

INFORMATION TO USERS

This reproduction was made from a copy of a manuscript sent to us for publication and microfilming. While the most advanced technology has been used to photograph and reproduce this manuscript, the quality of the reproduction is heavily dependent upon the quality of the material submitted. Pages in any manuscript may have indistinct print. In all cases the best available copy has been filmed.

The following explanation of techniques is provided to help clarify notations which may appear on this reproduction.

1. Manuscripts may not always be complete. When it is not possible to obtain missing pages, a note appears to indicate this.
2. When copyrighted materials are removed from the manuscript, a note appears to indicate this.
3. Oversize materials (maps, drawings, and charts) are photographed by sectioning the original, beginning at the upper left hand corner and continuing from left to right in equal sections with small overlaps. Each oversize page is also filmed as one exposure and is available, for an additional charge, as a standard 35mm slide or in black and white paper format.*
4. Most photographs reproduce acceptably on positive microfilm or microfiche but lack clarity on xerographic copies made from the microfilm. For an additional charge, all photographs are available in black and white standard 35mm slide format.*

*For more information about black and white slides or enlarged paper reproductions, please contact the Dissertations Customer Services Department.

UMI University
Microfilms
International

PREVIEW

8602938

Shuart, John William, Jr.

**EFFECTS OF SELF-INSTRUCTIONAL TRAINING ON PERFORMANCE IN A
SOCIAL SKILLS TRAINING GROUP**

The University of Nebraska - Lincoln

Ph.D. 1985

**University
Microfilms
International** 300 N. Zeeb Road, Ann Arbor, MI 48106

PREVIEW

PREVIEW

PLEASE NOTE:

In all cases this material has been filmed in the best possible way from the available copy.
Problems encountered with this document have been identified here with a check mark ✓.

1. Glossy photographs or pages _____
2. Colored illustrations, paper or print _____
3. Photographs with dark background _____
4. Illustrations are poor copy _____
5. Pages with black marks, not original copy _____
6. Print shows through as there is text on both sides of page _____
7. Indistinct, broken or small print on several pages ✓ _____
8. Print exceeds margin requirements _____
9. Tightly bound copy with print lost in spine _____
10. Computer printout pages with indistinct print _____
11. Page(s) _____ lacking when material received, and not available from school or author.
12. Page(s) _____ seem to be missing in numbering only as text follows.
13. Two pages numbered _____. Text follows.
14. Curling and wrinkled pages _____
15. Dissertation contains pages with print at a slant, filmed as received _____
16. Other _____

University
Microfilms
International

PREVIEW

EFFECTS OF SELF-INSTRUCTIONAL TRAINING ON PERFORMANCE
IN A SOCIAL SKILLS TRAINING GROUP

by
John William Stuart

A DISSERTATION
Presented to the Faculty of
The Graduate College in the University of Nebraska
In Partial Fulfillment of Requirements
For the Degree of Doctor of Philosophy
Major: Psychology

Under the Supervision of Associate Professor W. D. Spaulding

Lincoln, Nebraska

December, 1985

TITLE

EFFECTS OF SELF-INSTRUCTIONAL TRAINING ON PERFORMANCE
IN A SOCIAL SKILLS TRAINING GROUP

BY

John William Stuart

APPROVED

DATE

W. D. Spaulding

11-23-85

David S. Hargrove

11/22/85

Brian Sarata

11/21/85

Herbert E. Howe

12/4/85

David Dixon

12/4/85

SUPERVISORY COMMITTEE

GRADUATE COLLEGE

UNIVERSITY OF NEBRASKA

EFFECTS OF SELF-INSTRUCTIONAL TRAINING ON PERFORMANCE
IN A SOCIAL SKILLS TRAINING GROUP

John William Shuart, Jr., Ph.D.

University of Nebraska, 1985

Advisor: W. D. Spaulding

Five case studies were conducted in a coordinated manner to assess the effects of self-instructional training on the performance of pervasively-disordered adults in a social skills training group. Each subject received 1) social skills treatment, 2) self-instructional treatment focused on cognitive functioning, and 3) non-specific control treatment. The studies were conducted in a naturalistic aftercare setting. Together, the five cases reflected both the heterogeneity of schizophrenic individuals residing in aftercare settings and the variability of adjustment of these individuals.

Performance in social skills training was measured by a battery of instruments including observer assessments of behavior, therapist ratings of performance and a quiz to assess the assimilation and retention of material presented in the group.

Results indicated that four of the five subjects individually benefited from the cognitive intervention. Group-wise analysis of the case data revealed that the cognitive intervention made a unique and specific contribution to group performance as measured by information assimilated and retained. Other measures of performance showed more equivocal results.

The results support the hypothesis that cognitive interventions contribute to substantive improvement in the response of pervasively-

disordered adults to social skills training conducted in a naturalistic treatment setting. The study also demonstrates the usefulness of outcome methodologies which utilize time-series data with individual subjects in a small group treatment format.

PREVIEW

ACKNOWLEDGMENTS

The author wishes to thank:

- The individuals who volunteered to participate as subjects;
- Ms. Trudi Bretos and Larry Reznicek, Mental Health Center Therapists, for their ideas, enthusiasm, and skill as leaders of the social skills training groups;
- Ms. Bettie Gant, for encouraging the research and allowing the study to be conducted on the premises of the residential care setting which she directs;
- The Nebraska Department of Institutions - and in particular, LaVonne Daniels and Jack Ferguson - for its support;
- The Lincoln-Lancaster Community Mental Health Center - and in particular, Wendy Andorf and the Center Research Committee members - for its encouragement and enthusiastic cooperation;
- Matt Kushner, for his contributions as research assistant; and
- Chuck Walter, for his assistance in data collection.
- For their encouragement and guidance, the author is also grateful to the members of his dissertation committee: Herb Howe, Scotty Hargrove, Brian Sarata, and David Dixon.
- Finally, the author wishes to thank his dissertation chairman, Will Spaulding, for his sage counsel and enthusiastic support.

TABLE OF CONTENTS

	PAGE
INTRODUCTION.	1
RESULTS	30
DISCUSSION.	108
REFERENCES.	120
APPENDIX.	130

INTRODUCTION

During the past decade, social skills training has been an increasingly popular technique in the remediation of social deficits. Reflecting the belief that psychological functioning and quality of life are closely related to behavior and experience in social contexts, the social skills paradigm has been used with a variety of populations, including the mentally retarded (e.g., Bates, 1980; Bornstein, Bach, McFall, Friman & Lyons, 1980; Geller, Wildman, Kelly & Laughlin, 1980; Matson, Kazdin & Esveltd-Dawson, 1980; Meredith, Saxon, Doleys & Kyzer, 1980), children (e.g., Bornstein, Bellack & Hersen, 1980; La Greca & Santagrossi, 1980; Gresham & Nagle, 1980), adolescents (e.g., Elder, Edelstein & Narack, 1979; Filipczak, Archer & Friedman, 1980), and non-psychotic adults (e.g., Cole, Klarreich & Fryatt, 1982; Trower, Yardley, Bryant & Shaw, 1978; Twentyman & Zimering, 1979).

Typically, behavioral social skills training programs are designed to increase an individual's social skills repertoire through the use of techniques such as didactic instruction, modeling, behavioral rehearsal, and transfer training (homework) (Curran, 1979; Liberman et al., 1975; Twentyman & Zimering, 1979). For example, the skill "responding to praise" might be taught by 1) describing a series of thoughts and actions which would precede or accompany the response; 2) modeling examples of the response; 3) having the client rehearse or role-play the response (providing feedback and reinforcement for successive approximations of the response; and 4) giving a homework assignment to encourage practice of the response in different settings. Social skills training may be conducted in either an individual or group

treatment format (Bellack & Hersen, 1978).

During the past decade, social skills training has become a widely-used technique in the treatment of schizophrenic disorders (e.g., Bellack & Hersen, 1978; Bradshaw, 1982; Eisler, Blanchard, Fitts & Williams, 1978; Goldstein, 1973; Hersen, 1979; Kazdin, 1979; Liberman, King, De Risi & McCann, 1975; Liberman, Nuechterlein & Wallace, 1982; Matson, 1980; Matson & Stephens, 1978; Monti, Fink, Norman, Curan, Hayes & Caldwell, 1979; Monti, Curran, Corriveau, De Lancy & Hagerman, 1980; Wallace, Nelson, Liberman, Aitchison, Lukoff, Elder & Ferris, 1980). The current emphasis on social skills training in the treatment of schizophrenia is consistent with the association between premorbid social competence and outcome in schizophrenia (Zigler & Phillips, 1960; Zigler & Phillips, 1961). Moreover, the poor adjustment to community living experienced by many patients following the advent of the deinstitutionalization movement has provided a poignant reminder that antipsychotic drugs alone are insufficient to ensure community survival (Goldman, Adams & Taube, 1983; Greenblatt, Levinson & Klerman, 1961; Hogarty, Goldberg & Schooler, 1974; Kiesler, 1982; Lehmann, 1975; Lipton & Burnett, 1979; Paul, 1978; Paul, 1980; Tessler & Goldman, 1982; Zwerling, 1979).

Beneficial effects of social skills training with pervasively disordered schizophrenic adults have been noted by a number of independent researchers and interviewers (e.g., Goldstein, 1973; Hersen, 1979; Hogarty, Goldberg & Schooler, 1974; Liberman, Nuechterlein & Wallace, 1982; Matson, 1980; Paul & Lentz, 1977; Twentyman & Zimering, 1979). Hogarty et al. (1974) described a well-designed, longitudinal study which demonstrates a positive relationship between active treatment

targeting social adjustment and length of post-hospital community stay. Paul and Lentz (1977) reported a complex, longitudinal study which demonstrates a clear outcome advantage in favor of behaviorally-oriented skills training over milieu therapy. Paul (1981) summarized his work, emphasizing the importance of such skill training in reducing the rate of rehospitalization typically seen in the chronic patient population. Goldstein (1973) summarized and extended a substantial literature documenting both the importance of treating social deficits and the effectiveness of behavioral skills training in addressing such deficits. Reviewing about 150 studies covering a range of populations and procedures, Twentyman and Zimering (1979) found that behavioral social skills training was superior to no-treatment and waiting-list controls in the development of social skills. Hersen (1979), reviewing a range of studies, concluded that social skills training is an effective approach to the remediation of the skills deficits of medicated psychiatric patients. Matson (1980) concluded that social skills training is a promising modality in the treatment of chronic schizophrenia. Liberman et al. (1982) echoed Hersen (1979) in noting that sufficient evidence exists to support the view that social skills training can produce a desired increment in skilled behavior during the training phase.

Social Skills and Cognition

Although there is agreement that current social skills training models are comparatively effective in helping the client develop a repertoire of basic social responses, the effectiveness of current approaches in achieving generalization to other situations and settings

remains in question (Hersen, 1979; Liberman et al., 1982; Matson, 1980; Twentyman & Zimering, 1979). Actually, this limitation is not surprising, since most procedures to date have focused on promoting the acquisition of comparatively discrete skills (e.g., Goldstein, Sprafkin & Gershaw, 1976; Liberman, 1982). Moreover, the major training emphasis is often on observable, topographical features of social behavior (e.g., verbal and non-verbal behavior), rather than upon underlying variables (e.g., emotion, cognition). Although such a restricted focus is perhaps justifiable in "assertiveness training" procedures for comparatively well-functioning outpatients (in fact the tradition from which social skills training emerged), it would be expected to produce less satisfactory results with more pervasively disordered individuals.

Liberman et al. (1982) suggested that an increased treatment focus on cognitive factors could serve to potentiate the effectiveness of social skills training for pervasively disordered schizophrenics. The authors hypothesize that limitations on the durability and generalizability of current social skills training models are a direct consequence of their exclusive focus on social behavior at the outcome level (i.e., observable behavior) in the absence of coordinated treatment targeting the presumed precursors of observable behavior (e.g., cognitive processing). The implication of Liberman's hypothesis is that generalization of learned responses should be enhanced if impairments in underlying cognitive processes are successfully treated.

The logic of Liberman's (Liberman et al., 1982) argument rests upon an implicit model of human behavior which presupposes a hierarchy of organismic response levels (e.g., psychophysiological responses, cognitive responses, social responses) which influence one another.

The clinical utility of conceptualizing a behavioral outcome as the product of interacting levels or variables has been noted by several clinicians (Cloninger, Reich & Yokoyama, 1983; Liberman, Nuechterlein & Wallace, 1979; Marshall, 1982; Pankratz & Taplin, 1982; Scheflen, 1981; Spaulding, in press; Strauss, Kokes, Klorman & Sacksteder, 1977). The range of levels implicated in schizophrenia is wide, as is evidenced by a research literature addressing genetic inheritance (Cancro, 1979; Gottesman & Shields, 1966; Kessler, 1980; Rosenthal, Wender, Kety, Shulsinger, Welner & Ostergaard, 1968), biochemistry (Ferrier, Johnstone, Crow & Rincon-Rodriguez, 1983; Bowers, 1980; Meltzer, 1979a & b), psychophysiology (Shagass, 1977; Spohn & Patterson, 1980; Venables, 1977), cognitive processing (Chapman, 1980; Harrow, Silverstein & Marengo, 1983; Maher, 1966; Rabin, Doneson & Jentons, 1979), and socio-environmental factors (Bandura, 1977; Faris, 1944; Miller & Dollard, 1941; Murphy, 1978; Scheff, 1970).

Although such divisions or levels are, of course, psychological constructs, the clinical utility of employing such conceptualizations is well-illustrated by the report of Hogarty et al. (1974), who found a superior level of community adjustment among schizophrenics who are treated with both phenothiazines and active sociotherapy, when contrasted with individuals receiving only one of these interventions. The results of Hogarty et al. (1974) underscored the potential importance of targeting more than one response level when treating pervasively disordered individuals. These results also provide a basis for a conceptual analogy with the argument of Liberman et al. (1980); whereas Hogarty et al. (1974) addressed the psychophysiological and social levels of behavior, Liberman et al. (1980) focused on the cognitive and social levels.

Liberman (1982) summarized the rationale for addressing cognitive processes as part of an overall social skills training approach:

If schizophrenic patients do indeed experience . . . cognitive dysfunctions . . . then much of the assessment and intervention done to date in social skills training - emphasizing verbal and nonverbal responding to social challenges - may bypass the more critical psychological processes that are closely linked with attention, perception, and information processing. Focusing only on the topographical features of social skills . . . may lead to limited generalization because the cognitive processes that facilitate many different situations are not targeted for intervention. Thus, it may be more important to target the sensory input and cognitive processing precursors to verbal and nonverbal output. (pg. 80)

Other clinicians have also recently called for increased attention to the role of cognitive processing in more molar social-level responding (Adams, Brantley, Malatesta & Turkat, 1981; Gomes-Schwartz, 1979; Heilbrun, 1983; Liberman, 1982; Rathjen, Rathjen & Hiniker, 1978; Salsinger, 1981; Trower, 1979; Trower, 1980).

Cognitive Features of Current Social Skills Models

Many social skills training models do in fact include procedures which rely at least implicitly on cognitive mastery of relevant material. However, no skills model to date has produced results which establish an unequivocal causal link between interventions at the cognitive level and change at the more molar level of social behavior. For example, Goldstein's "Structured Learning Therapy" (SLT) includes for each skill taught a sequence of discrete "learning points" for the client to memorize (Goldstein et al., 1976). The skill "Responding to a Complaint," for example, incorporates the following "learning points":

1. Listen openly to the complaint
2. Ask the person to explain anything you don't understand

3. Show that you understand the other person's thoughts and feelings
 4. Tell the other person your thoughts and feelings, accepting the responsibility if appropriate
 5. Summarize the steps to be taken by each of you
- (Goldstein et al., 1976; pg. 98)

Although Goldstein's approach provides content which the client is encouraged to remember, the SLT model per se does not include any clinical interventions which specifically target the client's ability or capacity to remember the material.

A social skills training model which goes beyond Goldstein's model in addressing cognitive functioning has been described by Bradshaw (1982). Bradshaw reported a 20-week treatment program for pervasively-disordered adults which is designed to teach "Attending" and "Socialization" skills. "Attending Skills" included physically attending, visual awareness and discrimination, memory, and the ability to listen and follow directions. Socialization skills included labeling, expressing and responding to feeling, and beginning, maintaining, and ending conversations. "Socialization Skills" are taught in a conventional SST group approach. Drawing on a contribution to the cognitive-behavioral treatment armamentarium credited to Meichenbaum (Meichenbaum, 1969), Bradshaw (1982) employed a self-instruction training "SI" procedure to increase the client's attending behavior. Bradshaw (1982) provided the following example of self-instructions (intended to be memorized and used by the client to "program" his/her behavior) associated with attending behavior:

Pat is talking to me. I have to pay attention to her. What am I doing? O yeah. I need to sit up straight. Good, I'm doing that. What else? Look at her. When people pay attention they look at the person. I'd better not watch the TV. I can't do that and pay attention to her too. Good. I'm paying attention. I can do it. (pg. 62)

Bradshaw's model goes beyond Goldstein's (Goldstein et al., 1976) by including a procedure (SI) which directly treats the cognitive processing skills of the client. In Bradshaw's study, however, there is no direct link established between the cognitive-level interventions (e.g., attending behavior) on the one hand, and molar social behavioral outcome on the other. Although Bradshaw's results indicate gains for his subjects in terms of both attending behavior and social behavior, his design and dependent measures make it impossible to determine whether training in attending skills has any effect on social skills acquisition (or vice-versa). Thus, although his approach and results are consistent with Liberman's (1982) hypothesis, Bradshaw's (1982) results failed to demonstrate any unique and specific contribution of cognitive treatment to molar behavioral outcome (i.e., social skills).

Wallace et al. (1980) described perhaps the most systematic attempt to integrate treatment of pervasively disordered adults at the cognitive level with behavior at the social level. Along with elements of conventional social skills training, Wallace relied on procedures designed to influence the client's cognitive behavior in social situations (Wallace et al., 1980). In terms of such cognitive variables, Wallace focused on three posited stages of processing in social situations: 1) "receiving" variables (including cognitive/perceptual encoding and recognition of relevant situational aspects); 2) "processing" variables (including cognitive review, evaluation, and

selection of appropriate responses); and 3) "sending" variables (i.e., successful delivery of the response, including non-verbal elements).

The approach of Wallace et al. (1980) obviously puts more explicit emphasis on the development of general information-processing skills than does Goldstein's (e.g., Goldstein et al., 1976). The Wallace training process includes systematic assessment and shaping of the encoding, problem-solving, and self-monitoring skills which are presumed to underlie the selection and delivery of appropriate responses across a variety of social situations. However, the effectiveness of Wallace's model remains to be established unequivocally (Wallace et al., 1980).

Despite the widespread use of neuroleptic medication with the individuals typically included in social skills training groups, it should be noted that the present state of knowledge concerning the specific effects of these medications on cognitive and social functioning is deficient (Wallace et al., 1980). Although it is plausible to argue that neuroleptic medication may have an indirect but significant facilitative effect on the acquisition of social skills by suppressing acute psychotic symptomatology to a level which permits the subject to tolerate and participate in a group treatment intervention, little research to date has been adequately designed to isolate medication effects from cognitive or social skills training effects (Schooler, 1980). On the other hand, there is no evidence to suggest that medication alone should be expected to spontaneously produce social problem-solving strategies or an enhanced behavioral repertoire. For the present, perhaps the most reasonable hypothesis is that neuroleptic medication may set the stage for effective social skills training interventions by decreasing the level of cognitive and behavioral disorganization

associated with acute psychosis. The acquisition of adaptive cognitive strategies and the development of an enhanced social skills repertoire should be expected to derive from non-pharmacological treatments based on learning principles. At the same time, it is probably the case that there is a trade-off, in that medication probably suppresses not only psychotic symptomatology but cognitive learning processes (e.g., memory), as well.

Although the approaches of Bradshaw (1982) and Wallace (1980) are promising in that they include treatment of cognitive variables in an overall effort to enhance the social competence of their clients, neither approach has produced research designed to identify any specific and unique effects of cognitive treatment on behavior at a more molar level. Thus, although Liberman's (1982) call for increased attention to cognitive variables in social skills training remains intuitively persuasive, no reported research to date has been designed in a way which would allow detection of any unique and specific effects of cognitive training on clinically-relevant behavior in a social skills training context.

Cognitive-behavioral Treatment: Self-instructional Training

To explore more successfully the relationship between cognitive factors and social competence, more extensive use of already-existing cognitive-behavioral techniques is indicated. Such techniques constitute a well-established technology for treating the cognitive components of a variety of disorders (e.g., Beck, Rush, Shaw & Emory, 1979; Calhoun & Turner, 1981; Guidano & Liotti, 1983; Kazdin, 1982; Lange, 1979; Mahoney & Arnkoff, 1978; Mathews, Gelder & Johnston, 1981; Meagher, 1982; Meichenbaum & Cameron, 1982; Miller & Berman, 1983; Wilson, 1978).

Not only do such procedures specifically target the cognitive level of functioning, but most are also easily adapted to the sort of individually-tailored interventions required when treating pervasively-disordered individuals (Lieberman, 1982).

A procedure of particular promise is self-instructional training. The introduction of self-instructional (SI) training is usually credited to Donald Meichenbaum, who developed the technique initially as a treatment for the cognitive and attentional deficits of schizophrenics (Meichenbaum, 1969; Meichenbaum & Cameron, 1973). Since the introduction of the technique, it has been used with other populations, as well (e.g., Bornstein & Quevillon, 1976; Finch, Wilkinson, Nelson & Montgomery, 1975; Glass, Gorrman & Shmurak, 1976; Kim, 1980; Nelson & Birkimer, 1978).

Meichenbaum's original studies demonstrated that, by modeling a set of verbal self-statements concerning the accomplishment of a given task and then reinforcing the acquisition and use of these statements by his schizophrenic subjects, he could improve the attentional and cognitive functioning of his subjects, as well as produce generalized clinical improvement. Meichenbaum (Meichenbaum & Cameron, 1973) provided the following example of self-instructions designed to improve performance on a digit/symbol task:

What is it that I have to do? I'm supposed to fill in these numbered boxes with symbols. Now look up at the top code of symbols and numbers. Good. The first symbol I have to look for goes with number 94. It's three lines. That's it. Now quickly to the next one, number 24 has a circle with a dot in it. Just continue this way until I finish the line. I'm getting it. Let me see how many I can get. Remember, I must go quickly, but also carefully. (pg. 518).

Surprisingly, comparatively few clinicians have chosen to incorporate Meichenbaum's technique in the treatment of schizophrenia. Perhaps one reason for this is that Meichenbaum himself, following his initial successes in modifying schizophrenic behavior, focused his interest on applying SI training to other populations (e.g., Meichenbaum & Goodman, 1969; Meichenbaum & Goodman, 1971; Meichenbaum, 1972; Meichenbaum & Asarnow, 1979). Another reason may be that an early attempt to replicate Meichenbaum's results with schizophrenics was unsuccessful (Margolis & Shemberg, 1976). Recent studies, however, have tended to support Meichenbaum's approach (e.g., Lowe & Higson, 1981; Meyers, Mercatoris & Sirota, 1976). Lowe and Higson (1981) reported three studies which provide evidence for the effectiveness of SI training in the treatment of schizophrenia. They suggested that the earlier failure to replicate (Margolis & Shemberg, 1976) may be attributable to differences in procedure (e.g., insufficient training). They also suggested that inadequate attention to the needs of individual patients may have been involved (Lowe & Higson, 1981).

The potential utility of using SI training to treat cognitive deficits associated with impaired social functioning is evident. The procedure specifically targets cognitive/attentional functioning. By nature it is amenable to an individualized treatment approach. The content of the self-instructions taught can easily accommodate a variety of foci. Moreover, the nature of SI training lends itself to research designs which can isolate cognitive interventions from social skills training procedures per se. Thus, SI would appear to be a potentially powerful tool to employ in research designed to identify the specific effects of changes in cognitive functioning on molar behavioral outcome (Lowe & Higson, 1981).