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Treating Childhood Shyness and Related Behavior: Empirically Evaluated Approaches to Promote Positive Social Interactions

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Behavioral and cognitive–behavioral strategies, including exposure, social skills training, and peer-mediated approaches, used to treat childhood shyness and related impairments are described. In addition, relevant outcome studies published within the past 20 years are evaluated, and limitations regarding the generalization, maintenance, and social validity of the reported treatment gains are addressed. Although the interventions reviewed have demonstrated short-term merit in ameliorating social and emotional impairments, such as problematic peer relations and internalizing difficulties, there currently is a lack of evidence to support the social validity and long-term generalization and maintenance of such behavioral gains. Thus, recommendations for future research are made, including the need to (a) assess the social validity of treatment outcomes, (b) utilize important socialization agents (e.g., parents, teachers, peers), and (c) conduct prevention research and longitudinal outcome studies.

KEY WORDS: shyness; social anxiety; intervention; peer relations.

Contrary to the well-known expression, "silence speaks louder than words," children described as being shy, socially withdrawn, and socially isolated represent a relatively neglected group that is unlikely to be the target of prevention and early intervention efforts. Although shyness frequently is considered a normal and transitory phenomenon (Carducci, 1999; Sanson, Pedlow, Cann, Prior, & Oberklaid, 1996), many shy children experience elevated levels of social anxiety and demonstrate socially inhibited behavior, such as social withdrawal and avoidance (Bruch & Cheek, 1995; Jones, Briggs, & Smith, 1986). As a result, childhood shyness and related social difficulties are associated with internalizing difficulties, including clinically significant levels of anxiety (e.g., Compton, Nelson, & March, 2000; Olson & Rosenblum, 1998). Given that anxiety disorders represent one of the most debilitating forms of child psychopathology and affect approximately 20% of children and adolescents (Essau, Conradt, & Petermann, 1999, 2000; Kashani & Orvaschel, 1990), it is imperative for researchers to examine subclinical conditions and precursors related to their onset and development.

Other negative outcomes linked with shyness and related behavior include loneliness, low self-esteem, academic impairment, substance abuse, and peer relationship problems such as peer neglect, rejection, and victimization (Ginsburg, La Greca, & Silverman, 1998; Inderbitzen, Walters, & Bukowski, 1997; Rothbart & Mauro, 1990; Stevenson-Hinde & Glover, 1996). Despite such adverse consequences, most of the existing social enhancement and remediation programs have been devoted to peer-rejected children exhibiting disruptive and aggressive behavior (e.g., Hembree-Kigin & McNeil, 1995; Hinshaw, 1996; Kazdin, 1996; Kazdin, Siegel, & Bass, 1992; Lochman & Curry, 1986; Webster-Stratton, 1996). Conversely, shy children and adolescents are not viewed as an "at risk" group and often do not receive services unless their social problems lead

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to clinically significant impairments in social, academic, or vocational functioning (Beidel & Turner, 1998). Further, research suggests that only a small proportion of clinically significant cases seek professional assistance prior to or during adolescence (Essau et al., 1999).

Our primary aim was to review evidence-based approaches applied specifically to treat inhibited children and adolescents demonstrating social deficits such as reticence and withdrawal. Concerns regarding the social validity, generalization, and maintenance of treatment effects are discussed, and suggestions for enhancing interventions and outcome research are provided, including the need to consider the role of developmental variables (e.g., age and gender). Research suggests, for example, that younger children may respond better to "purely" behavioral techniques in comparison to more cognitive-focused interventions, such as problem-solving training and cognitive restructuring (e.g., Durlak, Fuhrman, & Lampman, 1991; Dush, Hirt, & Schroeder, 1989). Additionally, it may be more important to emphasize peer versus parent involvement at different developmental stages (Barclay & Houts, 1995; Feindler, 1990; Ronen, 1998). For instance, because of the increasing importance and influence of children's peer groups, shy adolescents may respond better to peer- as opposed to parent-mediated interventions. Unfortunately, very few investigators have assessed age- and gender-related differences, thereby precluding a comprehensive, integrative discussion of these factors. Despite this limitation, data pertaining to these developmental variables are presented when available.

SHYNESS AND RELATED BEHAVIOR

Given the heterogeneity of the target population (i.e., shy, isolated, withdrawn, and peer-neglected children), definitional issues pertaining to shyness and related constructs are addressed briefly (see Rubin & Asendorpf, 1993, for a complete review). Shyness has been described as the fear of being negatively evaluated in social situations and is associated with avoidance or withdrawal from familiar and unfamiliar people and situations (Buss, 1980; Pilkonis, 1977; Zimbardo, 1977). Although a relatively common phenomenon occurring in approximately 48% of the general population (e.g., Carducci & Zimbardo, 1995; Zimbardo, 1986), shyness is a fairly stable condition that may become disabling, leading to functional impairments in 13% or more of reported cases (e.g., Henderson, 1997). Increased levels of social anxiety, self-consciousness, and inhibition have been linked with shyness, as have relationship difficulties, including peer rejection and neglect (e.g., Buss, 1980; Jones et al., 1986). Additionally, researchers have described childhood shyness as one precursor contributing to the development of a chronic and debilitating clinical diagnosis known as social anxiety disorder (SAD; Stemberger, Turner, Beidel, & Calhoun, 1995).

Compared with shyness, social withdrawal and isolation refer to more specific phenomena that do not necessarily involve increased social anxiety and fear of negative evaluation. Rather, social withdrawal refers to the behavioral expression of solitude and involves withdrawing or isolating oneself *from* the peer group (i.e., self-isolation), whereas social isolation results from being rejected or isolated *by* one's peer group (Rubin & Asendorpf, 1993; Rubin & Stewart, 1996). Shy, socially withdrawn, and isolated children and adolescents also have been classified in terms of their social status or level of acceptance within the peer group. More specifically, shyness and related behavior have been associated with peer rejection and neglect (French, 1988; La Greca & Lopez, 1998; Ollendick, Weist, Borden, & Greene, 1992; Younger & Boyko, 1987).

Level of acceptance or peer-group status (e.g., popular, rejected, neglected) typically is identified via peer nominations or ratings (e.g., students identify classmates they like the least and the most). Peer rejection refers to receiving a high number of negative nominations, and peer neglect involves receiving no, or very few, positive and negative nominations (e.g., LaGreca, Dandes, Wick, Shaw, & Stone, 1988; Ollendick et al., 1992; Rubin, Hymel, Mills, & Rose-Krasnor, 1991). Thus, socially rejected children and adolescents appear to be disliked and actively isolated by their peer group, whereas neglected students often are ignored and passively isolated from their peers. In addition to experiencing concurrent adjustment difficulties, longitudinal research suggests that low-accepted children are at risk for future social, behavioral, and emotional maladjustment (e.g., Ollendick, Greene, Weist, & Oswald, 1990; Ollendick et al., 1992).

Although subtle distinctions exist between terms, there is a growing body of literature documenting similar adverse and long-term consequences associated with these conditions (e.g., Boivin, Hymel, & Bukowski, 1995; Rubin, Chen, McDougall, & Bowker, 1995). For example, shy, socially withdrawn,

and isolated children appear to be at risk for experiencing concomitant behavioral and emotional difficulties, such as substance abuse (e.g., Hartman, 1986), academic impairment (e.g., Green, Vosk, Forehand, & Beck, 1981), and school refusal behavior (e.g., Kearney & Silverman, 1990). Other long-lasting correlates include internalizing difficulties, such as anxiety (e.g., Irving & Irving, 1990; Rubin, 1985), depression (e.g., Boivin et al., 1995; Henderson, 1997), loneliness (e.g., Jones & Russell, 1982), and low self-esteem (e.g., Cheek & Melchior, 1990; Crozier, 1995; Jupp & Griffiths, 1990; Lawrence & Bennett, 1992).

Relation to Social Anxiety Disorder

Shyness, social withdrawal, and social isolation are not listed as mental disorders in the fourth edition of the American Psychiatric Association (APA) *Diagnostic and Statistical Manual of Mental Disorders* (*DSM-IV*; APA, 1994); however, social impairments related to these constructs often are evident in clinical populations. In particular, shyness and related behavior appear to be associated closely with social anxiety disorder (SAD) or social phobia. According to the *DSM-IV*, SAD is characterized by "a marked and persistent fear of one or more social or performance situations in which the person is exposed to unfamiliar people or to possible scrutiny by others" (APA, 1994, p. 416). Turner, Beidel, and Townsley (1990) compared the parameters of adult shyness and SAD and reported similar cognitive features and behavioral responses, such as fear of negative evaluation, social withdrawal, and avoidance. Furthermore, the authors reported that anxiety-producing social and performance demands elicited similar somatic responses (e.g., heart palpitations, dizziness, and perspiration) from shy individuals as well as those diagnosed with SAD.

Children and adolescents diagnosed with SAD may demonstrate socially withdrawn behavior and may be isolated from their peer group (Albano, DiBartolo, Heimberg, & Barlow, 1995; Beidel & Morris, 1993; Beidel, Turner, & Morris, 1999; Inderbitzen et al., 1997; Morris, 2000; Spence, Donovan, & Brechman-Toussaint, 1999). In addition, shyness has been described as the "normal personality characteristic" that most closely parallels SAD (Bruch & Cheek, 1995) and has been conceptualized as a milder version of SAD that falls at the lower end of the socially anxious continuum (Rapee, 1995). Finally, researchers have described shyness as one of the multiple predispositional factors contributing to the development of SAD (Bruch & Cheek, 1995; Stemberger et al., 1995).

In light of these collective findings, it appears that shyness and SAD are related, overlapping phenomena characterized by similar cognitive, behavioral, and physiological responding. Additionally, many children and adolescents who experience shyness and related social difficulties endure significant behavioral and emotional problems. Evaluating and enhancing interventions applied to this population can help to reduce the internal distress and peer relationship difficulties *currently* experienced by socially inhibited children. Further, early intervention efforts may disrupt the developmental trajectories of this at-risk group, thereby precluding the exacerbation of interpersonal distress and social impairments.

REVIEW OF EMPIRICALLY EVALUATED APPROACHES

Selection Criteria

Behavioral and cognitive–behavioral interventions, such as exposure, social skills training, and peer-mediated approaches, are reviewed. To provide a relatively recent account of the literature, only studies published between 1980 and present were selected, and are described herein. Using keywords such as childhood shyness, social anxiety, withdrawal, isolation, peer relations, and interventions, a series of PsychINFO computer-based literature searches was conducted to identify relevant outcome studies. Group and single-subject designs were considered for inclusion if (a) children or adolescents (preschoolers-18 years) were the foci of treatment, (b) participants experienced shyness or related difficulties or both, and (c) studies were published in peer-review journals within the past 20 years. Unpublished theses and dissertations were excluded, as were investigations focusing exclusively on childhood externalizing difficulties or developmental delays. Although design and sample characteristics differed drastically, all children and adolescents experienced interpersonal difficulties and were described as shy, socially withdrawn, isolated, or peer-neglected. This is a relatively neglected and undertreated group owing to the internalizing and, at times, subclinical nature of shyness; thus, only a limited number of studies were identified as being relevant to the current review.

Empirical Validation, Support, and Evaluation

Distinctions have been made between empirically validated, supported, and evaluated treatments (American Psychological Association [APA], Task Force on Psychological Intervention Guidelines, 1995). Researchers, for example, have described empirically *validated* treatments as efficacious, "well-established" interventions meeting the highest level of empirical support, whereas empirically *supported* treatments often are regarded as a step below and categorized as "probably efficacious" (Kazdin & Weisz, 1998; Kendall, 1998; Lonigan, Elbert, Johnson, 1998). Distinguishing criteria recently have been posited (e.g., Chambless & Hollon, 1998), with well-established or efficacious treatments conceptualized as "more effective than no treatment, a placebo, or an alternate treatment across multiple trials conducted by different investigative teams" (Kazdin & Weiz, 1998, p. 22). To be considered empirically supported (i.e., "probably efficacious), interventions must meet similar standards, with the exception of replication by an independent investigatory team.

There are manualized treatments for childhood anxiety disorders that likely meet criteria for "probably efficacious" psychosocial interventions (e.g., see, e.g., Kendall, 1998; Barrett, Dadds, Rapee, 1996). Notably, however, there currently are no empirically validated or supported treatments for childhood shyness and related behavior. This review, thus, focuses primarily on empirically evaluated (i.e., evidence-based) interventions that heretofore have not been validated or supported as per criteria set forth by the APA Task Force.

Exposure-Based Treatments

Description

From a social learning perspective, interpersonal distress and impairments in social functioning result from (a) performance inhibition due to anxiety, (b) social skills deficits, or (c) a combination of the two (Arkowitz, 1981). In general, exposure-based therapies are implemented to mitigate elevated levels of anxiety and internal distress, whereas social skills training programs are used to assist children in the development of effective interpersonal skills. More specifically, exposure therapies are used to treat negative emotional reactions (e.g., anxiety) and involve prolonged exposure to anxiety-evoking stimuli or events until the fear response is either extinguished or diminished (e.g., Spiegler & Guevremont, 1998).

Exposure is an integral component in the treatment of SAD and other clinically diagnosed anxiety disorders (e.g., Albano, 1995; Kendall, 1994; Ollendick & King, 1991b; Silverman & Kurtines, 1996), and it has been found to be a necessary component in the treatment of adult anxiety (Trower, 1995). In contrast, the unique contributions of exposure and its variants have not been investigated widely with nondiagnosed, socially inhibited children. Instead, outcome studies have focused on the remediation of deficient skills via social skills training techniques, such as modeling and role-plays. It is possible, however, to conceptualize such approaches as exposure-based procedures if they involve exposure to the arousing and often avoided stimuli and subsequent extinction of anxious responding. For example, socially withdrawn children may be asked to rehearse newly acquired social skills while engaging in unstructured interactions with their peers. Such role-playing and behavioral rehearsal techniques provide children with numerous opportunities to practice prosocial behavior within a training session, while exposing them to a frequently avoided and anxiety-inducing situation.

Empirical Findings

Only one randomized clinical trial was identified in which implosion and systematic desensitization were utilized as the primary intervention techniques (Lowenstein, 1983). In Lowenstein's study, 22 shy children and adolescents (6–19 years old; 16 girls, 6 boys) scoring low on an extroversion self-report scale and rated by their teachers as "known to be timid" were randomly assigned by gender to either a treatment ($n = 11$) or control group ($n = 11$). Treatment duration was 6 months, and both groups were reassessed 2 weeks following this 6-month period.

Implosive approaches included "forcing" treated individuals to participate in group activities, such as swimming and games, and treated individuals also were exposed to 30 min of loud music per day to reduce general levels of reactivity in the presence of auditory stimuli. Additionally, in vivo and imaginal desensitization procedures were implemented in which treated participants were required to relax in the presence of increasingly salient anxiety-provoking stimuli. Goals of treatment were to help shy and timid children and adolescents "develop greater

interest to communicate and to mix socially with others" (Lowenstein, 1983, p. 67), and the criteria for improvement were based on differences between pre- and posttreatment scores on teacher ratings of timidity and self-reported extroversion. Because of evidence supporting the relation between shyness and academic difficulties, reading, spelling, and mathematics scores on standardized tests also were evaluated.

Findings from Lowenstein's study provided initial support for using exposure-based treatments with shy children and adolescents (Lowenstein, 1983). Specifically, only those in the treatment group reported higher levels of extroversion and were rated by their teachers as being less timid following the 6-month period. Neither group, however, demonstrated improved academic performance, possibly because sessions were geared exclusively toward enhancing social performance.

Limitations

Despite Lowenstein's positive findings, it is important to highlight several limitations (Lowenstein, 1983). First, it is impossible to determine the durability of the treatment gains because of the absence of follow-up data. Additionally, although self- and teacher-reported improvements were noted, information solicited from parents and peers, along with the inclusion of systematic behavioral observations, would help to corroborate child and teacher data. Finally, the extent to which this program produced socially important outcomes is unknown in light of the narrowly defined treatment goals and improvement criteria, neither of which included assessing children's emotional status, acceptance within the peer group, and the quality of their social relationships.

A more general limitation involves the extent to which exposure-based treatments lead to meaningful changes in children's interpersonal relationships and levels of social skills. Although exposure to feared stimuli typically leads to a decrease in anxious arousal and avoidance behavior (e.g., Ollendick & King, 1991b), it is not clear whether exposure techniques, in isolation, lead to socially important outcomes, such as greater social competency, higher levels of peer acceptance, and the development of close friendships. In short, much additional research is needed before solid conclusions can be made regarding the short- and long-term effects, as well as the unique and incremental contributions, of exposure-based techniques used with this population.

Social Skills Training (SST) Programs

Description

Social skills training (SST) is a widespread treatment approach that may differ along numerous parameters, such as treatment format and setting. For example, SST may be delivered to individuals or groups of children, in clinical or school settings, and by various trained individuals, including mental health professionals and teachers. Although numerous variations in content and delivery exist, most programs involve training in verbal and nonverbal communication skills and comprise coaching, modeling, and social-problem–solving training (Erwin, 1993; Ladd, 1985; Schneider, 1989).

Most SST interventions are multimodal programs that use a combination of these three procedures, making it difficult to determine if one is superior to the others. One meta-analysis examining the relative effectiveness of coaching, modeling, and social-problem–solving training (SPST) suggested that these techniques were equally effective in promoting increases in the specific targeted behaviors (Erwin, 1994). In a critical evaluation of 33 studies on the treatment of social skills in children, Gresham (1985) concluded that modeling perhaps is the most cost-effective approach (followed by coaching) and that SPST perhaps is the most time consuming to implement.

Empirical Findings

Three studies were identified investigating the effectiveness of SST with shy children and adolescents. Christoff et al. (1985), for example, examined the incremental utility of adding conversational skills training (CST) following 4 weeks of social-problem–solving training (SPST). In this study, 6 shy adolescents (12–14 years; 4 females) participated in an 8-week program involving weekly group sessions and a 5-month follow-up assessment. After 4 weeks of SPST, adolescents were more successful in generating solutions to hypothetical social dilemmas. Additional gains, including increases in self-reported and observed social interaction rates, were found after the implementation of CST. These findings were

maintained at a 5-month follow-up assessment. Unfortunately, participants did not exhibit the trained skills or increased social interactions at school, suggesting that the therapeutic gains failed to generalize to a naturalistic, nontreatment setting. Other limitations included having a relatively small sample size and failing to utilize a no-treatment control group.

In a second study, Jupp and Griffiths (1990) compared the differential impact of SST versus psychodramatic role-plays in the treatment of socially isolated adolescents (15 males, 15 females). Thirty "isolated" students identified by peer and teacher ratings were assigned randomly by gender to one of the following three conditions: (a) SST, consisting of verbal instructions, modeling, and weekly group discussions; (b) psychodramatic role-plays, involving role-plays of common interactions and social dilemmas; or (c) wait list control. Adolescents in both treatment groups attended 13 weeks of school-based sessions, and those in the wait list control group were offered treatment following the completion of the study.

Following the 13-week intervention, adolescents in both treatment groups received higher teacher ratings of social skills compared with those in the wait list condition. Differences in teacher ratings were not found between the SST and psychodramatic role-play groups; however, students participating in the psychodramatic role-plays scored higher on a measure of self-concept than those in the SST and control groups. Follow-up data and the long-term intervention effects were not assessed. In addition, school observations, posttreatment ratings of social status, and additional measures of social validity (e.g., treatment acceptability) were not included.

In a third study, 102 "socially incompetent" 8–12-year-old children with peer relationship problems were randomly assigned either to a wait list control ($n = 30$; 23 girls, 7 boys) or treatment (condition $n = 72$; 45 boys, 27 girls; Blonk, Prins, Sergeant, Ringrose, & Brinkman, 1996). Children in the treatment group participated in a 20-week SST group intervention, and pre-, post-, and follow-up assessments were conducted on several variables: (a) self-reported social anxiety and negative self-perceptions; (b) teacher reports of child social competence; (c) social status based on peer ratings; (d) number of mutual friendships; and (e) parent reports of child social competence.

In general, Blonk et al. (1996) found that teachers and parents reported improvements in assertiveness and decreases in submissive behavior for the treated group. Additionally, posttreatment and follow-up peer ratings indicated increases in social status and the number of mutual friendships for children in the treatment group. It is essential to point out, however, that the effect sizes for these findings were small to moderate and, more substantively, approximately 50% of the treated children did not have a single friend at posttreatment. Of additional concern, differences between the treatment and control groups were not found on child measures of social anxiety and negative self-perceptions. Further, although teacher and parent ratings of social competence provided some evidence to support the generalization of treatment effects, behavioral observations in the children's natural social environments were not conducted to corroborate these findings.

Limitations of SST

In general, SST interventions have been successful in enhancing the specific skills targeted for treatment (e.g., Blonk et al., 1996; Christoff et al., 1985; Finch & Hops, 1982; Gresham, 1985; Jupp & Grittiths, 1990; Whitehill, Hersen, & Bellack, 1980). Although the general findings appear promising, the social validity and clinical importance of these interventions should be questioned, because of the circumscribed curricula and treatment goals of most SST programs. For example, the previously described studies focused almost exclusively on training children in the use of specific skills hypothesized (though not empirically demonstrated) to facilitate the initiation and maintenance of effective social interactions. Sufficient evidence regarding the clinical and applied importance of these targets was not provided and should direct researchers and clinicians to examine the actual importance and meaningfulness of these behaviors for children (Weist, Borden, Finney, & Ollendick, 1991).

Further, even if "optimal" target behaviors are identified, mastery of the trained skills and social-problem–solving abilities may not result in socially important outcomes, such as enhanced peer relationships or acceptance within the peer group (Matson, Sevin, & Box, 1995). For instance, prosocial attempts made by shy children might be rejected because of peer labeling and the stability of social status throughout childhood and adolescence (Berler, Gross, & Drabman, 1982; Cowen, Pederson, Babigian, Izzo, & Trost, 1973; Strain & Fox, 1981). That is, teaching specific social skills to shy children may not alter the social behavior of their peers (Strain, Odom, & McConnell, 1984).

Another concern with SST is the lack of convincing evidence demonstrating that changes in the trained behaviors are durable and easily generalized to real-life settings (Kendall & Morrison, 1984; French & Tyne, 1982). Researchers have emphasized the importance of facilitating skill maintenance and generalization by including elements of a child's natural social environment, such as family members and the peer group (Erwin, 1994; LaGreca & Fetter, 1995; Trower, 1995). However, the SST studies described above are child-focused interventions, and the maintenance and generalization of behavioral gains either were not assessed (e.g., Blonk et al., 1996) or yielded limited results (e.g., Christoff et al., 1985).

A final concern regarding SST is that it may not be necessary or sufficient for all children who exhibit deficits in social functioning. For instance, some children are capable of behaving in a socially competent manner but might experience interfering behavior, such as anxiety, that prohibits them from emitting proficient social responses (e.g., Spence et al., 1999). Other children have the requisite social competencies but may select inappropriate responses or fail to demonstrate skilled behavior in the appropriate social contexts. Prolonged exposure to anxiety-inducing social situations would be an appropriate intervention for the first subgroup (i.e., for children experiencing performance inhibition), and a more advanced level of SST, such as social-problem–solving training (SPST), may be necessary for the latter (Spence & Donovan, 1998; Trower, 1995). Prior to implementing SST, a thorough assessment should be conducted to determine the needs of, and appropriate interventions for, the target child or the collective needs of children in the case of group therapy (see La Greca & Fetter, 1995, for a complete review; Spence & Donovan, 1998).

Several suggestions for enhancing the generalization, maintenance, and social validity of SST programs include having children practice the newly acquired skills in a range of situations and across different settings, prescribing relevant homework assignments, and including "booster" or training review sessions after treatment ends. Further, utilizing children's important social networks likely will promote behavioral maintenance and generalization and may help to produce socially important outcomes, such as peer acceptance and the development of intimate friendships. Thus, it is recommended that clinicians and researchers evoke the active participation of prominent socialization agents, such as parents, peers, siblings, and teachers, in the treatment process. The next section addresses the relative strengths and weakness of utilizing children's peers as behavior-change agents in the treatment of shyness and related behavior.

Peer-Mediated and Peer-Pairing Interventions

Description

It has been posited that peer-mediated and peer-pairing approaches promote the generalization and maintenance of prosocial behavior, such as turn taking, sharing, and cooperation (Vaughn & Lancelotta, 1991). In peer-mediated or "peer-helper" interventions, peers of the target children serve as behavior-change agents and are trained to initiate, model, and reinforce appropriate social behavior (Odom & Strain, 1984; Strain & Fox, 1981). Similarly, peer-pairing approaches involve strategically matching children who exhibit social difficulties with well-liked, socially skilled peers. Both approaches involve providing target children with opportunities to engage in joint-task activities with their nonisolate peers.

Strain and Fox (1981) suggested that peer-mediated and peer-pairing interventions might be superior to adult-mediated approaches. One explanation for this hypothesis involves "the society of children" phenomenon, which suggests that children and adolescents belong to their own "societies" or "subcultures" and adhere to social rules and norms that, at times, differ drastically from adult-imposed values and social expectations (Hartup, 1996). It follows that peers may be qualified to offer informed judgments with regard to "social etiquette rules" and nuances operating within the larger peer group. Accordingly, soliciting peer involvement and support throughout the course of treatment appears to be a logical means for achieving meaningful outcomes, including increased social integration and peer acceptance. Furthermore, given that peers are major socialization agents in a child's natural environment, their involvement in therapy may foster the generalization of the trained social behaviors (Hazel, Schumaker, Sherman, & Sheldon, 1982; McFayden-Ketchum & Dodge, 1998; Spence & Donovan, 1998).

Empirical Findings

Very few investigators have evaluated peer-mediated and peer-pairing approaches in the

treatment of shyness and related social difficulties. In an early investigation, Furman, Rahe, and Hartup (1979) found that socially withdrawn preschoolers given the opportunity to interact with younger playmates in free-play sessions evidenced increases in their observed frequency of peer interaction, as compared with no-treatment controls). Extending such work, Bierman and Furman (1984) examined the effects of conversational skills training and peer involvement on the social acceptance and interaction of fifth and sixth graders who were classified as unaccepted by peers. As expected, peer involvement was found to increase peer acceptance.

Guevremont, MacMillan, Shawchuck, and Hansen (1989) examined the impact of a peer-mediated approach on the interactions of two socially isolated girls. Guevremont and colleagues trained peer helpers to initiate and maintain interactions with their socially isolated classmates. Overall, the authors found that both of the isolate girls demonstrated increased positive interaction rates comparable with those exhibited by a normative control group. Additionally, teacher- and self-reported ratings suggested that the two participants experienced fewer social problems, less loneliness, and lower levels of dysphoria following the intervention. These results generalized to a nonintervention recess setting and were maintained at a 4-month follow-up assessment. Problematically, the authors reported pre- but not posttreatment and follow-up ratings of sociometric status; therefore, the impact of this intervention on peer acceptance is not known.

Christopher, Hansen, and MacMillan (1991) implemented a peer-helper intervention to increase the social status and number of prosocial interactions of three socially withdrawn, elementary-aged boys. In this intervention, teachers selected two socially adept, same-sexed “peer helpers” to interact with each of the withdrawn boys during their morning recess. Peer helpers were trained in two 30-min sessions to (a) initiate and maintain interactions, (b) react appropriately to negative behavior, and (c) help structure dyadic play activities. Target children did not receive formal SST but were instructed to play with their peer helpers during morning recess period. At posttreatment, increases in positive social interactions were observed during the children’s morning recess period. Additionally, increases in prosocial behavior were noted during the children’s afternoon recess period and persisted for at least 4–5 months after treatment ended, thereby supporting the generalizability and maintenance of these effects. Christopher et al. (1991) investigated the social validity of their intervention by comparing sociometric ratings and positive interactions of the treatment group to a normative control group. However, the extent to which this intervention produced clinically significant and socially important outcomes is unclear because of the extremely small sample size and variable results across children (Christopher et al.).

Morris, Messer, and Gross (1995) implemented a peer-pairing approach to improve the social status and increase the positive interaction rates of peer-neglected first- and second-grade children. Twenty-four neglected and 24 popular children were assigned randomly and equally by gender to either a peer pairing or control condition. Each same-gender peer pair consisted of one popular and one neglected child who participated in twelve 15-min play sessions over a 4-week period. Sociometric nominations were obtained at posttreatment and at a 1-month follow-up assessment. In addition, 10-min playground observations were conducted for the neglected and popular children, as well as for 24 average-status children to enable normative comparisons. The frequency of each child’s positive interactions, negative interactions, and solitary behavior was coded during recess on nine separate occasions (three pretreatment, three posttreatment, and three follow-up).

Following the intervention, 75% of the neglected participants in the treatment group demonstrated improved sociometric status (defined as a change in classification to popular or average status), in contrast to only 17% of children in the control group. Further, 50% of neglected children in the treatment group (but none of the children in the control group) made gains in positive social interaction rates above the mean positive interaction rate of the average-status and popular children—providing support for the social validity of this intervention. These findings were maintained 1-month posttreatment, thereby supporting the short-term durability of using a peer-pairing approach with neglected children (Morris et al., 1995).

Based on aggregate findings of the reviewed studies, it is possible that peer-mediated and peer-pairing interventions are a logical extension (or perhaps a viable alternative) to SST programs. Given that most peer-focused approaches attempt to enhance social group status and level of peer acceptance, their incremental utility perhaps is illustrated best when considering issues related to social validation.

For example, two of the treatments discussed (i.e., Christopher et al., 1991; Morris et al., 1995)

resulted in dramatic improvements in social status or acceptance within the peer group, which often are regarded as a "socially important" outcome (e.g., Lovejoy & Routh, 1988). Additionally, Morris et al. found that peer-neglected children demonstrated increases in positive social interaction rates and decreases in solitary behavior relative to average-status children, thereby providing evidence for the social validity of using a peer-pairing approach with neglected children.

Limitations

There are several potential limitations with peer-mediated and peer-pairing approaches. For example, when used in isolation, these interventions may not produce significant improvements in social skills and social-problem–solving behavior. This would be particularly problematic if children lacking such skills were forced to change schools or classrooms and were required to "reestablish" their social standing among a new group of peers. In this case, training in the initiation and maintenance of conversations might benefit children without the requisite social skills, and exposure techniques (e.g., systematic desensitization) may be necessary for children experiencing anxiety and performance inhibition. Similarly, peer-mediated and peer-pairing approaches often do not include training in coping strategies, such as responding to negative peer reactions and, if necessary, learning to engage in adaptive solitary activities. Although some shy children demonstrate effective coping skills, the literature supports a relation between childhood internalizing difficulties (e.g., social anxiety) and avoidant coping strategies, such as avoidance or escape from anxiety-inducing social or performance demands (e.g., Beidel & Turner, 1998). Thus, training in emotional acceptance and approach coping strategies might be beneficial for some children.

In sum, peer-mediated and peer-pairing approaches appear to be effective in treating childhood internalizing difficulties related to low social status. The findings presented above should be interpreted with caution, however, given the small sample sizes and limited number of studies in this area. Additional outcome research is needed to empirically substantiate the incremental utility of incorporating peers as behavior-change agents and to elucidate the unique and combined effectiveness of peer-mediated and skills training approaches.

TREATING SOCIAL ANXIETY DISORDER: MULTICOMPONENT APPROACHES

As previously noted, shyness and related behavior are associated with internalizing difficulties, most specifically social anxiety disorder (SAD). Several outcome studies have investigated the efficacy of cognitive–behavioral therapies in the treatment of anxiety-disordered youth (see Barrett, 2000; Labellarte, Ginsburg, Walkup, & Riddle, 1999). More specifically, randomized clinical trials have been conducted using individual (Kendall, 1994; Kendall et al., 1997; Silverman et al., 1999a), group (Barrett, 1998; Silverman et al., 1999b), and family-based (Barrett et al., 1996) therapies. Overall findings have been positive, resulting in significant decreases in parent-, teacher-, and child-reported internalizing symptoms, as well as primary diagnostic recovery rates ranging from 64% (Kendall, 1994; Kendall et al., 1997; Silverman et al., 1999a) to 84% (Barrett, 1998).

The outcome studies conducted by Kendall, Barrett, and Silverman and colleagues focused on youth diagnosed with various types of anxiety disorders, including but not limited to SAD. It is unclear, therefore, whether comparable results were found across anxiety type and if participants diagnosed with SAD benefit maximally from treatments developed for such a heterogeneous clinical population. A thorough review of these therapies used to treat mixed clinical samples is beyond the scope of this paper; however, their development and apparent success certainly marks an advance in the field and merits recognition. To date, only three treatment protocols have been developed specifically to treat SAD in childhood and adolescence; each is described below.

Social Effectiveness Therapy for Children (SET-C)

Description

Social Effectiveness Therapy for Children (SET-C; Beidel, Turner, & Morris, 2000) is a comprehensive, multifaceted behavioral treatment developed specifically for children and adolescents diagnosed with SAD. The treatment program was modeled after an efficacious program for adult SAD (Turner, Beidel, & Cooley-Quille, 1997). SET-C is a 12-week multicomponent treatment program that includes (a) a one-session educational component, (b) weekly individual exposure sessions (60 min),

(b) weekly SST group sessions (60 min), and (c) peer generalization activities (90 min). The educational component includes providing parents and children with information about SAD and SET-C. Individual sessions involve in vivo exposure exercises constructed to address each child's unique pattern of social fears, and the SST sessions (conducted in small groups of 4–6 children) focus on conversational and friendship-making skills. Finally, to address an important limitation in existing programs, the treatment developers included a peer generalization component that involves 90-min unstructured group activities (e.g., pizza parties, bowling, skating).

Empirical Findings

Only one empirical study to date has examined the efficacy of SET-C in the treatment of childhood SAD. Beidel et al. (2000) randomly assigned 67 children (8–12 years, 60% female) diagnosed with SAD to participate in either SET-C or "Testbusters" (an active but nonspecific control treatment; Beidel, Turner, & Taylor-Ferreira, 1999). Children participating in SET-C underwent 12 weeks of treatment as described above, and those assigned to the Testbusters group participated in a 12-week program that included individual and getting group sessions covering such topics as establishing good study habits and receiving instructions and getting practice in test-taking preparation. To allow for a parallel comparison, the Testbusters program was held twice a week (one individual and one group session) and, similar to SET-C exposure and role-play exercises, children were required to read aloud from the Testbusters manual during group sessions.

Following 12 weeks of treatment, children participating in SET-C demonstrated statistically and clinically significant improvements across various domains (e.g., decreased levels of social and general anxiety, increased social skill and performance ratings, and more adaptive functioning in daily situations). These improvements were maintained 6 months posttreatment and were not found for the Testbusters control group (Beidel et al., 2000). Furthermore, the authors reported that 67% of children participating in SET-C did not meet diagnostic criteria at posttreatment compared to only 5% of those in the Testbusters group.

Strengths and Limitations

Some notable strengths of the Beidel et al. investigation included (a) use of an active, but nonspecific, control group, (b) use of multimethod and multiinformant assessment procedures, and (c) inclusion of a 6-month follow-up evaluation. One potential limitation, however, was that observations were not conducted in naturalistic environments (e.g., school, home), and children's peer status and friendships were not assessed to determine the impact of treatment on important social relationships. In addition, SET-C was designed for implementation in a specialized anxiety disorders clinic and, although efficacious in this capacity, it may be difficult to adhere to the intensive treatment protocol in a community mental health setting. In spite of these logistical limitations, SET-C is the first manualized therapy specifically developed to meet the needs of children diagnosed with SAD, and early research supports the efficacy of this treatment program.

Cognitive–Behavioral Group Treatment for Adolescents (CBGT-A)

Description

Albano and Barlow (1996) developed a cognitive–behavioral group treatment for adolescents diagnosed with SAD. This multicomponent program is a modified version of CBGT for adults (see Heimberg, Dodge, Hope, Kennedy, & Zollo, 1990). More specifically, the adolescent version of CBGT is a 16-week program that includes psychoeducation, exposure-based activities (e.g., structured snack time, role-plays), and a variety of skill-building techniques (e.g., SST, social-problem solving, cognitive restructuring).

Empirical Findings

To date, two pilot studies have examined the short-term efficacy of CBGT-A (i.e., Albano, Marten, Holt, Heimberg, & Barlow, 1995; Hayward et al., 2000). Albano et al. reported 3- and 12-month follow-up data for five adolescents (13–16 years; 3 boys, 2 girls); four teens were completely diagnosis-free at both follow-up evaluations, and the fifth experienced subclinical levels of social anxiety. In a subsequent

investigation, Hayward and colleagues randomly assigned 35 female adolescents ($M = 15.8$ years) diagnosed with SAD to a treatment ($n = 12$) or control ($n = 23$) group. Similar to findings reported by Albano et al., significantly fewer teens participating in CBGT-A met diagnostic criteria for SAD at posttreatment. Notably, however, there were no diagnostic differences between the treated and untreated groups at 1-year follow-up, highlighting the need to investigate further the long-term efficacy of CBGT-A.

These preliminary data provide moderate support for the short-term benefits of CBGT-A. Important limitations (e.g., small sample sizes, inconsistent follow-up data) mandate the need for additional outcome data, with efforts aimed at conducting randomized group designs with wait-list controls or alternative treatment groups or both. Additionally, component analyses might assist researchers and clinicians in identifying the extent to which the various treatment components are necessary or sufficient, or both, in mitigating debilitating levels of social anxiety and distress in adolescence.

Cognitive–Behavioral Therapy (CBT) Plus Parental Involvement

Description

Spence, Donovan, and Brechman-Toussaint (2000) examined the effectiveness of an integrated CBT package with and without parental involvement for children and adolescents diagnosed with social phobia. Fifty children (aged 7–14 years) were randomly assigned to CBT, CBT plus parent training, or a wait-list control condition. The CBT package included SST, relaxation training, positive self-instruction, cognitive challenge, and graded exposure. Groups of 6–8 children participated in 12 weekly sessions and 2 booster sessions (3 and 6 months posttreatment). The parental involvement component was developed to teach parents to model and reinforce the social skills being taught in the CBT package; to ignore avoidance and socially anxious behavior; to encourage child participation in social activities; and to reinforce homework completion. Parents observed the children's group sessions behind a one-way mirror and participated in a 30-min weekly training session while their children were practicing skills in another room.

Empirical Findings

Both active interventions proved superior to wait-list, although not significantly different from one another at posttreatment. However, a trend emerged toward greater gains among children in the parental involvement group at the 12-month follow-up (53% of children in the CBT group and 81% of children in the CBT plus parental involvement group no longer met criteria for social phobia). These results provide preliminary data supporting the incorporation of parents in child interventions. Clearly, more research is needed to empirically substantiate the clinical utility of including parents in prevention and intervention programs and to determine the best means of involvement.

SUMMARY AND FUTURE CONSIDERATIONS

Despite significant evidence documenting the adverse impact of shyness, social withdrawal, social isolation, and peer relationship problems, only a limited number of outcome studies conducted within the past 20 years have targeted this at-risk group. Long-lasting negative consequences associated with social maladjustment and peer relationship difficulties suggest that overlooking the special needs of socially inhibited children is remiss, and increased attention should be devoted to the development, evaluation, and refinement of relevant prevention and treatment strategies.

Several empirically investigated procedures used in the treatment of shyness and related behavior have been reviewed. In general, exposure, SST, and peer-mediated interventions have demonstrated short-term merit in ameliorating social impairments, such as peer neglect, avoidance, and social withdrawal. However, the lack of evidence documenting the generalization, maintenance, and social validity of these behavioral gains should urge researchers and practitioners to reconsider the long-dominant treatment goals and clinical methods used to treat childhood shyness and related social difficulties. Several concerns regarding the current state of the reviewed literature are addressed below, including the need to assess the social validity of treatment programs and the importance of considering contextual and developmental variables. Finally, issues related to prevention research and longitudinal outcome studies are discussed.

Social Validity

Several limitations of the reviewed literature are relevant to outcome research in general. Specifically, an increasing trend in outcome research calls for the consideration and measurement of socially valid outcomes. Questions of social validity involve the extent to which an intervention produces (a) meaningful changes that enhance the quality of a client's life, (b) behavioral, psychological, and social improvements that generalize outside of clinical and research settings, and (c) socially important and accepted outcomes that are maintained over time (Kazdin, 1988). In the treatment of social maladjustment, it often is assumed that peer acceptance and social integration are "socially important" outcomes and that incorporating peers in the intervention process may be instrumental in improving a child's social status (e.g., Gambrill, 1996; Hansen, Lawrence, & Christoff, 1989; Lovejoy & Routh, 1988).

Studies incorporating peers indeed appear to promote peer acceptance and children's social status. The outcome variables and criteria for treatment success, however, focus more on the quantity, rather than the *quality*, of children's peer relationships. For example, the aforementioned peer-mediated and peer-pairing approaches assessed peer acceptance by calculating the number of positive and negative peer nominations. In addition, social integration was determined by observing the sheer frequency of a child's positive social interactions. Although it is possible to conceptualize high-frequency positive interaction rates as reflecting high-quality relationships, the extent to which these interactions led to the formation of mutual friendships is unknown. Furthermore, friendship quality and satisfaction were not assessed directly in any of the reviewed studies, thereby precluding investigators from making substantive conclusions about the development or enhancement of high-quality relationships.

In light of evidence supporting the buffering effect of close, supportive friendships (Hartup & Stevens, 1997; Hoza, Bukowski, & Beery, 2000; Parker & Asher, 1993), researchers and clinicians perhaps should place a stronger emphasis on enhancing (and assessing) the quality of children's relationships. For instance, it may be beneficial to incorporate training in "friendship-making skills" and social contingencies related to the formation, deepening, and maintenance of close friendships (see Argyle & Henderson, 1984, for a complete review). Friendship-making skills were addressed to some extent in the SET-C program (Beidel et al., 2000) but were not incorporated into any of the other programs. Finally, given the unpredictable and voluntary nature of friendships (particularly in childhood and adolescence), it may be useful to teach children to cope with unwanted solitude and to independently seek out potentially rewarding social experiences (Rook, 1984).

Social Context

Generalization and maintenance of important behavioral gains were limited in several of the studies reviewed. As a potential ameliorative strategy, concerted efforts should be made to include elements of a child's natural social environment (e.g., school, neighborhood) and his or her important social networks, such as family, teachers, and peers, in the treatment process (e.g., Brent & Kolko, 1998; Kazdin, 1996). Because peer-focused interventions already were mentioned, only issues related to parent, teacher, and school involvement are presented below.

Parental Involvement

A growing body of literature suggests that parental characteristics (e.g., parenting style, parent psychopathology), as well as the nature and quality of the parent–child relationship, may influence the development and maintenance of child psychopathology (e.g., Rapee, 1997; Rutter & Quinton, 1984; Zoline & Jason, 1985). Relevant to the present review, research suggests an overcontrolling and rejecting parenting style may be a risk factor linked with the onset and exacerbation of childhood shyness, social anxiety, and related social impairments (e.g., Eastburg & Johnson, 1990; Greco & Morris, 2000; Krohne & Hock, 1991; Masia & Morris, 1998; Morris, 2000; Rapee, 1997). In addition, researchers consistently have demonstrated the relation between parent and child internalizing difficulties, thus corroborating the notion that negative affectivity tends to "run in families" (e.g., Anhalt & Morris, 2001; Eastburg & Johnson, 1990; Messer & Beidel, 1994).

Further, the literature suggests parent characteristics and family relationships influence children's peer relationships (Parke & O'Neil, 1999; Putallaz & Heflin, 1990). For example, young children rely heavily on their parents to arrange social contacts, or "play dates," because of their limited and highly regulated contact with social networks outside of the family

complex. In addition, "peer management" practices, such as offering peer-related advice, arranging social contacts, and supervising play interactions, have been identified as important to the formation and quality of children's peer relationships (Kerns, Cole, & Andrews, 1998; Parke & O'Neil, 1999; Pettit & Mize, 1993). Parents who lack, or simply fail to perform, these important peer management skills may contribute to the development and exacerbation of their child's social difficulties.

Parents of less sociable children may experience social impairments or interpersonal distress themselves, consequently prohibiting them from establishing adequate socialization experiences for their children. It is possible for parents of shy children to "teach" socially maladaptive behavior by modeling and reinforcing anxious responding and avoidance behavior, thereby impeding the acquisition of peer interaction skills and the development of an adequate social repertoire (Barrett, Rapee, Dadds, & Ryan, 1996; Greco, Cadotte, & Morris, 2000; Masia & Morris, 1998).

Given the pivotal role parents may play in shaping their child's interpersonal behavior, it is recommended that researchers and clinicians examine the unique and incremental utility of including parents in prevention and intervention programs. For example, parental rejection and control appear to be risk factors contributing to the development and exacerbation of shyness; therefore, it might be beneficial for therapists to educate parents about the potential effects of their behavior. Therapists can coach parents in the use of positive discipline skills, such as reinforcing prosocial (e.g., approach) behavior and extinguishing child reactions to the feared stimuli or events. Also, parents exhibiting overcontrolling behavior can be instructed to reduce the number of directives used and to allow their child to exercise age-appropriate levels of independence. Finally, parental involvement in the treatment process would enable parents to serve as "treatment facilitators" (as in Spence et al., 2000, described earlier). That is, parents can assist with out-of-session homework assignments (e.g., exposure, self-monitoring), thereby promoting the generalization and maintenance of treatment effects across various settings (Brent & Kolko, 1998).

Sheridan, Kratochwill, and Elliott (1990) empirically tested the differential effectiveness of teacher-only versus parent and teacher involvement in an SST program implemented to treat four socially withdrawn, school-aged children (ages 9–12; 3 girls, 1 boy). Using a multiple baseline across subjects design, the authors reported that incorporating teachers and parents in the treatment process (i.e., conjoint behavioral consultation) was an effective method for enhancing social initiation behavior both at home and at school. In contrast, teacher-only consultation enhanced social initiation behavior at school only.

School Involvement

Key socialization agents (i.e., teachers and peers) are present in the school environment and ostensibly influence the nature and course of children's social skills and interpersonal behaviors (e.g., Brent & Kolko, 1998). For example, the quality of children's school environment appears to impact educational, behavioral, and socioemotional outcomes (Rutter, Maughan, Mortimore, Ouston, & Smith, 1979). Thus, it seems logical that school-based interventions would be effective in improving outcomes and in producing durable, cross-setting behavioral change. Finch and Hops (1982) developed the PEERS program to provide a comprehensive, school-based intervention for socially isolated and withdrawn children. Important social agents (i.e., parents, teachers, peers) participate in treatment to allow for the effective generalization and maintenance of socially important outcomes. The developers hypothesized that a school-based intervention would facilitate children's entry into the peer group and that the use of a broad-based intervention program would increase the probability of long-term maintenance and generalization (Finch & Hops, 1982). The inclusion of significant individuals within a child's overall social system appears to be a promising approach (e.g., Sheridan et al., 1990); however, the PEERS program requires empirical support to demonstrate its clinical significance, social validity, and long-term benefits. In conclusion, it is likely that adopting a multisystemic approach and incorporating a child's social milieu into treatment will promote the generalization and maintenance of socially important improvements. Additional research is needed to provide an empirical basis for this prediction and can be achieved by investigating the relative and combined impact of including children's multiple, interrelated social networks.

Developmental Considerations

A child's age, cognitive abilities, and gender are important variables to consider when developing

prevention and intervention strategies (Brent & Kolko, 1998; Kendall, MacDonald, & Treadwell, 1995; Ollendick & King, 1991b; Ronen, 1998), ones that potentially may moderate treatment outcome (e.g., Eyberg, Schuhmann, & Rey, 1998; Kazdin, 1988; Mash, 1998). Unfortunately, studies examining the differential effectiveness of intervention methods for older versus younger children and males versus females are virtually nonexistent within the realm of shyness and related behavior. This undoubtedly is a significant omission due to consistently documented gender differences in maturation processes, social development (Kazdin, 1988; Raviv, Raviv, & Reisel, 1990; Ronen, 1998), and the quality and nature of peer relationships and friendships (Hartup & Stevens, 1997; Hoza et al., 2000; Parker & Asher, 1993). Further, there is some evidence suggesting that gender differences are related to children's preferences for involving social agents, such as peers, parents, and experts, in treatment (Winter, Hicks, McVey, & Fox, 1988).

One outcome study examined the relative contributions of cognitive–behavioral therapy (CBT) and family management training (FAM), and included data regarding age and gender interactions (Barrett et al., 1996). This investigation targeted 79 anxiety-disordered youth 7–14 years old (45 boys, 34 girls), including children diagnosed with overanxious disorder ($n = 30$), separation anxiety disorder ($n = 30$), and SAD ($n = 19$). Participants were randomly assigned to either (a) CBT ($n = 28$), (b) CBT + FAM ($n = 25$), or (c) a wait-list control condition ($n = 26$), and were evaluated at posttreatment, and at 6- and 12-month follow-ups.

Barrett et al. (1996) reported significant improvements across treatment conditions, with 70.3% (CBT) and 95.6% (CBT + FAM) of the participants no longer fulfilling diagnostic criteria for an anxiety disorder 12 months following treatment, compared with only 26% of those in the wait-list condition. Additionally, the authors found that age and gender interacted with treatment condition, with younger children and females benefiting most from the combined CBT + FAM intervention. In contrast, the two active treatments produced equivalent results for males and children over 10 years of age, thereby supporting the moderating role of gender and developmental stage on treatment efficacy.

In short, future research should examine the mediating and moderating effects of age, cognitive ability, and gender on treatment outcome given that children and adolescents may respond differently as a function of these variables. Such investigation will assist researchers and clinicians in designing developmentally sensitive programs that may help to answer the fundamental questions of when, and with whom, to intervene. A growing empirical base provided by the emergent fields of developmental psychopathology (Cicchetti & Cohen, 1995; Cicchetti & Toth, 1992) and prevention research (Simeonsson, 1994) also may help to address these questions.

Prevention Research: To Treat or Not to Treat

Broadly defined, prevention refers to interventions that occur prior to the onset of a clinically diagnosable disorder to reduce the number of new cases of that disorder (Munoz, Mrazek, & Haggerty, 1996; Simeonsson, 1994). Thus, aside from promoting the healthy development of children, the goals of prevention include reducing the need for curative and therapeutic services, and obviating the need for intensive correctional programs. In general, it appears that empirical research, mental health funding, and mental health professionals have focused primarily on the treatment, rather than prevention, of childhood psychopathology (Simeonsson, 1994). It is not, therefore, surprising that children who experience subclinical levels of internalizing difficulties, such as shyness, represent an undertreated and underresearched group.

As previously mentioned, shyness is recognized widely as being a relatively normal and transitory phenomenon (e.g., Sanson et al., 1996). Consequently, shy children typically do not receive psychosocial services unless their interpersonal difficulties reach debilitating levels (Beidel & Turner, 1998; Essau et al., 2000). In determining whether to intervene, researchers and clinicians are urged to consider the adverse concomitants, such as emotional and behavioral problems and long-standing interpersonal difficulties, associated with shyness and related behavior. Most would agree that building skills is preferable to remediating deficits; thus, future efforts should move toward the development of effective prevention strategies. Two prevention-related issues considered next involve the selection of target populations and the identification of risk and protective factors.

Levels of Prevention

The literature distinguishes among three levels of prevention defined on the basis of their target

populations (Mrazek & Haggerty, 1994). Universal prevention strategies are designed for all children, irrespective of internalizing and externalizing symptoms or the presence of risk and protective factors, whereas selective prevention involves selecting children who are "at risk" for developing a particular condition due to their exposure to biological, psychological, or social risk factors. Finally, indicated prevention strategies focus on children who exhibit detectable, though subclinical, levels of a particular disorder (e.g., Munoz et al., 1996; Simeonsson, 1994; Donovan & Spence, 2000). Shy, socially anxious, withdrawn, and isolated children represent an indicated group, because they are both "symptomatic" and at risk for developing a clinical diagnosis such as SAD.

Systematic evaluations of universal and selective prevention strategies are rare and typically have the vague goals of "preventing maladjustment" and promoting "healthy behavior" rather than focusing on the prevention of specific negative outcomes (Durlak, 1998). In contrast, all of the previously reviewed interventions can be conceptualized as indicated prevention strategies that help to prevent the development of SAD and other clinically significant impairments. Generally speaking, however, limitations in follow-up periods and methodologies preclude evaluation of the preventative value of these interventions (Ollendick & King, 1994).

One indicated prevention research program appears particularly promising in preventing the onset and development of anxiety disorders, including social anxiety disorder (SAD; i.e., Dadds, Spence, Holland, Barrett, & Laurens, 1997). In a study conducted under the auspices of the Queensland Prevention and Early Intervention of Anxiety Project (QEIPAP), Dadds et al. (1997) randomly assigned 128 children aged 7–14 to either a 10-week parent- and child-focused program ($n = 61$) or to a no-treatment control group ($n = 67$). Children and parents in the treatment group participated in a school-based, multicomponent intervention that included SST, SPST, exposure-based techniques, and cognitive restructuring. Parental involvement was limited to three sessions and involved educating parents about their child's anxiety and training them to use contingency management skills such as positive reinforcement.

At pretreatment, children in both groups demonstrated subclinical symptoms or were diagnosed with an anxiety disorder, but exhibited only mild to moderate impairments. Thus, the primary aim of the QEIPAP was to intervene both with "disorder-free" children experiencing mild anxiety and with those who met criteria for an anxiety disorder but were in the less severe range. Based on parental responding to the Anxiety Disorders Interview Schedule for Children (Silverman & Nelles, 1988), the authors found that 54% of the subclinical children in the no-treatment group progressed to a diagnosable disorder at 6-month follow-up, compared with only 16% of those in the intervention group. Additionally, child and parent reports of children's internalizing difficulties (e.g., general anxiety and avoidance) were significantly lower, and ratings of family adjustment were significantly higher, for the intervention group following treatment.

These results highlight the potential utility of early intervention and prevention programs used with an indicated school-aged group. Additional research is needed, however, to demonstrate the effectiveness of prevention strategies in reducing the prevalence and incidence of particular disorders. One suggestion for designing preventive programs involves identifying important risk factors and modifying their developmental impact, while promoting the development of variables that serve a protective function (Spence & Donnovan, 1998). Both types of variables (i.e., risk and protective factors) are described briefly below.

Risk and Protective Factors

With the emergence of developmental psychopathology research, there has been an increasing trend toward the identification and analysis of risk and protective factors (Cicchetti & Cohen, 1995; Cicchetti & Toth, 1992; Ollendick & King, 1991a). Broadly defined, risk factors refer to variables that predict the onset, severity, and duration of psychopathology, whereas protective factors increase resiliency and decrease vulnerability to psychological disorder and maladaptive development (e.g., Cicchetti, 1993). It is critical to consider both types of variables when creating intervention programs to provide information regarding predictors of outcome and change.

Numerous risk factors have been implicated in the onset and development of shyness and related behavior, including parental anxiety, a child temperament style of behavioral inhibition, traumatic and stressful life events, and parenting style characteristics, such as parental rejection and overcontrol (e.g., Beidel & Turner, 1998; Donovan & Spence, 2000; Morris, 2000). Variables that serve a protective function have not been investigated as extensively; however, research suggests that social support and child

coping skills may improve resilience to both risk factors and psychological disorder (Coie et al., 1993).

Two recommendations for developing effective preventive programs include (a) identifying factors associated with risk and resiliency, and (b) implementing procedures that either directly alter the risk factors themselves or that promote protective factors, thereby increasing resiliency (Durlak, 1998; Spence, 1994; Spence & Dadds, 1996). For example, school-based universal prevention programs involving all children could be incorporated into classroom curricula, with the primary goal of enhancing protective factors. Specific program objectives might be to encourage and promote collaborative group work within and outside of the classroom, to teach appropriate coping skills (e.g., communication, assertiveness, and relaxation training), and to enhance children's social support networks (e.g., family relationships, peer networks, close friendships). Despite the potential benefits of implementing wide-scale programs, the preventive value and net utility of universal prevention efforts currently is unknown. Thus, it will be necessary to first conduct cost-benefit analyses and to evaluate the effectiveness of such programs prior to their implementation.

Since selective prevention strategies target presymptomatic at-risk individuals, children with highly anxious parents, or toddlers who demonstrate the temperamental quality of behavioral inhibition, could be "selected" to participate in these programs. Program goals might be to reduce levels of parental anxiety and to moderate overcontrolling parenting behaviors (e.g., LaFreniere & Capuano, 1997). In summary, recent advances have been made in the area of prevention research owing, in part, to the emergent discipline of developmental psychopathology. Knowledge of risk and protective factors should assist researchers and clinicians in identifying at-risk populations and developing prevention programs designed to promote resiliency and to decrease risk.

SUMMARY AND CONCLUSIONS

Several limitations in the existing literature and the necessity for additional outcome and prevention research have been discussed. Specific recommendations include assessing the social importance of treatment gains, actively engaging children's important social agents in the treatment process, and considering the impact of important developmental variables, such as age and gender. Finally, researchers and clinicians are urged to reconceptualize the clinical importance of childhood shyness and related social difficulties, to place equal emphasis on prevention and treatment, and to include sound longitudinal methodology in future outcome studies.

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