

Journal of Rehabilitation
2014, Volume 80, No. 2, 41-46

Agency Setting as a Factor in the Effectiveness of Supported Employment Programs

Robert Evert Cimera
Kent State University

This study investigated whether being affiliated with a sheltered workshop had an effect on an agency's ability to provide effective and efficient supported employment services. To this end, two groups of supported employees were compared—31 supported employees served by agencies that only had supported employment programs and 31 supported employees served by agencies that also had facility-based programs. Preliminary data indicate that supported employees from agencies with sheltered workshops maintained their employment in the community 2.5 months longer (10.84 v. 8.32 months) and incurred 41.6% fewer costs (\$399.43 v. \$684.38 per month) than matched peers from supported employment-only agencies. However, these results may have been influenced by factors other than the presence of pre-vocational programs. Additional research will need to explore this critical issue.

In a recent study, Cimera (in press) examined two groups of supported employees. One group received follow along services in the traditional manner—from job coaches and other adult vocational agency staff. The other group received follow along services from individuals who were not employed by vocational agencies. For instance, follow along services could be provided by friends and family members of the supported employee. Both groups of supported employees had similar demographics across six variables (e.g., disabilities, offensive and self-abusive behaviors).

Cimera (in press) found that not only were individual service providers more cost-effective than agency staff, but their supported employees were also more likely to keep their jobs. Specifically, the average individual-provided supported employee (i.e., supported employees who received services from non-agency staff) obtained services costing funding sources \$382 per month. Agency-provided supported employees with the same combination of disabilities and behavioral ratings cost an average of \$808 per month—a 111.5% increase over the individual-provided supported employees. Further, 61.5% of the individual-provided supported employees were still employed in the community

three months after data were initially collected, compared to only 33.3% of the agency-provided supported employees. However, the most surprising finding of the study was that 55.6% of the agency-provided supported employees ended up in facility-based programs, such as sheltered workshops; whereas, only 7.7% of the individual-provided supported employees went into segregated placements after exiting their competitive positions within the community.

The author theorized that one potential explanation as to why so many agency-provided supported employees exited their jobs and went to sheltered workshops was that job coaches affiliated with sheltered workshops might be less motivated to maintain positions within the community since the supported employee always had sheltered placements as an option. In other words, the presence of sheltered workshops might have indirectly undermined the effectiveness of the supported employment programs. Other authors have voiced similar concerns (Griffin, 1996; McGaughey, Kiernan, McNally, Gilmore, and Keith, 1995; Migliore, Mank, Grossi, & Rogan, 2007; Murphy and Rogan, 1995).

Does being associated with facility-based programs undermine an agency's commitment to facilitating community-based, competitive employment? This is an interesting question. The inherent concern is whether an adult service agency can be both pro-community employment and operate a sheltered workshop (Mank and Grossi, 2013; Murphy and

Robert Evert Cimera, Ph.D., Kent State University, 405 White Hall, Kent, Ohio 44242.

Email: rcimera@kent.edu

Rogan, 1995). Further, having both programs might somehow impair the ability to do one of them well. Perhaps, as speculated by Cimera (in press), having a sheltered workshop to "fall back on" would take away some of the motivation to provide exceptional services to supported employees. Or perhaps agencies would use their supported employment programs to help offset the cost of the more expensive facility-based programs, thus inflating the cost of community-based employment. Although the debate between the philosophies of sheltered and supported employment has raged for many years (cf. Gill, 2005; Mank, Cioffi, and Yovanoff, 1998; Rusch and Braddock, 2004), issues regarding the impact that sheltered workshops have on how well agencies provide supported employment services have yet to be explored in the literature.

The present study sought to begin to address this gap in the literature by examining two groups of supported employees—one comprised of individuals who received services from a vocational agency that also had a sheltered workshop, and the other containing individuals who received services from agencies providing only supported employment. The a priori hypothesis was that agencies specializing in only supported employment would be more effective and efficient at providing community-based programs. Further, supported employee-only agencies would likely produce supported employees who kept their jobs longer and would utilize services that were less costly to funding agencies (i.e., more cost-effective) than agencies that also had sheltered workshops.

Method

Source of Data

Data for this study were provided by a Midwestern state's Department of Health Services (DHS). It included: (a) detailed information on each supported employee's diagnosis (-es),

functional abilities, and other demographics, (b) the amount Family Care and Waiver funding systems reimbursed service providers for supported employment services, (c) the name of the vocational agency providing the supported employment services, and (d) whether the agency also provided "pre-vocational" services (e.g., facility-based programs).

Participants

On July 26th, 2011, 227 workers with disabilities were receiving supported employment follow along services from 96 different service providers. Fifty-two (54.2%) of these service providers did not have facility-based programs (e.g., sheltered workshops). The remaining 44 (45.8%) supported employment service providers did. Of the 227 supported employees served, 51 (22.5%) received services from the non-sheltered workshop agencies while 176 (77.5%) received service from agencies with sheltered workshops.

In order to determine which group produced the most cost-effective outcomes, supported employees from the non-sheltered workshop cohort were matched to supported employees from the sheltered workshop cohort. Matches were made across ten variables, including the presence of: (a) autism, (b) intellectual disabilities, (c) physical disability, (d) mental illness, (e) blindness, (f) deafness, (g) emotional-behavioral disorders, (h) offensive behaviors, (i) communication deficits, and (j) toileting difficulties. To be matched, supported employees had to have exactly the same combination of demographics. Of the 51 supported employees being served by agencies without sheltered workshops, 31 had a comparable peer in the other group. Thus, the sample for this study was 62 (i.e., two groups of 31 supported employees). Demographics for each cohort are presented in Table 1.

Variables

Sheltered workshop agencies and non-sheltered workshop agencies. "Sheltered workshop agencies" were defined as adult vocational programs that billed the State's Family Care and Waiver funding systems for supported employment and "pre-vocational" services (i.e., programs in facility-based programs). "Non-sheltered workshop agencies" were vocational programs that only billed for supported employment services.

Matching variables. Each matching variable was dichotomous. Participants either had a diagnosis of autism or they didn't. The same was true for intellectual disabilities, physical disabilities, emotional-behavioral disorders, blindness, deafness, and mental illnesses. "Toileting difficulties" were defined by the State's *Long-Term Care Functional Screening Assessment-Version 3* as a reoccurring need to have somebody physically present to assist in the act of toileting, including providing supervision, prompting, and hands-on assistance (Wisconsin Department of Health Services, 2009). "Communications deficits"

Table 1.

Demographics of Supported Employees from Both Cohorts

	Non-Sheltered Workshop Agencies	Agencies with Sheltered Workshops
Sample Size	31	31
Autism	19.4%	19.4%
Emotional-Behavioral Disorder	3.2%	3.2%
Blind	0.0%	0.0%
Deaf	0.0%	0.0%
Intellectual Disability	77.4%	77.4%
Physical Disability	6.2%	6.2%
Mental Illness	0.0%	0.0%
Multiple Disabilities	22.6%	22.6%
Communication Deficits	32.3%	32.3%
Offensive Behaviors	16.1%	16.1%
Toileting Difficulties	16.1%	16.1%
Multiple Functional Difficulties	19.4%	19.4%

Note: Given that individuals might have had multiple disabilities, the percentages displayed here do not sum to 100%.

were defined as when an individual could only communicate "basic needs" or had "no effective communication (including with the use adaptive technology)." Finally, "offensive behavior" was defined as a history of aggressive behavior toward others.

Autism, intellectual disabilities, physical disabilities, emotional-behavioral disorders, blindness, deafness, and mental illnesses were selected as matching criteria because they represented a diverse array of possible diagnoses experienced by the 62 participants. Further, research has found that individuals with these disabilities tend to achieve different vocational outcomes and have different rates of cost-effectiveness (Cimera, 2009).

Offensive behaviors, communication skills, and toileting abilities were utilized in the matching criteria as an attempt to distinguish the level of functioning ability that occurs within disability categories. Using the *Long-Term Care Functional Screening Assessment-Version 3* (Wisconsin Department of Health Services, 2009), data for the matching variables were entered into the State-operated database by each supported employee's case coordinator at the time individuals applied for their program as well as each year thereafter. The demographic data utilized for this study were the most up-to-date available.

Cost of services. Supported employment services that were not provided directly by funding sources were contracted to adult service providers. The contracted amount for these services are considered costs of supported employment to the funders. For the purposes of this study, total cost of the services contracted to vocational agencies was divided by the number of months services were provided, thereby producing a per-month-cost of service.

Months of services. Services provided by vocational agencies were reimbursed by funding sources on a monthly basis. If services were provided on only one day of any given month, that period was counted here as a full month of service.

Research Questions

This study investigated two questions. First, it attempted to determine whether supported employees trained by agencies that did not have sheltered workshops maintained their positions in the community longer than did supported employees with similar demographics who were trained by agencies with sheltered workshops. The second question attempted to determine whether supported employees from non-sheltered workshop agencies generated fewer costs to funding sources than their comparable peers from the sheltered workshop cohort.

Statistical Analyses

For the first research question investigated, the number of months of service received by each supported employee from the non-sheltered workshop cohort was compared to the number of months of service received by the corresponding supported employee (i.e., the matched supported employee with the same demographics) from the sheltered workshop

cohort. For the second research question, the per-month-cost of services funded by funding sources was compared in a similar manner. In both cases, two-tailed, t-tests for matched samples were conducted to evaluate differences between the sheltered workshop and non-sheltered workshop groups.

Results

Question 1: Do supported employees from agencies without sheltered workshops receive services longer than supported employees from agencies with sheltered workshops?

As can be seen in Table 2, supported employees from the non-sheltered workshop cohort received services for an average of 8.32 months. Supported employees from the sheltered workshop cohort received services for an average of 10.84 months. In twenty out of the thirty-one cases (64.5%), the supported employee from the sheltered workshop cohort received services longer than their matched peer from the non-sheltered workshop cohort. However, examined using a two-tailed, t-test for matched pairs, this result wasn't statistically significant at the 0.05 level ($t(30) = -1.74$; $p = .091$).

Question 2: Do supported employees from agencies without sheltered workshops receive services that are less costly than supported employees from agencies with sheltered workshops?

As can also be seen in Table 2, supported employees from the non-sheltered workshop cohort received services costing funding agencies an average of \$5,696, or \$684.38 per month of service. In comparison, supported employees from the sheltered workshop cohort received services costing an average of \$4,329, or \$399.43 per month of service. In twenty-one out of the thirty-one cases (67.7%), supported employees from the sheltered workshop cohort cost less to serve per month than did their matched peers from the non-sheltered workshop cohort. Evaluated using a two-tailed, t-test for matched pairs, this result was statistically significant at the 0.05 level ($t(30) = 2.05$; $p = .050$).

Discussion

This preliminary study sought to determine whether being affiliated with sheltered workshops impacted a supported employment program's ability to provide effective and cost effective vocational services to people with disabilities. The a priori hypothesis was that agencies providing only supported employment services would produce supported employees who would keep the jobs longer and receive less costly services agencies that offered both supported and sheltered employment programs. The initial assumption was that the supported employment-only agencies would be philosophically more committed to facilitating community-based, competitive employment than agencies that also had segregated programs. Further, it was assumed that staff from agencies with facility-based programs would use sheltered workshops as a "fall back" option; that is, they would be more likely to let positions in the community fail because supported employees could always return to the sheltered workshop. Based upon the data presented here, it would appear that the opposite is true.

Specifically, this study found that supported employees from agencies with sheltered workshops averaged receiving services 2.52 months longer than did supported employees from non-sheltered workshop agencies (i.e., 10.84 v. 8.32 months). They also cost 41.6% less to serve per month (i.e., \$399.43 v. \$684.38).

The explanation for these findings isn't clear. Taken at face value, it would seem that the presence of a sheltered workshop would somehow enable agencies to provide better supported employment services. Perhaps, supported employees from these agencies participated in sheltered workshops and learned skills that would later help them once placed in the community. This, however, runs contrary to two recent studies.

Cimera (2011) investigated two groups of 9,808 supported employees with intellectual disabilities—one group who were participated in sheltered workshops prior to becoming supported employees and another group who did not. He found that the supported employees who were not in sheltered workshops worked more hours, earned more per week, and cost less to serve than former sheltered employees. Cimera, Wehman, West, and Burgess (2012) found similar results for individuals with autism spectrum disorder (ASD).

The conclusion that these authors came to was that individuals learn skills and behaviors in facility-based programs that do not translate well to competitive employment within the community. For example, in sheltered workshops, workers may become dependent upon constant supervision and immediate correction. Individuals who used to be in sheltered workshops thus had to "unlearn" these skills in order to be successful supported employees, which resulted in more job coach intervention and more cost to funding sources. If these conclusions are accurate, it seems unlikely that the supported employees in the sheltered workshop cohort investigated here somehow benefited from being in segregated placements. Further, there is no evidence to suggest that the supported employees in this study ever participated in facility-based programs.

The question arises: If supported employees do not directly benefit from the presence of sheltered workshops, why was there such a stark difference in outcomes achieved by the two groups investigated here? The answer would seem to lay with some other characteristics that differentiate the two types of agencies.

For example, one potential difference may be the length of time agencies have been in business. It may be that supported employment-only agencies were much newer to the field than

agencies that also have facility-based programs. Consequently, perhaps level of experience at providing services in the community is responsible for the results presented here. Perhaps the sheltered workshop agencies were better at providing supported employment services, not because they had pre-vocational programs, but because they have been facilitating community-based, competitive employment longer and, therefore, have developed more effective training strategies or had more experienced staff.

Another potential difference between these two groups maybe the number of people each cohort of agencies served. For instance, perhaps the sheltered workshop agencies served more supported employees and, therefore, produced better outcomes because of their familiarity with various disabling conditions or the number of times they have provided services. In other words, perhaps agencies with sheltered workshops were better able to provide appropriate job matches, or better training, because they have had more experience doing so. This hypothesis seems likely given that agencies with sheltered workshops

Table 2.

Outcomes Achieved by Matched Pairs

Agencies without Sheltered Workshops				Agencies with Sheltered Workshops			
Matched Pair #	Total Cost of Services	Months of Service	Cost-per-Month	Total Cost of Services	Months of Service*	Cost-Per-Month**	
1	\$2,370	3	\$790.07	\$1,329	14	\$94.91	
2	\$35,964	24	\$1,498.51	\$10,553	11	\$959.34	
3	\$2,285	8	\$285.59	\$2,095	11	\$190.43	
4	\$990	8	\$123.75	\$1,142	10	\$114.21	
5	\$270	3	\$90.00	\$2,363	16	\$147.66	
6	\$19,552	19	\$1,029.05	\$1,264	11	\$114.84	
7	\$4,926	9	\$547.33	\$1,270	7	\$181.43	
8	\$9,628	12	\$802.33	\$1,382	13	\$106.33	
9	\$3,791	12	\$315.91	\$4,930	18	\$273.87	
10	\$11,442	5	\$2,288.48	\$1,423	4	\$355.76	
11	\$2,840	5	\$568.00	\$1,726	11	\$156.94	
12	\$10,588	16	\$661.75	\$1,463	4	\$365.63	
13	\$1,109	9	\$123.24	\$10,702	16	\$668.90	
14	\$11,507	17	\$676.85	\$19,328	22	\$878.53	
15	\$7,269	8	\$908.57	\$5,428	25	\$217.14	
16	\$8,018	10	\$801.80	\$23,947	14	\$1,710.52	
17	\$1,660	3	\$553.33	\$2,898	5	\$579.60	
18	\$1,043	4	\$260.63	\$6,515	17	\$383.23	
19	\$11,340	16	\$708.75	\$2,828	10	\$282.80	
20	\$810	3	\$270.00	\$6,618	11	\$601.62	
21	\$2,355	6	\$392.50	\$9,767	10	\$976.67	
22	\$4,108	8	\$513.49	\$538	1	\$538.00	
23	\$2,240	9	\$248.89	\$489	7	\$69.85	
24	\$1,381	4	\$345.13	\$706	5	\$141.23	
25	\$1,078	4	\$269.40	\$182	2	\$90.91	
26	\$2,370	3	\$790.07	\$505	1	\$505.41	
27	\$3,456	12	\$288.00	\$102	5	\$20.30	
28	\$255	1	\$255.00	\$4,930	18	\$273.87	
29	\$240	2	\$120.00	\$1,726	13	\$132.79	
30	\$180	1	\$180.00	\$560	14	\$40.00	
31	\$11,507	14	\$821.89	\$5,500	10	\$550.02	
Averages	\$5,696	8.32	\$684.38	\$4,329	10.84	\$399.43	

*t(30) = -1.74; p = .091

**t(30) = 2.05; p = .050

accounted for only 45.8% of the total number of agencies providing supported employment services in the participating state, yet provided services to 77.5% of the state's supported employees.

Limitations of the Study

Unfortunately, the present study did not include data on the length of time agencies have been in business, nor the amount of experience they have providing supported employment services. Consequently, the present study cannot determine if these variables somehow impacted the results described above.

Moreover, the present study only contained data from sixty-two supported employees—thirty-one in each cohort. Had it had a greater sample size, its results may have been different. The same maybe true if the study included data from multiple states.

Additionally, the present study utilized ten demographic variables to match supported employees from the sheltered workshop and non-sheltered workshop groups. It may be that these two groups were different across some other demographic (e.g., ethnicity or region of residence) that had a greater impact on the outcomes than did the presence of sheltered workshops.

Finally, this study explored the number of months services were provided as a way of identifying length of employment. By definition, supported employees receive ongoing support (Federal Register, 1984). However, it is not unheard of for people to "graduate" from supported employment and simply become "workers" without support from adult service agencies. So it may have been that the individuals in the non-sheltered workshop cohort all stopped receiving services while continuing to maintain their jobs in the community. The present study did not examine this possibility.

Future Areas of Research

Determining why some vocational agencies are better at providing supported employment services is of utmost importance to the field, the taxpayer, and individuals with disabilities. Given that the present study was a preliminary examination, clearly additional research is needed to investigate this critical issue.

In addition to examining the actual length of employment, future research will also need to investigate whether other agency characteristics may impact the quality of services that agencies provide. For example, future research should determine whether job coaches with college degrees provide better training than job coaches with only high school diplomas or whether attending seminars through professional organizations (e.g., APSE) improves the quality of services provided by agency staff.

Finally, future research should also include larger sample sizes. As has been said previously, perhaps this study may have found different results had more than sixty-two people

been included within its sample. The same is true had multiple states participated in the study.

Conclusions

Finding methods of improving vocational outcomes, while decreasing the cost of services provided, is within everybody's best interests. If the cost of supported employment could be reduced, the promise of community-based employment can be extended to more individuals with disabilities without the need for increasing the amount of funding required by supported employment programs. Further, if the length of time supported employees maintain their positions within the community can be increased, the longer individuals with disabilities can experience the monetary, and non-monetary, benefits of competitive employment. However, it should be kept in mind that the determination of which program to enter (i.e., facility-based or supported employment programs) should be based upon the individual's unique needs, interests, and wishes—not the results of this study.

References

- Cimera, R.E. (in press). Reducing the cost of providing supported employment services: A preliminary study. *Journal of Rehabilitation*.
- Cimera, R.E. (2011). Does being in sheltered workshops improve the employment outcomes of supported employees with intellectual disabilities? *Journal of Vocational Rehabilitation*, 35, 21-28.
- Cimera, R.E. (2009). Supported employment's cost-efficiency to taxpayers: 2002 to 2007. *Research and Practice for Persons with Severe Disabilities*, 34, 13-20.
- Cimera, R.E., Wehman, P., West, M., & Burgess, S. (2012). Do sheltered workshops enhance employment outcomes for adults with autism spectrum disorder? *Autism: The International Journal of Research and Practice*, 16(1), 87-94.
- Federal Register (1984). *Developmental Disabilities Assistance and Bill of Rights Act (Public Law 98-527)*. Washington, DC: US Government Printing Office.
- Gill, M. (2005). The myth of transition: Contractualizing disability in the sheltered workshop. *Disability & Society*, 20(6), 613-623.
- Griffin, David K. "A Comparison of Self-Esteem and Job Satisfaction of Adults with Mild Mental Retardation in Sheltered Workshops and Supported Employment." *Education and Training in Mental Retardation and Developmental Disabilities* 31, no. 2 (1996): 142-50.
- Mank, D. M., & Grossi, T. A. (2013). Employment: Renewed Investments. *Inclusion*, 1(1), 7-16.
- Mank, D., Cioffi, A., & Yovanoff, P. (1998). Employment Outcomes for People With Severe-Disabilities: Opportunities for Improvement. *Mental Retardation*, 36(3), 205-216.
- McGaughey, M. J., Kiernan, W. E., McNally, L. C., Gilmore, D. S., & Keith, G. R. (1995). Beyond the workshop: National trends in integrated and segregated day and

- employment services. *Journal of the Association for Persons with Severe Handicaps*, 20(4), 270-285.
- Migliore, A., Mank, D., Grossi, T., & Rogan, P. (2007). Integrated employment or sheltered workshops: Preferences of adults with intellectual disabilities, their families, and staff. *Journal of Vocational Rehabilitation*, 26(1), 5-19.
- Murphy, S. T., & Rogan, P. M. (1995). *Closing the shop: Conversion from sheltered to integrated work*. Brookes, Baltimore, MD.
- Rusch, F. R., & Braddock, D. (2004). Adult day programs versus supported employment (1988-2002): Spending and service practices of mental retardation and developmental disabilities state agencies. *Research and Practice for Persons with Severe Disabilities*, 29(4), 237-242.
- Wisconsin Department of Health Services (2009). Wisconsin Adult Long Term Care Functional Screen—Version 3. Madison, WI: Wisconsin Department of Health Services.