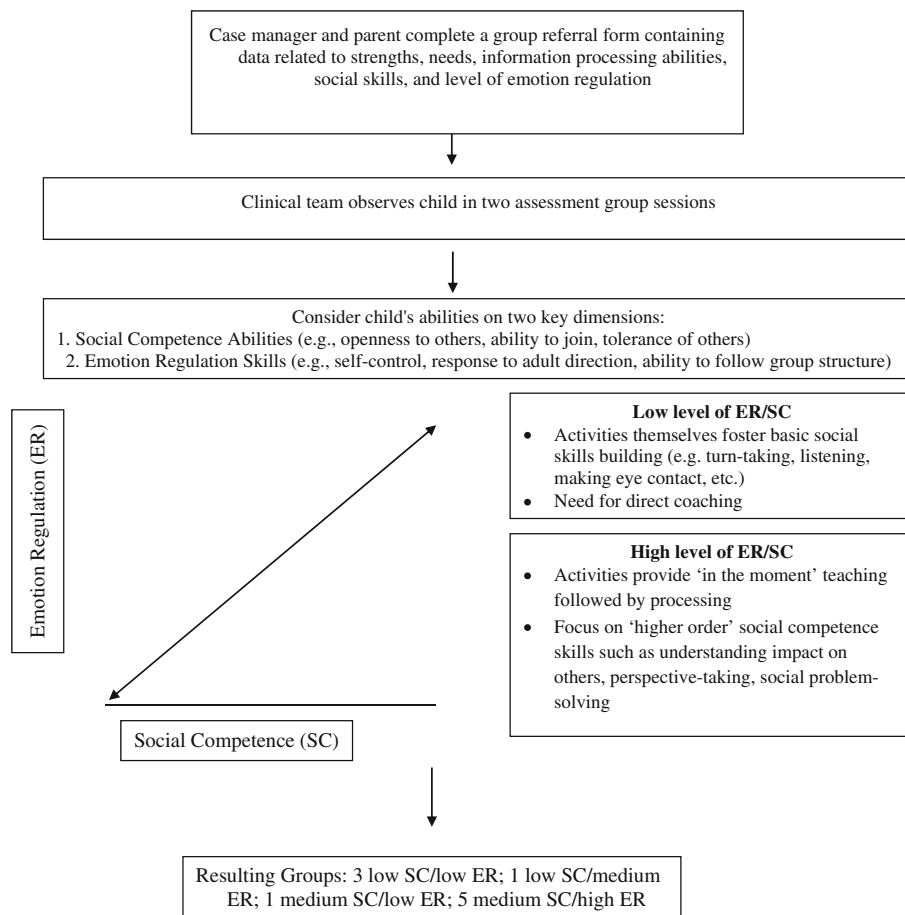
All children had diagnosed LDs on the basis of a psychoeducational assessment completed by a registered

psychologist or psychological associate. While access to the specific scores were not available for research purposes, to meet criteria for a LD and to gain admittance into the program, children had to have cognitive scores on the Verbal or Perceptual Reasoning indices of the Wechsler Intelligence Scale for Children-III or IV (or other comparable intelligence test) falling within the Average to Above Average range (25th percentile or greater), have at least one area of academic achievement (math, reading, or writing) that is significantly lower than their cognitive ability, and have significant challenges in at least one area of information processing (i.e., memory, executive functions, processing speed). Further, to be specifically referred to the SC Group program, children had to present with significant emotion regulation challenges (e.g., behavior, anxiety, depression) that impact on their peer relationships (assessed as part of the admission criteria to the children's mental health center).

Children were divided into ten groups based on a multi-source assessment of their information processing and emotion regulation skills as well as their performance ability of specific social skills. In the SC Group program model, social competence and emotion regulation are dimensional constructs, and as the group characteristics increase or decrease along these dimensions, there is a corresponding increase or decrease in the level of processing that occurs within the group structure. As depicted in Fig. 1, the assessment process begins with case managers and parents completing a group referral form that specifies strengths and needs in terms of learning and information processing, as well as social skills and emotion regulation (see Table 1 for information processing, social skills, and emotion regulation areas).

All children have undergone psychoeducational assessment as part of the process by which they received their LD diagnosis. These assessments typically include information about their verbal and visual cognitive abilities, as well as key areas of information processing such as memory, executive functions, and processing speed. This information can be used as a road map to tailor treatment goals, activities, and accommodations based on how a child learns best in order to ensure that information is taken in and encoded in a manner that is meaningful for the child and promotes later recall and implementation. For example, visually-based activities, such as cooperative building games, are used with children who have difficulty expressing themselves verbally. Instructions for activities are provided one step at a time and may be repeated, accommodating for processing speed and memory difficulties. In addition to repetition of instructions, slower processing speed is accommodated for by slowing down the pace of the game and ensuring that the child is not rushed by other group members. Similarly, children who

**Fig. 1** Flow chart illustrating the Integra Social Competence Group Program assessment process. Participants' information processing abilities are considered when planning the group activities. Group participants with very low levels of emotion regulation are often streamed into dyads and triads



have difficulty with transitions and 'letting go' may be engaged in group games that target turn-taking and shifting from one task to another. Memory and generalization difficulties are alleviated through use of visuals both in and out of session, including the use of weekly session summaries with at-home recommendations that are taken home by parents to help reinforce the skills practiced during the session. Executive function challenges (e.g., attention, impulse control, and cognitive flexibility) and perspective-taking are addressed through use of 'in the moment' feedback and scaffolding.

Children are then observed in two group assessment sessions (with 5–8 children) a week apart. During these sessions, they play a variety of social skill based games, including collaborative problem-solving games, games requiring identification of emotion (e.g., Taxi Driver game which requires the "taxi driver" to observe and mimic the emotion of the child who is their "passenger"). These activities create an opportunity for group leaders and case managers (observing from behind a one-way mirror) to observe the emotion regulation and social competence

abilities of children (following the categories included on the group referral form).

The case manager combines information from the child's psychological assessment report, parent and teacher reports, and observations from the assessment groups to make a clinical judgment about optimal group placement. Children with difficulties in regulating emotions and behaviors are flagged for placement in small groups of 2–3 children. Children who are better able to regulate emotions are assigned to larger groups, which may include up to eight children. All group placements are further matched according to level of social skills (high, medium, low), gender (male or female), and age. The nature of group activities is determined by the composition of children in the assigned group and is tailored to their LDs. For example, with a triad of younger boys with low emotion regulation and social skills and low language abilities, the group will consist of a fast pace of group games and activities to practice basic social competence, such as eye contact, turn-taking, and improving awareness of others. In contrast, with a larger group of older, well-regulated boys

**Table 1** Information processing, social, and emotion regulation skills assessed in referral and assessment group process

Behavior
Language ability/verbal cognitive abilities
Processing speed
Memory (i.e., working memory, verbal, visual)
Attention and focus
Self-control of impulses
Copes with own emotions
Compliance with authority
Works well within structure
Transitions between activities
Copes with anxiety
Listens openly to others
Aware of their impact on others
Tolerance of others' behaviors
Responds on topic
Joins in
Takes turns
Demonstrates flexibility
Asserts wishes and needs
Shows leadership and teamwork

with low social skills and high verbal abilities, cooperative games are accompanied by group discussions to process the application of the social competence skills used in the game to real-life challenges, such as conflict resolution when working on a similar group project at school.

### Procedure

The SC Group program ran on a weekly basis for 10 weeks, after the completion of the two group assessment sessions. Each group was planned and run by two Masters-level therapists with training in providing support to children and youth with mental health issues complicated by learning disabilities. Co-therapists liaised with the case manager and, when necessary, the parents to set goals for each group so that they were tailored to the social competence level and emotion regulation needs of the children. In addition to group goals, each child within the group had individual social competence goals that had been identified by the case manager in collaboration with the family and the child. Across all groups (assessment and treatment), there was a similar structure that included providing the children with a written agenda, a 'check in' discussion at the beginning, followed by games and activities, and ending with 'snack and chat.' For all groups, each weekly session was supplemented by a handout for parents/guardians that outlined the session goal and targeted skills and provided suggestions for home and school practice.

Groups low on both social competence and emotion regulation were structured in such a way as to limit the amount of processing that occurred and focused more on fostering basic social skills such as turn-taking and making eye contact, for example. Groups characterized by higher levels of social competence and emotion regulation were structured to include games and activities that fostered cooperation, group work, conflict resolution skills, and higher order social competence skills such as perspective-taking and social problem-solving. Such groups also emphasized processing of group dynamics and 'in the moment' teaching opportunities. Group size was also considered, especially in relation to participants' levels of emotion regulation. Thus, participants who were very low on emotion regulation abilities were often streamed into dyads and triads to ensure that their emotion regulation needs were supported. In the current study, groups varied in size, ranging from 2 to 5 participants each.

Considering social competence and level of emotion regulation as two key dimensions in the group matching process (see Fig. 1), there were three low social competence/low emotion regulation groups ( $n = 2-3$ ), one low social competence/medium emotion regulation group ( $n = 3$ ), one medium social competence/low emotion regulation group ( $n = 5$ ), and five medium social competence/high emotion regulation groups ( $n = 3-5$ ).

Previous research on the SC Group program have examined accommodations related to group process that are specific to the LD population, such as special techniques to accommodate for the LD and to foster positive group process factors (Mishna et al. 2010). One long-standing key process in the SC Group program has been the use of experiential group activities that allow "real life" peer conflicts, challenges, and cooperation to arise, thereby providing opportunities for 'in the moment' instruction, cueing, and reinforcement of new skills. Importantly, these 'teachable moments' were planned to address the social and information processing needs of group members within a safe and supported environment (Mishna et al. 2010). Activities were selected to target specific skills and areas of focus, such as turn-taking, initiating conversation, or social problem-solving (e.g., compromising), depending on the type of group and the level of social competence and emotion regulation of the group members.

All children and their parents enrolled in the SC Group program were invited to participate in the research. Consent to participate in the completion of questionnaires and to videotape group sessions was received by all child participants and their parents. Questionnaires were distributed by a research assistant and completed by parents at the first and last SC group session. Teacher questionnaires were given to parents to give to their child's teacher and then were returned to the researchers by mail. All SC group

sessions were videotaped. Data collection was carried out by the first author of this paper and a team of research assistants not involved in the delivery of the program but employed by the children's mental health center delivering the group.

## Measures

*Social Skills Improvement System Rating Scales (SSIS; Gresham and Elliott 2008)*

The SSIS provides a targeted assessment of an individual's social skills, problem behaviors, and academic competence. Teacher and parent forms are included to provide a comprehensive picture of social competence across school, home, and community settings. Subscales of interest for this study included Communication; Cooperation; Assertion; Responsibility; Empathy; Engagement; Self-Control; and Top Ten, which includes items that were deemed by a national sample of teachers to be most important for school success (e.g., following rules, paying attention to instructions, turn-taking, interacting well with children, showing concern for others, tolerating annoying behavior, and managing disagreements). Inter-rater reliability for the SSIS for total social competence is adequate for parent (0.62) and teacher (0.70), with subscale reliability coefficients ranging from 0.35 to 0.71 (Gresham et al. 2010).

### *Coding of Social Competence Behaviors*

All group sessions were video recorded for subsequent coding of social competence behaviors. To qualitatively assess changes in children's social competence within the context of group sessions, a social competence coding manual was developed based on an adapted version of the "Initiative Response Assessment (IRA)" coding scheme (Cummings et al. 2008). See Table 2 for a description of behaviors coded. Behaviors were coded every 30 s for a period of 10 min. Coding was completed at the beginning (e.g., session 1), middle (e.g., session 5), and end (e.g., session 10). If a child was absent during the designated coding session, the next session attended was coded. To determine inter-coder reliability, 20 % of coded sessions were independently coded by a second member of the coding team. The coding team was not involved in the delivery of the group treatment. There were no significant differences between coder observations, with agreement exceeding 90 % for each behavior category.

### *Qualitative Interviews*

To understand the experience of children participating in the SC Group program and key intervention processes and

outcomes, children and their parents and teachers were invited to participate in an interview. Given the pilot nature of this study, we sought to collect detailed information from a small group of children and to triangulate this information with data from interviews with parents and teachers. A poster inviting children and their parents to participate in interviews about their experience was posted in the waiting room area outside of the therapy room 2 weeks prior to the end of the group. Case managers who were not directly involved in the delivery of the group also provided names of parents and children who they thought would be able to reflect on their experience in the program and fully participate in a verbal interview. Teachers of children who participated in these interviews were also contacted to better understand any gains seen at school since participation in the group.

The final sample for the qualitative interviews included 4 children, 5 parents, and 5 teachers. The majority of children were from the medium social competence, high emotion regulation groups, with one child representing the medium social competence, low emotion regulation group. Parallel forms of the semi-structured interview guide were developed for parents and children and a brief interview was developed for teachers. The purpose of the parent and child interviews was to better understand the process variables that contributed to the success of the program. The teacher interview, in contrast, focused on description of the child's social interactions and any changes that the teacher saw in the child's social competence. Questions included in the qualitative interview are presented in Table 3. Given the exploratory nature of this research and the small sample, an inductive thematic analysis as described by Braun and Clarke (2006) was used to analyze interview transcripts. This approach enabled the identification of both explicit and implicit or underlying themes to highlight areas that may be important in fostering social competence and positive social experience for children with LD + MH. Two researchers individually read each of the transcripts, tabulated responses, and took notes on key themes. These themes were then discussed to ensure common interpretation and identification of key themes. This process allowed for investigator triangulation (i.e., the use of two or more investigators to examine the same phenomenon) in interpreting the data, thereby reducing the risk of biased interpretation. Any discrepancies were resolved by consensus.

## Results

Baseline levels of social competence reported by parents suggested that 75 % of children were rated as having below to very below average social competence. Problem

**Table 2** Description of coding scheme for social competence group observations

Behavior	Coding description
Initiation	The child makes a verbal or non-verbal attempt to interact with a peer or leader, without being prompted (e.g., talking to another child, asking questions, making suggestions, taking something from another child, with their verbal or non-verbal acknowledgement and approval, gesturing to demonstrate it's another child's turn)
Positive response	The child acknowledges and responds to a verbal or non-verbal prompt, initiated by a peer or leader (e.g., answering questions, complying with another child's on-task request, nodding)
Rejection	The child responds to a verbal or non-verbal prompt, initiated by a peer or leader, but expresses intolerance of another individual's choices, ideas, suggestions, or behaviors (e.g., verbal rejection, sarcasm, non-acquiescence)
Supportive/positive behaviors	A positive verbal or non-verbal interaction that helps, supports, assists, and/or provides encouragement to a peer or leader. It may be on or off-topic and does not have to relate to the completion of the task (e.g., providing rule or game demonstrations, complimenting or encouraging a peer, acquiescence)
Negative behaviors	A negative verbal or non-verbal interaction that hinders the group's progress and/or hurts someone's feelings
Level of engagement	3 levels coded (occurs in at least half of coding interval) Actively disengaged Engaged with some distraction Actively engaged

**Table 3** Qualitative interview questions (parent version)

Do you think the social competence group was a positive social experience for your child? Why? Probe for specific examples
What were the best things about the social competence group?
Do you see any areas where the social competence group experience could be improved?
What was your child's goal for the social competence group? How successful was he/she in achieving his/her goal? What about the social competence group program helped him/her to achieve his/her goal?
Has the manner in which your child interacts with other children improved since being in the group?
Have you noticed any changes in your child's confidence in social interactions?
Have you noticed any changes in your child's mood (e.g., are they more happy, less anxious, less angry or frustrated)?
Your child attended 1 or 2 sessions before the beginning of group to determine what group would be best for him/her. What was this experience like for your child? What were the best parts of this experience? What could be improved?
Did you feel that your child was with a group of children that would enable him/her to make gains in their social competence?
What aspects of the group did you and your child like the most? The least?

behaviors were also commonly reported, with above to well above average levels of problem behaviors noted for 71 % of children. Specific behavioral difficulties included externalizing behavior (46 %), hyperactivity (54 %), internalizing behavior (64 %), and behaviors seen in autism, such as preoccupied with objects, repeating things, and not making eye contact when talking (78 %).

Children exhibited high levels of engagement ( $M = 2.96$ , with a score of 3 representing the highest level of engagement) across the three coded sessions (see Table 4). Repeated Measures Analysis of Variance (ANOVA) indicated that the most significant gains for children were made in the area of goal-directed initiations (Wilks'  $\lambda = 0.64$ ,  $F(2, 25) = 7.02$ ,  $p = .004$ ), with significant gains made between session 1 and 5 and then maintained until the end of treatment (session 10). Results did not significantly differ based on age, gender, type of

group, number of previous groups attended, number of children in the group, or parent-rated level of behavioral difficulties.

Paired sample  $t$  tests were conducted to examine changes in SSIS scores from pre- to post-intervention. Significant gains in overall social skills approached significance ( $t(22) = -1.9$ ,  $p = .07$ ), with items considered most important to school success by a US-sample of teachers (Top Ten) showing significant gains from pre- to post-treatment, ( $t(22) = -2.35$ ,  $p = .03$ ). SSIS subscales were examined to better understand these gains. Significant gains were made in assertion ( $t(22) = -2.05$ ,  $p = .05$ ,  $d = .43$ ) and engagement ( $t(22) = -2.8$ ,  $p = .01$ ,  $d = .59$ ), with gains in responsibility approaching significance ( $t(22) = -1.91$ ,  $p = .07$ ,  $d = .40$ ). Results did not significantly differ based on age, gender, type of group, number of previous groups attended, number of children in

**Table 4** Behaviors of participants in Integra Social Competence Group assessed through observational coding of 10-min segments from the beginning, middle, and end of the series

Subscale	M (SD)		
	Pre-test	Mid-test	Post-test
Goal directed initiations*	20.56 (13.38)	34.56 (26.96)	32.89 (22.12)
Goal directed responses	13.04 (7.41)	11.67 (5.08)	7.63 (4.58)
Goal directed rejections	0.04 (0.19)	0.56 (1.31)	0.04 (0.19)
Non-goal directed initiations	0.22 (0.58)	0.85 (2.23)	1.48 (3.21)
Non-goal directed responses	0.22 (1.15)	0.07 (0.27)	0.11 (0.32)
Non-goal directed rejections	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Positive/supportive behaviors	0.74 (1.95)	1.03 (2.89)	0.22 (0.51)
Negative behaviors	0.07 (0.38)	0.11 (0.32)	0.04 (0.19)
Acquiescence	0.04 (0.19)	0.07 (0.27)	0.04 (0.19)
Level of engagement	2.96 (0.10)	2.94 (0.11)	2.94 (0.11)

*n* = 27, \* *p* < .05

the group, or parent-rated level of behavioral difficulties. No significant differences from pre- to post-treatment were found for problem behavior (see Table 5).

Paired sample *t* tests were run to examine changes in SSIS scores from pre- to post-treatment as reported by teachers. No significant gains in social skills or decreases in problem behavior were reported by teachers.

**Qualitative Interviews**

Three main outcomes were commonly described by children and their parents: (1) improved social self-concept; (2) increased initiation; and (3) enhanced emotion regulation.

A number of parents highlighted that they saw an improvement in their child’s social self-concept and confidence. Parents made comments such as: “She definitely is

helpful and a team player so she was able to demonstrate that in the group, so it made her feel successful and was good for her self-esteem;” “I think that it just builds his self-esteem;” and “He has definitely built some self-confidence.”

In addition to overall social self-concept and confidence, parents and children highlighted the ability to initiate interactions and share ideas more freely. For example, one parent remarked, “He’s learned how to find his voice.” Another parent discussed how the process supported her daughter’s ability to “take on a very positive leadership role.” Children reported similar themes of confidence, initiation, and being able to share ideas. For example, a child reported now being able to share his ideas on a school field trip: “I’m sharing my ideas. Actually today I shared my idea about a super villain [with the class] at the

**Table 5** Parent rated social skills and problem behaviors of participants in social competence group

Subscale	M (SD)	
	Pre-test	Post-test
Social skills standard score <sup>†</sup>	77.96 (10.68)	82.57 (12.68)
Social skills—communication raw score	11.35 (2.96)	12.09 (2.92)
Social skills—cooperation raw score	10.39 (2.89)	11.17 (3.07)
Social skills—assertion raw score*	10.87 (3.47)	12.04 (3.16)
Social skills—responsibility raw score <sup>†</sup>	10.65 (3.10)	11.35 (3.14)
Social skills—empathy raw score	10.52 (3.38)	11.04 (3.50)
Social skills—engagement raw score*	8.00 (4.02)	9.87 (3.48)
Social skills—self control raw score	8.35 (2.90)	8.91 (3.44)
Problem behaviors standard score	119.30 (11.68)	118.48 (13.68)
Problem behaviors—externalizing raw score	11.04 (5.28)	11.09 (5.612)
Problem behaviors—bullying raw score	2.48 (2.00)	2.39 (2.59)
Problem behaviors—hyperactivity/inattention	9.17 (3.56)	9.04 (3.70)
Problem behaviors—internalizing raw score	10.26 (3.68)	10.13 (3.65)
Problem behaviors—autism spectrum score	20.00 (5.72)	18.04 (5.16)

*n* = 23, <sup>†</sup> *p* < .10, \* *p* < .05



National Film Board Centre.” Another child reported that before the group she was always “really shy at first” but noted that “has all gone away” since completing the group. She remarked that she now feels like things are going to be ok when she changes schools for Grade 7. A third child noted while speaking to the interviewer that she is now able to “talk to people in the eyes—just like now.”

Finally, parents and children noted improved emotion and behavioral regulation. For example, one parent reported, “[He’s] not melting down, like frustrated.” Two parents reported that their daughters were able to let things go and that they were able to “integrate this and let [their parents] know.” Another parent echoed this outcome, but noted that they “had to build that over weeks.” Consistent with emotion regulation gains, children remarked, “I liked being with the therapist because I was still able to let out what I need to say and not offend anybody” and “I feel better when I talk [to other kids] now that I’m breathing in and out, relaxing, I’m okay.” Another child also discussed this theme, highlighting an activity that had been helpful for her.

“Well, one of the things we did was role plays and we had to act out a scene where there were two people fighting and then the audience had to help negotiate it out. I realized that I’ve had very similar things happen to me before and I followed some of the advice that I got and it seems to have worked.”

Outcomes were mixed in terms of their generalizability to other settings, such as school. Two parents noted positive outcomes. At one extreme, a parent noted “I’m clearly hearing at school that he’s become Mr. Popular and everybody wants to play with him, so there’s a lot more going on in his social life.” More modest gains were made by other children. For example, a parent reported, “In grade 2 she spent a lot of time following the popular girls around and they were bothered by her behavior, whereas this year, she seems to have more friends.” Another parent noted “she is talking more in Tae Kwondo, playing more with kids at recess.” In contrast, one parent noted that there was “no improvement in unstructured settings such as the schoolyard.”

Children echoed seeing some social improvements outside of group. Some children noted that they had better friendships outside of school after the group. For example, one child reported “Playing Tip the Scale and the Friend’s Scale...where you describe a good friend and a bad friend [was helpful]. Now I just ignore a lot of people who try to trick me so I have better friends now and I can trust them. For a while I couldn’t trust my friends because of all the bad stuff that was happening.” Similarly, another child noted:

“I was actually hoping to maybe get along better with the kids in my class, but unfortunately that didn’t

change. However, I have some girls that I see every Sunday that I argue with a lot and I’ve actually made friends with a lot of them now...It helped me to be more positive and showed me ways around our differences.”

Mixed results in terms of generalization of social gains were also found in teachers’ comments. Three of four teachers noticed significant changes in the children over the course of the group. For two children, speaking, engaging in social interactions, and taking social risks was difficult. Both children were reported by their teachers to have made gains since participating in the group. Gains reported included behaviors such as speaking in a voice that could be heard, responding to questions asked, and playing and interacting more with peers. Both children were reported to be happier and more confident, and one child was taking more of a leadership role and had made more friends at school. The third child presented with more externalizing behaviors and greater difficulty with impulse control, reading social situations, and responding appropriately. Her teacher also reported significant gains, including being less disruptive and now more thoughtful and aware of herself. She noted that she is more relaxed and happy and associates with peers that are more age-appropriate than before the group. This child was also reported to be more confident and to be able to take on a leadership role in helping teachers with younger students. All of the teachers noted that, while gains had been made, there was still need for improvement in a variety of areas, such as initiating conversations, reading social behaviors, and developing closer friendships. It is interesting to note that each of the three children described as making positive gains were in a small class educational placement that provided them with high levels of support and encouragement rather than a regular stream classroom. It is possible that these class settings may have similar characteristics to the group therapeutic environment and may have supported the generalization of these skills. In contrast, the parent of the child who was not reported to make significant gains reported that her daughter has struggled in her school placement and reported that her child needed more support at school than she was receiving. Future research is needed that explores continuity of gains and environmental factors that may foster generalization and maintenance of social competence skills.

Processes that support or hinder gains in social competence were also explored. The results of the qualitative interviews with parents and children reflected three primary therapeutic process variables: (1) positive social experience, (2) assessment process, and (3) ‘in the moment’ feedback from therapists to encourage risk-taking and support learning.

Parents and children reported that the social competence groups were fun and enjoyable, and this helped children who may have had negative social experiences in the past to take the risk to come to group. They were engaged and were able to participate in new activities.

All children and parents reported that they would return to the group for another session if it was offered and would recommend it to other children. One parent noted, “She seemed happy every time she came out of the room. You know, a big smile on her face.” Similarly, another parent stated, “She had a good time. She enjoyed coming. There was no resistance.” Another reported, “Well, every time that she would come out she would be bouncing and positive.” The perspective shared by children in the groups also emphasized the positive and fun nature of group. For example, comments included “The girls were nice and we played fun games” and “the games made it fun.” “Can’t wait [to attend another SC group series].”

Having the opportunity to make friends was important to many of the children with whom we spoke. For example, one child reported “Well, I made some new friends and I hadn’t made friends in a while because I’ve had a couple of bullying problems at school. I tend to be the one who is picked on the most out of my class.” Parents reported that being with children with similar challenges in a supportive environment was important to their child’s success. For example, one parent noted, “[Children’s mental health center] has been good for [my daughter] to understand that she’s not the only one and that we all have something to work on.” Another parent emphasized the importance of comfort with other children for engaging in social risk-taking. “He has to feel very comfortable and confident with whomever he’s with to put himself out on that limb because it is a risk for him.”

Overall, parents and children liked the pre-group assessment process and referred to it as “good practice” before the actual group. Parents reported that leaders were responsive, knowledgeable, and realistic about LDs. It seemed to be “grounded in the reality” of LD + MH. One parent noted about the assessment process “You can’t just say it’s a social competency group and here are five girls. Not everyone needs the same social competencies. And so while one person needs to learn to [be quiet], another person may need to learn to talk.” Similarly, another parent noted being pleased that it was “Ok if it takes a while to find the words to express yourself.”

Scaffolding children so that they had to be present with challenges and not avoid by withdrawing or acting out was also noted as being an important process. Providing ‘in the moment feedback’ when challenges arose in the context of naturally occurring social dynamics allowed group leaders to create “teachable moments” and gently correct misperceptions or scaffold the child in trying out new ways of

interacting. For example, one parent commented: “I think it was great for her to, in a very supportive environment, go through struggles and learn from those and then be able to try again, and to do all of those things in that very safe environment and structure. There’s lots of help there... Here’s a teachable moment and we’re going to do this.” Another parent noted, “She was able to do things like step up to be the leader, step back to let others lead and then to get the very quick positive feedback, like very quick bio feedback from the group, and that’s what she needs.” Children similarly reported that experiencing challenges in the group was helpful. For example, “now that I faced some challenges with the group, it’s easier to ignore people for some reason. I’ve gotten better at doing it with my brother.”

Parents and children also provided recommendations for future groups. They noted that change takes time and that longer and a greater number of sessions would be helpful. For example, one parent reported, “I think she was just kind of getting into it and then it was done.” Parents also requested more feedback about the groups so that they know about progress being made and how to help their child outside of group. For example, “If there’s something they [the leaders] noticed in a session, maybe they could talk to the parent about it.”

## Discussion

Children with LD + MH are at increased risk for challenges in social functioning. The present study evaluated the effectiveness of the Integra Social Competence Group program, an intervention aimed at ameliorating social competence in youth with LD + MH using activities tailored to their specific information processing and emotion regulation deficits. Using mixed methods, this study examined social competence both within the group context (using observational methods) and outside of the group process to examine gains made and the generalization of outcomes to home and school settings. Overall, findings suggest that participating youth and their families benefited from the program, as evidenced by both group observations and parent- and child-report.

From a group process perspective, levels of engagement in the group sessions was observed to be high throughout treatment, suggesting that the program was acceptable, engaging, and implemented at a level that supported children. Relatedly, the level of social competence challenge in the context of the assessment was also lower than parent report levels. Specifically, while 75 % of parents reported significant social competence challenges, only 30 % of children were assessed to be of low social competence, with the remaining 70 % exhibiting medium levels of

social competence. This difference may reflect characteristics of the group environment (e.g., structure, support, safety) that allow children to engage more fully and to exhibit their social strengths that may be less prevalent in school or community settings.

Further, children were observed to improve their goal-directed (or on-task) initiation from the beginning to the end of treatment. For example, children made more attempts to interact positively with a peer or leader without being prompted, such as asking questions or making suggestions for the group. Importantly, increases in initiation were not limited to the group context, but were observed by parents in contexts outside of the group, in the form of increased parent-rated social assertion and engagement in social interactions. Importantly, effect sizes associated with these outcomes were in the upper end of the small or moderate range in terms of strength and larger than previous outcomes which have been small in strength (Forness and Kavale 1996; Kavale and Mostert 2004). Similarly, qualitative interviews with both parents and children highlighted that children improved in their abilities to share thoughts and feelings, initiate conversation, engage in peer interaction, and appropriately engage in solving problems in relationships. Such changes in engagement and initiation are noteworthy given that children with LD + MH show a greater tendency to withdraw from social interactions and report greater feelings of sadness related to social interactions (Semrud-Clikeman et al. 2010). Remaining present rather than engaging in patterns of avoidance (fight or flight) sets an essential foundation that enables children to practice social skills and develop a sense of competence.

Qualitative interviews with parents and children suggested that the high rates of engagement, improved problem-solving, and initiation were supported by ‘in the moment’ coaching and feedback from therapists. Children and parents noted that they had to engage in skills that were hard for them but were able to do this with the support of the group leader and then generalize this to social interactions outside of the group with peers and siblings.

‘In the moment’ feedback served to help children to become aware of their behavior and to correctly interpret social-emotional information, which are considered key skills associated with social competence (McKown et al. 2009). Parents, however, noted that they would benefit from more session-by-session feedback so that they were able to provide ‘in the moment’ feedback to their children and support their social skills. This recommendation has now been incorporated into the SC Group program.

Interestingly, despite above average levels of internalizing and externalizing behavior problems at baseline in 75 % of the participants, the occurrence of negative behaviors during the SC groups was low throughout treatment, regardless of initial level of emotion regulation.

This is an important finding because it highlights that taking emotion regulation into consideration when determining child placement, group composition, and size can support emotional and behavioral regulation, enhancing opportunities for skill- and relationship-building within the group setting. Further, results suggest that while the SC Group program does not directly target emotion regulation as an outcome, there is indirect benefit in fostering higher levels of regulation, at least within the SC group process. It may be that children who are in SC groups that are tailored to their emotion regulation needs may be able to focus more on skills development and less on behavior management of group dynamics. Having a safe foundation that supports emotion regulation may set the stage for learning and implementing social skills, thus promoting adaptive social interactions (Dollar and Stifter 2012). These results are also consistent with previous research that underscores the contribution of emotion regulation to social competence (Bauminger et al. 2005; Rydell et al. 2007) and the potential role of emotion regulation in mediating negative social behaviors (Dollar and Stifter 2012).

Similar to other intervention studies of social competence, the current study showed mixed results with regard to generalizability (Forness and Kavale 1996; Greenberg et al. 2001; Maag 2006; Schneider et al. 1992). Parents reported significant gains in social competence from pre- to post-treatment, with significant gains in overall social skills and in social skills that are considered to have the highest association with school success (i.e., Top Ten on SSIS including following rules, paying attention to instructions, turn-taking, interacting well with children, showing concern for others, tolerating annoying behavior, and managing disagreements). Gains were also noted in engagement and assertion from pre- to post-intervention, results that mirror the observational outcomes observed in the context of the SC groups. Qualitative responses of parents, children, and some teachers also supported the effectiveness of the group, suggesting gains in child social self-concept and initiation in and outside of the group.

In contrast, while positive gains were noted by teachers in the qualitative interviews, there were no significant changes in scores on teacher ratings of the SSIS. In part, this may reflect situational context for the observation of gains in pro-social behaviors. Teachers may be more likely to notice aggressive, disruptive, and distractible behaviors with peers, particularly when the behaviors compete with attention to instruction and school tasks (Blandon et al. 2010). Moreover, the classroom setting in particular has been described as “multifaceted and multi-situational” (Goodwin 1999). Lack of social competence can be exacerbated by situational factors in the classroom that may not exist in other situations, such as home (Musser et al. 2001; Wight and Chapparo 2008) or the SC group setting. Given

the mixed nature of the results reported by teachers, further investigation of the generalizability of the skills learned in the SC Group program is warranted. Similarly, it may be fruitful for future research to study social competence in children with LDs across a variety of settings (e.g., school, community) to better understand the processes that support or hinder the development of social competence across contexts.

It is interesting to note that teacher interviews suggested that when the classroom setting was most similar to the group setting and embodied some of the characteristics described by children and parents as important (e.g., structured, safe, ‘in the moment’ feedback, small class size), more positive gains were seen. In particular, the children whose teachers reported social competence gains during interviews were all enrolled in specialized classrooms, with a smaller class size, increased structure and predictability, and accommodation for the processing and academic challenges associated with the child’s specific LD. This finding is consistent with research by Kiuru et al. (2012) who found that smaller class size offered a protective factor against peer rejection. Results suggest that supportive and safe classrooms may function as a moderator for the promotion of generalization of social competence from the treatment setting to the school setting. This is an area for future research and may be an important avenue for enhancing generalization of skills to the school setting.

Another factor that may impact on outcomes as well as the potential for generalizability is time in treatment. Parents and children noted that they had made gains, but that more treatment was needed to reach their social competence goals. This is consistent with Kavale and Mostert’s (2004) critical review of social competence programs for children with LD that suggests that 10 weeks of treatment may not be enough to improve social skills challenges that have been longstanding. Similar to learning, more practice and repetition across different setting characteristics and partners may be needed to better internalize and generalize skills.

The current study provides preliminary within-participant support for the effectiveness of the SC Group program. However, further controlled research by independent researchers is needed to better understand the impact of the program and child characteristics that may moderate outcomes. More specifically, research using a randomized group design is needed that compares the SC Group program and its tailoring process to a social competence group program that does not employ this tailoring approach. A larger sample is also required to increase statistical power and to more fully explore moderators of change, such as gender, presence of internalizing and externalizing behavior challenges, emotion regulation ability, type of LD, level

of cognitive ability, and type of group. Finally, follow-up assessment to explore the sustainability of gains made, as well as behavioral observation to examine generalization to settings such as the classroom or home would increase our understanding of the impact of the intervention on the child’s daily living. Further qualitative research with a larger sample of parents, children, and teachers is also warranted, given the small sample included in this study and that those included may have been biased due to self-selection or case manager selection. This would provide a more balanced representation of the different types of social competence groups.

Social competence is an important predictor of future well-being (Holopainen et al. 2012). Children with LDs and impairments in emotion regulation have more difficulty than typically-developing youth in acquiring social competence. Results of this study suggest that improvements in initiating, taking social risks, and engaging successfully in conversations can be achieved by applying a multi-dimensional view of social competence that addresses three key areas: skills (i.e., behavioral, social-cognitive, and social emotional depending on the specific needs of the child and group as a whole); emotion regulation abilities (provision of ‘in the moment’ feedback); and environmental factors (e.g., by adapting amount of structure, group size and composition based on skills and emotion regulation abilities). These elements are all critical components of socially competent behavior. Providing children with LD + MH with a positive and engaging structured social experience may change their trajectory of social competence development from a negative spiral of withdrawal and social isolation into empowerment and engagement. This may enable children to more effectively stand up for themselves or others, ask for help, and express their feelings when wronged, thereby decreasing risk of victimization and placing them on more positive trajectories of social functioning and mental health.

## References

- Andrade, B. F., Brodeur, D. A., Waschbusch, D. A., Stewart, S. H., & McGee, R. (2009). Selective and sustained attention as predictors of social problems in children with typical and disordered attention abilities. *Journal of Attention Disorders, 12*, 341–352. doi:[10.1177/1087054708320440](https://doi.org/10.1177/1087054708320440).
- Arthur, A. R. (2003). The emotional lives of people with learning disability. *British Journal of Learning Disabilities, 31*, 25–30. doi:[10.1046/j.1468-3156.2003.00193.x](https://doi.org/10.1046/j.1468-3156.2003.00193.x).
- Baumeister, R. F., DeWall, C. N., Ciarocco, N. J., & Twenge, J. M. (2005). Social exclusion impairs self-regulation. *Journal of Personality and Social Psychology, 88*, 589–604. doi:[10.1037/0022-3514.88.4.589](https://doi.org/10.1037/0022-3514.88.4.589).
- Baumeister, A. L., Storch, E. A., & Geffken, G. R. (2008). Peer victimization in children with learning disabilities. *Child and*

- Adolescent Social Work Journal*, 25, 11–23. doi:10.1007/s10560-007-0109-6.
- Bauminger, N., Edelsztein, H. S., & Morash, J. (2005). Social information processing and emotional understanding in children with LD. *Journal of Learning Disabilities*, 38, 45–60. doi:10.1177/00222194050380010401.
- Bauminger, N., & Kimhi-Kind, I. (2008). Social information processing, security of attachment, and emotion regulation in children with learning disabilities. *Journal of Learning Disabilities*, 41, 315–332. doi:10.1177/0022219408316095.
- Bandon, A. Y., Calkins, S. D., Grimm, K. J., Keane, S. P., & O'Brien, M. (2010). Testing a developmental cascade model of emotional and social competence and early peer acceptance. *Development and Psychopathology*, 22, 737–748. doi:10.1017/S0954579410000428.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research In Psychology*, 3, 77–101. doi:10.1191/1478088706qp063oa.
- Bryan, T., Burstein, K., & Ergul, C. (2004). The social-emotional side of learning disabilities: A science-based presentation of the state of the art. *Learning Disability Quarterly*, 27, 45–51. doi:10.2307/1593631.
- Burke, K. L. (2008). A call to action: World Summit on Learning Disabilities. Foothills Academy World Summit Organizing Committee on Learning Disabilities. Calgary, AB: Author. Retrieved from <http://www.foothillsacademy.org/wp-content/uploads/2012/02/whitepaper-ENG2.pdf>.
- Chawla, N., & Ostafin, B. (2007). Experiential avoidance as a functional dimensional approach to psychopathology: An empirical review. *Journal of Clinical Psychology*, 63, 871–890. doi:10.1002/jclp.20400.
- Clark, C., Prior, M., & Kinsella, G. (2002). The relationship between executive function abilities, adaptive behaviour, and academic achievement in children with externalising behaviour problems. *Journal of Child Psychology and Psychiatry*, 43, 785–796. doi:10.1111/1469-7610.00084.
- Cohen, J. (1988). A power primer. *Psychological Bulletin*, 112, 155–159. doi:10.1037/0033-2909.112.1.155.
- Cotugno, A. J. (2009). Social competence and social skills training and intervention for children with autism spectrum disorders. *Journal of Autism and Developmental Disorders*, 39, 1268–1277. doi:10.1007/s10803-009-0741-4.
- Cummings, K. D., Kaminski, R. A., & Merrell, K. W. (2008). Advances in the assessment of social competence: Findings from a preliminary investigation of a general outcome measure for social behavior. *Psychology in the Schools*, 45, 930–946. doi:10.1002/pits.2034.
- Diamond, A. (2013). Executive functions. *Annual Review of Psychology*, 64, 135–168. doi:10.1146/annurev-psych-113011-143750.
- Dollar, J. M., & Stifter, C. A. (2012). Temperamental surgency and emotion regulation as predictors of childhood social competence. *Journal of Experimental Child Psychology*, 112, 178–194. doi:10.1016/j.jecp.2012.02.004.
- Ducharme, J. M., & Harris, K. E. (2005). Errorless embedding for children with on-task and conduct difficulties: Rapport-based, success-focused intervention in the classroom. *Behavior Therapy*, 36, 213–222. doi:10.1016/S0005-7894(05)80070-X.
- Elksnin, L. K., & Elksnin, N. (2004). The social-emotional side of learning disabilities. *Learning Disability Quarterly*, 27, 3–8. doi:10.2307/1593627.
- Fink, E., Begeer, S., Peterson, C. C., Slaughter, V., & de Rosnay, M. (2014). Friendlessness and theory of mind: A prospective longitudinal study. *British Journal of Developmental Psychology*. doi:10.1111/bjdp.12060.
- Forness, S. R., & Kavale, K. A. (1996). Treating social skill deficits in children with learning disabilities: A meta-analysis of the research. *Learning Disability Quarterly*, 19, 2–13.
- Ginieri-Coccosis, M., Rotsika, V., Skevington, S., Papaevangelou, S., Malliori, M., Tomaras, V., & Kokkevi, A. (2013). Quality of life in newly diagnosed children with specific learning disabilities (SpLD) and differences from typically developing children: A study of child and parent reports. *Child: Care Health and Development*, 39, 581–591. doi:10.1111/j.1365-2214.2012.01369.x.
- Goodwin, M. W. (1999). Cooperative learning and social skills: What skills to teach and how to teach them. *Interventions in School & Clinic*, 35, 29–34. doi:10.1177/105345129903500105.
- Greenberg, M. T., Domitrovich, C., & Bumbarger, B. (2001). The prevention of mental disorders in school-aged children: Current state of the field. *Prevention & Treatment*, 4, 1–62. doi:10.1037/1522-3736.4.1.41a.
- Gresham, F. M., & Elliott, S. N. (2008). *Social skills improvement system rating scales manual*. Minneapolis, MN: NCS Pearson.
- Gresham, F. M., Elliott, S. N., Cook, C. R., Vance, M. J., & Kettler, R. (2010). Cross-informant agreement for ratings for social skill and problem behavior ratings: An investigation of the Social Skills Improvement System—Rating Scales. *Psychological Assessment*, 22(1), 157. doi:10.1037/a0018124.
- Gresham, F. M., Sugai, G., & Horner, R. H. (2001). Interpreting outcomes of social skills training for students with high-incidence disabilities. *Exceptional Children*, 67(3), 331–344.
- Guli, L. A., Semrud-Clikeman, M., Lerner, M. D., & Britton, N. (2013). Social Competence Intervention Program (SCIP): A pilot study of a creative drama program for youth with social difficulties. *The Arts in Psychotherapy*, 40, 37–44. doi:10.1016/j.aip.2012.09.002.
- Hayes, S. C., Wilson, K. G., Gifford, E. V., Follette, V. M., & Strosahl, K. (1996). Experiential avoidance and behavioral disorders: A functional dimensional approach to diagnosis and treatment. *Journal of Consulting and Clinical Psychology*, 64, 1152. doi:10.1037/0022-006X.64.6.1152.
- Holopainen, L., Lappalainen, K., Junttila, N., & Savolainen, H. (2012). The role of social competence in the psychological well-being of adolescents in secondary education. *Scandinavian Journal of Educational Research*, 56, 199–212. doi:10.1080/00313831.2011.581683.
- Kavale, K. A., & Mostert, M. P. (2004). Social skills interventions for individuals with learning disabilities. *Learning Disability Quarterly*, 27(1), 31–43.
- Kiuru, N., Poikkeus, A., Lerkkanen, M., Pakarinen, E., Siekkinen, M., Ahonen, T., & Nurmi, J. (2012). Teacher-perceived supportive classroom climate protects against detrimental impact of reading disability risk on peer rejection. *Learning and Instruction*, 22, 331–339. doi:10.1016/j.learninstruc.2011.12.003.
- Lowe, K., Allen, D., Jones, E., Brophy, S., Moore, K., & James, W. (2007). Challenging behaviours: Prevalence and topographies. *Journal of Intellectual Disability Research*, 51, 625–636. doi:10.1111/j.1365-2788.2006.00948.x.
- Maag, J. W. (2006). Social skills training for students with emotional and behavioral disorders. A review of reviews. *Behavioral Disorders*, 32, 5–17.
- Margari, L., Buttiglione, M., Craig, F., Cristella, A., de Giambattista, C., Matera, E., & Simone, M. (2013). Neuropsychopathological comorbidities in learning disorders. *BMC Neurology*, 13, 198. doi:10.1186/1471-2377-13-198.
- McCabe, P. C., & Meller, P. J. (2004). The relationship between language and social competence: How language impairment affects social growth. *Psychology in the Schools*, 41, 313–321. doi:10.1002/pits.10161.

- McKown, C., Gumbiner, L. M., Russo, N. M., & Lipton, M. (2009). Social-emotional learning skill, self-regulation, and social competence in typically developing and clinic-referred children. *Journal of Clinical Child and Adolescent Psychology, 38*, 858–871. doi:10.1080/15374410903258934.
- Mishna, F. (2003). Peer victimization: The case for social work intervention. *Families in Society, 84*, 513–522. doi:10.1606/1044-3894.142.
- Mishna, F., & Muskat, B. (2004). “I’m not the only one!” Group therapy with older children and adolescents who have learning disabilities. *International Journal of Group Psychotherapy, 54*, 455–476. doi:10.1521/ijgp.54.4.455.42762.
- Mishna, F., Muskat, B., & Wiener, J. (2010). “I’m not lazy; it’s just that I learn differently”: Development and implementation of a manualized school-based group for students with learning disabilities. *Social Work with Groups: A Journal of Community and Clinical Practice, 33*, 139–159. doi:10.1080/01609510903366210.
- Musser, E. H., Bray, M. A., Kehle, T. J., & Jenson, W. R. (2001). Reducing disruptive behaviors in students with serious emotional disturbance. *School Psychology Review, 30*, 294–304.
- Nigg, J. T., Quamma, J. P., Greenberg, M. T., & Kusche, C. A. (1999). A two-year longitudinal study of neuropsychological and cognitive performance in relation to behavioral problems and competencies in elementary school children. *Journal of Abnormal Child Psychology, 27*, 51–63. doi:10.1023/A:1022614407893.
- Parker, J. G., & Asher, S. R. (1987). Peer relations and later personal adjustment: Are low-accepted children at risk? *Psychological Bulletin, 102*, 357–389. doi:10.1037/0033-2909.102.3.357.
- Riggs, N. R., Jahromi, L. B., Razza, R. P., Dillworth-Bart, J. E., & Mueller, U. (2006). Executive function and the promotion of social-emotional competence. *Journal of Applied Developmental Psychology, 27*, 300–309. doi:10.1016/j.appdev.2006.04.002.
- Rydell, A. M., Thorell, L. B., & Bohlin, G. (2007). Emotion regulation in relation to social functioning: An investigation of child self-reports. *European Journal of Developmental Psychology, 4*, 293–313. doi:10.1080/17405620600783526.
- Schneider, B. H. (1992). Didactic methods for enhancing children’s peer relations: A quantitative review. *Clinical Psychology Review, 12*, 363–382. doi:10.1016/0272-7358(92)90142-U.
- Seidman, L. J., Biederman, J., Monuteaux, M. C., Doyle, A. E., & Faraone, S. V. (2001). Learning disabilities and executive dysfunction in boys with attention-deficit/hyperactivity disorder. *Neuropsychology, 15*(4), 544. doi:10.1037/0894-4105.15.4.544.
- Semrud-Clikeman, M., Walkowiak, J., Wilkinson, A., & Minne, E. P. (2010). Direct and indirect measures of social perception, behavior, and emotional functioning in children with asperger’s disorder, nonverbal learning disability, or ADHD. *Journal of Abnormal Child Psychology, 38*, 509–519. doi:10.1007/s10802-009-9380-7.
- Shechtman, Z., & Katz, E. (2007). Therapeutic bonding in group as an explanatory variable of progress in the social competence of students with learning disabilities. *Group Dynamics: Theory, Research, and Practice, 11*, 117–128. doi:10.1037/1089-2699.11.2.117.
- Sideridis, G. D. (2007). Why are students with LD depressed? A goal orientation model of depression vulnerability. *Journal of Learning Disabilities, 40*, 526–539. doi:10.1177/00222194070400060401.
- Stichter, J. P., O’Connor, K. V., Herzog, M. J., Lierheimer, K., & McGhee, S. D. (2012). Social competence intervention for elementary students with aspergers syndrome and high functioning autism. *Journal of Autism and Developmental Disorders, 42*, 354–366. doi:10.1007/s10803-011-1249-2.
- Thompson, R. A. (1994). Emotion regulation: A theme in search of definition. *Monographs of the Society for Research in Child Development, 59*(2–3), 25–52. doi:10.1111/j.1540-5834.1994.tb01276.x.
- Valås, H. (1999). Students with learning disabilities and low-achieving students: Peer acceptance, loneliness, self-esteem, and depression. *Social Psychology of Education, 3*, 173–192. doi:10.1023/A:1009626828789.
- Wiener, J., & Schneider, B. H. (2002). A multisource exploration of the friendship patterns of children with and without learning disabilities. *Journal of Abnormal Child Psychology, 30*, 127–141. doi:10.1023/A:1014701215315.
- Wiener, J., & Sunohara, G. (1998). Parents’ perceptions of the quality of friendship of their children with learning disabilities. *Learning Disabilities Research & Practice, 13*, 242–257.
- Wight, M., & Chapparo, C. (2008). Social competence and learning difficulties: Teacher perceptions. *Australian Occupational Therapy Journal, 55*, 256–265. doi:10.1111/j.1440-1630.2007.00706.x.
- Zelazo, P. D., & Lyons, K. E. (2012). The potential benefits of mindfulness training in early childhood: A developmental social cognitive neuroscience perspective. *Child Development Perspectives, 6*, 154–160. doi:10.1111/j.1750-8606.2012.00241.x.

Copyright of Journal of Child & Family Studies is the property of Springer Science & Business Media B.V. and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.