

Utilizing Natural Supports to Lower the Cost of Supported Employment

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This study explored the effect of utilizing natural supports strategies on the cost of supported employment in the state of Wisconsin. Data presented here suggest that the use of natural supports reduced annual per capita costs by 57.6%. Further, supported employees trained via natural supports generated cumulative costs of \$5,063 over 6.04 fiscal quarters (i.e., \$838 per fiscal quarter). This is compared to the state average of \$8,212 over 3.36 fiscal quarters (i.e., \$2,444 per fiscal quarter).

DESCRIPTORS: supported employment, natural supports

Since the early 1980s, much has been written regarding the costs of supported employment and sheltered workshops. Indeed, reviews of the literature cited over 20 empirical studies that have examined the monetary outcomes of these two programs (Cimera, 2000a; Cimera & Rusch, 1999; Kregel, Wehman, Revell, Hill, & Cimera, 2000). The general consensus from these reviews is that, over time, supported employment appears to be less expensive than segregated placements from the taxpayers' perspective (cf. Hill, Wehman, Kregel, Bank, & Metzler, 1987; Lewis, Johnson, Bruininks, Kallsen, & Guillery, 1992; McCaughrin, Ellis, Rusch, & Heal, 1993; Rusch, Conley, & McCaughrin, 1993; Schneider, Rusch, Henderson, & Geske, 1981; Wehman et al., 1985). Recently, however, concerns have been raised regarding the cost trend of supported employment. Specifically, indirect evidence has suggested that the costs of supported employment have risen dramatically since the mid-1990s, which, interestingly, is after the period in which most of the cost analysis literature had been published. For example, in a re-aggregation of data presented by Rusch and Braddock (2004), Cimera (2006) found that the per capita annual federal cost of supported employees increased 154% from 1998 to 2002. Over the same period, the per capita annual federal cost of sheltered employees decreased 4.2%.

To further explore this issue, Cimera (2007) investigated the costs of supported employment in Wisconsin over a 4-year period. He found that from 2002 to 2005, the costs of services given to supported employees by vocational rehabilitation increased 61.7%.

Although a thorough exploration of the national cost trends of supported and sheltered employment is still lacking, one thing is clear. If the expenditures associated with supported employment can be reduced, more individuals with disabilities could potentially be placed within the community. Further, if programmatic expenditures could be reduced, more individuals with disabilities would be able to enjoy the monetary and nonmonetary benefits that supported employment has to offer (cf. Mank, 1994; Wehman & Kregel, 1995). Thus, one of the keys to promoting supported employment, especially to policy makers and politicians, would appear to be finding way of reducing its costs.

Several authors have claimed that utilizing supports that occur naturally or can be developed within the vocational environment (i.e., natural supports) will not only help supported employees successfully retain their jobs, but also reduce the costs of services they require (Fabian & Luecking, 1991; Hanley-Maxwell & Millington, 1992; Pumpian & Fischer, 1993). However, most of the natural supports literature has focused upon its definition and utility (cf. DiLeo, Luecking, & Hathaway, 1995; Mank, 1996; Parent, Wehman, & Bricout, 2001; Rusch & Hughes, 1996; Test & Wood, 1996), rather than its actual economic impact. In fact, only two systematic studies have explored whether natural supports can influence programmatic costs: Zivolich, Sueman, and Weiner (1997) and Cimera (2001).

Zivolich et al. (1997) analyzed the monetary benefits and costs generated by 59 supported employees who were trained utilizing natural supports strategies (i.e., training was provided by fellow employees, rather than by job coaches) over a 6-month period. These authors found for every dollar invested in supported employment agencies that utilize natural supports strategies, taxpayers received between \$0.74 and \$1.21 back, depending upon the cost accounting formula used.

Cimera (2001) investigated the effect of coworker involvement on the cost efficiency, rate of job retention, and other employment outcomes achieved by 111 supported employees with mental retardation. This author found that the amount of coworker involvement was not statistically associated with an increase in cost efficiency; however, it was associated with length of employment. Specifically, supported employees who were trained by their coworkers maintained their jobs an average of 44.51 months compared to 32.15 months of supported employees trained by job coaches.

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It should be noted that, although important, cost analysis should not be the final word when determining the merits of selecting one support strategy or program over another. There are many other nonmonetary factors to consider, such as consumer choice, satisfaction, and long-term outcomes. Nevertheless, given the budgetary crises that many human service agencies face, finding strategies that produce cost-effective results may be critical to the future success of supported employment and individuals with disabilities who wish to work within their communities.

The purpose of the present study was to extend the findings of Zivolich et al. (1997) and Cimera (2001) by directly determining whether the utilization of natural supports can decrease the overall costs of providing supported employment services. The present study, conducted in Wisconsin, addressed this question by conducting three cost analyses.

The first analysis compared that annual per capita costs of supported employees before and after agencies began participating in the Natural Supports Initiative (NSI). The second analysis compared the annual per capita cost of supported employment from the NSI agencies to the costs generated by all other agencies throughout the state. Finally, this study examined whether the cumulative costs generated by supported employees were higher in the NSI agencies versus the state average.

Methods

The Natural Supports Initiative

In an effort to explore techniques for improving cost efficiency, the Wisconsin Division of Vocational Rehabilitation proposed to form interagency agreements with four agencies that furnished supported employment services to adults with disabilities. Several agencies expressed interest in participating in the project; the four agencies that served the most supported employees were chosen. The number of supported employees served was the only criterion for selection. Further, there was no attempt to choose agencies that were representative of all other service providers throughout the state.

As part of these interagency agreements, job coaches attended a workshop on how to promote the use of supports that occur naturally within the work environment. Additionally, the four selected agencies were given financial incentives for utilizing "natural supports" in an effort to reduce a supported employee's dependency on job coaches. Agencies were given up to \$500 per supported employee when the documented use of natural supports resulted in a "significant" reduction in paid services (i.e., a 50% or more reduction in the number of billable hours job coaches provided to the supported employee). Agencies received up to \$1,500 per supported employee when the documented use of natural supports resulted in complete elimination of all

paid supports provided by the supported employment agency. In order for the agency to receive their monetary incentive, supported employees had to successfully maintain their positions within the community for at least 90 days after the reduction in services had taken place.

Prior to the implementation of any intervention, job coaches were required to obtain written approval from the supported employee, the supported employer, and the funding source. In the situations where the supported employees were not able to fully understand the concept of natural supports or give their informed consent, written approval was obtained by their parents or guardians.

Because strategies were designed to meet the unique needs of each supported employee, his or her position in the community, and the needs of the employer, the types of strategies utilized were numerous and diverse. However, generally, the strategies used fell into six categories: those that involved *training* (e.g., direct instruction from nondisabled coworkers), *organizational supports* (e.g., rearranging the employee's work area or schedule), *social supports* (e.g., building opportunities for supported employees and coworkers to interact), *physical supports* (e.g., technologies that enabled supported employees to perform the essential duties of their jobs), *community supports* (e.g., creating linkages between the supported employee and already existing service programs, such as public transportation), and *personal supports* (e.g., developing self-advocacy skills) (cf. Trach & Shelden, 1999).

Participant Selection

Billing records were obtained on 1,118 supported employees who were classified by their VR counselors as having "most significant" mental retardation (i.e., mental retardation that adversely affected three or more functional areas, such as self-help, communication, accessing the community). Of these 1,118, services were received by 504 in FY 2002, 528 in FY 2003, 547 in FY 2004, and 503 in FY 2005.¹ These individuals represent all supported employees with "most significant" mental retardation who were served by VR throughout Wisconsin from FY 2002 to FY 2005.

From FY 2001 to FY 2005, the four adult service agencies participating in the initiative provided natural supports to a total of 85 supported employees who were also classified by VR as having most significant mental retardation. Forty-three individuals were provided services in FY 2001, 44 in FY 2002, 36 in FY 2003, 38 in FY 2004, and 32 in FY 2005. These individuals represent all supported employees who were (i) served by these

¹Given that most supported employees received services over multiple years, the sum of the annual sample sizes does not equal the total number of individual supported employees who participated in the study.

agencies from FY 2001 to FY 2005, (ii) had a primary disability of mental retardation, (iii) classified by their VR counselors as having "most significant" mental retardation, and (iv) agreed to participate in the NSI. Individuals with "most significant" mental retardation were selected for the focus of this study due to the low sample sizes of individuals with other conditions or degrees of severity.

Calculation of Program Costs

Costs of supported employment (i.e., the total amount that VR reimbursed agencies for the services that they provided) were calculated directly from the electronic billing records provided by the State Department of Workforce Development and the adult service agencies participating in the NSI. It should be noted that although the NSI agencies receive funding from VR, the supported employees who participated in their programs were not part of the cost data provided by the State from FY 2002 through 2005.

Finally, cost data were obtained from the NSI agencies from FY 2001 through FY 2005. However, the NSI itself did not actually begin until FY 2002. The expenses reported from FY 2001 were included as part of a pre- or postintervention comparison described below.

Conversion of Dollar Values

Given that the value of the dollar changes over time (e.g., a dollar in FY 2001 does not equal a dollar in FY 2002), the cost data furnished by the Department of Workforce Development and the four NSI agencies had to be converted to identical denominations (i.e., FY 2005 dollars). This was accomplished by multiplying the dollar amount given by the consumers' price index (CPI) of the base year and then dividing the results by the CPI of the year in which the dollar was originally designated (Levin & McEwan, 2000).

For example, in order to convert \$5,000 worth of services obtained in FY 2002 to FY 2005 dollars, 5,000 would be multiplied by the CPI of FY 2005 (i.e., 195.3). The result (i.e., 976,500) would then be divided by the CPI of FY 2002 (i.e., 179.9). This calculation indicates that \$5,000 of FY 2002 dollars is the equivalent of \$5,428.01 in FY 2005 dollars. The CPIs that were utilized for the computations in this study were annual averages obtained by the U.S. Bureau of Labor Statistics at www.bls.gov/home.htm.

Cost Analyses

Three cost analyses comprised this study. The first was a pre- or postcomparison of the per capita costs of services that the four NSI agencies experienced prior to their participation in the initiative (i.e. FY 2001) and during the 4 years immediately following the initiation of the NSI (i.e., FY 2001 to FY 2005). The second analysis compared the annual per capita costs of services generated by the NSI agencies from FY 2002 to FY 2005 to the annual per capita costs of services gener-

ated throughout the rest of the state during the same period. The final analysis compared the average cumulative costs generated by supported employees who were served by the NSI agencies to those served throughout the state.

Results

In FY 2001, the average annual cost of services (in 2005 dollars) obtained by supported employees enrolled in the four participating adult service agencies was \$4,304. In FY 2002, these agencies began their involvement with the NSI. That year, the average annual cost of services received by supported employees decreased 21.4% to \$3,382. From FY 2003 to FY 2005, the reduction in costs continued. In FY 2003, the average annual per capita cost of services was \$3,626. By FY 2004, this figure decreased by 16% to \$3,046 and then by 40.1% to \$1,824 in FY 2005.

Examined in total, the average annual per capita cost of supported employment decreased 57.6% from FY 2001 (i.e., the year prior to participation in NSI) to FY 2005 (i.e., the final year of NSI participation). In comparison, the average annual cost of supported employment throughout the State increased from \$4,909 in FY 2002 to \$8,225 in FY 2005. This is an increase of 67.5% (see Figure 1).

When cumulative costs were examined, it was found that supported employees who participated in the NSI received services costing an average of \$5,063 over 6.04 fiscal quarters (i.e., 18.12 months). This is a per quarter cost of \$838. Supported employees who did not participate in the NSI, on the other hand, generated an average cost of \$8,212 over 3.36 fiscal quarters (i.e., 10.08 months) or \$2,444 per fiscal quarter.

Discussion

Over the years, several researchers have suggested that "natural supports" (i.e., supports that already exist or could be cultivated within the community) could reduce the need for job coaches (Butterworth, Hagner, Kiernan, & Schalock, 1996; Nisbet & Hagner, 1988; Rogan, Hagner, & Murphy, 1993; Test & Wood, 1996).

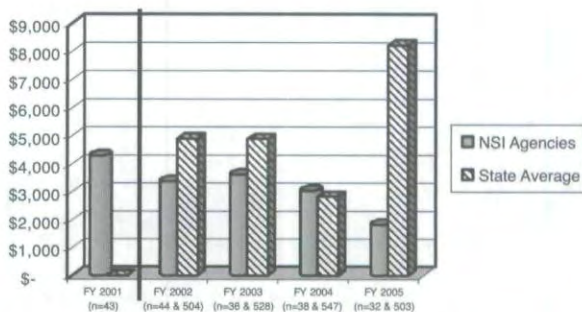


Figure 1. The average annual costs of supported employment (in 2005 dollars) for individuals with most significant mental retardation.

Theoretically, a reduction in job coach intervention should decrease the overall cost of services provided to the supported employees (Cimera, 2000b). Unfortunately, to date, very little is known about the effects that natural supports have on programmatic expenditures.

The present study compared the costs of supported employees who were trained by agencies utilizing natural supports strategies to the average cost of supported employees from across the participating state. The present study also compared the cost of services provided by agencies before and after their participation in the NSI.

Data from these analyses indicate that immediately after the inception of the NSI program (i.e., FY 2002), costs of providing supported employment decreased by 21.4%. Moreover, the costs of supported employment continued declining over subsequent years. In fact, by the end of the fourth year of involvement in the NSI (i.e., FY 2005), cost of services given to supported employees were 57.6% lower than before the NSI was enacted. Additionally, whereas the cost of services provided by the NSI agencies decreased substantially from FY 2002 to FY 2005, the average annual costs of services provided to supported employees throughout the state increased by 61.7% over the same period.

When cumulative costs were examined, it was determined that supported employees participating in the NSI generated an average total expenditure of \$5,063 over 6.04 fiscal quarters. This is \$838 per fiscal quarter. Supported employees throughout the state generated cumulative costs of \$8,212 but only received services for 3.36 fiscal quarters (i.e., \$2,444 per fiscal quarter). That is, the per fiscal quarter costs of supported employees participating in the NSI were 65.7% cheaper than the average supported employee served throughout the state.

These findings suggest that the utilization of natural supports in the training of supported employees can significantly reduce the overall costs of services. Such a conclusion could have substantial fiscal and programmatic implications. For instance, if reductions of 65.7% were applied to the 118,000 supported employees who were receiving services in 2002 (Braddock, Rizzolo, & Hemp, 2004; Rusch & Braddock, 2004), the federal government would have saved \$70,956,000 in FY 2002 alone. Or, stated another way, an additional 195,526 supported employees could have been placed in the community for the same expenditures that were actualized without using natural supports.

It is important to note that the findings do not imply that all supported employees should be trained via "natural supports," or that the traditional "job coaching" method should be abandoned. Nor do these findings suggest that the type of strategy utilized should be dictated solely by the financial bottom line. After all, in order for supported employment to be cost effective, it must first meet the needs of the people whom it serves (e.g., the supported employee and employer). For ex-

ample, an employee or employer may require the specialized assistance that only an experienced job coach can provide. Moreover, poorly conceived and executed strategies, no matter how cost efficient in the short run, may not be cost efficient in the long run—especially if supported employees have difficulty retaining their positions and require frequent replacement within the community.

Further, financial outcomes should not be the last word in any discussion regarding the personal fulfillment of individuals with and without disabilities. There are many factors to consider prior to making a final decision as to what programs to fund or how to provide services. Consumer choice and dignity are certainly chief among them.

Nevertheless, the economic constraints faced by human service programs cannot be denied. Budgets to service agencies are being reduced. Available funding is being spread over ever-growing program options. If there are ways to reduce costs while maintaining a program's quality, service providers would do well to take notice.

There were several limitations to this study. For example, there are currently no controls regarding the quality of outcomes experienced by the supported employees who participated in this study. It could very well be that although natural supports reduces the costs of services being offered, the quality of services decreases and therefore reduces the supported employees' tenure or job satisfaction. Further, no data were collected on the nonmonetary outcomes achieved by supported employees, such as their happiness or feelings of self-worth. These would be critical issues to consider prior to adopting such strategies. Further investigation of these topics is clearly warranted.

Second, the present study only examined the costs generated by individuals with "most significant" mental retardation. Consequently, its findings cannot be extrapolated to individuals with other needs (e.g., individuals with milder mental retardation, schizophrenia, or sensory impairments). Future inquiry will have to examine the impact of natural supports on other populations.

Third, the NSI agencies were selected based upon their willingness to participate in the program as well as by the number of supported employees they served. As a result, there are no assurances that they are representative of all other agencies across the state. Moreover, data were only collected from one state (i.e., Wisconsin). Given that each state funds supported employment differently, results from one location may not generalize to another. For this reason, a longitudinal, national study on the costs of supported employment is warranted.

Additionally, the present study did not examine the effect of natural supports on the monetary costs to employers. It could be that having coworkers train supported employees, for example, may increase the costs of hiring workers with disabilities. Such issues have

yet to be adequately explored in the supported employment cost-efficiency literature.

Finally, the present research did not factor the cost of the NSI incentives into the overall costs of providing supported employment. Consequently, the actual expenditures associated with the supported employees who participated in the NSI were somewhat underreported.

The rationale for this omission was that these incentives were time limited and were not intended to continue indefinitely. In effect, the present research assumed that the job coaches of these agencies would continue employing natural supports even after the monetary incentives to do so ceased. This assumption, however, could be an error. Future research will need to evaluate this aspect of job coach behavior as well as other areas of limitation previously identified.

It should be noted that the average per capita cost of incentives to use natural supports was \$944. If this sum were included in the analyses, supported employees participating in the NSI would have generated expenditures totaling \$6,007, or \$1,006 per fiscal quarter. Compared to the \$2,444 actualized by supported employees who did not participate in the NSI, natural supports still appear to have saved the taxpayer \$1,438 per fiscal quarter.

Conclusions

The present study examined whether the utilization of natural supports could reduce costs of services given to supported employees. It found that adult service agencies that were participating in an NSI in the state of Wisconsin reduced the annual cost of services they provided to supported employees by 57.6%. Further, supported employees who were trained using natural supports generated cumulative costs of \$5,063 over 6.04 fiscal quarters (i.e., \$838 per fiscal quarter). This is compared to state average of \$8,212 over 3.36 fiscal quarters (i.e., \$2,444 per fiscal quarter).

Although reducing programmatic costs is critical to the goal of increasing the number of individuals with disabilities who are successfully employed in the community, there are factors to consider other than merely what program or strategy is cheapest. In the final analysis, it must be remembered that the purpose of all funding decisions should revolve around how to best serve the needs of the program's participants. When examined in this light, the nonmonetary benefits of utilizing one strategy over another might far outweigh any monetary costs identified here.

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