Psychological Interventions for Schizophrenia

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Abstract

This review examines the impact of dynamic and supportive psychotherapies (both individual and group) and psychosocial skills training on clinical and social outcomes for individuals with schizophrenia. The relatively few controlled trials of individual or group psychotherapies for persons with schizophrenia exhibit serious methodological problems that limit their generalizability. Reality-oriented approaches appear to be superior to dynamic, insight-oriented psychotherapies, but further research is needed to identify and evaluate disorder-specific models that target specific deficits and disabilities in schizophrenia. Research on psychosocial skills training models shows that target skills can be trained and maintained over time. Further work is needed to determine the extent to which trained skills generalize from the original training setting to "real life" environments.


This review considers evidence for the efficacy of three types of psychological interventions for persons with schizophrenia: individual and group psychotherapies (dynamic and supportive) and psychosocial skills training. Individual psychotherapies can be defined structurally as interventions with one-to-one contact between a patient and a therapist. A wide variety of therapies can be administered in this format, ranging from dynamic insight-oriented psychotherapies, to supportive psychotherapies, to social skills training and cognitive and behavioral therapies. However, individual psychotherapy historically connotes either dynamically oriented psychotherapy, which typically seeks to increase insight, or supportive psychotherapy, which typically seeks to build ego strength. This review will consider individual therapy in both these connotations.

Powles (1964) suggests three criteria for defining group psychotherapies: (1) a group of people is gathered for some therapeutic goal; (2) a professional expert leader is present to assist the group; and (3) the relationships and interactions between group members are used as tools for clarification, motivation, or behavioral change. As with individual psychotherapy, a variety of models can be used in a group format, including psychoanalytic, interpersonal, and educational approaches. Social skills training, cognitive and behavioral therapies, and family therapy also may be delivered in group settings, and patient-directed self-help groups by definition use this format. In this review, we will focus on group psychotherapies with largely dynamic or supportive orientations, although some of the group interventions reviewed target problem-solving and socialization skills.

Psychosocial skills training refers to a class of treatment interventions that uses methods and principles derived from social learning theories to train (or retrain) motor...
and interpersonal skills and competencies. Complex behaviors are analyzed and broken down into a smaller set of discrete behavioral elements that are then trained using various core behavioral techniques. These techniques include problem or skill specification, didactic instruction, modeling, role-play or behavioral rehearsal, coaching, feedback, verbal reinforcement, generalization training, and homework. Specific interventions may not use all these techniques, but, in general, interventions that are considered social skills training will use at least some of them; at least two reviews (Benton 1989; Benton and Schroeder 1990) define social skills training as an intervention using three or more of these methods.

Recently, there has been growing interest in including cognitive skill and/or cognitive remediation techniques in traditional social skills training approaches. For example, Brenner et al. (1992) reviewed research on the integrated psychological therapy (IPT) model, which combines cognitive and social skills training. There is also interest in applying cognitive remediation techniques in schizophrenia; see discussions by Spring and Ravdin (1992) and Liberman and Green (1992). However, while the application of various cognitive techniques with persons with schizophrenia has been a subject of studies for a number of years, there have been few randomized controlled trials that would support firm conclusions on efficacy or effectiveness. Because the trend is toward incorporating these cognitive approaches into social skills training, we have used the term “psychosocial skills training” in referring to these interventions.

In dividing psychological interventions into individual therapies, group therapies, and psychosocial skills training, we recognize that we run the risk of confusing the intervention’s typology or modality with its format. We selected this organizational structure because it generally corresponds with the organization of the literature and of service systems that offer individual and group therapies. We also recognize that our categories of specific interventions may seem somewhat arbitrary. For example, a group therapy study may also use some skills training techniques. This blending of components reflects the evolution of increasingly more disease-specific psychological interventions in the care of persons with schizophrenia over the last two decades. Our discussion and conclusions will accordingly consider the data from the perspective of both typology of treatment and format.

Assuming that patients are otherwise receiving adequate clinical care (including antipsychotic medications), this review addresses the following questions:

1. Do any of these interventions reduce relapse or psychopathology in persons with schizophrenia?
2. Do any of these interventions improve social or vocational functioning in persons with schizophrenia?
3. For psychosocial skills training, is there evidence that (1) this intervention results in skill acquisition by persons with schizophrenia? (2) the effects persist over time? and, (3) the effects generalize from the training setting into “real life”?

Methods

We conducted computerized searches of the PsycLIT and MEDLINE bibliographic data bases for 1966 to 1993. In addition, we obtained relevant references from the bibliographies of articles selected for review, and we consulted a number of experts in the field to determine if there were any recent or as-yet unpublished data that should be considered.

For individual and group psychotherapies, we used the following key words: schizophrenia and individual therapy or group therapy (PsycLIT); and schizophrenia and psychotherapy or counseling (MEDLINE). These searches yielded a total of 1,223 citations on individual and group psychotherapies. For psychosocial skills training, we entered the key words “social skills training,” “cognitive techniques,” “social support or social adjustment,” “psychosocial rehabilitation,” “rehabilitation,” “skills training,” “psychosocial readjustment” or “rehabilitation counseling,” or “social support networks.” This produced a total of 904 citations.

Applying criteria modeled after those of Beaman (1991), we identified four reviews on individual psychotherapy (Mosher and Keith 1980; Heinrichs and Carpenter 1981; Gomes-Schwartz 1984; Mueser and Berenbaum 1990), four reviews on group psychotherapy (Parloff and Dies 1977; Mosher and Keith 1980; Scott and Griffith 1982; Schooler and Keith 1993), and eight reviews on psychosocial skills training (Wallace et al. 1980; Brady 1984a, 1984b; Donahoe and Driesenga 1988; Benton 1989; Benton and Schroeder 1990; Corrigan 1991; Halford and Hayes 1991; Brenner et al. 1992). Two addi-
tional reviews of group therapy (Kanas 1986, 1993) were used to identify primary studies, but the methodology of these reviews was not rigorous enough to include their conclusions.

We also considered several primary studies not included in these reviews. In each case, the primary studies met the following four criteria: (1) the study was not included in one of the primary reviews, (2) the study used either a true experimental design or one or more comparison conditions, (3) the sample consisted primarily of persons with schizophrenia who were diagnosed in a systematic manner, and (4) specific outcome measures were described and systematically applied. Using these criteria, one primary study was identified for individual psychotherapy (Hogarty et al. 1995), five for group psychotherapy (Wentworth-Rohr 1972; Coche and Flick 1975; Serok and Zemait 1983; Beutler et al. 1984; Kanas et al. 1989), and seven for psychosocial skills training (Hogarty et al. 1991; Eckman et al. 1992; Wallace et al. 1992; Wirshing et al. 1992; Bradshaw 1993; Tarrier et al. 1993; Dobson et al. 1995).

Findings

It is important to note that the studies that address the efficacy and effectiveness of individual and group psychotherapy are, for the most part, at least 10 years old and have serious methodological flaws. By contrast, the literature on psychosocial skills training includes more recent studies with a higher proportion of controlled trials. The eight primary reviews of this latter literature considered 72 studies, of which 29 were cited by two or more reviews. The primary reviews include a high number of noncontrolled studies, reflecting the frequency of the single-subject case study and multiple baseline research designs that have been popular in this field; only 35 studies were described as controlled trials. Of the 72 studies, 47 were conducted in inpatient settings; the remainder were carried out in outpatient settings. The inpatient settings contained a higher proportion of controlled trial designs than the outpatient settings and tended to have larger samples (mean sample size of 33.4 vs. 22.6 subjects, respectively). Lack of adequate statistical power is an important problem in many of these studies, although most of the reviews do not give it much prominence.

Do Any of These Interventions Reduce Relapse or Psychopathology in Persons With Schizophrenia?

Individual psychotherapy. Gomes-Schwartz (1984) concludes that the results from major controlled studies of psychotherapy with patients with schizophrenia show that "... on average individual treatment does not play an important role in reducing symptoms, decreasing hospitalization, or enhancing community adjustment" (p. 324). She notes, however, that since the literature gives some indication of success with psychotherapy, examination of the therapist and patient characteristics that predict good outcome may be warranted. Mosher and Keith (1980) emphasize the methodological difficulties in previous studies of individual psychotherapy, which render any conclusion problematic. In discussing Hogarty's major role therapy (MRT; Hogarty et al. 1973), however, they conclude that this social therapy may benefit subgroups of patients over time. Heinrichs and Carpenter (1981) found that the evidence supporting the effectiveness of psychotherapy is inconsistent and modest at best. Mueser and Berenbaum (1990) reviewed four controlled trials of psychotherapy. In three of the four trials, psychodynamic therapy failed "... to exert any beneficial effect on outcome, either alone, or in combination with antipsychotic medication" (p. 256). These authors interpret the results from the fourth and methodologically strongest study (Gunderson et al. 1984; Stanton et al. 1984) to show that reality-adaptive supportive therapy is superior to exploratory insight-oriented psychodynamic therapy on three of four outcome criteria (rehospitalization, vocational adjustment, and social adjustment); the two treatments do not differ on symptoms. Mueser and Berenbaum (1990) also offer evidence from other studies on the potential toxicity of psychodynamic approaches. Thus, there is some evidence that reality-oriented psychotherapy is superior to a dynamic, insight-oriented approach, but there is scant evidence that either approach is superior to a controlled, no-therapy condition.

Given the apparent inferiority of psychodynamic approaches, there has been growing interest in providing supportive psychotherapies for persons with schizophrenia (Rockland 1993). At present, the category of supportive psychotherapy remains vague and poorly defined. Strategies and techniques considered part of supportive psychotherapy include strengthening the therapeutic alliance; enacting environmental in-
Interventions; providing education, advice, and suggestion; offering encouragement and praise; setting limits and prohibitions; undermining maladaptive defenses while strengthening adaptive defenses; and emphasizing strengths and talents (Rockland 1993). An important focus for future research will be the development of well-articulated models that systematically combine these strategies and techniques.

One approach that has evolved is personal therapy (PT), developed by Hogarty and colleagues from earlier work with MRT (Hogarty et al. 1995). They describe PT as a timed, three-phased approach that is "...designed to equip patients with adaptive strategies that would facilitate the self-control of affect, a state that we believe follows the individual perception of stress ..." (p. 383). This is accomplished by controlling the process by which escalating affective reactions lead to dysfunctional responses. Hogarty et al. (1995) are conducting two studies of PT. The first compares PT with supportive psychoeducation/management (FPM), and a combination of PT and FPM; the second compares PT with supportive therapy only. Examination of psychotic and affective relapses show no overall PT effect in the patients who live on their own, but show a significant positive effect in those living with family. Analyses of adjustment outcomes are ongoing (Hogarty, personal communication 1995).

Group psychotherapy. There have been relatively few controlled trials of group psychotherapy interventions for individuals with schizophrenia, and these studies tend to exhibit serious methodological deficiencies that sharply limit their value. In reviews of the effectiveness of group psychotherapy interventions, reviewers have separated studies conducted in inpatient settings from those conducted in outpatient settings. In inpatient settings, there is a general consensus (e.g., Mosher and Keith 1980; Schooler and Keith 1993) that evidence for the efficacy of group psychotherapy is very weak, particularly among acutely psychotic patients. In fact, Schooler and Keith (1993) suggest that group psychotherapy may actually be harmful: "...we find little theoretical rationale for exposing an acutely psychotic and disorganized patient to the multitude of stimuli, potentially intrusive, over-involved, and critical, that can be part of group therapy on an inpatient unit" (p. 17). Mosher and Keith (1980) suggest that some positive results have been found, however, in studies in which behaviors or attitudes to be changed were clearly defined and measured and the intervention was clearly defined and structured.

Group psychotherapy studies conducted in outpatient settings have not produced evidence of a strong or consistent effect on rehospitalization or reductions in psychopathology (Parloff and Dies 1977; Mosher and Keith 1980). Schooler and Keith (1993), however, suggest that there may be some limited evidence for a positive impact, possibly as a consequence of the effect of group affiliation on poorly socialized patients. Kanas (1986, 1993) found evidence in the literature to support the effectiveness of group therapy for persons with schizophrenia and concludes that interaction-oriented therapy is superior to insight-oriented therapy. However, the methodology Kanas used to summarize effectiveness is not acceptable since he counted studies as supportive of the effectiveness of group therapy if the group was superior to control subjects on any unspecified outcome measure.

Psychosocial skills training. Earlier studies found only limited support for the role of psychosocial skills training in preventing relapse and rehospitalization. In her meta-analysis, Benton (1989) found a nonsignificant treatment effect size across four studies; however, she found a significant mean treatment effect size for social skills training on hospital discharge, although this may have been an artifact of the research designs of the four studies she reviewed. Among the primary studies considered here, both Hogarty et al. (1991) and Bradshaw (1993) found evidence for a positive impact on rehospitalization at 1 year, but Hogarty et al.'s findings had washed out by the 2-year follow-up, and Bradshaw's sample had only 14 subjects, 7 in each group.

Evidence for the impact of psychosocial skills training on the reduction of psychopathology is also inconclusive. Benton's (1989) meta-analysis reports only weak treatment effect sizes for reduction in self-reported symptomatology in seven studies. On the other hand, Corrigan's (1991) meta-analysis reports a large median effect size in nine studies with psychotic patients; however, Corrigan warns that acquired skills do not appear to replace maladaptive behaviors in patients with psychoses.

More recent studies have not resolved this issue. Hogarty et al. (1991) found that subjects diagnosed with schizophrenia who received social skills training ex-
hhibited significant improvements in symptomatology 1 year after treat-
ment, but these gains had been lost after 2 years. Tarrier et al. (1993) conclude that coping strat-
egy enhancement (CSE) training is associated with significant reduc-
tions in symptoms; however, they also note that the group receiving CSE training was more disturbed at baseline than the comparison group, raising the possibility that the observed improvements were an artifact. Also, improvement is reported for anxiety only, and not for depression or hallucinations. Eckman et al. (1992) report that patients receiving social skills training in their study improved significantly more than patients who received supportive psycho-
therapy on the Brief Psychiatric Rating Scale (Overall and Gorham 1962). The results from these primary studies thus suggest that reduc-
tions in psychopathology, when they occur, may be time limited in duration and restricted to only certain categories of symptoms.

Do Any of These Interventions Improve Social or Vocational Functioning in Persons With Schizophrenia?

Individual psychotherapy.

There is no consistent evidence that individual dynamic psycho-
therapy improves social or voca-
tional functioning. There is limited evidence from the studies by Gunderson et al. (1984) and Stanton et al. (1984), as interpreted by Mueser and Berenbaum (1990), that reality-adaptive supportive psychotherapy is superior to a dy-
namic, insight-oriented approach on vocational and social adjust-
ment, although this study did not contain a no-therapy control condi-
tion. Evidence from the ongoing Hogarty et al. (1995) study sug-
gests that PT is beneficial on sev-
eral measures of social and voca-
tional functioning. Patients are reporting significant improvements in overall functioning, work, and social/leisure measures at 18 and 24 months, and in overall func-
tioning, general adjustment, major role performance, social and lei-
ure activities, and relationships after 30 and 36 months of treatment. While this is promising, however, the results remain preliminary.

Group psychotherapy. There is a general consensus that studies on group psychotherapy (whether provided in an inpatient or an outpatient setting) have not provided clear and consistent evidence of improved social or voca-
tional functioning among persons with schizophrenia (Farloof and Dies 1977; Mosher and Keith 1980). Schooler and Keith (1993) conclude that, at best, the evidence for an effect in outpatient settings is "...modest, for an additive effect" (p. 17).

Psychosocial skills training.

Two early narrative reviews (Wall-
ace et al. 1980; Brady 1984b) and one meta-analysis (Benton 1989) found consistent evidence for psycho-
social skills training having a positive impact on social anxiety. However, the most comprehensive narrative review (Donahoe and Driesenga 1988) characterizes the available evidence as mostly nega-
tive, noting that many of the stud-
ies that assessed social anxiety lacked adequate no-treatment com-
parison groups. Two additional re-
views (Brady 1984b; Corrigan 1991) conclude that psychosocial skills training also leads to improved so-
cial adjustment (whether self- or other-rated). However, the Brady review considers a number of old studies, and the Corrigan meta-analysis includes studies of individuals with psychoses other than schizophrenia. Benton (1989) concludes that social skills training produces significant improvements in other-rated behavioral measures but only marginal improvement in other-rated general functioning. In a more recent study, Hogarty et al. (1991) found that, among recip-
ients of psychosocial skills training, improvements on various social adjustment measures that had been observed at 1-year followup had eroded within 2 years after treatment.

These results suggest that the impact of psychosocial skills train-
ing on measures of social function-
ing is modest and may be time limited when it does occur. More careful assessments of social functioning involving both self- and other-rated measures over longer intervals of time are needed. At present, there is insufficient evi-
dence from which to conclude that cognitive skills training programs such as IPT improve social functioning among individuals with schizophrenia (Brenner et al. 1992).

There have been few studies of the impact of psychosocial skills training on vocational adjustment among individuals with schizo-

Does Social Skills Training Re-
sult in Skill Acquisition by Per-
sons With Schizophrenia? The results from the narrative and
meta-analytic reviews support three general conclusions about the acquisition of targeted social or cognitive skills. First, individuals with schizophrenia who complete social skills training can acquire the targeted social skills. As Wallace et al. (1980) conclude, "there is, of course, little doubt from the accumulated evidence that the topographical [basic performance] features of social skills can be modified by the training procedures" (p. 58). This finding has been affirmed in subsequent reviews. For example, Brenner et al. (1992) found that patients who are exposed to IPT exhibit significant improvement from baseline levels on cognitive tasks such as attention, abstraction ability, and general verbal performance.

Second, social skills training appears to be effective in improving subjects' social competence (Halford and Hayes 1991). Donahoe and Driesenga (1988) conclude that "...social skills training has almost always led to improvements in social competence, and in particular, assertion competence" (p. 149).

Third, these positive results are strongest and most consistent when acquisition is assessed through role-play methods, but studies that use other measures such as naturalistic observation generally report positive results as well. These conclusions are also supported by the results from both meta-analytic reviews and the five primary studies in which skill acquisition was assessed.

**Do the Skills Acquired Through Psychosocial Skills Training Persist Over Time?** To establish that individuals are able to maintain over time the skills and competencies they have acquired through psychosocial skills training, it is necessary to show that the subject can reproduce the target behavior under the same conditions in which it was originally acquired, using the same assessment procedure or measure. Evidence from the narrative and meta-analytic reviews suggests that acquired skills do persist over time. Among the narrative reviews, only the two earliest articles (Wallace et al. 1980; Brady 1984a, 1984b) report the evidence as mixed; more recent reviews that include later studies not available to these earlier reviewers conclude that there is generally clear evidence for skill maintenance over periods ranging from 2 weeks to 7 months (Donahoe and Driesenga 1988). However, Hogarty et al. (1991) found that outcomes in their social skills condition began to deteriorate after approximately 21 months. This suggests that many earlier studies had not monitored subjects for sufficiently long followup periods.

Several meta-analytic reviews suggest that trained skills can be maintained. In these reviews, mean (Benton 1989; Benton and Schroeder 1990) and median (Corrigan 1991) treatment effect sizes significantly different from zero were detected. Four of the seven primary studies examined skill maintenance and reported it to be successful. In considering the evidence from these meta-analyses, however, it is important to remember that many of the studies included did not use lengthy followup periods.

Evidence for the maintenance of cognitive skills trained through IPT is less certain. Brenner et al. (1992) report such a finding based on only one study in which this was assessed.

**Is There Evidence That the Effects of Psychosocial Skills Training Generalize From the Training Setting Into "Real Life"?** Research on the question of skill generalization has progressed through two distinct phases. In the first phase, investigators used novel role-play assessments (i.e., role-play assessments other than those used initially to assess baseline levels of competence). More recently, other studies have begun to assess in vivo performance. However, a major limitation in research to date is that studies have not assessed the extent to which subjects have actually used acquired skills in their daily lives.

Findings from the narrative and meta-analytic reviews support several conclusions. There is evidence that some types of topographic (i.e., motor performance) skills may generalize more readily than other, more complex behaviors (Wallace et al. 1980). For example, simpler behaviors such as eye contact have been shown to generalize more to novel situations than do more complex sets of behaviors (e.g., making an appropriate request for behavioral change to another individual). In general, the evidence for the generalization of acquired skills to real-life settings is mixed. While the meta-analytic reviews report mean (Benton 1989) and median (Corrigan 1991) treatment effects that are positive and significantly different from zero, the clinical significance of the improved outcomes described in the studies used in their analyses is unclear. The more recent narrative reviews (Donahoe and Driesenga...
1988; Halford and Hayes 1991) offer more cautious conclusions, taking into account the methodological criticisms leveled at these studies. Donahoe and Driesenga (1988) conclude that "patients can be prompted to use these skills in situations that are similar in setting and assessment format to those used in training, and, in some cases, can use skills in naturalistic settings in which their behavior is neither prompted nor obtrusively monitored" (p. 159). Halford and Hayes (1991) state a more negative conclusion: "despite the large volume of research, it is still not known if SST [social skills training] effects generalize to the day-to-day social behavior of schizophrenic patients" (p. 36). In a review of work with IPT, Brenner et al. (1992) report finding "... little evidence demonstrating the generalizability of these improvements to elementary attentional/perceptual processes" (p. 160) to date. None of the primary studies examined generalizability.

Discussion

Research on these interventions has been limited by a number of flaws in methodology and problems in execution. For example, there have been relatively few high-quality controlled trials of individual or group psychotherapies for individuals with schizophrenia. The most common deficiencies include poorly defined and operationalized psychotherapeutic interventions, a lack of attention to the experience and training of therapists, inadequate specification of a minimal "dose" of treatment (e.g., the minimum number of sessions a patient should attend), inadequate or inappropriate comparison groups, biased treatment assignment procedures, attrition, inadequate sample sizes resulting in a lack of statistical power, a lack of attention to psychiatric diagnosis, inadequate followup, and the absence of standardized outcome measures. The cumulative effect of the flaws and deficiencies in these studies sharply diminishes the confidence that can be placed in their results and generalizability.

While there has been considerable research on the impacts of psychosocial skills training among patients with schizophrenia, much of this work has consisted of non-controlled studies (single-subject case studies and multiple baseline designs) that are of limited value in addressing the issues of efficacy and effectiveness. The smaller literature of controlled trials is marked by several important limitations, including inadequate statistical power, the lack of information on the diagnostic and demographic composition of patient samples (particularly in earlier studies), and the notable lack of information on the use of antipsychotic medications received during the studies. In addition to these design limitations, there are measurement issues that should be addressed in subsequent studies. For example, there is an urgent need to develop appropriate assessment procedures to measure the transfer of psychosocial skills from the original training setting to naturalistic settings in the community. These procedures need to incorporate multiple perspectives (i.e., the patient, the family, and clinicians). There is also a need to focus on a wider range of potential outcomes, including the impact of psychosocial skills training on vocational adjustment, quality of life, family well-being, and satisfaction with services.

Given the limitations of past research, we can draw several conclusions about the efficacy of the psychological interventions reviewed here. First, there appears to be no evidence for the efficacy of dynamic, insight-oriented psychotherapies (either individual or group) for patients with schizophrenia. Indeed, there is some indication that such therapies may be potentially toxic for these patients. Second, there are some suggestive and tentative findings that supportive psychotherapies may reduce symptomatology and rehospitalization and improve social and vocational adjustment for patients with schizophrenia, at least in some subgroups of patients (Mueser and Berenbaum 1990; Hogarty et al. 1995). However, the supportive intervention approach is poorly defined, and the success of future work in this area will depend in part on the development of well-articulated models of supportive therapy that can be tested against appropriate comparison conditions. In particular, it will be especially important to distinguish supportive psychotherapy from the types of supportive and monitoring interventions that take place as part of case management or pharmacotherapy.

This raises a larger point: What should be the elements of a model of supportive psychotherapy for patients with schizophrenia? In our view, the evidence from the literature suggests that psychological interventions that target disorder-specific problems with structured and well-specified approaches have produced more promising results. We would argue that supportive psychotherapy must include more
than support alone to be effective, and that the development of a supportive psychotherapy intervention "package" should target the specific problems and deficits that arise from schizophrenia itself. The current work by Hogarty et al. (1995) is an example of this developmental approach, incorporating cognitive and social models about schizophrenic deficits and suggesting what needs to be done to overcome them. We believe it is important to conduct further research with different (and well-specified) models of supportive psychotherapy. This research should address not only outcomes but process issues as well. In particular, future studies should monitor and report on medication use and compliance.

The literature on psychosocial skills training presents a different set of issues. First, there seems little doubt that specific motor performance behaviors can be trained successfully. Second, there is evidence that such skills can be maintained over several weeks to several months, although findings from Hogarty et al. (1991) suggest that these skills erode within 2 years after the training. However, evidence for the generalizability of psychosocial skills training from the clinical setting to everyday life is far weaker and has received less attention than it deserves. The problem of generalizability is crucial for psychosocial skills training, as may be reflected in the limited impact of such training on rehospitalization, symptom reduction, and social functioning. Further research is needed on how to assess generalizability in natural settings and on what factors affect the transfer of acquired skills and behaviors from the training setting to other settings. Liberman et al. (1986) offer some strategies and techniques that could be applied to improve generalization, and research on methods for achieving this should be pursued in the future.

The application of cognitive skills training and cognitive remediation techniques is currently receiving renewed attention in the treatment of schizophrenia. Past research does not provide a firm basis for us to draw any conclusions on the use of these techniques at present. Controlled evaluation studies on the efficacy and effectiveness of interventions based on these techniques are needed; these studies should use well-specified interventions (e.g., IPT). It is important to demonstrate the efficacy of these techniques on their own for specific outcomes before they are combined widely with other types of psychosocial interventions. Future trials should demonstrate adequate statistical power and longer follow-up intervals. These studies should directly examine generalization from the training setting to "real life."

There is also a need to reconsider some of the conceptual bases underlying training in social and cognitive skills. In particular, it will be important to identify cognitive and social skills that are most important for recovery and reintegration into the community. Studies that incorporate the perspectives of patients and their families would be particularly worthwhile for discovering what cognitive and social skills patients and their relatives/significant others view as most important for patients to learn. Do these skills differ for patients who live alone compared with those who live with families or others? How do cognitive skills relate to the acquisition, maintenance, and generalization of social skills?

Finally, there is a need to identify diagnostic, demographic, setting, and social factors that influence the effectiveness of psychosocial skills training. For example, Benton's (1989) meta-analysis found evidence that women may benefit more, and severely mentally ill persons benefit less, from psychosocial skills training when compared with other groups. Corrigan (1991) found evidence that training conducted in outpatient settings may be more effective than training conducted in inpatient settings. It would be important to examine demographic characteristics, clinical variables (subtype, chronicity, comorbidity, premorbid social competence, etc.), duration of training, settings, and environmental variables that may affect the acquisition and transfer of new or relearned skills.

References


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