ABSTRACT
        This study conducted a descriptive analysis of the
research literature on teaching social skills to youth with
behavioral disorders. Analysis focused on studies which used a
single-subject research design. The 22 articles, representing 38
separate studies, were analyzed in terms of: (1) nature of
independent variables; (2) distribution of independent variables
across studies; (3) dependent variables; (4) measures used to
evaluate the dependent variables; (5) location of studies; (6)
inclusion of a generalization program; and (7) authors' conclusions
and reviewers' responses. The following findings are discussed:
multiple treatments were used in 95 percent of the studies; a large
number of discrete behaviors were defined as social skills; all the
studies used direct observation to measure the dependent variables;
the largest percentage of studies were conducted in a school setting;
and there was little evidence that behavior changes effected by the
interventions generalized to other settings. (Contains 33
references.) (DB)

Social Skills Training for Youth with Behavior Disorders

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IT IS WELL DOCUMENTED THAT YOUTH WITH BEHAVIOR DISORDERS (BD) OFTEN DO NOT EXHIBIT appropriate social behavior. Moreover, youth with BD are defined by leading experts as children who chronically respond to their environment in socially unacceptable ways (Kauffman, 1977). Not only does the lack of appropriate social responses define BD, it also leads to an endless array of problems. For example, lack of appropriate social responses in youth has been associated with juvenile delinquency (Pilivan & Briar, 1964; Roff, 1961; Sarason, 1968; Ullmann, 1957), low social status among peers that leads to problems in personal adjustment in adult life (Parker & Asher, 1987), and adult maladjustment and psychiatric problems (Michelson & Mannarino, 1986). Given these bleak outcomes for children whose social skills appear to be lacking, a large number of studies have begun to emerge in research journals that have focused on social skills training. This literature base has become so large that synthesis of the research has become necessary.

Again, with the large number of studies that focus on social skills interventions for children with BD (ERIC listed 82 studies using the descriptors "behavior disorders and social skills") it would appear warranted to conduct a quantitative synthesis of the literature on this topic. Several recent reviews have focus on the topic of teaching social skills to youth with behavior problems (Cunliffe, 1992; Singh, Deitz, Epstein, & Singh, 1991; Zaragoza, Vaughn, & MacIntosh, 1991), however, the descriptive analyses that have been published have not focused exclusively on single-subject research designs. Therefore, the purpose of this study was to conduct a descriptive analysis of the research literature on teaching social skills to youth with BD that used a single-subject research design.

The analysis addressed the following questions: (a) What were the independent variables used in the studies? (b) How were the independent variables distributed across studies? (c) What were the dependent variables measured in the studies? (d) What were the dependent measure used in the studies? (e) Where did the studies take place? (e) If, any what type of generalization program was employed? and (f) What were the author's conclusions and the reviewers response to those conclusions?

Results

A search for single-subject studies of youth with BD yielded 22 articles that represented 38 separate studies (see appendix A). The results of the analysis are presented below.
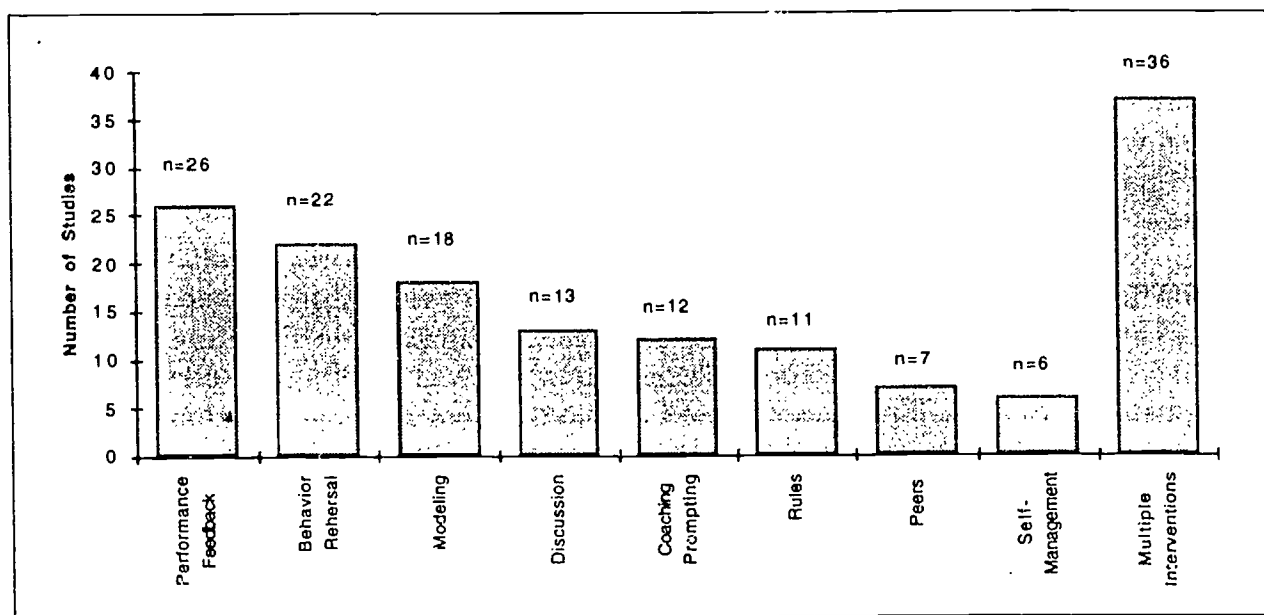
Independent Variables

Analysis of the independent variables are presented in Figure 1. Figure 1 indicates that most of the studies analyzed in this review used multiple interventions (2 or more independent variables). Over 20% of the studies (8) used 5 or more independent variables in their interventions. And, as Figure 1 indicates, multiple interventions were used in 36 of the 38 studies in this review.

Figure 1 also indicates how often each independent variable listed was used in the studies: Performance feedback was used in 68% of the studies (n=26); behavior rehearsal was used in 58% of the studies (n=22); modeling was used in 47% of the studies; discussion was used in 34% of the studies; coaching/prompting was used in 31% of the studies; rules were used in 29% of the studies; peers were involved in the training in 18% of the studies; and self-management was used in 16% of the studies.

Dependent Variables

Analysis of the dependent variables indicate that a large number of discrete behaviors are defined as social skills. Most of the studies examined different behaviors. Only a few behaviors were examined in more than one study. For example, eye contact was a dependent variable in 3 of the 22 studies (Bornstein, Bellack, & Hersen, 1980; Combs, & Lahey,

N=38; categories not exclusive.

Figure 1. Independent variables.
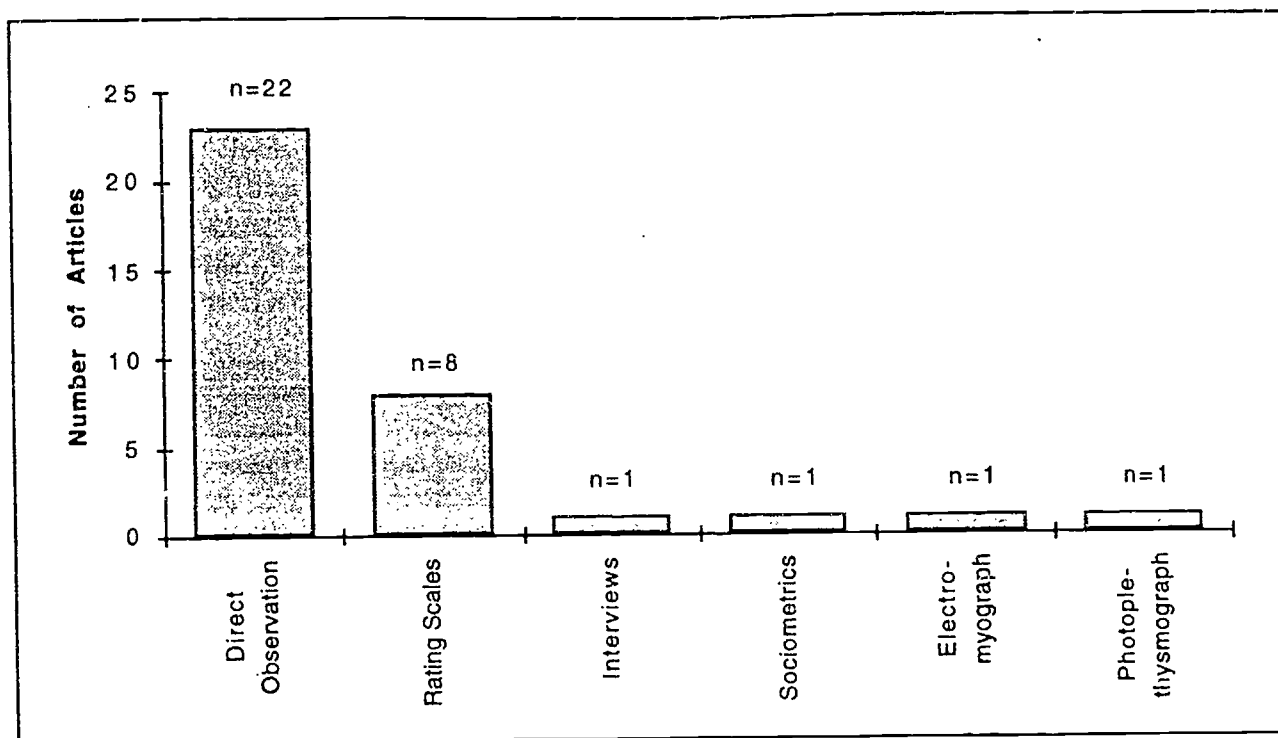
N=22; categories not exclusive.

Figure 2. Dependent measures.

1981; Fanco, Christoff, Crimmins, Kelly, 1983), and social interaction was a dependent variable in 3 of the 22 studies (Franca, Kerr, Rietz, & Lambert, 1990; Nietupski, Stainback, Gleiessner, Stainback, & Hamre-Nietupski, 1983; Wahler, & Fox, 1980). However, dependent variable found in more than one study was the exception rather than the rule.

Dependent Measures

Dependent measures are presented in Figure 2. 100% of the studies used direct observation to measure their dependent variables (n=22). Rating scales were used in 36% of the studies (n=8), followed by interviews (n=1), sociometrics (n=1), electromyograph (n=1), and photoplethysmograph (n=1).

Settings

Figure 3 presents an analysis of the settings. 41% of the studies were conducted in a school setting (n=9); 27% of the studies were conducted in a residential setting (n=6); 18% of the studies were conducted in a clinical setting (n=4); 9% were conducted in a vocational setting (n=2); and 4% of the studies were conducted in a home setting (n=1).

Generalization

Analysis of the generalization programming is presented in Figure 4 (the definitions of the generalization strategies are presented in White et al, 1988). These results indicate that 60% of the studies (n=23) used either a train and hope or no strategy; 29% of the studies (n=11) used a train in the natural setting strategy; 13% of the studies (n=5) used a train to generalize strategy; 8% of the studies (n=3) used an introduce to natural maintaining contingencies strategy; 5% of the studies (n=2) used either homework or indiscriminate contingencies strategies; and 3% of the studies (n=1) used either a sufficient exemplars, mediate generalization, sequential modification, or program common stimulus strategies.
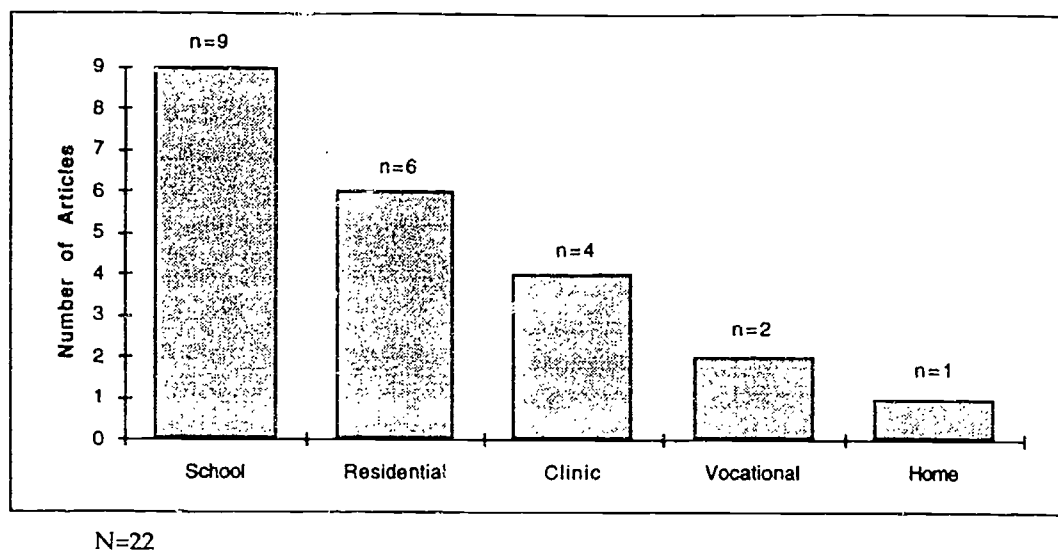
N=22

Figure 3. Settings.

Author's and Reviewer's Conclusions

The author's and review's conclusions are presented in Figure 5. 29% (n=11) of the authors concluded that their subjects were successful in acquiring the skills they had trained; and 10% (n=4) of the authors concluded that their subjects were partially suc-

cessful in acquiring the skills they had trained. 29% (n=11) of the reviewers agreed with the authors conclusion on acquisition; and 10% (n=4) partially agreed with the authors conclusions on acquisition.

Forty-two pecent (n=16) of the authors concluded that their subjects were successful in
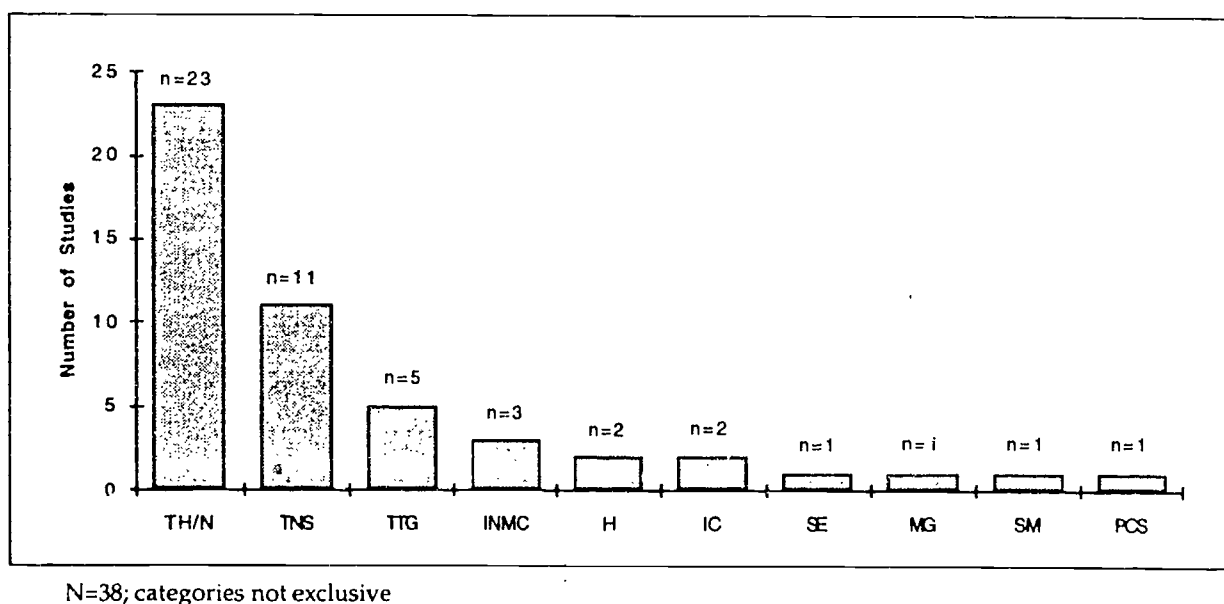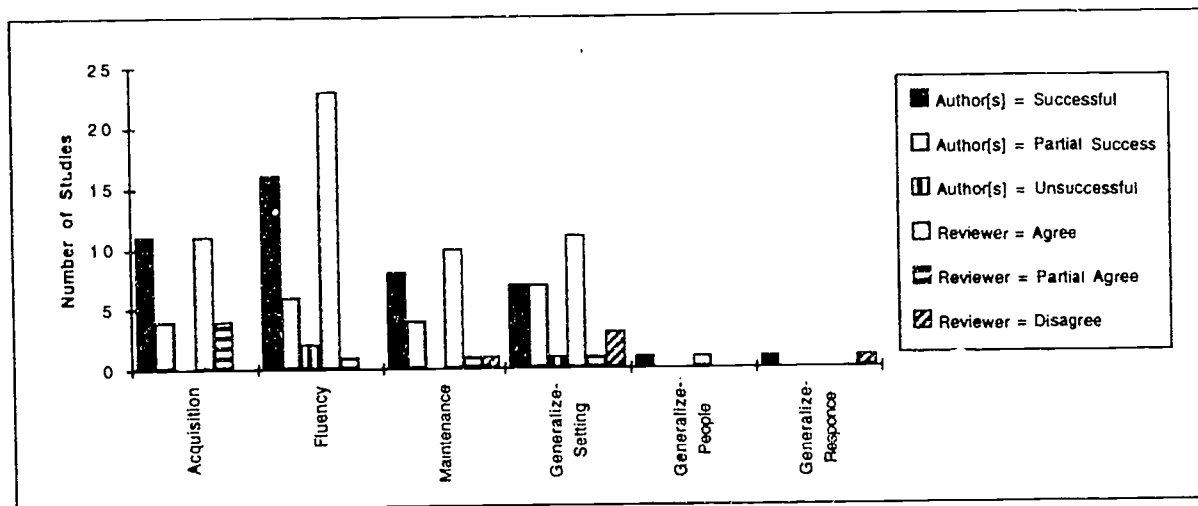

N=38; categories not exclusive

Figure 4. Generalization: TH/N=Train and Hope/None; TNS= Train in the Natural Setting; TTG= Train to Generalize; INMC=Introduce to Natural Maintianing Contingencies; H=Homework; IC=Indiscriminate Contingencies; SE=Sufficient Exemplars; MG=Mediate Generalization; SM=Sequential Modification; PCS=Program Common Stimulus.

increasing the fluency of the skills they had trained; 16% (n=6) of the authors concluded that their subjects were partially successful in increasing the fluency of the skills they had trained; and 5% (n=2) authors concluded that their subjects were unsuccessful in increasing the fluency of the skills they had trained. 60% (n=23) of the reviewers agreed with the au-

their subjects were partially successful in generalizing the trained behavior across settings; and 3% of the authors concluded that their subjects were unsuccessful in generalizing the trained behavior across settings. 29% (n=11) of the reviewers agreed with the authors on generalization across settings; 3% of the reviewers partially agreed with the authors on

N=38; categories not exclusive

Figure 5. Author's and Reviewer's Conclusions

thors conclusions on fluency; and 3% (n=1) of the reviewers partially agreed with the authors conclusions on fluency.

Twenty-one percent (n=16) of the authors concluded that their subjects were successful in maintaining the effects of training; and 16% (n=6) of the authors concluded that their subjects were partially successful in maintaining the effects of training. 26% (n=10) of the reviewers agreed with the authors on maintenance; 3% (n=1) of the reviewers partially agreed with the authors on maintenance; and 3% (n=1) of the reviewers disagreed with the authors conclusions on maintenance.

Eighteen percent (n=7) of the authors concluded that their subjects were successful in generalizing the trained behavior across settings; 18% (n=1) of the authors concluded that

generalization across settings; and 8% (n=3) of the reviewers disagreed with the authors on generalization across settings. 3% (n=1) of the authors concluded that their subjects were successful in generalizing the trained behavior across people; and 3% (n=1) of the reviewers agreed with the authors on generalization across people. 3% of the authors concluded that their subjects were successful in achieving response generalization; and 3% (n=1) of the reviewers disagreed with the authors conclusion that their subjects had achieved response generalization.

Additional Variables

Finally, the following variables were included in the analysis. 86% (n=19) of the articles followed a behavioral perspective; and 14% (n=3) of the articles followed a cognitive/

behavioral perspective. 4% (n=1) of the articles measured procedural reliability that the reviewer scored as moderate; 4% (n=1) of the articles measured procedural reliability that the reviewer scored as strong; and 91% (n=20) did not measure procedural reliability. 14% (n=3) of the articles reported a source of social validity; 9% (n=2) of the articles reported a target of social validity; and 86% (n=19) did not report social validity. 50% (n=11) reported maintenance checks. 86% (n=19) of the subjects/students were in special education classes; 14% (n=3) were in regular education classes; and 4% (n=1) were in mixed classes.

Conclusion

In summary, several findings stand out. Multiple treatments were used in 95% of the studies. Analysis of the dependent variables indicated that a large number of discrete behaviors are defined as social skills. This large number of discrete behaviors defined as social skills suggests that the contruct of social skills is not clearly defined in the literature. All of the studies used direct observation to measure the dependent variables. The largest percent of studies were conducted in a school setting. Although a large percentage of the authors suggested that their subjects had either acquired, or become more fluent, in the bahaviors that were taught, a smaller percent suggested that the behaviors maintained, and an even smaller percent suggested that the behaviors generalized to other settings, people, or responses. Further, even when the authors did conclude that the behaviors had generalized, the reviewers in this study did not always agree.

The results of this study indicate that (a) more studies need to be conducted on the maintenance and generalization of social skills and (b) what constitutes social skills needs to be clarified if we are to move forward with this line of research.

References

Anderson, C., Rush, D., Ayllon, T., & Kandel, H. (1987). Training and generalization of social skills with problem children. *Journal of Child and Adolescent Psychotherapy, 4*(4), 294-298.

Baum, J. G., Clark, H. B., MaCarthy, W., Sandler, J., & Carpenter, R. (1986). An analysis of the acquisition and generalization of soicla skills in troubled youth: Combining social skills training, cognitive self-talk, and relaxation procedures. *Child and Family Behavior Therapy, 8*(4), 1-27.

Bornstein, M., Bellack, A. S., Hersen, M. (1980). Social skills training for highly aggressive children: Treatment in an inpatient psychiatric setting. *Behavior Modification, 4*(2), 173-186.

Christopher, J. S., Hansen, D. J., & MacMillan, V. M. (1991). Effectiveness of a peer-helper intervention to increase children's social interactions: Generalization, Maintenance, and social validity. *Behavior Modification, 15*(1), 22-50.

Combs, M. L., & Lahey, B. B. (1981). A cognitive social skills training program: Evaluation with young children. *Behavior Modification, 5*(1), 39-60.

Cunliffe, T. (1992). Arresting youth crime: A review of social skills training with young offenders. *Adolescence, 27*, 891-900.

Ford, D., Evans, J. H., & Dworkin, L. K. (1982). Teaching interaction procedures: Effects upon the learning of social skills by an emotionally disturbed child. *Education and Treatment of Children, 5*(1), 1-11.

Franca, V. M., Kerr, M. M., Reitz, A. L., & Lambert, D. (1990). Peer turoring among behaviorally disordered students: Academic and social benefits to tutor and tutee. *Education and Treatment of Children, 13*(2), 109-128.

Franco, D. P., Christoff, K. A., Crimmins, D. B., & Kelly, J. A. (1983). Social skills training for an extremely shy young adolescent:

An empirical case study. *Behavior Therapy, 14*, 568-575.

Kauffman, J. M. (1977). *Characteristics of Children's Behavior Disorders.* Columbus, OH: Merrill.

Kelly, W. J., Salzberg, C. L., Levy, S. M., Warrenfeltz, R. B., Adams, T. W., Crouse, T. R., & Beegie, G. P. (1983). The effects of role-playing and self-monitoring on the generalization of vocational social skills by behviorally disordered adolescents. *Behavioral Disorders, 9*(1), 27-35.

Knapczyk, D. R. (1992). Ef.ects of developing alternative responses on the aggressive behavior of adolescents. *Behavioral Disorders, 17*(4), 247-263.

McConnell, S. R., Sisson, L. A., Cort, C. A., & Strain, P. S. (1991). Effects of social skills training and contingency management on reciprocal interaction of preschool children with behavioral handicaps. *The Journal of Special Education, 24*(4), 473-495.

Michelson, L., Mannarino, A. P. (1986). Social skills training with children: Research and clinical application. In P. S. Strain, M. J. Guralnick, & H. M. Walker (Eds.), *Children's social behavior: Development, assessment, and modification* (pp.373-406). Orlando, FL: Acadimic Press.

Nietupski, J., Stainback, W., Gleissner, L., Stainback, S., & Hamre-Nietupski, S. (1983). Effects of socially outgoing versus withdrawn nonhandicapped peer partners on nonhandicapped/handicapped student interactions. *Behaivoral Disorders, 8*(4), 244-250.

Parker, J., & Asher, S. (1987). Peer acceptance and later personal adjustment: Are low-accepted children "at risk"? *Psychological Bulletin, 102*, 357-389.

Piliavin, I., & Briar, S. (1964). Police encounters with juveniles. *American Journal of Sociology, 70*, 206-214.

Ragland, E. U., Kerr, M. M., & Strain P. S. (1981). Social play of withdrawn children: A study of the effects of teacher-mediated peer feedback. *Behavior Modification, 5*(3), 347-359.

Roff, M. (1961). Childhood social interactions and young adult bad conduct. *Journal of Abnormal and Social Psychology, 63*(2), 333-337.

Sarason, I. B., & Ganzer, V. J. (1973). Modeling and group discussion in the rehabilitation of juvenile delinquents. *Journal of Counseling Psychology, 20*(5), 442-449.

Schloss, P. J., Schloss, C. N., & Harris, L. (1984). A multiple baseline analysis of an interpersonal skills training program for depressed youth. *Behavioral Disorders, 9*(3), 182-188.

Singh, N. N., Deitz, D. E. D, Epstein, M. H., & Singh, J. (1991). Social behavior of students who are seriously emotionally disturbed: A quantitative analsysis of intervention studies. *Behavior Modification, 15*(1), 74-94.

Smith, L. K., & Fowler, S. A. (1984). Positive peer pressure: The effects of peer monitoring on children's disruptive behavior. *Journal of Applied Behavior Analysis, 17*(2), 213-227.

Strain, P. S., & Timm, M. A. (1974). An experimental analysis of social interaction between a behaviorally disordered preschool child and her classroom peers. *Journal of Applied Behavior Analysis, 7*(4), 583-590.

Swanson, H. L. (1985). Improving same-sex hetrosexual interactions of emotionally disturbed adolescents. *Journal of School Psychology, 23*(4), 365-375.

Tisdelle, D. A., & St. Lawrence, J. S. (1988). Adolescent interpersonal problem-solving skill training: Social validation and generalization. *Behavior Therapy, 19*, 171-182.

Ullmann, C. A. (1957). Teachers, peers and tests as predictors of adjustment. *The Journal of Educational Psychology, 48*(5), 257-267.

Van Hasselt, V. B., Griest, D. L., Kazdin, A. E., Esveldy-Dawson, K., & Unis, A. S. (1984).

Poor peer interactions and social isolation: A case report of successful in vivo social skills training on a child psycchiatric inpatient unit. *Journal of Behavior Therapy and Experimental Psychiatry*, 15(3), 271-276.

Wahler, R. G., & Fox, J. J. (1980). Solitary toy play and time out: A family treatment package for children with aggressive and oppositional behavior. *Journal of Applied Behavior Anlysis*, 13(1), 23-39.

Warrenfeltz, R. B., Kelly, W. J., Salzberg, C. L., Beegle, C. P., Levy, S. M., Adams, T. A., & Crouse, T. R. (1981). Social skills training of behavior disordered adolescents with self-monitoring to promote generalization to a vocational setting. *Behaviora! Disorders*, 7(1), 18-27.

White, O. R., Liberty, K. A., Haring, N. G., Billingsley, F. F., Boer, M., Burrage, A., Connors, R., Farman, R., Ferdorchak, G., Leber, B. D., Liberty-Laylin, S., Miller, S., Opalski, C., Phifer, C., & Sessoms, I. (1988). Review and analysis of strategies for generalization. In N. G. Haring (Ed.) *Generalization for students with severe handicaps: Strategies and solutions* (pp. 15-51). Seattle WA: University of Washington Press.

Wolfe, V. V., Boyd, L. A., & Wolfe, D. A. (1983). Teaching cooperative play to behavior-problem preschool children. *Education and Treatment of Children*, 6(1), 1-9.

Zaragoza, N., Vaughn, S., & McIntosh, R. (1991). Social skills interventions and children with behavior problems: A review. *Behavioal Disorders*, 16(4), 260-275.