

An Update on Supported Employment for People With Severe Mental Illness

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Objective: This review examines the effectiveness of supported employment for people with severe mental illness. **Methods:** A comprehensive search was made for quantitative studies, primarily in the published literature. **Results:** Seven descriptive studies, three surveys, one quasi-experimental study, and six experimental studies were found. All studies suggested significant gains in obtaining employment for persons enrolled in supported employment programs. In experimental studies, a mean of 58 percent of clients in supported employment programs achieved competitive employment, compared with 21 percent for control subjects, who typically received traditional vocational services. Employment outcomes relating to time employed and employment earnings also favored clients in supported employment over control subjects. No evidence was found that supported employment led to stress levels precipitating higher rehospitalization rates. Two features of many supported employment programs have the most empirical support: integration of mental health and vocational services within a single service team and the avoidance of preplacement training. Two other widely held principles—ongoing support and attention to client preferences—have not been systematically evaluated. **Conclusions:** Supported employment appears to be a promising approach for people with severe mental illness, but more studies are needed, with close attention to program implementation and long-term follow-up. (*Psychiatric Services* 48:335–346, 1997)

The development of supported employment marked an important shift in the history of vocational rehabilitation for people with severe mental illness. Although accounts of supported employment approaches first appeared in the psychiatric rehabilitation literature less than a decade ago (1), they have been disseminated to many mental health and rehabilitation programs serving psychiatric populations.

Despite this widespread adoption, systematic information on the impact of supported employment is lacking.

In this update we provide a brief historical overview of the development of supported employment programs for persons with severe mental illness and critically review the literature supporting its effectiveness.

Supported employment was first defined during the 1980s. A formal definition was outlined in the Rehabilitation Act Amendments of 1986 (revised in 1992) and included the following features: clients work for pay, preferably the prevailing wage rate, as regular employees in integrated settings and in regular contact with

nonhandicapped workers, and receive ongoing support (2). Furthermore, supported employment is intended for “individuals who, because of the severity of their handicaps, would not traditionally be eligible for vocational rehabilitation services” (3).

These federal guidelines were intended to provide flexibility for developing alternatives to traditional vocational rehabilitation approaches, such as vocational counseling, skill training, sheltered employment, and job clubs, which have little sustained impact on competitive employment for people with severe mental illness (4–8). Within the psychiatric field, four significant influences on the development of supported employment include the job coach model, the clubhouse model and transitional employment, the assertive community treatment model, and the “choose-get-keep” model.

Initially pilot tested for people with developmental disabilities, supported employment was justified as a more effective, humane, and cost-effective alternative to sheltered workshops (9–16). Wehman (16) advocated for a “place-then-train” approach, in contrast to the conventional “train-place” philosophy, targeting persons with the most severe disabilities, who were mostly ignored by traditional employment programs, and minimizing pre-vocational assessment. Wehman showed the feasibility of an “individual placement” model, with job coaches at the work site intensively training clients in their work roles and providing time-unlimited support, even though fading out the more intensive on-site coaching over time.

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Advocacy by supported employment proponents led to federal legislation and targeted funding for supported employment through the U.S. Department of Education. Despite continuing expansion of supported employment services (17,18), the empirical foundations are surprisingly thin, with the literature consisting primarily of case studies, nonexperimental demonstration projects, and surveys.

In the 1950s, an innovative approach to helping people with severe mental illness adjust to community living was pioneered at Fountain House in New York City. Operating outside of the mental health system, it became known as the clubhouse, because its identity revolved around a central meeting place for "members" to socialize. Members were encouraged to participate in work units at the clubhouse as part of the "work-ordered day" (19–21). Beard and colleagues (20) hypothesized that members benefited from participation in the clubhouse because they felt needed for its successful functioning.

Fountain House also pioneered transitional employment—temporary, part-time community jobs commensurate with members' stamina and stress tolerance and designed to acclimate them to work, increase their self-confidence, and help them build up their résumés. Clubhouse staff workers negotiate with community employers for transitional employment positions.

Contributions of the clubhouse model include its focus on the normalizing function of community employment and on giving all members a chance to work, regardless of employment or psychiatric history. Transitional employment bears a resemblance to supported employment, and some experts argue that the distinctions dissolve in practice (7,22). Both approaches assume that professional staff usually need to help clients locate jobs and provide continuing support. Differences include the fact that transitional employment positions are temporary and are controlled by the clubhouse (23). The client's home base remains the clubhouse.

The assertive community treatment model is a comprehensive approach to community-based services devel-

oped by Stein and Test (24,25). Assertive community treatment provides intensive, time-unlimited support and individualized assistance, primarily in natural environments. A multidisciplinary treatment team integrates treatment and rehabilitation. Employment strategies used by assertive community treatment teams have evolved over time (26). A fully staffed team includes at least one vocational counselor. Every client is assumed to have a vocational goal, even if it is a modest first step toward competitive employment.



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The "choose-get-keep" model, a person-centered approach to supported employment, was developed by Danley and Anthony (27) at Boston University. A fundamental feature is an emphasis on client choice in selecting, obtaining, and maintaining jobs. Unlike transitional employment, which gives priority to building a work history, this model encourages career planning, which typically occurs in preplacement counseling sessions. All of the supported employment models reviewed below have incorporated a focus on client choice and preferences, although they achieve this goal in widely varying ways.

Current program models

The psychiatric rehabilitation field has not reached consensus on the essential components of supported employment for persons with severe mental illness. However, the following components appear to be common across many supported employment programs (28–30): a goal of permanent competitive employment, minimal screening for employability, avoidance of prevocational training, individualized placement instead of placement in enclaves or mobile work crews, time-unlimited support, and consideration of client preferences.

The job coach model has been the dominant influence on supported employment programs funded through the federal-state vocational rehabilitation system (28,29). In practice, many programs use hybrid approaches in which skill training, job clubs, and career planning may be required before entry into supported employment, even though these elements are not formally part of the federal supported employment guidelines, nor are they consistent with Wehman's place-train conceptualization. Furthermore, clubhouses sometimes offer both supported employment and transitional employment, reserving transitional employment for clients who are vocationally less capable.

Methods

Our literature search included studies of vocational programs offering supported employment, regardless of specific program features, provided that quantitative employment outcome data for people with severe mental illness were reported. We included any study completed by 1995; a few were unpublished studies. Search methods included manual searches of the rehabilitation literature, *Psych Abstracts*, and *Index Medicus*; computerized searches of dissertation abstracts; and searches of bibliographies (31,32), conference proceedings, and listings of federally funded studies.

Many different outcome indicators were used in these studies, although most included some form of employment rate as one measure. Although the federal guidelines define support-

ed employment as an *outcome* (and not as enrollment in a program), most studies report the employment rate as the percentage of clients admitted to a program who actually obtain a paid community job. Most studies report "interval" rates, that is, the percentage of clients obtaining employment at any time during a time interval, such as one year after admission. However, "status" rates—percentages of clients currently employed at a fixed interval after program admission—are also sometimes reported. Employment rates usually exclude sheltered work, but some investigators report employment rates based on any paid employment. A more detailed discussion of employment measures is available elsewhere (5).

Findings

The results of our literature search are presented in two categories: non-experimental studies and experimental studies.

Nonexperimental studies

We located reports of seven pre-post studies of individual supported employment programs (33–40), three surveys (28,30,41), and one quasi-experimental study (42–44). Their key features and results are summarized in Table 1. Despite wide variation in sampling, program models, and measurement strategies, the pre-post studies all suggest increased rates of employment. The pre-post studies and survey results suggest a job retention rate of between 35 and 59 percent after six months. One additional study, which examined a hybrid approach combining supported employment and transitional employment, concluded that workplace employment support substantially increased job retention rates (45,46).

Several factors suggest caution in interpreting findings from this group of studies. Some did not make clear whether any clients are screened out at admission to the supported employment program, and some did not document the rate of study dropout. One project found that only 36 percent of the clients identified as eligible for supported employment received any meaningful vocational services (37).

Thus ambiguities about sample selection and dropout rates suggest the need for experimental designs to assess program effects. Moreover, the findings in nonexperimental studies may be representative of model programs, rather than of typical experience when supported employment is broadly implemented. This difference is suggested by the mixed results from several statewide dissemination projects (5,47,48).

One quasi-experimental study has been conducted. It involved a natural experiment in which a community mental health center operating day

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treatment programs in two rural sites was faced with budgetary cuts. One site closed its day treatment program, replacing it with a supported employment program known as Individual Placement and Support (IPS) (49). The other site continued its day treatment along with traditional brokered vocational rehabilitation services (42). Clients at the day treatment program that converted to IPS had an increased employment rate; no change was found for the site that did not convert its day treatment program. Increases in employment rates were especially marked for regular attenders of day treatment. Moreover, the program that converted to IPS had no increases in negative outcomes such as hospitalization, incarceration, homelessness, suicide attempts, or program dropouts. Interviews with clients, their families, and mental

health staff revealed widespread satisfaction with the conversion (43). The second site subsequently converted to IPS, with similar favorable results (44).

Experimental studies

We located six experimental studies of supported employment for people with severe mental illness (50–56). Results of the studies are summarized in Table 2. The following sections describe the research design, program model, sample, findings, limitations, and general conclusions of each study.

Indiana study of accelerated supported employment. Bond and colleagues (50) evaluated rapid referral to supported employment services for clients with severe mental illness attending day treatment in five community mental health centers in Indiana. Clients were randomly assigned to "accelerated" or "gradual" conditions. Clients in the accelerated condition received supported employment services immediately after study admission, while those in the gradual condition attended four months of prevocational work readiness training before they were eligible for supported employment.

The supported employment approach was the same for both conditions. It followed the job coach model, with no screening for job readiness and no prevocational preparation. Two agencies operated the supported employment programs for the five community mental health centers. One agency, itself one of the five mental health centers, closely coordinated the supported employment program with case management and other mental health services. The other agency, a rehabilitation agency, provided brokered supported employment services to the remaining four mental health centers.

Study subjects consisted of unemployed clients with severe mental illness enrolled in day treatment or case management who expressed an interest in seeking competitive employment. During the study year, 42 percent of the participants in the accelerated condition and 44 percent in the gradual condition terminated from vocational services.

Table 1

Summary of key features and results of pre-post studies, surveys, and quasi-experimental studies of supported employment for persons with severe mental illness

Study	Sample size	Referral source or study group	% with schizophrēnia	Program model	% employed ¹		% retaining job			Other findings
					Base line	Follow-up	Three months	Six months	Nine months	
Pre-post studies										
Danley et al. (33)	19	Self-referred	37	Choose-get-keep	31	73	nr	nr	nr	Less hospitalization No change in quality of life
Fabian (34,35)	249	Vocational rehabilitation agency, community mental health center	44 ²	Job coach	nr	36	75	59	50	
Kirszner et al. (36)	82	Agency serving homeless persons	53	Assertive community treatment	50	70	55	nr	nr	—
Mowbray et al. (37)	88	Community mental health center	68	Assertive community treatment	67	84	nr	nr	nr ³	—
Nichols (38)	25	Community mental health center	32	Job coach	nr	80	nr	nr	nr ⁴	—
Shafer and Huang (39)	86	Vocational rehabilitation agency, community mental health center	31	Job coach	nr	60	63	35	29	—
Trotter et al. (40)	114	Vocational rehabilitation agency, community mental health center	40	Choose-get-keep	nr	35	nr	nr	nr	—
Surveys										
MacDonald et al. (30)	212	Vocational rehabilitation agency	—	Job coach	nr	nr	66	53	43	—
Wehman et al. (41)	233	Vocational rehabilitation agency	—	Job coach	nr	nr	66	59	nr	—
Gervy et al. (28)	12 ⁵	Directors of supported employment programs	—	Job coach	nr	54 ²	63 ²	nr	nr	—
Quasi-experimental studies										
Drake et al. (42,43)	71	Day treatment program clients	42	Individual Placement and Support	25	39	nr	nr	nr	No negative outcomes
	27	Regular program attendees		Individual Placement and Support	33	56	nr	nr	nr	—
Drake et al. (44)	112	Day treatment program clients	44	Day treatment	13	13	nr	nr	nr	No negative outcomes
	35	Regular program attendees		Day treatment	14	9				
Drake et al. (44)	112	Day treatment program clients	44	Individual Placement and Support	13	23	nr	nr	nr	Less hospitalization
	35	Regular program attendees		Individual Placement and Support	9	40	nr	nr	nr	—

nr, not reported

¹ All studies used competitive employment for calculating employment rates, except Mowbray et al. (37), who included all paid employment, even sheltered employment, and Trotter et al. (40), who defined employment as acceptance as a permanent employee after a four- to-six month trial work period.

² Estimated percentage

³ Clients retained jobs for a median of eight months.

⁴ Clients retained jobs for a mean of 3.5 months.

⁵ 12 program directors surveyed

After one year, clients in the accelerated condition had modestly better employment outcomes than clients in the gradual condition, with significant differences in the percentage obtaining employment, the percentage

holding a full-time job, weeks during which clients worked, and earnings. Finally, a serendipitous finding was that the supported employment program developed at the community mental health center was more suc-

cessfully implemented and had better employment outcomes than the brokered supported employment program.

Limitations of the study included problems in implementing the bro-

Table 2

Summary of key features and results of six experimental studies of supported employment for persons with severe mental illness

Feature or result	Bond et al. (50)	Chandler et al. (51,52)	Drake et al. (53)	Drake et al. (54)	Gervey and Bedell (55)	McFarlane et al. (56)
Referral source	Five community mental health centers (CMHCs)	County mental health system	Two CMHCs	Case management program	Secondary schools and CMHCs	Two CMHCs
Admission criteria	Interest in work, eligible for or a recipient of SSI or SSDI	"Cross section," interest in work not required	Interest in work, six months in area, no severe cognitive or physical impairment, no substance abuse	Interest in work, enrolled in case management program	Age 15 to 24, family available to participate	Stable for six months, family available
Screening method	Case manager referral	Interviewed by team of three clinicians	Four informational sessions	Four informational sessions	One month of prevocational training	nr
Sample N	74	210	140	152	34	69
% with schizophrenia	66	55	47	55	35	65
Follow-up period	One year	Three years	18 months	18 months	One year	18 months
Intervention						
Experimental	Rapid entry into supported employment with job coach	Assertive community treatment, clubhouse	Individual Placement and Support	Individual Placement and Support	Supported employment with a job coach, clinical services	Assertive community treatment, family therapy
Control	Prevocational training before supported employment	Usual services, referral to vocational rehabilitation	Skills training, choose-get-keep supported employment	Referral to vocational rehabilitation	Sheltered workshop	Usual services, referral to vocational rehabilitation
% of clients employed at baseline	None; clients employed a mean of one month in year before	12% of clients employed within year before	None	None	None; 12% employed within year before	14% of experimental group, 9% of control group
% of clients obtaining employment at any time during follow-up	Within 12 months, 56% of experimental group, 29% of control group	During year 1, 12% of both groups; year 2, 16% of experimental, 7% of control group; year 3, 20% of experimental, 6% of control group	Within 18 months, nr	78% of experimental group, 40% of control group	Within 12 months, 76% of experimental group, 6% of control group	Within 18 months, 46% of experimental group, 19% of control group ¹
% of clients employed						
At 12 months						
Experimental	26	nr	36	nr	nr	37
Control	17	nr	24	nr	nr	8
At 18 months						
Experimental	33 ²	nr	38	nr	nr	27
Control	17 ²	nr	22	nr	nr	8
Duration of employment						
Experimental	9.4 weeks	nr	607 hours	nr	146 days	4.8 months
Control	3.1 weeks	nr	205 hours	nr	9 days	1.3 months
Annual earnings						
Experimental	\$1,525	Year 1, \$602; year 2, \$1,086; year 3, \$1,135 ³	\$2,263	nr	\$3,682 ³	\$755
Control	\$574	Year 1, \$226; year 2, \$329; year 3, \$233 ³	\$718	nr	\$1,097 ³	\$214
Other findings	No differences between groups in hospitalization	Experimental group had less hospitalization; no difference between groups in self-esteem	No differences between groups in hospitalization, self-esteem, quality of life, symptoms	nr	No differences between groups in hospitalization, symptoms	No differences between groups in hospitalization, symptoms

nr, not reported

¹ Paid employment, excluding sheltered employment² At only one study site³ Paid employment, including sheltered employment

kered supported employment program, brevity of follow-up, small sample size, and high attrition. Furthermore, the study design, which made both experimental and control subjects eligible for the same supported employment services, may have compromised the integrity of the experimental manipulation. On the positive side, this study directly tested a basic tenet of supported employment—the advantages of bypassing prevocational preparation—and replicated a previous study (57).

One might have expected that subjects in the gradual condition would have outcomes equivalent to those in the accelerated condition but would achieve the outcomes somewhat later. However, even three years later, experimental differences were still evident at the center with the more successfully implemented supported employment program. One interpretation is that entry into competitive employment is influenced by the expectations of staff and clients (58,59). Although study participants in the gradual condition were eligible for supported employment services after the preparatory period, many did not begin receiving those services expeditiously. This finding suggests that once clients enter a prevocational program that lacks a strict time limit, they may remain indefinitely.

California study of integrated services. Chandler and colleagues (51, 52) evaluated a capitated mental health program in California that was based on a philosophy of wraparound services. One of the two demonstration sites, the Village, in Long Beach, developed a supported employment program as a centerpiece, offering an opportunity to examine the effectiveness of supported employment. Clients randomly selected to participate in this program were compared with control subjects who received usual services, including referrals to the state vocational rehabilitation system.

The Village offered an array of vocational options, including paid agency positions and transitional employment, in addition to individual supported employment placements. Experimental clients received a relatively generous array of residential, case

management, and crisis services not routinely available to control subjects.

Program participants constituted a cross-section of clients with severe mental illness, including stable clients who lived in group homes, frequently hospitalized clients, and homeless clients. Interest in employment was not a prerequisite for the study. Follow-up interviews were conducted annually for three years after admission.

The competitive employment rate for Village clients was not significantly different from that for control subjects during year 1 (12 percent versus 13 percent), although the two groups' rates differed during year 2 (16 percent versus 7 percent) and year 3 (20 percent versus 6 percent). Moreover, Village clients earned more wages from paid employment than did control subjects during each year. Among Village clients who worked, the continuity of work (defined as the number of quarters of the year worked) increased over time. Over the three-year period, 32 percent of Village clients obtained competitive employment, compared with 11 percent of the control subjects (Chandler D, personal communication, 1996).

Strengths of this study include sample size, length of follow-up, and assessment under "real-world" conditions. Also lending ecological validity to the study was its focus on a heterogeneous group of clients. As a hybrid vocational model, the Village approximated the way vocational services are frequently implemented. However, blending supported employment and clubhouse approaches precluded evaluation of the unique contributions of different vocational components.

New Hampshire study of Individual Placement and Support. Drake and colleagues (53) compared two different supported employment approaches in New Hampshire. One group received integrated clinical and rehabilitation services through the IPS model described above. The "parallel" group was referred to a separate rehabilitation agency and received two months of skills training followed by supported employment services.

Subjects were unemployed clients

with severe mental illness attending community mental health centers in two small cities. Admission criteria included an interest in competitive employment, local residence for at least six months, absence of severe intellectual or physical impairment, and absence of substance dependence. Clients also were required to attend four sessions of an informational group (60).

Employment outcomes over an 18-month period strongly favored IPS. Compared with clients in the parallel condition, IPS clients were more likely to obtain a competitive job during follow-up and averaged more hours spent working in competitive jobs and more earnings from employment. IPS clients were also more likely to obtain a position in which they worked 20 hours or more per week. No experimental differences were found in nonvocational outcomes, including global functioning, quality of life, self-esteem, and symptoms.

This study had adequate sample size, follow-up period, and data collection procedures and a very low attrition rate. Given the finding that IPS had outcomes superior to those of a comparison supported employment program that lacked two major elements of IPS—rapid job search and integration of mental health and vocational services—it follows that those two elements may be critical factors in effective program design.

District of Columbia replication of the IPS study. Drake and colleagues (54) recently completed a study in Washington, D.C., that replicated much of the design and many of the methods of the study just described. The study site was a case management agency serving people with severe mental illness. The experimental group was assigned to IPS, while the control group was assigned to an enhanced vocational rehabilitation model, in which clients were evaluated rapidly by a special vocational counselor and referred to a comprehensive rehabilitation agency offering work adjustment training as preparation for competitive employment.

Subjects were unemployed case management clients. They were required to attend four sessions of an in-

formational group. Subjects were between 26 and 64 years of age. Eighty-three percent were African American. Sixty-six percent had a co-occurring substance use disorder.

Final data from this study are not yet available, but preliminary findings suggest that, as in the New Hampshire study, IPS clients have substantially better outcomes than the comparison group, albeit with lower employment rates than in New Hampshire for both conditions. This study suggests that the IPS model is generalizable to urban settings and to diverse ethnic and socioeconomic populations.

Supported employment for youth in New York. Gerver and Bedell (55) evaluated a supported employment program for young adults that was based at a community mental health center in New York. Using an adapted job coach model (61), the supported employment program provided a one-month prevocational skills training module and concurrent family therapy. Control subjects participated in an agency-run sheltered workshop located in the mental health center. Sheltered workshop staff were encouraged to develop competitive employment job leads for work-ready clients.

Subjects were clients with serious emotional disturbance between the ages of 15 and 25. Seventy-one percent had been enrolled in special education classes. Thirty-five percent had a diagnosis of schizophrenia, 33 percent had childhood and impulse disorders, 19 percent had affective disorders, and 13 percent had personality disorders. All clients were required to have a family member or friend who would participate in the family therapy component. Before random assignment to study conditions, subjects also were required to satisfy a minimum attendance criterion in a prevocational module.

Employment outcomes at one year, including employment rates, earnings, and the number of days employed, strongly favored the supported employment group. Although initial ratings of job satisfaction were similar in the two programs, the dropout rate at one year was significantly higher for the control group.

The average program tenure was ten months for supported employment clients and five months for control subjects. The two groups did not differ in rates of hospitalization or levels of symptoms at follow-up.

Positive features of this study include the use of a well-defined supported employment program approach and the use of a control group that represented an important contrast. The study showed that clients may be initially satisfied with a guaranteed job placement, even if it pays

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a subminimum wage. However, such work opportunities may decrease the chances of competitive employment. The limitations of the study center on the sampling, including the small sample size and the inclusion of clients with diagnoses extending beyond the severe mental illness classification.

New York study of family-aided supported employment services. McFarlane and colleagues (56) conducted a study at two community mental health centers in New York State in which they compared clients assigned either to an experimental program called the Work in Family-Aided Assertive Community Treatment or to a control group receiving usual mental health services, with re-

ferrals to conventional vocational rehabilitation services. The experimental program model combined multiple family therapy (62) with a vocationally-oriented assertive community treatment approach. Also, family members were encouraged to assist in the vocational process. Another distinctive feature of the experimental approach was the use of sheltered and volunteer employment placements as steppingstones to competitive employment.

To be admitted to the study, clients had to be between ages 18 and 45, have a diagnosis of schizophrenia or affective disorder, be symptomatically stable, have a family member who would participate in the program, have expressed interest in obtaining a job, and be in treatment at one of the study sites. After 18 months, 90 percent of the clients in the experimental group and 77 percent of the control subjects were still receiving treatment.

Employment outcomes were assessed every three months for 18 months. Significantly more experimental clients than control clients were competitively employed at 12 months and 18 months only; however, the experimental group had consistently higher rates of competitive employment, ranging from 19 to 37 percent, than did control subjects, whose rates ranged from 7 to 14 percent. Experimental clients averaged significantly more in earnings over the 18-month follow-up period than did control subjects. Hospitalization rates during follow-up were equal for the two groups.

Although the employment outcomes were modest, they are mildly supportive of the effectiveness of supported employment. The systematic involvement of the family is an intriguing feature, but the study design did not permit the contribution of the family component to be disentangled from that of the assertive community treatment program. Family treatment in itself may contribute to increased employment rates (63).

This study also raises the question of whether a supported employment approach with pure emphasis on competitive employment is more effective than a hybrid model encour-

aging sheltered and volunteer work. Another issue is the restrictive admission criteria, which may have led to selection of an unusually high-functioning sample.

Discussion

Despite the diversity of supported employment models, settings, sampling strategies, and research designs, the results of the studies we reviewed are encouraging. The pattern of enhanced employment outcomes is particularly noteworthy in light of findings of limited success in studies of traditional vocational approaches for persons with severe mental illness (5,6).

Among experimental studies of supported employment, the unweighted mean rate of clients' obtaining competitive employment was 58 percent, with a range from 32 to 78 percent. The corresponding rate for the control groups was 21 percent, with a range from 6 to 40 percent. The rates for clients' obtaining employment in the nonexperimental studies were similar—an unweighted mean of 55 percent, with a range from 23 to 84 percent. Experimental studies generally show comparable advantages for supported employment programs in the number of hours clients spend in their jobs and the wages they earn. Tempering these optimistic findings on supported employment are significant limitations, which we discuss below.

Principles of supported employment

Our review supports several principles of supported employment. First, clients need direct assistance in finding and keeping jobs. Employment rates are not increased by programs that provide only case management (64), skills training (65), or prevocational training (5), without an explicit focus on competitive employment. We hypothesize that general approaches to clinical stabilization and rehabilitation do not lead to the vocational outcomes that clients want because those approaches do not provide the specific assistance they need to find and keep jobs.

Second, direct approaches to finding and attaining employment, that is, place-train models, increase rates of competitive employment more than

do gradual, stepwise approaches (50,53,54,57). Moreover, clients prefer approaches that offer paid employment to those that require unpaid prevocational training (50,53,66). The most parsimonious explanation of these findings is that activities that deflect attention from competitive employment consume the limited time and resources of providers and clients (67).

Third, integration of vocational and clinical approaches is more effective than brokered approaches. Positive

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approaches to making
information available to
clients and to giving them
more control over
developing their own
rehabilitation
plans.*

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outcomes for programs that followed the assertive community treatment approach of integration of services within multidisciplinary teams support this principle (51,53,54,56). Brokered approaches, in which clients are referred to vendors of rehabilitation services through the state vocational rehabilitation system, had little impact on employment outcomes (51,56). Like previous research (68, 69), this review suggests that people with severe mental illness often do not benefit from brokered vocational rehabilitation services. One likely explanation for this principle is that integration forces providers to commu-

nicate with one another and to present a unified, coherent plan, while brokering between two parallel systems places the burden of integration on clients and in practice leads to conflicting plans, miscommunications, and dropouts (70).

Several other principles of supported employment need further empirical study. We hypothesize that supported employment programs that concentrate solely on direct placement into competitive employment may obtain higher competitive employment rates than those using a combination of competitive and sheltered options. This hypothesis has not been experimentally tested, but the results of two studies that used the latter approach (51,56) raise the question of whether the development of intermediate work options may have diluted the overall focus.

Many supported employment programs assume that attending to clients' preferences will lead to better vocational outcomes. Two correlational studies found that clients who obtain jobs in their preferred areas retain their jobs approximately twice as long as clients who work in nonpreferred areas (71,72).

Although ongoing support is a central tenet of the supported employment model, we have limited research on long-term supports (73). The studies reviewed above provide few details about the nature and extent of supports needed at each phase of the rehabilitation process. However, two studies showed decreased employment rates around the time of termination of grant support, suggesting that uncertainty about staff availability may affect clients' job tenure (33,56).

Components of supported employment

Traditionally, people with severe mental illness have encountered numerous barriers that prevented their entering vocational programs, including readiness requirements, prolonged assessments, requirements for prevocational training programs, lack of access and availability of programs, and rigid interfaces between mental health and vocational programs. As a result, only a small minority of indi-

viduals with severe mental illness have had access to supported employment programs (74).

One common feature of many of these barriers is the assumption that professionals should determine when mental health clients are linked with vocational services. This approach is at odds with consumerism, which emphasizes client-directed services; with principles of the community support system model, which emphasizes client-centered services; with the current trend in health care toward shared decision making (75); and with initial findings that clients who are given access to appropriate information about programs can make appropriate choices about their own rehabilitative program (54,60). To attain the ideal of access to supported employment for all clients (3), we need to develop and study innovative approaches to making information available to clients and to giving them more control over developing their own rehabilitation plans.

Retention in supported employment programs is also an issue. Dropout rates of more than 40 percent are common (39,40,50,55). Clients terminate from employment programs for many reasons, including their own ambivalence (76). The fear of losing government entitlements is a strong disincentive to working competitively (5,50,77). One consistent finding in the studies reviewed above is that retention rates are improved when supported employment services are integrated within multidisciplinary teams that provide outreach and integrate clinical and vocational services (53,54,56). Perhaps the advantage of these programs is that supported employment services are always easily accessible, are not terminated for any reason, and are sensitive to fluctuations of the client's clinical condition.

Another area in need of clarification is the process of job development. Self-directed strategies, such as the job club, that require clients to assume most of the responsibility for searching for jobs and for making contacts with employers, do not appear to be satisfactory for the large majority of persons with severe mental illness (78). Similarly, the conventional ap-

proach of developing job leads from newspapers and other impersonal sources may not be useful (61,79).

The role of staff in the interviewing process needs empirical study. One correlational study found that clients who were accompanied on a job interview by an employment specialist had more job offers than those who went unaccompanied (Gervey R, personal communication, 1995). This finding raises the issues of disclosure, contacts between employment staff and employers, and job accommodations. With the passage of the Americans With Disabilities Act (80), employers are giving more attention to reasonable accommodations, with more systematic efforts possibly increasing the job tenure of persons with disabilities (81).

Despite the rhetoric about job matching and job preferences, most supported employment job placements are in unskilled, entry-level jobs. Entry-level service jobs such as food service or janitorial work are the most popular type of placement, with the percentage of supported employment clients who work in such jobs ranging from 35 to 62 percent (30,36,37,39,61,82). The range for clerical placements is 6 to 19 percent, and perhaps 10 to 20 percent of placements are in skilled positions.

The reasons for placement in unskilled jobs are obvious: many clients lack job experience, credentials, and training and education needed for jobs with career tracks. Furthermore, entry-level jobs are readily available in most labor markets. Supported education is an alternative to supported employment that offers the potential for more skilled jobs (83). For clients who have advanced degrees or technical skills, matching them with sympathetic professionals working in the same field may be an effective means to provide suitable role models and to help them find jobs commensurate with their abilities (84).

Although the short-term emphasis on entry-level jobs in most supported employment programs may be realistic, it raises questions about the long-term picture of career development. Do clients make the transition to better jobs, to educational and training opportunities, and to satisfying ca-

reers? We have few data on these issues, although a recent study by Test and colleagues (85) may serve to clarify the longer-term view.

Although studies demonstrate that it is possible for people with severe mental illness to obtain jobs, the evidence is less clear on whether clients can retain those jobs for any substantial length of time. Between 41 and 77 percent of clients terminate a supported employment placement within six months (28,30,34,38,39,55,71, 86). Furthermore, studies of job terminations indicate that many clients experience negative job endings (30, 82,86-88). Nevertheless, turnover rates in entry-level jobs for supported employment clients with severe mental illness appear to be no higher than those for nondisabled Americans (30,89). Some evidence suggests that employment rates may be maintained or even increased over time if intensive supports continue (46,51,85,90).

Studies of job supports are also clearly needed. Although skills training before searching for a job does not seem to be effective, there may still be a role for training after the client is employed. Training might address not only job skills but also social skills that are pertinent to a particular job (91).

A common assumption of supported employment is that attaining employment can have a secondary effect of improving self-esteem, reducing symptoms, and improving quality of life. However, the studies reviewed above lend little support for the hypothesis that supported employment programs have a generalized effect on other outcomes. Two controlled studies do show improvements in nonvocational domains (52,85), but the comprehensive nature of the interventions in these studies suggests that additional gains may have been due to program elements other than vocational interventions per se. On the other hand, the competing hypothesis that programs with high expectations lead to increased relapse rates and other negative outcomes as a result of increased stress (92,93) is not supported in the literature on supported employment. The relationship between employment and other life domains

appears to be complex, not a simple linear impact on nonvocational outcomes (94-97).

Methodological considerations

Several methodological recommendations emerge from our review. First, the use of randomized experimental designs is paramount. At this point, descriptive studies of supported employment contribute little to our understanding. Second, standardization of terms for program models, study groups, designs, and outcomes is needed. Only common terminology and categories will allow comparisons across studies. Third, programs need to be defined in terms of specific elements, implementation criteria, and personnel. Ideally, efforts to define programs more clearly will result in development of program manuals and fidelity measures (98,99).

Fourth, the services received by control groups, which often represent "standard services" in the same community, should be measured as carefully as the services received by experimental groups. Fifth, the outcomes of hybrid models of vocational services are difficult to interpret and need to be examined carefully. The simplest approach is to establish the efficacy of pure models and components before melding them with other treatment modalities. Another, more complex approach is to establish the outcomes of hybrid models and then try to test their components in further studies. Sixth, the generalizability of supported employment to the full spectrum of people with severe mental illness, not just those who are most motivated, needs to be explored further. Studies have not identified which client characteristics predict who benefits most from various vocational approaches.

One critical element in studies of supported employment is cost-effectiveness analysis (100). Particularly in this era of managed care, we need to know much more about the costs of rehabilitation and supported employment in relation to clinical services, cost offsets, and benefits. These studies should consider the client's perspective as well as the perspectives of families, health systems, and society.

Studies in the field

Several studies currently in the field should enhance our overall understanding of supported employment, including a group of eight studies funded by the Center for Mental Health Services of the Substance Abuse and Mental Health Services Administration in 1995 (101). This multisite demonstration should clarify many details about the differences between supported employment models in relation to generalizability, costs, and nonvocational outcomes.

Conclusions

This review is the first synthesis of the empirical findings on supported employment for people with severe mental illness, based mostly on recent studies. It provides benchmark statistics against which the results of future studies of supported employment may be gauged. It also has identified key principles of supported employment programs. Initial findings indicate the importance of an explicit focus on competitive employment outcomes, of direct placement, and of the integration of vocational and clinical services. Nevertheless, research on supported employment is in its infancy, and numerous methodological and substantive issues warrant further study. ♦

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