Social Skills Training with Children and Young People: Theory, Evidence and Practice

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Deficits in social skills and social competence play a significant role in the development and maintenance of many emotional and behavioural disorders of childhood and adolescence. Social skills training (SST) aims to increase the ability to perform key social behaviours that are important in achieving success in social situations. Behavioural SST methods include instructions, modelling, behaviour rehearsal, feedback and reinforcement, frequently used in association with interpersonal problem solving and social perception skills training. Effective change in social behaviour also requires interventions that reduce inhibiting and competing behaviours, such as cognitive restructuring, self- and emotional-regulation methods and contingency management. Research suggests that SST alone is unlikely to produce significant and lasting change in psychopathology or global indicators of social competence. Rather, SST has become a widely accepted component of multi-method approaches to the treatment of many emotional, behavioural and developmental disorders.

Keywords: Social skills training; children; adolescents; evidence; practice

Introduction

It is interesting to trace the historical developments relating to social skills training over the past 30 years. This period has seen a shift from excitement about the potential of social skills training (SST) as a panacea for many different psychological disorders to a gradual recognition that SST represents a valuable therapeutic approach but only as an integrated component of more complex cognitive-behavioural interventions. There is now considerable evidence that social skill deficits are integral to many emotional and behavioural problems. As a result, SST is a frequent component of the prevention and treatment of these disorders. It is important, therefore, that mental health professionals have a detailed knowledge of the nature of social competence and social skills deficits, and the skills to bring about their remediation.

Each day, children and adolescents are required to handle a wide range of challenging social situations. Successful management of the social world requires a sophisticated repertoire of social skills and an interpersonal problem solving capacity. Social competence has been defined in various ways. Spence and Donovan (1998) define social competence as the ability to obtain successful outcomes from interactions with others. In contrast, Bierman and Welsh (2000) conceptualise social competence as an organisational construct that reflects the child's capacity to integrate behavioural, cognitive and affective skills to adapt flexibly to diverse social contexts and demands. This definition emphasises the multiple determinants of social competence, with the ability to engage in socially skilled behaviour representing just one factor.

Social competence in interpersonal relationships has a significant long-term influence upon psychological, academic and adaptive functioning (Coie et al., 1995; Elliott, Malecki, & Demaray, 2001; Roff, Sells, & Golden, 1972). Poor social skills and relationship difficulties with peers, family and teachers are associated with many forms of psychopathology, including depression (Segrin, 2000), conduct disorders (Gaffney & McFall, 1981; Spence, 1981), social phobia (Spence, Donovan, & Brechman-Toussaint, 1999), autism and Aspergers syndrome (Harris, 1998) and early onset schizophrenia (Schulz & Koller, 1989). Not surprisingly, attempts to enhance social competence, social skills and the quality of relationships forms an important component of treatment and prevention of many mental health problems.

Factors that influence social competence

Success in social interactions is determined by many factors relating to the individual, the response of others and the social context. Social skills represent the ability to perform those behaviours that are important in enabling a person to achieve social competence (McFall, 1982; Spence, 1995). These skills include a range of verbal and non-verbal responses that influence the perception and response of other people during social interactions. It is important that individuals are able to adjust the quantity and quality of non-verbal responses such as eye-contact, facial expression, posture, social distance and use of gesture, according to the demands of different social situations. Similarly, verbal qualities such as tone of voice, volume, rate and clarity of speech significantly influence the impression we make upon others and their reactions to us. These micro-level aspects of social skills are highly important in determining the success of social interactions.

At a more macro-level, individuals need to be able to integrate these micro-level skills within appropriate strategies for dealing with specific social tasks. For

example, success in starting a conversation involves many micro-level social skills in addition to more complex skills such as identifying appropriate moments to initiate the conversation, selecting appropriate topics for conversation, and so on. There are a huge number of social tasks that young people need to be able to deal with, such as requesting help, offering assistance, saying 'no', requesting information, asking to join in, and offering invitations, to mention just a few. Each task requires a sophisticated interplay of behavioural responses in order to achieve a successful outcome.

The ability to perform these important behavioural social skills is a necessary but insufficient determinant of competent social functioning. There are many other factors that determine how an individual actually behaves in a social situation. Despite the ability to use appropriate social skills, in some circumstances a child may behave in a socially inappropriate manner as the result of a range of cognitive, emotional and environmental factors that determine social responding. Figure 1 outlines just some of the important cognitive, emotional and environmental factors that influence social behaviour and, therefore, social competence.

As can be seen from Figure 1, the young person needs to be able to monitor the response of other persons in the interaction and then change their own behaviour accordingly, as a reflection of the ongoing changes in the demands of the situation. Thus, in addition to monitoring one's own behaviour, individuals require a range of social perception skills by which they can interpret the social cues and body language of the other person. Deficits in social perception skills and social knowledge may result in inaccurate interpretation of social cues and inappropriate social responding.

Gresham (1997) distinguishes between social skill acquisition deficits and social skill performance deficits. A child is said to possess an acquisition deficit if they do not have the particular social skill in their behavioural repertoire. Alternatively, performance deficits refer to the situation where the young person possesses the skills to behave in a socially skilled manner, yet fails to demonstrate these skills in one or more social situations. Performance deficits may result from a range of affective factors, cognitive deficits or distortions, or from competing/interfering problem behaviours. From an affective point of view, high levels of arousal associated
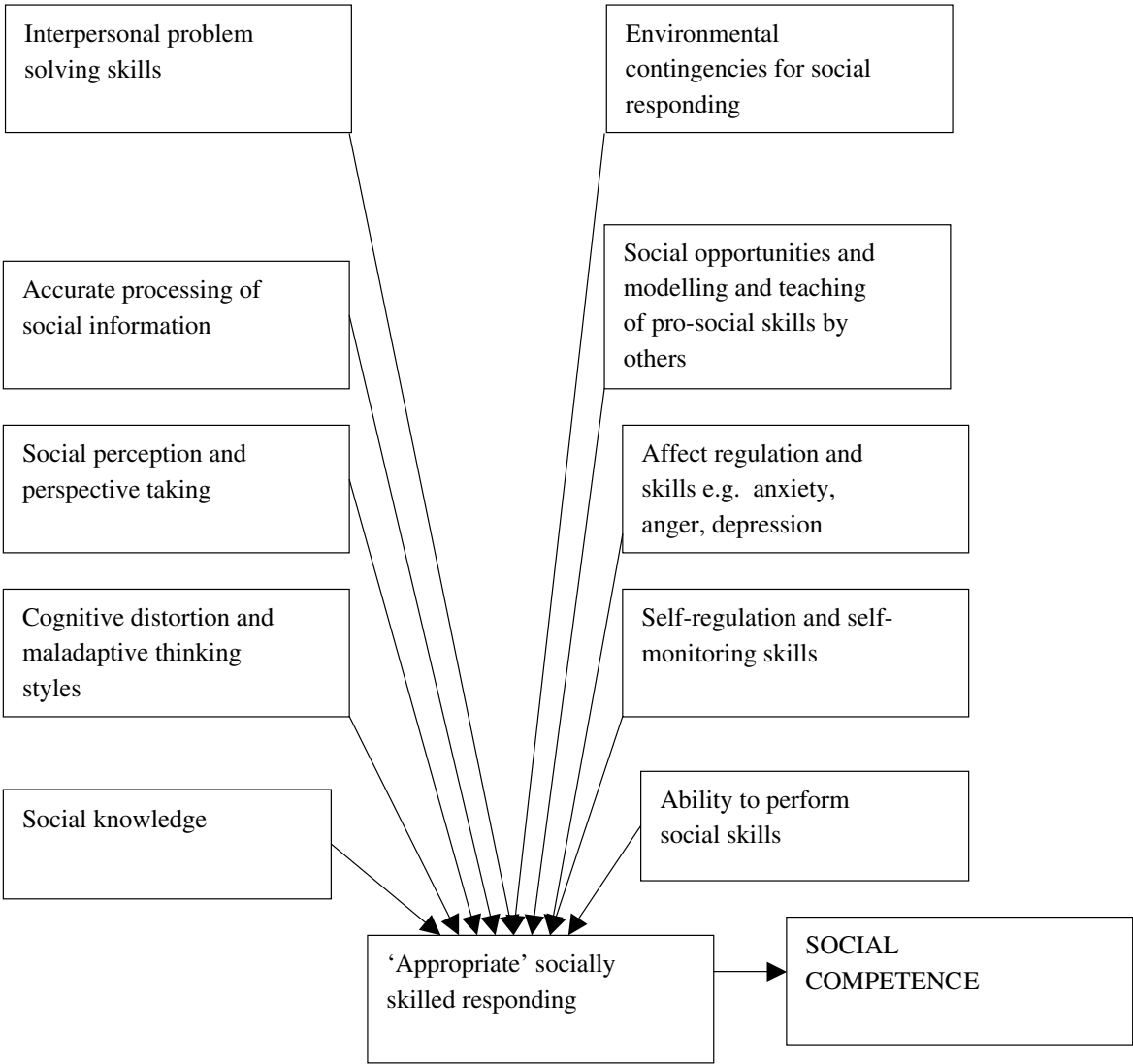

Figure 1. Some behavioural, cognitive, emotional and environmental determinants of social responding

with anxiety or anger may inhibit the use of appropriate social skills. Inappropriate social performance may also result from cognitively distorting the way in which social information is interpreted or from cognitive deficits in information processing. There has been a good deal of research demonstrating the association between social-cognitive skills deficits and distortions, and inappropriate or problematic social behaviour. For example, Lochman and Dodge (1994) demonstrated that aggressive children tend to make faulty interpretations of social events and the behaviour of others, which then increases the chance that they will respond in an aggressive manner. Similarly, the pessimistic cognitive style of depressed children is also associated with poor social competence (Garber, Weiss, & Shanley, 1993). Finally, from a behavioural perspective, deficiencies in social performance may be the result of more efficient or effective competing behaviours or behaviours that interfere with appropriate social expression. For example, the conduct disordered adolescent may find it more effective, and may receive more positive reinforcement from the deviant peer group, if they engage in physical violence rather than appropriate conflict resolution skills.

This is not to say, however, that the presence of emotional, cognitive or behavioural problems rule out the existence of a possible acquisitional deficit, as these problems may serve to maintain and/or exacerbate acquisitional skills deficits. For example, Spence et al. (1999) found that socially phobic children tend to exhibit a variety of cognitive problems such as underestimation of social abilities, poor performance expectations, anticipation of adverse outcomes, and negative internal dialogue. These factors were proposed to maintain child anxiety and trigger avoidance of social situations. However, Spence et al. (1999) also found evidence suggestive of acquisitional skills deficits. Compared with control children, socially phobic children were rated as less socially skilled and competent on both self and parent report, and direct behavioural observation suggested that these children initiated social interactions less frequently, participated in fewer social interactions, and were significantly less likely to produce positive outcomes from peers during social interactions.

Deficits in interpersonal problem-solving are also found to result in inappropriate or problematic responding in social situations. If children are unable to identify the presence of a challenging social situation, to generate a range of possible alternative ways of dealing with the situation, and to predict and evaluate the likely consequences of these alternatives, then they are less likely to engage in an appropriate social response. Not surprisingly, deficits in interpersonal problem-solving are associated with several forms of child psychopathology including conduct disorder and depression (Lochman & Dodge, 1994; Spence, Sheffield, & Donovan, 2002). Again, interpersonal problem-solving deficits may be acquisitional or performance-oriented in nature. For example, an ADHD child may understand and be able to progress through the steps of problem-solving. However, the impulsivitiy and distractibility associated with the disorder may prevent them from actually engaging in the problem-solving process effectively.

The distinction between acquisition and performance deficits is clearly important to the conceptualisation and subsequent treatment of a child case. However, the distinction between the two types of deficits does not suggest that one is in some way less of a social skills problem than the other. It is true that a child with a performance deficit may not require the degree of initial SST that a child with an acquisitional deficit may require. However, a child with performance deficits will require treatment aimed at reducing the factors maintaining the performance deficit (e.g., cognitive restructuring, contingency management, impulse control) in addition to psycho-education regarding the usefulness of social skills and rehearsal of these skills within the problem situation. As such, SST training, albeit of a slightly protracted nature, will still be required.

In addition to factors intrinsic to the young person, various environmental variables may influence social competence. Children differ in the degree to which they have opportunities to learn appropriate social and interpersonal skills. In addition, the type of social behaviour modelled by significant others in their social worlds will be of varying levels of competence. Furthermore, the contingencies for engaging in socially skilled behaviour will also vary across individuals. If children do not receive positive outcomes for socially skilled behaviour, or are actively punished, then their acquistion or use of social skills is likely to be poor.

For these reasons, researchers have investigated the role of parental influences in the acquisition and performance of social skills. For example, Engels, Dekovic and Meeus (2002) found that parental attachment and parenting practices were associated with the peer relations of 12–18 year-old youngsters both directly and through the mediational role of the young person's social skills. In fact, the relationship between parental attachment and children's social functioning has received some empirical attention. For example, securely attached 4-year-old children have been found to be more socially engaged than insecurely attached children (Rose-Krasnor et al., 1996), while insecurely attached 4-year-olds have been found to be more aggressive and to demonstrate higher levels of negative affect in social interactions compared to securely attached children (Booth, Rose-Krasnor, & Rubin, 1991). Similarly, compared to securely attached children, insecurely attached 5–6-year-old children have been found to be less liked by peers and teachers, seen as more aggressive by peers, and perceived by teachers to be less competent and to have more behaviour problems (Cohn, 1990). The importance of attachment also appears to follow through into adolescence with secure attachment predicting a relative increase in social skills from 16–18 years, and insecure attachment predicting an increase in delinquency during the same time period (Allen et al., 2002). Furthermore, the parental attachment of 15–18-year-olds has been found to be moderately related to social skills, which in turn was found to be related to competency in both friendship and romantic relationships (Engels et al., 2001).

In summary, social competence is influenced by many factors, all of which must be considered in the assessment and remediation of deficits in this domain. Not suprisingly, as data emerged regarding the complex interplay between the determinants of social competence,

intervention approaches have become similarly complex. Traditional SST, focusing specifically on teaching behavioural aspects of social responding, generally forms just one element within programs to enhance social competence. Thus, behavioural SST is typically used in association with interpersonal problem solving skills training, cognitive restructuring, training in social perception and social perspective taking, self-regulation skills training, modification of environmental contingencies, and affect regulation methods (such as relaxation training).

As therapists and researchers came to realise that interpersonal problems occur in association with many forms of psychopathology and require remediation, they also recognised the inadequacy of SST as a sole intervention for child and adolescent emotional and behavioural difficulties (Bullis, Walker, & Sprague, 2001). Thus, attempts to enhance social competence frequently form one element of integrated therapeutic approaches that tackle the various aspects of psychopathology. For example, in the treatment of conduct disorders, it became clear that social skills training methods alone were insufficient to bring about major and lasting changes in conduct problems and attention deficit disorder (Bullis et al., 2001; Sawyer et al., 1997). Interventions such as contingency management, parenting skills training and behavioural self-regulation methods were recognised as being psychological best-practice, in addition to traditional attempts to enhance social competence (Gumpel & David, 2000; Hemphill & Littlefield, 2001; Nolan & Carr, 2000).

Given the limited space available, this paper will focus on the assessment of social skills and social competence, and upon methods designed to increase the use of social skills, including behavioural skills training, social perception and social problem solving skills training, and self-instructional skills. However, it is emphasised that a thorough assessment is required to identify additional determinants of social competence and emotional/behavioural problems that need to be included in order to remove barriers to the performance of socially skilled behaviour. Additional methods such as cognitive therapy, parent training, contingency management, relaxation training and emotional self-regulation may be required.

The assessment of social competence and social skills

To date, there has been relatively little attention paid to the development of content-sensitive and psychometrically sound methods of assessing social skills and social competence in young people. Little is known about the extent to which most current measures are sensitive to changes in social behaviour, and actually assess significant and socially valid components of social functioning (Bullis et al., 2001). Information relating to social skills and social competence may be gathered through various forms of assessment including interviews, behaviour rating scales or questionnaires (youth, parent, teacher or peer report), direct behavioural observation (real-life or role-played) and sociometric measures of social status with peers. The exact measures and content of the assessment will depend upon

whether the purpose is to (i) screen to identify those children in a population who are experiencing social difficulties, (ii) provide information about the exact nature of presenting problems in social skills and competence in order to guide the content of treatment, or (iii) evaluate the effectiveness of intervention. It is also recognised that clinicians and social skills trainers tend to have limited resources and are frequently not able to conduct detailed behavioural observations outside the clinic or training setting. Wherever possible, however, information should be gathered in relation to a range of settings, including home, school and peer-recreational situations, and from a range of informants. Reliance upon information from a single informant or from a single setting may present a biased picture of the young person's social functioning.

Interviews

Interview information from the young person or significant others provides useful and detailed material relating to the quality of relationships with others, the types of social situations and settings in which difficulties occur, and the response strategies that the young person currently uses to deal with social challenges. Although interview data are invaluable in providing detailed material for planning the content of SST, they are obviously not an appropriate method for screening large numbers of children in schools, nor as a sole method for evaluating treatment outcome. Interviews may be either structured or unstructured in form. Structured and semi-structured interviews such as the Social Adjustment Inventory for Children and Adolescents (SAICA; John et al., 1987) provide valuable information relating to general aspects of social functioning and quality of relationships with significant others. Structured interviews, however, restrict the focus of the interview and are limited in terms of depth of information relating to specific social situations or social skills. More detailed material may be obtained through a cognitive-behavioural interview. Some of the questions that provide valuable data in an interview (with young people; parents and teachers) include:

- How many friends? Who? What type of contact does she or he have with friends, and how often? How long do friendships last? Is the young person popular with other children.... or rejected by them?

- Does the young person get invited to parties/attend parties? Does she or he feel comfortable in approaching a group of peers to join in an activity?

- What does she or he do at lunch/recess times? Who does the young person spend time with?

- Quality of relationships with teachers?

- Quality of relationships with parents and other family members?

- What type of social activities/clubs/sports does the young person engage in; how often?

- Are there any social situations in which she or he becomes anxious? Does she or he avoid any particular social situations.... examples (how often, where, when, what are the triggers, what exactly does the young person do, consequences?)

- Are there social situations in which she or he gets into conflict with others? – examples (how often, where, when, what are the triggers, what exactly does she or he do, consequences?)

- Are there any other social situations that the young person finds difficult to deal with? – examples (how often, where, when, what are the triggers, what exactly does she or he do, consequences?)

Behaviour rating scales and questionnaires
Several behaviour rating scales exist that are designed to assess social competence and/or social skills of young people. However, as noted above, very few have been found to demonstrate strong content validity and adequate psychometric properties. Very few measures focus specifically on social competence or social skills, with the majority confusing the assessment of social skills with the assessment of emotional, behavioural, and academic problems.

The Social Skills Rating System (Gresham & Elliott, 1990) is one of the most commonly used measures, and has parent, teacher and child versions with separate scales for preschool, elementary and Grades 7–12. Prosocial behaviours are rated in terms of frequency of occurrence, and cover behaviours that are proposed to influence the quality of relationships with others on three dimensions relating to self-control, cooperation and assertion. The social skills subscale has been shown to have strong psychometric properties (Demaray et al., 1995). Examination of the items, however, reveals that many relate to more general aspects of functioning, such as 'produces correct school work'; 'puts work materials or school property away'; 'keeps room clean and neat without being reminded'. Although these behaviours are important areas of behavioural adjustment, they do not relate specifically to the interpersonal aspects of social skills.

In order to overcome this limitation among existing measures of social skills, Spence (1995) developed the Social Skills Questionnaires with parent, teacher and young person versions. The Social Skills Questionnaires were designed for use among 8–18-year-olds and focus on those social behaviours that are proposed to influence the outcome of social interactions. The Social Skills Questionnaires includes 30 items, with the respondent rating the extent to which each item best describes the young person over the past 4 weeks. Items cover a wide range of social skills including the ability to deal with situations requiring an assertive response, the ability to handle conflict situations, and the quality of peer and family relationships. The scales have been shown to have good psychometric properties in terms of reliability and validity and to be sensitive to change in response to SST with children with social phobia (Spence, 1995; Spence, Donovan, & Brechman-Toussaint, 2000).

Other useful measures of children's social functioning include the Matson Evaluation of Social Skills for Youngers (Matson, Rotatori, & Helsel, 1983) and the School Social Behaviour Scales (SSBS; Merrell, 1993). The SSBS includes a social competence scale (32 items) and an antisocial behaviour scale (33 items), with the social competence scale comprising interpersonal skills, self-management skills and academic skills subscales. Little detail is produced regarding specific behavioural social skills and Merrell (2001) reports that a parent version is currently under development. Some scales developed to specifically assess children's assertive responding include the Children's Assertive Behaviour Scale (Michelsen & Wood, 1982), the Children's Assertiveness Inventory (Ollendick, 1983) and the Children's Action Tendency Scale (Deluty, 1979, 1984).

Behaviour rating scales and questionnaires are also valuable in the assessment of social anxiety, maladaptive thoughts and beliefs relating to social situations, and interpersonal problem solving abilities. In relation to social anxiety, the Social Phobia and Anxiety Inventory for Children (Beidel, Turner, & Morris, 1995) and the Social Anxiety Scale for Children (La Greca & Stone, 1993) provide a detailed self-assessment. A shorter measure that is useful in screening for social anxiety is the Social Worries Questionnaire (Spence, 1995) for which there are parent, teacher and young person versions.

The assessment of social problem solving skills is a challenge as it is difficult to find measures with strong psychometric properties, or that have normative data to aid in interpretation. Generally, these measures have been used in research studies, and include the Open-Middle Interview (OMI; Polifka et al., 1981), the Means-Ends Problem Solving Test (MEPS; Platt & Spivack, 1995) and the Social Problem-Solving Inventory (D'Zurillo & Maydeu Olivares, 1995). Questionnaires to assess cognitions and beliefs that disrupt effective social responding have tended to be quite general, rather than focusing specifically upon interpersonal scenarios. However, the Children's Cognitive Error Questionnaire (Leitenbertg, Yost, & Carroll-Wilson, 1986) and the Children's Attributional Style Questionnaire (Kaslow, Rehm, & Siegel, 1984) may provide useful information. Cartoon scenarios, with blank thought/speech bubbles that depict interpersonal situations may be used as an alternative method of obtaining information from children about their thoughts and beliefs relating to social challenges.

Direct behavioural observation
Many researchers emphasise the importance of behavioural observation as a valid method of obtaining information about children's social responding and evaluating the effectiveness of SST. However, the range of published and validated observational procedures from which to choose is relatively limited. Farmer-Dougan and Kaszuba (1999) describe the PLAY behavioural observation system whereby children are observed during free-play time in each of four play areas. The superordinate categories of solitary, parallel, associative and co-operative play are further compartmentalised into the subordinate categories of functional, constructive, dramatic and games with rules, with onlooker behaviour included as an additional category. Each child is observed for 10 minutes in the four different play areas. Each observation comprises 20, 30-second time sampling units resulting in 9 minutes of observation and one minute of recording. Observers alternately watch the child for 25 seconds and record their observations for 5 seconds. The PLAY observation system was found to have a mean inter-observer agreement of 92% and predicted children's social and cognitive developmental functioning and their level of teacher-rated social skill.

The Peer Social Behaviour Code (PSBC) of the Systematic Screening for Behaviour Disorders (SSBD; Walker & Severson, 1992) represents another observational system that may be used to assess child social skill. Conducted during free-play with children from grades one to six, the PSBC includes the five categories of social engagement, participation, parallel play, alone, and no codable response. For both the social engagement and participation categories, the observer codes the interaction if it occurs, as either positive or negative. Alternatively, when parallel play occurs or the child is alone, the observer simply ticks the corresponding box on the report form. The no codable response category is ticked if the child is not in view, and dotted if the child is interacting with an adult rather than a peer. The observer watches the child for 10 seconds and records for 10 seconds using an audio tape for accurate timing. The manual is very detailed and recording forms and audiotapes are included. The psychometric properties of the SSBD have been found to be adequate, with acceptable levels of reliability and high levels of discriminative validity (see Walker & Severson, 1992 and Walker et al., 1990 for details).

In my own research investigating the social skills of children with social phobia (Spence et al., 1999), a simplified version of the direct behavioural observation system developed by Furman and Masters (1980) was employed. In this study, children were observed for 37.5 minutes in both the playground and classroom. Observers alternately watched the child for 15 seconds and recorded their observations for 15 seconds, documenting both the number of interactions the child was involved in and the number of interactions initiated by the target child. Inter-rater reliability was found to be 90.14% for the total number of interactions and 90.49% for the number of interactions made by the target child.

In practice, most clinicians do not have the time to conduct repeated observations of a child's behaviour across multiple social settings. Behavioural observation certainly provides a wealth of data, but is time consuming, requires strict training of observers to achieve an adequate level of reliability, and often disrupts the child's normal pattern of behaviour if they are aware of being observed. If the opportunity for careful and reliable observation is not possible, then the clinician must rely upon the reports of parents, teachers, peers and the young person him/herself. These individuals provide their report based on many observations across a wide range of social situations, but with the risk of potential bias in their reports.

Sociometry
Sociometry is another method that has been used in many research studies to identify children who are isolated, neglected or actively rejected by their peers and to evaluate the impact of SST. There are various forms of sociometry. The peer nomination method requires each child to list a certain number of children who they particularly like or dislike, or with whom they would most prefer (or prefer not) to play or work with (e.g., Christopher, Hansen, & MacMillan, 1991; Tiffen & Spence, 1986). In contrast, rating methods require each child to rate each classmate on a scale of like-dislike or preference (e.g., Ladd, 1981; La Greca & Santogrossi, 1980). Spence (1995) provides greater detail regarding the use of sociometry in the assessment of children's social competence. However, as an example, Hansen, Nangle and Ellis (1996) employed both peer nomination and rating methods in their investigation of the temporal stability of sociometric measures. For the peer nomination measures, children were required to circle the names of the three classmates they liked most on one class list and circle the names of three classmates they liked least on another. For the peer-rating measures, children were required to rate on a 5-point Likert-type scale from 1 (do not like to at all) to 5 (like to a lot), the extent to which they liked to both 'play with' and 'work with' each classmate. Results indicated that these two sociometric methods were relatively stable at the group level, but somewhat unstable at the individual level.

In clinical practice, sociometry is unlikely to be particularly useful. Given that the procedure requires responses from all children in a classroom, or social group, informed consent is required from all parents and children involved (Merrell, 2001). Furthermore, sociometry tells us nothing about why a child is liked or disliked by peers.

Social skills training methods: a multi-modal, integrated approach

There is some evidence to suggest the superiority of multi-modal approaches to social skills training, rather than mono-modal interventions such as modelling, coaching, reinforcement or social-problem solving training used in isolation (Beelmann, Pfingsten, & Loesel, 1994). The following summary is based on the SST program described by Spence (1995) that was developed for young people aged 7–18 years. The evidence-based program was developed in line with empirical studies that have shown SST to be effective in increasing the performance of specific social skills with young people presenting with a range of emotional, behavioural and developmental problems. Thus the content reflects that used in a range of research studies (see Spence, 1995 for a detailed review) and from the author's own research with young people presenting with conduct disorder (Spence & Marzillier, 1979, 1981) and social anxiety (Spence et al., 2000).

The program aims to teach a range of fundamental social skills and strategies to deal with commonly presenting social situations that present a challenge to young people. A detailed assessment enables the therapist to identify additional social situations that should be covered within the training program. It is also recognises that the length of intervention will vary for different children and adolescents, depending on the nature and severity of social skills deficits, and the speed of skill learning. For some young people, considerable benefits will be gained from a relatively brief intervention (such as 8–12 sessions). Other children will require multiple training sessions each week over several months, with ongoing training outside sessions.

The components of the program include:

- *Behavioural social skills training* – instructions, discussion, modelling, role-playing/behaviour rehearsal, feedback and reinforcement to increase the ability to perform appropriate response strategies;

- *Social perception skills training* – correct interpretation of social cues from others and social context;
- *Self-instructional/self-regulation techniques* – self-monitoring, self-talk, self-reinforcement;
- *Social problem solving* – problem identification, generation of alternative solutions, prediction of consequences, selection and planning of appropriate responses;
- *Reduction of competing/inhibiting/inappropriate social responses* – contingency management, parent training, relaxation training, cognitive restructuring. These approaches are not covered in the present review.

Behavioural social skills training

The behavioural component of SST involves interventions that enable children to acquire an adequate repertoire of basic behaviours that have a strong impact upon the impression made upon others and that increase the chance of successful outcomes from social situations. These skills include a series of non-verbal responses, such as appropriate use of eye contact and facial expression, and basic verbal skills that also influence the impact upon others. Verbal skills, such as tone, rate and volume of speech, influence the emotion conveyed (e.g. anger, fear, happiness), which in turn influences how others respond. These basic skills have important social consequences over and above what a child actually says or does in an interaction. In addition to the training of significant basic social skills, behavioural SST methods are also used to teach frequently used complex performance skills for handling challenging social situations. Some examples of these are outlined in Table 1.

The behavioural techniques used to teach social skills are similar to those used to teach the acquisition of any other skill and include instructions, discussion, modelling, role-playing/behaviour rehearsal, feedback and reinforcement.

Instructions, discussion and modelling. These techniques are used to provide information about how to perform a particular response and why such behaviours are important for successful social outcomes. In most instances, the trainer provides this information; however, videotapes or peers may be used to illustrate skill use. We know from the social learning literature that learning is most likely to occur if the model is of a similar age and background to the trainee, and provides a competent but not unrealistically perfect performance (Bandura, 1977). Modelling should also be made as realistic as possible, using real-life cues.

As with the teaching of any form of human behaviour, it is important that the behaviour is broken down into small, sub-component steps and that a skill has been well-learned before moving on to the next target response. Having provided a demonstration of and rationale for a specific skill, training then provides the opportunity to practice the skill and to receive feedback.

Behaviour rehearsal, role-play and practice. The practice of target responses is essential for skill acquisition and improvement. Ideally, practice should occur as often as possible, as in the learning of any skill. Practice may take place within sessions, or may be set as tasks to perform at home, school or other social venues. Within sessions, role-play scenarios are frequently used for skill practice. Scenarios are described that are of relevance to the group members, and for which the target skill is important. For example, the challenge of asking a peer about their favourite TV program may be set as a role-play scenario in order to practise the use of eye contact. More complex skills, such as saying 'no' to peer pressure, may require in-depth descriptions of the scenario, with details often provided on role-play cards. Where possible, role-plays should be made as realistic as possible, including significant others and props from the 'real world'. Board games may be used to provide an interesting and exciting format in which role-plays can be generated. Spence (1995) described roleplayopoly in which a dice is thrown and the square upon which the player lands describes a particular social setting. Role-play cards are drawn that outline a particular scenario that is role-played with another group member or with the trainer.

It has become increasingly evident that skill practice limited to clinic training sessions is insufficient to produce long-lasting and substantial improvement in social behaviour in school, family and other social settings. Several techniques are used to increase the opportunity for skill practice, including the setting of 'home-work', the involvement of peer trainers, and the inclusion of parents and teachers in training. Peers, parents and teachers can be used to enhance the impact of SST by prompting the use of target skills, providing feedback and praising appropriate responding (Nazar Biesman, 2000; Strain & Powell, 1982). Generally, peers, teachers and parents require specific training in methods of coaching social skills in order to participate effectively in the SST program. In addition to acting as real-world discriminative cues for triggering positive social interaction, the involvement of significant others outside the training sessions is a useful means of ensuring that children's efforts to use their newly acquired social skills lead to positive social outcomes. This reduces the risk that socially skilled attempts are just ignored or even punished by others. It is difficult to change the 'image' of a child once he or she has earned the reputation of being unpopular, aggressive, a loner, or socially anxious. This

Table 1. Examples of basic social skills and complex performance skills

Basic social skills	Complex performance skills
Eye contact	Starting conversations
Body posture	Asking to join in
Voice quality (tone, speed, clarity)	Offering invitations
	Asking for and offering help
Facial expression	Giving negative feedback
Gesture	Responding to negative feedback
Listening skills	Saying 'no' and dealing
• Verbal acknowledgements	with peer pressure
	Assertive responding
• Head movements	Dealing with teasing and bullying
	Job interviews (adolescents)
	Dating situations (adolescents)
	Negotiation and conflict resolution

makes it hard for other people to change their usual pattern of responding towards that child. Thus, active efforts are needed to change the response of others in the child's social world.

Where homework practice is involved, it is important that instructions for skill performance are carefully described on 'home-task' cards. In addition to outlining the nature of the skill, the card should indicate the circumstances in which a response should be used (e.g., where, when and who with). It is useful if trainees record information about their practice of the skill and the outcomes that were received. This enables the trainer to identify problems in performance and provides material for practice and discussion in future sessions. The outcome of home-based practice should be reviewed at the start of each session.

Feedback and reinforcement. Practice of a skill is only of value if it results in some form of feedback as to whether the performance is satisfactory and what, if anything, needs to be done to further improve that performance. Feedback of this type may be provided by trainers or other participants within the SST group, or by significant others outside the sessions. Again, peers, teachers and parents may be trained to provide feedback about skill performance. Feedback should be presented in a constructive manner, so that the positive aspects of the performance are emphasised, in addition to the areas in need of change. It is often helpful to videotape the roleplay or behaviour rehearsal and replay this to the trainee. Specific areas of success and further targets for improvement can then be pointed out. Feedback may also take the form of self-evaluation of one's own performance during videotaped roleplays.

Praise is an important aspect of feedback and reinforcement of skill improvements, and should be given for successive approximations to target behaviours. Similarly, the trainer should praise the participants' efforts at behaviour change, and ensure that praise is given by peers, teachers and parents if they are involved in the program. In some instances, it may be appropriate to use tangible reinforcers in a contingency management program in order to reinforce target skills. Self-reinforcement for skill improvements may also be used, in association with self-evaluation.

Social perception skills training
Social perception skills training refers to teaching the individual to monitor, discriminate and identify cues relating to (i) one's own emotions and feelings, (ii) the emotions, feelings and perspective of others in an interaction, (iii) the characteristics and social rules of the specific social situation and context (Milne & Spence, 1987). Accurate social perception enables children to identify when a social problem is present and when and how an adjustment to one's social behaviour is required in order to produce a successful social outcome. Social perception skills therefore form an important component of social knowledge. Training in social perception skills does not appear to produce significant improvements in social competence when used in isolation (Milne & Spence, 1987). However, there is a strong theoretical rationale for proposing that training in social perception skills should be a fundamental component of SST.

Training may include discussion of written, pictorial or videotaped vignettes that depict challenging social situations. The material can be used to identify the social cues within the situation, such as the facial expression, body posture, tone of voice, eye contact and more complex social actions of those involved in the scenario. Such information may be used to identify the emotions and perspective of those within the interaction and the social rules that govern the situation. Alternatively, simple pictures and videotapes that depict basic nonverbal stimuli, such as facial expression and tone of voice, may be used to train younger children to identify and label the emotions being conveyed.

Interpersonal problem solving skills training
SST frequently includes training in interpersonal problem solving skills. This component teaches young people a strategy for identifying a response that is likely to be effective in managing a challenging social situation. Detailed descriptions of interpersonal problem solving skills training for children have been outlined by Spivack and Shure (1976) and Camp and Bash (1981). Briefly, children are taught a series of problem solving steps including (i) identifying the occurrence of a social problem that requires a solution, (ii) thinking of alternative possible responses rather than responding impulsively, (iii) predicting likely consequences of each alternative, and (iv) selecting and performing the strategy most likely to lead to a successful outcome. These steps are generally taught within a series of exercises and games that illustrate the steps both generally (with non-social material) and in relation to challenging social situations of relevance to the child. Programs such as Spence (1995) and Camp and Bash (1981) make use of self-instructional training as a vehicle for guiding the use of problem solving techniques.

Self-instructional and self-regulation methods
Self-instructional training makes use of internal dialogue or self-talk that guides the child's cognitive processes and overt behaviour (Luria, 1961; Vygotsky, 1962). Meichenbaum and Goodman (1971) pioneered the work in which self-instructions were used to enable children to gain greater control over their own behaviour. Initially, instructions to guide behaviour are given aloud by the trainer, followed by stages in which the child gives self-instructions aloud and then covertly. This process may be used in the training of social problem solving steps, was included in the Think Aloud program described by Camp and Bash (1981), and has since been used by many social skills therapists. Once each step of problem solving has been learned, the trainer models the steps out loud in an illustration of solving a particular social problem. The group participants are then asked to speak aloud as they guide themselves through the problem solving steps. Once this stage has been successfully accomplished, children engage in silent self-talk while they instruct themselves through the stages of problem solving, using a series of vignettes. The self-instruction component is also used to teach children to instruct themselves in the use of social skills for the performance of the chosen response. Similarly, the final stages of self-instruction require the child to evaluate the degree of success of their performance and to reward themselves through self-praise

Table 2. The social detective steps (Spence, 1995)

Step	Self-instruction
Detect	Stop
	What is the problem?
Investigate	Relax
	What are my alternatives (choices)?
	What would happen next?
	Which of these would be best?
	Watch for unhelpful thoughts (adolescents)
Solve	Make a Plan
	Remember social skills
	Do it
	How did I do?

or to make appropriate modifications to their response strategy if required.

Various programs use prompts to remind children about the problem solving steps. Spence (1995) uses the concept of the Social Detective – Step 1 (Detect), Step 2 (Investigate), Step 3 (Solve) – to prompt young people to use interpersonal problem solving strategies and social skills, as shown in Table 2.

The effectiveness of social skills training

There have been many reviews of the social skills literature, drawing a range of conclusions relating to the effectiveness of social skills training with children and adolescents. Briefly, the behavioural strategies of modelling, coaching, behavioural rehearsal, role play, feedback and reinforcement of skill usage have been found to be effective in producing short-term improvements in specific social skill responses (Gresham, 1981, 1985; McIntosh, Vaughn, & Zaragoza, 1991). Less convincing results have been found in terms of the impact of social-cognitive approaches such as interpersonal problem solving, self-instructional and social perception skills training upon social functioning (Gresham & Elliot, 1987).

In addition to extensive reviews of the research literature, several studies have been conducted using meta-analysis, a statistical procedure that evaluates the effect size of changes produced by SST in comparison to no-intervention or placebo treatments. The results of meta-analyses have varied considerably with the effect size depending upon the presenting problem of the child, the outcome measure (behavioural social skills, more general social competence or overall emotional/behavioural adjustment), the length of the follow-up period, the location (clinic, home or school), and the informant (young person, parent, teacher or trained observer). Schneider (1992), in a review of 79 controlled outcome studies, concluded that SST produced an average moderate effect size of 40. Quinn et al. (1999) were less positive in their conclusions, finding only a small effect size (.199) in a meta-analysis of SST for children with emotional and behavioural problems, despite studies using an average of 2.5 hours of SST per week over 12 weeks.

Although these findings appear to be discouraging, meta-analytic studies have shown that the impact of SST varies according to the type of intervention, measures used and length of follow-up. Beelmann et al. (1994) found that social competence training produced a moderate effect size for short-term outcomes (.39) but weak effects in the long-term (.11). Furthermore, they noted that the impact of different approaches to intervention varied according to the outcome measure used. Monomodal social problem-solving approaches tended to have higher effect sizes on measures of social-cognitive skills (.80) and weak effects on measures of behavioural social interaction skills (.11). Similarly monomodal behavioural SST tended to have a greater impact on social interaction skills (.61) than on social-cognitive measures (.13). The effects were found to be greater for preschool children (.96) compared to those in older age groups (.38). Interestingly however, social competence training had minimal effect on social-cognitive measures amongst younger children. Beelmann et al. (1994) proposed that this reflects the cognitive-developmental limitations of early childhood. The authors proposed that younger children may respond better to more direct, behavioural rather than cognitive approaches.

Effectiveness of SST also appears to vary as a function of the presenting problem(s) of the child, although the results of the various meta-analyses are not necessarily consistent with each other in this regard. Schneider (1992) concluded that SST was more effective with withdrawn children (.69) than with unpopular (.37), aggressive (.37), 'not atypical' (.32) or 'other' (.48) children. Alternatively, Beelman et al. (1994) concluded that at risk children (i.e., those demonstrating social deprivation and/or confronted with critical life-events) benefited most from SST (.85). Children with externalising (.48) and internalising (.50) problems benefited moderately, and 'normal' (.35) and intellectually disabled children (.38) benefited least from SST. In yet another meta-analysis, Kavale et al. (1997) found that the effects of SST were highest for anxiety (.422) and lowest for aggression (.129). Kavale et al. (1997) also conducted a meta-analysis on single-subject design experiments, using the percentage of non-overlapping data (PND) as their outcome measure. Results of their study suggested that SST was effective for delinquent participants (PND = 76%), moderately effective for emotionally and behaviourally disordered children (PND = 64%), and relatively ineffective for autistic children (PND = 54%).

The above review highlights the inconsistency of results from studies investigating the effectiveness of SST with children. Gresham (1997) noted that meta-analytic studies have not yet adequately addressed issues pertaining to the characteristics of participants, type of intervention, type of measure, short-term versus long-term effects, and impact upon generalisation of behaviour change. Furthermore, Beelman et al. (1994) stated that there are insufficient data available to draw firm conclusions about the impact of SST in terms of generalisation of behaviour change to real-life contexts. As noted earlier, there is now general acceptance that SST is insufficient as a sole treatment for most emotional and behavioural disorders but represents an important therapeutic component for multi-method interventions. Future research needs to examine the relative benefits of SST within these multi-method approaches and the effectiveness of different methods of enhancing the long-term, generalised outcomes of SST.

Methods to enhance the efficacy of SST

A major challenge in the use of SST is to produce changes in social behaviour that are both long-lasting and that generalise from the clinic/training setting to real-world social interactions. Much has been written about theoretically and practically-based methods to enhance the long-term and generalised outcomes of SST (Bullis et al., 2001; Hansen, Nangle, & Meyer, 1998; Hepler, 1994; Spence, 1995). These methods can be summarised as follows:

- Greater effort to select social skills for training that are based on empirical evidence regarding their social validity. That is, the skills to be taught should be those that do actually increase the chance of successful outcomes from the social interactions of young people.

- Greater attention to cultural issues to ensure that target skills are selected according to what is culturally appropriate for the child's context and that children are taught to discriminate between different cultural contexts that demand different social responses (Cartledge & Loe, 2001).

- Group leaders should aim to maximise the participation of all group members and to include young people in the identification of target behaviours and developing the rationale for SST.

- Ensure adequate duration of training. For some young people, months rather than weeks may be required to produce significant improvements in social functioning.

- Booster sessions should be used to facilitate the maintenance of learned skills.

- For some children, training needs to be conducted on an ongoing basis, day-to-day, rather than being limited to brief, specific clinic or classroom sessions. Where the program is conducted within the school curriculum, this should be extended across year levels in the same way in which academic skills are taught in a hierarchical and developmental fashion rather than a one-off intervention.

- SST should extend into the child's naturalistic settings at school and at home. In some instances training may be conducted in real-life social contexts, such as the youth club project reported by Jackson and Marzillier (1982).

- Token economy systems and other contingency management methods may assist in increasing skill acquisition, practice and group participation. Hepler (1994) used a group-based token system in which the group could earn points towards a pizza party at the end of training, based upon the response of trainees in each session.

- Teachers, parents and peers should play a role in SST both within and outside training sessions, in order to serve as antecedent cues for use of socially skilled behaviour, and to model, prompt and reinforce appropriate social responding.

- Socially competent peers should be included in SST groups where possible in order to provide models of desirable target behaviours and as a method of changing children's peer networks outside the sessions.

- Efforts should be made to increase the fidelity of training, such as regular training sessions and meetings with trainers, structured session manuals and guides, and self- or other-observation and ratings of program adherence.

- Strong contingency management and adjunct interventions are required to reduce competing/inhibiting responses that reduce the use of socially skilled behaviour.

Recent multi-modal interventions

There are a number of recent multi-modal SST-based interventions that have been empirically tested and found to be effective. While a thorough review of all such interventions is beyond the scope of this paper, a few examples will be provided here. It is interesting to note that in line with empirical research indicating the importance of parental influence on the development and/or expression of social skills, many recent programs have included a parent training component. For instance, Kazdin (1990, 1997, 1998) has long advocated the use of social problem-solving strategies and parent training strategies in the treatment of conduct disorder. In a study comparing social problem solving alone, parent training alone and social problem-solving combined with parent training, Kazdin, Siegel and Bass (1992) found that the combined treatment improved parental and child functioning and placed a greater proportion of children within the non-clinical range compared to the other two conditions. Similarly, Frankel and colleagues have found that parent training in combination with SST has been advantageous in treating both children with attention deficit hyperactivity disorder (Frankel et al., 1997) and ostracised children (Frankel, Cantwell, & Myatt, 1996).

Another recent program incorporating multi-modal methods and including a parent training component is Webster-Stratton, Reid and Hammond's (2001) Incredible Years Dinosaur Social Skills and Problem-Solving Curriculum for children with early-onset conduct problems. To improve generalisation of the skills taught, parents and teachers were given weekly information regarding the content of the child sessions and were asked to reinforce targeted social skills using behaviour charts and bonus rewards. Results of the program with children aged 4–8 years showed that compared to control children, those receiving the Dinosaur Program demonstrated fewer externalising problems at home, less aggression at school, more prosocial behaviour with peers, more positive conflict management strategies, and less aggressive and non-compliant behaviour.

While some studies have indicated enhanced treatment effects when parents are involved in therapy, our own research investigating the usefulness of SST in the alleviation of child social phobia did not (Spence et al., 2000). In this study, SST was found to be effective in reducing social anxiety and improving social skills both at post-treatment and 12-month follow-up. However, while trends in the data suggested superior improvement

of children whose parents were involved in the program compared to those whose parents were not, the differences were not statistically significant.

Over the years, many researchers have developed the social skills and social problem solving paradigms in different ways to produce an integrated curriculum or program. For example, Meyer and Farrell (1998) described their RIPP ('you can decide to Respond In Peaceful and Positive ways or you can Rest in Peace Permanently') program that aimed to prevent violence in high-risk urban environments. The acronym SCIDDLE was used to indicate the problem solving process of Stop, Calm Down, Identify the problem and your feelings about it, Decide among your options, Do it, Look back, and Evaluate. The acronym RAID was used to describe the four prosocial behavioural alternatives to violence of Resolve, Avoid, Ignore, and Diffuse. Results of the study indicated that RIPP participants received fewer disciplinary violations for violent offenses and in-school suspensions, and that the reduction in suspensions was maintained at 12-month follow-up for boys but not girls. In addition, participants in the experimental condition reported more frequent use of peer mediation and a reduction in fight-related injuries following treatment.

Other recent investigations have attempted to explicitly tailor the SST programs to the developmental level of the child. For example, Bullis et al. (2001) have developed four SST-based programs specific to the developmental levels of elementary children (The First Step to Success Project), middle-school children (The Effective Behavioral Support Program and the Second Step Violence Prevention Curriculum) and high school children (The Connections Program). The elementary school program comprises a universal screening procedure to identify at-risk children, a school-based SST component, and a parent training component aimed at teaching parents to develop child social skills. The programs for middle school children set up and support lower order social skills and teach higher order social-cognitive skills. Finally, the program for high school students is designed to enhance job-related social skills. Results thus far have indicted some positive outcomes (Bullis et al., 2001).

Conclusion

There is a good deal of evidence to demonstrate the significant role that deficits in social skills and social competence play in determining children's emotional and behavioural adjustment. In the 1970s and early 1980s there was a great deal of enthusiasm regarding the potential of SST as a treatment for many forms of psychopathology. Evidence quickly emerged to demonstrate that, although SST was frequently effective in producing changes in specific social behaviours, these benefits were often short-lived and did not carry over from the clinic into real-life contexts. Furthermore, SST when used on its own was generally not powerful enough to produce substantial reductions in psychopathology or improvements in more global indicators of social functioning. Nevertheless, SST is now widely accepted as a component of multi-method approaches to the treatment of many emotional, behavioural and developmental disorders.

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