

The Quality of Supported Employment Implementation Scale

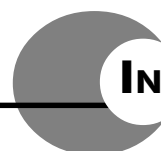
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ABSTRACT

The authors describe a 33-item interviewer-rated checklist, the Quality of Supported Employment Implementation Scale (QSEIS), designed to measure implementation of supported employment (SE) programs for people with severe mental illness (SMI). They used a 1.5-hour semi-structured interview with program directors in 32 SE programs in Kansas (KS) and New Jersey (NJ). Interviewers averaged 84% agreement in item ratings. The internal consistency for the total scale was low (Cronbach's $\alpha = .51$), but higher for four subscales: Teamwork (.74), Planning and Support (.60), Rapid Job Search (.74), and Integration with Mental Health (.62).

Substantial implementation of SE standards was found in these programs, with mean ratings exceeding 4.0 on a 5-point scale, for 18 of 33 items. Mean overall implementation was similar in both states, with somewhat different patterns, with NJ rating higher on Planning and Support, and KS rating higher on Integration of Mental Health and Rapid Job Search.

The QSEIS total scale and 4 subscales were correlated with 9 indicators of employment outcomes, obtained from a retrospective survey completed by program directors in 24 of the programs. The total QSEIS score was not significantly correlated with any of the outcome measures. Planning and Support correlated positively with job tenure ($r = .62$), but was not related to annual VR closure rate ($r = -.15$). Conversely, Rapid Job Search was negatively correlated with job tenure ($r = -.56$), while positively correlated with annual VR closure rate ($r = .46$). Thus different aspects of the supported employment approach may foster job acquisition and job retention. The authors conclude that the QSEIS is a pragmatic tool for describing SE programs for people with SMI, although more work on psychometric precision and predictive validity is needed. The survey provides norms by which other providers and other states can compare their achievement of the principles of supported employment.



INTRODUCTION

Introduced in the 1980s (Wehman, 1986), supported employment (SE) is an approach to helping people with severe disabilities work in competitive employment positions. Although its principles are well described in the literature, its implementation has been variable throughout the U.S. In this project, the authors sought to develop a checklist that concretely measures features of well-implemented SE programs. Although the current focus is on developing a scale applicable for programs serving people with severe mental illness (SMI), the ultimate goal is to develop companion scales for other disability groups.

Scales to measure quality of supported employment implementation are of interest to consumers, providers, and administrators. The recent Rehabilitation Act Amendments explicitly note the role of state VR agencies in helping consumers acquire "...information necessary to make an informed choice about the specific services, including the providers of those services, that are needed to achieve the individual's vocational goal. This information must include, at a minimum, information relating to cost, accessibility, and duration of potential services, the consumer satisfaction with those services,...the qualifications of potential service providers, the types of services offered by those providers, and the degree to which services are provided in

integrated settings" (Public Law 105-220, 1998, 361.52 (b)). The reality is quite different; however. Despite this mandate, such information typically is not available to consumers, nor do states have indicators of program quality by which they can describe supported employment services for consumers. Similarly, service providers request guidance in the form of program standards to achieve the goals articulated in supported employment legislation (e.g., diversifying employment opportunities, improving wage outcomes, serving individuals with the most significant disability). Yet, self-assessment tools are not readily available to link program content to outcomes. State agencies responsible for funding and monitoring of SE services also seek quality assessment tools tied to performance to help identify program improvement areas that can be addressed through technical assistance. Thus, neither consumers, service agencies, nor funding agencies have available at this time validated tools that tie program content to valued employment outcomes in supported employment.

Recently, several randomized controlled trials have suggested that SE is more effective than traditional vocational rehabilitation strategies for people with SMI with respect to a range of competitive employment outcomes, including employment rates, total time worked, and earnings (Bond, Drake, Mueser, & Becker, 1997b). These findings heighten the importance of defining the components of successful SE programs so that they can be replicated elsewhere. Previous efforts to develop a method to assess critical SE program components have provided insight into the best strategies for obtaining this information. In a national study of exemplary SE programs, Gurvey, Parrish, and Bond (1995) used a 49-item checklist to describe provider characteristics, funding, consumer eligibility, case management services, staffing, and support services. The survey questions were generally factual and did not give a detailed picture

of specific program procedures. McDonnell, Nofs, Hardman, and Chambless (1989) devised a 14-item checklist for monitoring a statewide SE implementation. One contribution of this study was that several items correlated with better employment outcomes. Unfortunately, the items were not specific to SE, but instead reflected good management practices (e.g., "Written training programs are developed for each work assignment."). A 28-item checklist of SE standards developed by Wood and Steere (1992) covers many important dimensions of SE, but its response format appears to be vulnerable to socially desirable responses (Perkins, 1995).

The IPS Fidelity Scale, a 15-item checklist assessing adherence to a specific SE model known as Individual Placement and Support (Bond, Becker, Drake, & Vogler, 1997a), was piloted in a sample of 27 programs that included a wide variety of vocational models. Both interrater reliability and internal consistency were adequate. The scale discriminated sharply between IPS and the non-SE vocational programs. IPS programs differed from other types of SE programs on items measuring integration of SE with mental health services and on an item measuring "zero exclusion" admission criteria. Subsequent work on the IPS scale with an expanded sample of 50 sites yielded interrater reliability exceeding .93 and internal consistency of .87 (Bond, Vogler, Becker, & Drake, 1998).

Vogler (1998) developed a 40-item scale to measure implementation of 24 SE programs in Indiana and Minnesota. Ratings were based on both face-to-face interviews with staff during site visits and telephone interviews. Agreement between interviewers was very good, but overall internal consistency for the scale was marginal (Cronbach's $\alpha = .59$). Vogler found no systematic bias in the comparison of face-to-face ratings to telephone interviews. Correlations between ratings made from interviews with program supervisors and those with line staff were

moderately high. However, ratings by follow-along specialists (i.e., staff in the Indiana SE service model who provide long-term support after consumers achieve successful VR closure status), who were less informed about many aspects of the program organization and functioning, agreed poorly with ratings by other SE staff. Vogler found no relationship between the total score for the SE implementation scale and employment outcomes. She concluded that restriction of range in the study sample limited internal consistency and correlations with outcome.

The current study was aimed at developing a brief, self-explanatory checklist, suitable for use in a telephone interview format, and ultimately as an instrument completed by a program administrator or state planner, or as a self-evaluation by a study site. Concurrent with this effort, this investigators sought to develop a method for collecting indicators of employment outcomes. The authors sought to determine whether the checklist measuring program implementation would be well-received and usable in a statewide survey, whether it could be completed in a reliable fashion, whether the items constituted an internally consistent scale, whether it aptly described services in the programs examined, and finally, whether the ratings on the implementation checklist were associated with higher rates of employment outcomes.



METHODS

NATIONAL ADVISORY BOARD

The current study was undertaken with the help of a national advisory board of experts chosen for their knowledge and expertise in SE. The point of departure included several existing SE scales, as described above. The advisory board was convened in a series of teleconferences at several stages of the process. The board

suggested a variety of additional items and descriptions of best practices (e.g., Ford, 1995; Hoff, 1997; MacDonald & Roberts, 1998; Marrone, 1996; Matrix, 1992). Next, draft versions of the implementation and employment outcome instruments described in this report were developed and circulated to the advisory board for review and revision. The instruments were piloted using 10 sites, the finding complied, and reviewed with the advisory board. Based on this initial data analysis and discussions with the advisory board, item revisions and deletions were made and four new items were added to the implementation checklist. The resultant checklists are a culmination of this interactive process. Thus, the instruments did not represent a single theoretical perspective but were based instead on a consensus process.

STUDY SITES

State administrators from Kansas (Randy Stout) and New Jersey (Steve Fishbein) provided the research team with complete rosters of program directors for the SE programs for people with SMI in their respective states. Interviewing began first in NJ. Sites were scheduled according to time availability of program directors and interviewers. Of the 21 NJ sites, 20 (95%) participated, and one did not return calls. Of the 27 KS sites, 12 (44%) agreed to participate, with two programs refusing. The remaining sites had not been interviewed at the time of this report.

Sample characteristics. There were no differences in longevity of programs between KS ($M = 5.07$ years, $SD = 3.18$), and NJ ($M = 6.71$ years, $SD = 3.08$), number of employment specialists (full-time equivalents) devoted to supported employment (KS: $M = 2.88$, $SD = 1.84$; NJ: $M = 3.34$, $SD = 1.26$), number of active consumers (KS: $M = 40.17$, $SD = 29.36$; NJ: $M = 42.85$, $SD = 17.94$), or

number of consumers per staff member (KS: \underline{M} = 16.67, \underline{SD} = 8.45; NJ: \underline{M} = 14.93, \underline{SD} = 8.38). Programs were also comparable in the number of annual admissions (KS: \underline{M} = 30.56, \underline{SD} = 24.68; NJ: \underline{M} = 27.46, \underline{SD} = 11.31) and cases closed (KS: \underline{M} = 15.00, \underline{SD} = 9.60; NJ: \underline{M} = 22.00, \underline{SD} = 10.89).

PROCEDURES

The research pilot was first presented to the study sites by the state administrators during regularly-scheduled regional and statewide meetings. The research team then contacted each SE program director (or, in a couple of instances, another staff worker from the SE program), to explain the project and determine the program director's willingness to participate in the study. A convenient telephone interview time was scheduled for those agreeing to participate.

The QSEIS was administered during a telephone interview, typically of about 1.5 hours in duration. The first three authors served as the interviewers. At least two interviewers were present during each interview (with one exception). Altogether, 9 interviews were completed with 3 interviewers and 22 with 2 interviewers.

The QSEIS interview procedure began with a few orienting remarks followed by a semi-structured interview that is scripted in the QSEIS Interview Guide. The intent of the interview questions was to be simple and direct, but minimize cueing socially desirable answers. Thus the questions were worded neutrally as much as possible. For example, the QSEIS Interview Guide question about consumer choice in job selection (versus making job placement decisions primarily on the basis of job availability) asks, "Do you have a pool of jobs you use when placing consumers?" One interviewer was designated as the primary interviewer, although the second interviewer occasionally added clarifying questions.

After the QSEIS interview was completed, the procedures for the employment outcome data

collection were explained. Following the telephone interview, the *Employment Outcomes Form* was faxed, and program directors were offered a \$100 honorarium for the time required to complete this form.

MEASURES

QSEIS. The format and structure of the QSEIS was borrowed from the IPS Fidelity Scale (Bond et al., 1997a). The QSEIS items are rated on 5-point, behaviorally-anchored scales, where 5 represents full implementation, 4 represents moderate implementation, with the remaining scale points representing increasingly less adequate implementation of the item in question. Behavioral anchors were developed through clinical judgment, trial-and-error, and prior norms in the literature (e.g., Bond et al., 1997a; Vogler, 1998). The QSEIS subscale structure (*Vocational Staffing, Organization, and Services*) also was borrowed from the IPS Fidelity Scale. Sample items are seen in Table 1 on page 78.

- **Vocational Staffing (6 items)** -- is designed to assess the commitment of the program and agency to staffing SE programs at levels appropriate for providing quality services. Examples of these items are: agency focus on SE, which assesses the ratio of agency staff devoted to SE versus other types of employment activities, and exclusive vocational focus, which rates the program on the amount of time employment specialists spend on nonvocational activities.
- **Organization (11 items)** -- assesses the organizational features of the vocational program and its relationship to mental health treatment services. Items include: attendance at clinical treatment team meetings (by employment specialists), vocational unit (i.e., whether employment specialists work as a team), and team meetings (i.e., frequency of meetings with SE supervisor). Other organization items assess the SE program's policies toward and control of admissions, including screening policy, which gauges

whether consumers are excluded on the basis of work readiness, and role of VR, which rates the extent to which state vocational rehabilitation counselors determine who is accepted for services.

- **Services Subscale (16 items)** -- examines the “nuts and bolts” of supported employment specialists’ work. Representative items include length of vocational assessment, rapid search for competitive employment, and types of follow-along supports provided.

Role of VR, role of case manager, length of vocational assessment, and prevocational activities were not scored for the first 10 interviews, because they were added after the initial pilot phase. Where appropriate, item means were substituted for these missing scores.

Employment Outcomes Form (EOF).

Sites were offered 2 options for reporting employment and program outcomes. The *EOF--Summary Version* asks sites to provide summary information and is intended for sites already compiling annual summaries for their own reporting purposes. It includes 34 items on employment status of current consumers (including job tenure, hours worked per week, job types, and wages and benefits) and 10 items on admission information, placement rates, and VR status of consumers over a recent 12-month period. The *EOF--Consumer Version* was designed for sites that did not routinely compile this type of summary information. This version is a 24-item form completed for each consumer in the supported employment program. Respondents compiled information on all consumers on their caseload, person-by-person. The individual data forms were then tabulated by the research team. In addition, all sites were asked to complete information about the current program staff, including months with agency, education level, years of experience in the field, and current caseload size.

No single indicator is adequate for summarizing the performance of a vocational pro-

gram (Bond, 1992). Moreover, higher placement rates for programs with more staff, were expected by virtue of their greater capacity. Consequently, indicators that took program capacity into consideration were sought. Thus, for outcome indicators, scores were calculated for each site by dividing the absolute rates by the number of FTE direct service staff in the SE program. Four primary indicators were used: **competitive employment rate** (among current caseload), **job tenure** (rate of jobs held for 6 months among currently employed consumers), **annual placement rate** (i.e., new placements during last year), and **annual VR successful closure rate** (i.e., rate of Status 26 closures). Five secondary employment outcome measures for the current caseload were also examined: **full-time competitive employment rate** (30 hours or more per week), **rate of those not working** on current caseload, **average wages** of those working, percentage of working consumers with **fringe benefits**, percentage of current jobs with **reasonable accommodations**.



FINDINGS

QSEIS

Respondents indicated that interview questions were easily understood and that the length of the interview was not excessive. One issue encountered was that 7 (22%) respondents had limited contact with consumers. These respondents had difficulty answering questions concerning percentage of time in specific activities; however, removing these 7 respondents affected the overall results very little. There was anecdotal evidence that the interviewers succeeded to some degree in avoiding socially desirable responses. Respon-

TABLE 1 -- EXAMPLES OF SELECTED QSEIS ITEMS

Subscale	Item	Item Point				
		1	2	3	4	
<u>Vocational Staffing</u>	VSI - <u>Agency focus on SE</u> : Ratio of vocational staff solely devoted to SE to all staff devoted to vocational services (including prevocational employment, clubhouse, agency-run employment, sheltered workshop, etc.). If staff time is split, then estimate % of time.	< 25% of total staff devoted to SE	26-50%	51-70%	71-90%	90- sta SE
<u>Organization</u>	07 - <u>Screening policy</u> : Program does not have exclusionary eligibility requirements relating to presumed job readiness, such as substance abuse, violent behavior, minimal intellectual functioning, mild symptoms, or treatment compliance. Note: requiring consumers to understand SE before admission is not an exclusion criteria.	Screening criteria are extensive and have clear intent of excluding poorer functioning individuals.		2 or more exclusion criteria, but intent is still to include most clients with SMI		Cor scr bec vie rea fun
<u>Services</u>	S5 - <u>Rapid search for competitive employment</u> : The search for competitive jobs occurs rapidly after program entry	First job application is typically > 1 year after program entry	7 months - 1 year	3 - 6 months	1 - 2 months	Firs cat < 1 pro

dents sometimes referred to changes that they were thinking of implementing, but the proposed changes would have actually scored them lower on the scale than their current practice (the basis for our ratings). For example, some respondents mentioned plans to increase the use of standardized assessment or to develop transitional employment placements.

RELIABILITY OF THE QSEIS

Inter-interviewer agreement. The agreement between interviewers was moderately high, as shown in Table 2 on the following page. At the item level, the average interrater correlation was .80, while the percentage of exact agreement on item ratings ranged from 63% to 96%, with 10 items showing 90% or more agreement, 14 items with 80% to 89% agreement, and 9 items less than 80%.

Internal consistency. Overall, internal consistency of the total scale was poor (Cronbach's $\alpha = .51$). (Within the two state subsamples, Cronbach's α for the total scale was .19 for KS and .66 for NJ.) The internal consistency coefficients for the three a priori subscales of Staffing, Organization, and Services were all poor (less than .5). As shown in Table 2, item-total correlations varied widely, with 5 items negatively correlated and 6 other items correlated less than .15. Deleting items with negative or low item-total correlations did not materially increase the internal consistency of the total scale, suggesting that the QSEIS is multidimensional. Exploratory factor analysis also proved fruitless. Four subscales were then defined based on a conceptual grouping, as follows: *Teamwork*, consisting of 3 items (VS6: Team size, O4: Vocational unit, O5: Team meetings); *Planning and Support*, consisting of 6 items (S4: Benefits, S8: Career planning, S9: Support plan, S11: Length of follow along, S12: Multiple jobs, S14: Peer support); *Rapid Job Search*, consisting of 3 items (S2: Assessment, S3: Pre-

vocational, S5: Rapid search); *Integration with Mental Health*, consisting of 5 items (VS5: Exclusive vocational focus, O1: Collocation, O2: Attend treatment meetings, O3: Contact with case managers, O11: Integration of records). These subscales proved to have marginal to adequate internal consistency: Teamwork (.74), Planning and Support (.60), Rapid Job Search (.74), and Integration with Mental Health (.62). Also, the four subscales were statistically independent, with correlations between subscales ranging from -.26 to +.25.

OVERALL DESCRIPTIVE FINDINGS FOR QSEIS

As shown in Table 2, all 33 items showed some variation, with mean item values ranging from 2.53 to 4.84 (on a 5-point scale). Although item ratings were skewed toward the high end of the scale, all 5 rating scale points were used on at least some items. The overall distribution of ratings was as follows: "5 – Full Implementation" (57%), "4 – Moderate Implementation" (16%), 1 - 3 (27%). The mean item rating across all QSEIS items was 4.09 ($SD = 0.28$). Mean ratings exceeded 4.0 on a 5-point scale for 18 of the 33 items. The last three items on the checklist (Peer support, Family involvement, and Assessing consumer satisfaction) were generally rated lower in both states.

Overall, both states showed similarly high ratings, suggesting moderate to full implementation in most of the measured areas of SE. However, there were some differences at the subscale and item levels in the two states, as shown in Table 3 on page 81. NJ had significantly higher implementation than KS on Planning and Support, while KS had significantly higher implementation than NJ on Integration of Mental Health. The difference on Rapid Job Search approached significance, with KS higher than NJ.

TABLE 2

Item Label	Agreement Between Raters (mean pairwise)	Consensus Rating	Distribution of Ratings			Correlation with QSEIS
			1-3	4	5	
<u>Vocational Staffing</u>						
VS1-Agency focus on SE	80% (.84)	3.69 (1.42)	13	5	14	.20
VS2-Staff capacity	88% (.95)	4.78 (0.490)	1	5	26	-.13
VS3-Caseload size	90% (.87)	4.53 (0.62)	2	11	19	-.01
VS4-Vocational generalists	69% (.66)	3.94 (1.13)	11	8	13	.19
VS5-Exclusive voc. focus	94% (.95)	4.53 (0.67)	3	9	20	.10
VS6-Vocational team	91% (.97)	4.34 (1.21)	4	7	21	.47**
<u>Organization</u>						
O1-Co-location with MH	94% (.87)	4.38 (1.26)	4	5	23	.38*
O2-Attend tx team meetings	88% (.96)	3.53 (1.44)	14	6	12	.25
O3-Contact with tx team	96% (.95)	4.56 (0.80)	4	5	23	.27
O4-Vocational unit	84% (.72)	4.28 (1.46)	5	3	24	.40*
O5-Team meetings	92% (.89)	4.19 (1.40)	7	3	22	.38*
O6-Information on SE	80% (.83)	3.97 (1.09)	14	3	15	.52**
O7-Screening policy	71% (.56)	4.50 (0.80)	6	4	22	.00
O8-Waiting list	84% (.96)	3.88 (1.54)	7	9	16	.19
O9-Role of VR ^a	94% (.87)	4.45 (1.10)	3	3	16	.22
O10-Role of case manager ^a	80% (.81)	3.86 (1.52)	9	0	13	-.08
O11-Integration of records	67% (.73)	3.34 (1.33)	19	4	9	.62**
<u>Services</u>						
S1-Community based	88% (.95)	3.97 (1.15)	9	9	14	.13
S2-Length of voc. assessment ^a	69% (.84)	3.36 (1.09)	13	5	4	.19
S3-Prevocational activities ^a	72% (.63)	3.86 (1.17)	8	5	9	-.02
S4-Benefits counseling	90% (-.07)	4.84 (0.51)	2	1	29	.37*
S5-Rapid job search	94% (.92)	4.16 (0.81)	8	11	13	.06
S6-Individualized job search	94% (.72)	4.50 (0.92)	4	6	22	-.14
S7-Diversity of jobs	84% (.86)	4.78 (0.49)	1	5	26	.13
S8-Career-focused employment	80% (.61)	4.00 (1.34)	9	5	18	.56**
S9-Job support plan	74% (.77)	4.03 (1.47)	8	4	20	.48**
S10-Types of follow-along	86% (.53)	4.78 (0.55)	2	3	27	.41*
S11-Length of follow-along	84% (.74)	4.34 (1.31)	7	0	25	.24
S12-Multiple jobs	88% (.61)	4.72 (0.52)	1	7	24	.00
S13-Assertive outreach	69% (.67)	3.88 (1.26)	10	9	13	.50**
S14-Peer Support	76% (.93)	2.53 (1.61)	24	1	7	.25
S15-Family involvement	63% (.74)	2.97 (1.36)	22	3	7	.15
S16-Consumer satisfaction	80% (.80)	3.41 (1.62)	16	2	14	.35*
QSEIS Total		4.09 (0.28)	-	-	-	-
SUBSCALES						
Teamwork						.51**
Planning and Support						.56***
Rapid Job Search ^a						.12
Integration with MH						.54***

* $p < .05$, ** $p < .01$, *** $p < .001$

^a $n = 22$, items not used for interviews 1-10

TABLE 3 -- COMPARISON OF KANSAS AND NEW JERSEY ON QSEIS (N = 32)

Item Label	Kansas (N = 12)	New Jersey (N = 20)	t Value
<u>Vocational Staffing</u>			
VS1-Agency focus on SE	4.58 (0.90)	3.15 (1.42)	3.49**
VS2-Staff capacity	4.75 (0.62)	4.80 (0.41)	0.28
VS3-Caseload size	4.50 (0.67)	4.55 (0.60)	0.22
VS4-Vocational generalists	3.92 (1.24)	3.95 (1.10)	0.08
VS5-Exclusive vocational focus	4.25 (0.75)	4.70 (0.57)	1.91
VS6-Vocational team	3.92 (1.44)	4.60 (0.99)	1.59
<u>Organization</u>			
O1-Co-location with MH	4.83 (0.39)	4.10 (1.52)	2.05*
O2-Attend tx team meetings	4.50 (0.90)	2.95 (1.39)	3.43**
O3-Contact with tx team	4.92 (0.29)	4.35 (0.93)	2.52*
O4-Vocational unit	3.58 (1.93)	4.70 (0.92)	1.88
O5-Team meetings	3.83 (1.64)	4.40 (1.23)	1.11
O6-Information on SE	4.00 (0.95)	3.95 (1.19)	0.12
O7-Screening policy	4.58 (0.67)	4.45 (0.89)	0.45
O8-Waiting list	4.17 (1.53)	3.70 (1.56)	0.83
O9-Role of VR*	4.22 (1.56)	4.62 (0.65)	0.71
O10-Role of case manager*	4.33 (1.41)	3.54 (1.56)	1.22
O11-Integration of records	3.67 (0.98)	3.15 (1.50)	1.06
<u>Services</u>			
S1-Community based	4.33 (0.98)	3.75 (1.21)	1.41
S2-Length of vocational assessment ^a	3.89 (1.05)	3.00 (1.00)	2.01
S3-Prevocational activities ^a	4.11 (1.27)	3.69 (1.11)	0.82
S4-Benefits counseling	4.92 (0.29)	4.80 (0.62)	0.61
S5-Rapid job search	4.42 (0.51)	4.00 (0.92)	1.64
S6-Individualized job search	4.25 (1.29)	4.65 (0.59)	1.01
S7-Diversity of jobs	5.00 (0.00)	4.65 (0.59)	2.67*
S8-Career-focused employment	3.50 (1.57)	4.30 (1.13)	1.55
S9-Job support plan	3.92 (1.44)	4.10 (1.52)	0.34
S10-Types of follow-along	4.75 (0.62)	4.80 (0.52)	0.24
S11-Length of follow-along	3.25 (1.66)	5.00 (0.00)	3.66**
S12-Multiple jobs	4.75 (0.45)	4.70 (0.57)	0.26
S13-Assertive outreach	3.58 (1.56)	4.05 (1.05)	0.92
S14-Peer support	1.42 (0.79)	3.20 (1.61)	4.18***
S15-Family involvement	2.50 (1.31)	3.25 (1.33)	1.55
S16-Consumer satisfaction	3.00 (1.71)	3.65 (1.57)	1.10
QSEIS Total^a	3.99 (0.23)	4.16 (0.300)	1.42
SUBSCALES			
Teamwork	3.78 (1.46)	4.57 (0.72)	1.75
Planning and Support	3.63 (0.69)	4.35 (0.57)	3.23**
Rapid Job Search ^a	4.15 (0.77)	3.49 (0.80)	1.94
Integration with MH	4.43 (0.31)	3.85 (0.81)	2.90**

* p < .05, ** p < .01, *** p < .001

^a Ks (n = 9), NJ (n = 13). Item not used for site 1-10.

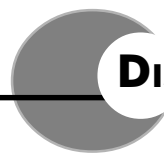
EMPLOYMENT OUTCOMES

Altogether, 24 (75%) sites returned Employment Outcome Forms [10 (83%) KS sites and 14 (70%) NJ sites]; 2 had partly usable data and 22 were filled out completely. Nineteen sites (79%) opted for the summary version of the form, while 5 (21%) used the individual consumer version. As shown in Table 4 on page the following page, KS and NJ generally did not differ on employment outcomes, with a competitive employment rate (per-FTE) among active consumers of 7.0 ($SD = 4.5$) for KS and 7.0 ($SD = 2.9$) for NJ. Overall, consumers averaged an hourly wage of \$6.66 ($SD = \1.01), and 33% of those had fringe benefits. With regard to job tenure, NJ sites averaged a higher rate of current consumers employed for more than 6 months per FTE ($M = 4.5$, $SD = 2.2$) than did KS ($M = 2.7$, $SD = 1.9$), $t = 2.09$, $p < .05$. On the other hand, compared to NJ, KS sites averaged somewhat higher per-FTE annual rates for new job placements (12.4 vs. 8.7) and admissions (13.3 vs. 10.3). Together, these findings are consistent with those from the QSEIS suggesting that NJ programs provide follow-along services for a longer time than do KS programs, while admitting new consumers at a slower rate.

CORRELATIONS BETWEEN THE QSEIS AND EMPLOYMENT OUTCOMES

The next step was to explore the relationship between SE implementation measures and employment outcome indicators. From the QSEIS, the total scale and the four post hoc subscales were examined. In addition, correlations between QSEIS items and employment outcomes were examined, but those correlations were generally nonsignificant and not reported. With the large number of correlations and small sample size, this stage of analysis should be regarded as exploratory. Both the actual size of the correlations as well as the two-tailed significance level were examined.

As shown in Table 5 on page 84, the QSEIS total score had small and nonsignificant correlations with all 9 employment outcome indicators. Of the four post hoc subscales, Planning and Support and Rapid Job Search had correlational relationships with plausible theoretical interpretations. Planning and Support was positively correlated with job tenure, consistent with the view that systematic follow-along services lead to better job retention. However, Planning and Support contributed little to higher VR closure rates, to judge from the slightly negative, nonsignificant correlation. Conversely, Rapid Job Search was significantly negatively correlated with job tenure, while correlating moderately (.46), although not significantly, with VR closure rate. Teamwork was negatively related to both placement rate and to VR closure rate, while Integration with Mental Health was not significantly correlated with any employment outcome indicator.



DISCUSSION

This survey suggests how far supported employment has evolved since its introduction into the psychiatric rehabilitation field more than a decade ago (Mellen & Danley, 1987). Prior to its inception, state-of-the-art vocational services for people with mental illness included clubhouses, transitional jobs, time-limited support and prevocational skills training (Bond, 1992). From the current perspective it is possible to forget that supported employment principles were revolutionary when they first appeared. Now, there are few SE programs in either of these two states that do not exemplify many basic SE principles. Combined with results from surveys in other states (Vogler, 1998), it appears that basic ideas for SE are wide-spread among mental health centers.

Although both states had similar levels of SE implementation, they differed somewhat in

TABLE 4 -- EMPLOYMENT OUTCOMES (N = 24)

	Total Annual Rates			Per-FTE Annual Rates		
Measure	n	M (SD)	%	Kansas M (SD)	New Jersey M (SD)	t Value
Admissions and Closures						
Admissions	23	29.0 (17.2)		13.3 (10.7)	10.3 (3.5)	0.80
Closures	24	19.8 (11.2)		7.3 (5.9)	8.4 (4.3)	0.52
Clients served	19	54.7 (30.3)		18.3 (10.0)	24.1 (11.0)	1.18
VR closure rate	21	9.7 (6.9)		4.6 (3.5)	3.1 (1.6)	1.23
Placements (most recent 12 month period)						
New job placements	23	26.7 (19.8)		12.4 (10.6)	8.7 (5.1)	1.02
Unduplicated count or consumers in new	22	21.2 (16.9)		9.3 (7.4)	7.4 (5.2)	0.73
Jobs ended	21	11.2 (10.3)		5.1 (4.7)	4.4 (3.4)	0.39
More than on placement	22	5.6 (5.9)		3.0 (3.1)	1.7 (1.3)	1.23
Current Status						
Clients not employed	24	18.3 (13.0)		7.3 (4.2)	6.5 (4.0)	0.45
Competitively employed	24	19.4 (11.9)		7.0 (4.5)	7.0 (2.9)	0.02
Wages and Benefits						
Wages	23	\$6.73		\$6.35 (0.84)	\$6.97 (1.18)	1.37
Employed with fringe benefits	22	5.2 (6.9)	32%	33%	32%	
Placements with job accommodations	21	12.0 (17.6)	32%	40%	26%	
Job Tenure						
< 3 months	23	4.3 (4.3)	28%	2.2 (1.9)	1.3 (0.7)	1.37
3 - 6 months	23	4.7 (5.0)	21%	2.1 (1.9)	1.2 (0.8)	1.40
> 6 months	23	11.1 (7.3)	55%	2.7 (1.9)	4.5 (2.2)	2.09*

* p < .05

their emphases. These differences related partly to the influence of funding agencies (i.e., special program initiatives in NJ and closure policies in KS). The authors also speculate that the different patterns of implementation in the two states may be attributed partly to the challenges of providing SE services in predominantly urban and rural states. Further research will be necessary to determine if geographical differences influence the practice of supported employment.

PSYCHOMETRIC ISSUES

The QSEIS constitutes a set of face-valid items for describing SE programs for people with

SMI. It provides a common language for programs to discuss their method of serving consumers. If used with a semi-structured interview given to a knowledgeable staff worker, it can be completed with good agreement between interviewers. However, the QSEIS did not constitute a unitary scale. The post hoc subscales suggest that a multidimensional approach will be more fruitful.

The authors attribute the lack of internal consistency partly to a restriction of range among the sites interviewed. Studies of other fidelity scales have also found low interitem correlations in relatively homogeneous samples

**TABLE 5 -- QSEIS AND SUBSCALE CORRELATIONS WITH OUTCOME (N = 23)**

Measure	n	QSEIS Total	Teamwork	Planning & Support	Rapid Job Search (n)	Integration with MH
Competitively employment rate for current caseload	24	.16	-.26	.34	-20 (16)	.33
Rate of jobs held for 6 months or more	23	.37	.25	.62***	-.56* (15)	.21
New job placement rate during last year	23	-.15	-.42*	-.16	.33 (15)	.27
VR closure rate for last year	21	-.05	-.52*	-.15	.46 (13)	.35
Full-time Competitive employment rate (≥ 30 hrs.)	22	.38	-.05	.14	.46 (14)	.38
Rate not working for current caseload	24	-.08	-.23	-.19	.34 (15)	.03
Average wage of working consumers	23	.01	.28	.12	-.30 (15)	.11
Percentage of working consumers w/fringe benefits	23	.24	-.29	-.00	.52* (16)	.40
Percentage of working consumers with accommodations	21	.31	.29	.14	.18 (14)	.36

(Vogler, 1998). Continued work is needed to establish both the factor structure and external validity for the scale, both of which may be facilitated by contrasting ratings for established programs with programs that do not subscribe to a supported employment model. A larger study sample is also needed to find a stable factor structure.

Predictive validity has been found for implementation measures examined for other program models (e. g., McGrew Bond, Dietzen, & Salyers, 1994). Using the same reasoning, the researchers had hoped to find significant positive correlations between the implementation items and factors and employment outcome indicators. In retrospect, this exploratory analysis failed to take into account several factors. One concerned the specific content of some of the QSEIS items, which one would not expect to predict

higher employment rates. For example, the item concerning the inclusion of all clients without pre-screening is an important SE value, but it may lead to lower employment rates. A second factor concerned the difficulties in defining reliable and valid outcome indicators. Client characteristics, such as severity of illness, lack of job skills, and education level, are not captured by the employment indicators used in this report. Thus, any aggregate measures of employment placement rates should be viewed cautiously, because these measures do not tell us the severity of disability of those helped to find employment.

The validity of any outcome measure also depends on how the program defines the active caseload on which outcome statistics are based. The authors speculate that the SE practices in KS, which involve transferring consumers to mental health case managers once consumers

achieve “successful closure” from the state vocational rehabilitation office’s standpoint, may have understated the competitive employment rate for the active caseload. In other words, it is possible that KS programs, by reporting the status of current consumers, did not fully represent the past successes of employed consumers who, because of their transfer from SE caseloads to those of case managers, were not counted in their employment summaries. In future applications, the Employment Outcomes Form will be modified to capture employment outcomes for consumers who have been transferred.

USING PERFORMANCE INDICATORS FOR FUNDING DECISIONS?

One of the prime motivations for developing the QSEIS concerned a search for an alternative to current trends in SE funding. *Outcome-based funding* refers to reimbursement for program services based on actual outcomes. In the case of supported employment, outcome-based funding refers to payment for successful case closures or other such employment indicators. For example, one such scheme, used by the Social Security Administration (SSA) in its Alternate Participant Program, provides for a one-time payment to providers upon successful completion of 9 months of employment at a Substantial Gainful Activity wage level. Versions of outcome-based funding are now in practice in some states, such as Massachusetts and Oklahoma, with plans contemplated for other service systems, such as New York City (Pascaris, 1999). A basic question is whether rewarding agencies (or service systems) for increasing employment rates among a target group actually leads to better performance.

In addition to these concerns about its effectiveness, experiences at the ground level with outcome-based funding designs suggest that such arrangements create uncertainty and stress for provider agencies. The funding design used

by SSA requires providers to assume substantial risks without assurances of compensation. By contrast, outcome-based funding designs in Oklahoma and Massachusetts provide for multiple payment points for achievement of intermediate goals (O’Brien & Cook, 1998). In these two states, funding agencies have made a good faith effort to fairly cost-out services consistent with the population to be served and the outcomes required. Even though this financial risk-reward arrangement is more favorable for provider agencies, it has not completely eliminated financial risk for providers. Determining equitable funding formulas poses a difficult challenge, particularly when attempting to respond to individuals with complex employment issues.

The findings from the current study suggest another problem with outcome-based funding. If the VR closure rate is used as the primary indicator of performance, then it will not necessarily lead to desired outcomes with regard to job tenure. As noted above, those programs that more fully implemented items related to Planning and Support had better job tenure, consistent with some studies suggesting the importance of long-term supports (McHugo, Drake, & Becker, 1998). However, the Planning and Support subscale did not increase VR closure rates. In other words, choice of employment outcome indicator is a critical decision that may shape the style of employment services. Alternatively, by encouraging programs to examine their implementation standards, it may be possible to achieve outcomes that optimize placement rates and job tenure. We know, for example, that attention to consumer preferences influences job tenure (Becker, Drake, Farabaugh, & Bond, 1996); therefore, programs focusing on consumer preferences should improve this outcome. It should be possible to attain this goal while emphasizing rapid job search strategies.

Tools such as a validated QSEIS could be helpful in supporting a continuous self-assessment effort. However, progress in developing performance indicators is crude at best. Indicators described in this report should not be used to make reimbursement decisions. The researchers believe that funding schemes that incorporate both implementation and outcome indicators will ultimately prove to be the most useful.

IMPLICATIONS FOR PRACTITIONERS

Using the QSEIS for statewide monitoring. One possible use of the QSEIS is to provide comparative data to state planners regarding implementation of supported employment within their states. Examination of individual items permits planners to decide whether a particular item fits with their objectives for the state and if so, then to decide whether technical assistance might be desirable. To use the example of New Jersey, the relatively low score for S3 (Prevocational activities) was not of concern to the state administrator, because the “New Jersey” model endorses prevocational groups as a method to engage consumers who are ambivalent about beginning a job search. On the other hand, the relatively low scores on O2 (Attending treatment team meetings) did concern him, and did suggest an area for further inquiry and pos-

sible intervention, because the principle of close integration of rehabilitation and treatment is part of the statewide model.

Using the QSEIS as a self-assessment tool for individual agencies. The QSEIS might be used by providers to track SE implementation over time. This use is of specific interest to newly-developed programs, who can benefit by having a target to move toward. In the application of the QSEIS within individual agencies, SE programs may be more interested in comparisons of their QSEIS ratings with their prior ratings than in comparisons to normative standards. Repeated use of implementation scales has been employed, with some success, to monitor newly developed case management programs (Bond, Fekete, & Salyers, in press) and supported employment programs (McCarthy, Thompson, & Olson, 1998).

Using the QSEIS as an informational tool for consumers. In principle, the QSEIS should provide a basis for explaining how a program operates in concrete terms that can be understood by mental health consumers and their families. This function has not yet been field-tested, and it is likely that some of the terminology needs to be simplified to make it more user-friendly for the lay public. If the mandate from Public Law 105-220 is implemented, then this effort is worth undertaking.

References:

Becker, D. R., Drake, R. E., Farabaugh, A., & Bond, G. R. (1996). Job preferences of clients with severe psychiatric disorders participating in supported employment programs. Psychiatric Services, *47*, 1223-1226.

Bond, G. R. (1992). Vocational rehabilitation. In R. P. Liberman (Ed.), Handbook of psychiatric rehabilitation (pp. 244-275). New York: Macmillan.

Bond, G. R., Becker, D. R., Drake, R. E., & Vogler, K. M. (1997a). A fidelity scale for the Individual Placement and Support model of supported employment. Rehabilitation Counseling Bulletin, *40*, 265-284.

Bond, G. R., Drake, R. E., Mueser, K. T., & Becker, D. R. (1997b). An update on supported employment for people with severe mental illness. Psychiatric Services, *48*, 335-346.

Bond, G. R., Fekete, D. M., & Salyers, M. P. (in press). ACT fidelity scale: A practical application in a statewide project. In K. M. Coughlin (Ed.), 1999 Behavioral outcomes and guidelines source-book. New York, NY: Faulkner & Gray.

Bond, G. R., Vogler, K. M., Becker, D. R., & Drake, R. E. (1998, August). Measurement of fidelity of implementation in supported employment programs. Paper presented at the Annual Convention of the American Psychological Association, San Francisco, CA.

Ford, L. H. (1995). Providing employment support for people with long-term mental illness. Baltimore: Paul H. Brookes.

Gervery, R., Parrish, A., & Bond, G. R. (1995). Survey of exemplary supported employment programs for persons with psychiatric disabilities. Journal of Vocational Rehabilitation, *5*, 115-125.

Hoff, D. (1997). Quality employment services: Will you know it when you see it?. Boston, MA: Institute for Community Inclusion, Children's Hospital.

MacDonald, R., & Roberts, M. (1998). Supported employment quality service indicators : Boggs Center — UAP and NJ APSE (Available from Melissa Roberts, UMDNJ, 1776 Raritan Road, Scotch Plains, NJ 07076).

Marrone, J. (1996). Managing employment with care: Better practices in employment for a state/county/provincial department of mental health to fund, support and monitor. Boston, MA: Institute for Community Inclusion, Children's Hospital.

Matrix. (1992). Quality indicators for supported employment programs servicing persons with cognitive, psychiatric, and physical disabilities (Mid Atlantic Regional Information Exchange). Philadelphia, PA: Matrix Research Institute.

McCarthy, D., Thompson, D., & Olson, S. (1998). Planning a statewide project to convert day treatment to supported employment. Psychiatric Rehabilitation Journal, *22*(1), 30-33.

McDonnell, J., Nofs, D., Hardman, M., & Chambless, C. (1989). An analysis of the procedural components of supported employment programs associated with employment outcomes. Journal of Applied Behavior Analysis, 22, 417-428.

McGrew, J. H., Bond, G. R., Dietzen, L. L., & Salyers, M. P. (1994). Measuring the fidelity of implementation of a mental health program model. Journal of Consulting and Clinical Psychology, 62, 670-678.

McHugo, G. J., Drake, R. E., & Becker, D. R. (1998). The durability of supported employment effects. Psychiatric Rehabilitation Journal, 22(1), 55-61.

Mellen, V., & Danley, K. (1987). Special issue: Supported employment for persons with severe mental illness. Psychosocial Rehabilitation Journal, 9(2).

O'Brien, D., & Cook, B. (1998). Oklahoma Milestone Payment System. [Online]. Available: (<http://www.onenet.net/~home/milestone>).

Perkins, D. V. (1995). Program evaluation report to Tri-County Center: Community Integration Initiation Establishment Grant. Muncie, IN: Ball State University.

Public Law 105-220. (1998). Workforce Investment Act of 1998, Title IV. .

Vogler, K. M. (1998). A fidelity study of the Indiana Supported Employment Model for individuals with severe mental illness. Unpublished dissertation, Indiana University-Purdue University Indianapolis, Indianapolis, IN.

Wehman, P. (1986). Supported competitive employment for persons with severe disabilities. Journal of Applied Rehabilitation Counseling, 17, 24-29.

Wood, R., & Steere, D. (1992). Evaluating quality in supported employment: The Standards of excellence for employment support services. Journal of Vocational Rehabilitation, 2, 35-45.