Outcomes of postsecondary supported education programs for people with psychiatric disabilities

Karen V. Unger[a,*], Roy Pardee[b] and Michael S. Shafer[c]
[a]*Rehabilitation Through Education, P.O. Box 82176, Portland, OR 97282, USA*
Tel.: +1 503 232 7085; E-mail: unger@transport.com
[b]*13822 Dolly Varden Lane NW, Bremerton, WA 98312, USA*
[c]*Community Rehabilitation Division, School of Public Administration and Policy, University of Arizona, 721 North Avenue, Suite 187, Tucson, AZ 85721-0209, USA*

Supported education programs provide support and services so people with a major mental illness can begin or continue postsecondary education. 124 students from three supported education sites were surveyed for five semesters to assess demographic and service utilization information, education and employment outcomes, predictors of school completion and job/education fit. The study showed that students completed 90% of their college course work and achieved an average grade point of 3.14. Increases were noted in the number of students living independently. Type of psychiatric diagnosis was not a predictor of school completion but having one's own car and number of psychiatric hospitalizations prior to program participation were predictors. The school retention rate was comparable to the general population of part-time students; employment rates (42%) during the study were lower than the population of other part-time students but higher than the population of people with mental illness generally. There were no significant changes in either quality of life or self-esteem. Students reported a job/education fit of 50%.

Keywords: Postsecondary education, psychiatric disabilities, mental illness

*Corresponding author.

Journal of Vocational Rehabilitation 14 (2000) 195–199
ISSN 1052-2263 / $8.00

1. Introduction

Increasing the employment of people with psychiatric disabilities has been a stated goal of the mental health system for decades. Working is believed to have intrinsic value and to be one of the most desired means of achieving community integration and recovery. Although postsecondary education is seen as the most critical factor for improving work opportunities for the general population, returning to school for people with psychiatric disabilities has not been similarly viewed, even though recent research indicates that supported education is a consistent significant predictor of successful employment outcomes [10].

In the past fifteen years, the concept of supported education, providing support services to postsecondary education students with psychiatric disabilities, has been defined and described [17–19]. Some preliminary outcomes studies have been conducted [7,8,14,20] and literature from the Association for Higher Education and Disabilities (AHEAD) reports an influx of students with psychiatric disabilities in colleges and universities across the nation [4].

This trend supports the results of a recent survey [15] which assessed mental health consumer service preference ($n = 314$). The authors found that 62% of the consumers surveyed would like more education. Thirty-three to 52% wanted supports such as assistance in applying to an education program, gaining access to financial aid, strengthening basic education skills, peer support groups, and staff support.

The objectives of this study were to examine if people with mental illness could complete a course of study, if returning to school enhances quality of life and self esteem, if there are identifiable predictors of school completion and if participating in supported education programs leads to career employment or employment that reflects education level. This observational study used a survey methodology.

2. Methods

2.1. Participants

Study participants were drawn from three sites: a mental health program in Quincy, MA, Consumers and Alliances United for Supported Education (CAUSE); a community college program at the College of San Mateo in San Mateo, CA, the Transition to College Program; and Laurel House, a clubhouse program in Stamford, CT. The number of enrollees per site who agreed to participate was 55, 46 and 23 respectively, representing a total study pool of 124 students. One hundred five students remained in the study throughout the five semesters, representing an attrition rate of 15%. No discernible differences in the attrition rates were noted across the study sites. Of the students who completed the study, 96 (77%) began the first semester enrolled in classes. An additional 9 (7%) became enrolled during one of the subsequent semesters. The psychiatric history indicates that most students had been hospitalized and the most frequent diagnosis was major depression. Some students reported more than one diagnosis.

A critical question in providing supported education services to mental health clients is who is appropriate for those services? Our study indicated that less than half (39%) of the students had previous college experience. The students' reported education history indicated that at the beginning of the study, 17% ($n = 21$) had an Associates degree, 19% ($n = 23$) a Bachelor's degree and 3% ($n = 4$) a Master's degree. Eighty-nine percent ($n = 112$) of the participants had a high school diploma. All students had an Axis 1 diagnosis and a substantial percentage had been arrested (38%), or homeless (29%) during their lives. Table 1 summarizes the key demographic characteristics of the students.

Table 1
Participant demographics

Variable	Number	Percent
Female	69	57
Caucasian	94	75.8
Private or unsupervised housing	106	85.5
Social Security Disability Income	65	52.4
Social Security Income	62	50
Psychiatric hospitalization	107	85.6
Major depression	45	36
Bipolar disorder	34	27.2
Schizo-affective disorder	23	18.4
Schizophreneia	25	16.1
Post-Traumatic Stress disorder	23	18.4
Personality disorder	23	18.4
Other psychiatric disorder	28	22.4
Psychiatric medication	108	86.4
Ever arrested	47	37.6
Ever jailed	36	28.8
Ever homeless	36	28.8

Note: Numbers may total more than 100% because some may have reported more than 1 diagnosis.

2.2. Data collection

Students were assessed fall and spring semesters during school years 1995–96, 1996–97 and fall semester 1997 by interviewers trained on site by the first author. One third of the students had initially enrolled during the 1992–93 school year; one third during the 1993–94 school year; and the final third in the fall of 1995, thus providing subjects who had possibly been in school from 2 to 6 years. All interviews were conducted one-to-one and lasted from 45 to 90 minutes. All participants completed an initial demographic survey, and repeated assessments each semester of their academic participation. The assessments included community and campus service utilization, the Rosenberg Self Esteem Inventory [16] and an abbreviated version of the Lehman Quality of Life Inventory [11]. All participants were paid $30.00 per interview.

Completed questionnaires and assessments were sent to the University of Arizona where they were checked for accuracy and thoroughness before being entered into Access-software date storage programs. These data were subsequently analyzed using SPSS statistical analysis software.

3. Results

3.1. Educational enrollment and completion rates

Students were queried as to the type of educational institution they were attending, the type of degree they were seeking, and the major area of study. Over the course of the study, the majority of students (64%) were attending community colleges, followed by 25% attending 4-year colleges and 5% attending graduate school. While the reported programs of study were extremely diverse, the most frequently cited majors included Liberal Arts, Psychology, Health or health related fields and Business Management/Administrative Services.

Most study participants attended school part-time. They registered for an average of 7.10 credits per semester, and completed an average of 6.34 credits. This represents a completion rate of 90%. The students maintained an average grade point of 3.14 (on a

Table 2
Enrollment status of study participants by enrolled semester

Semester	#Enrolled	#Drop	% Drop	Cum%
1	105	37	35.2	35.2
2	68	20	19.1	54.3
3	48	15	14.3	68.6
4	33	10	9.5	78.1
5	23			

4 point system). However, over the course of the five semesters that data were collected, a total of 82 students (78%) of the 105 students enrolled had removed themselves from school. Among the stated reasons for leaving school were lack of financial support, illness and completion of educational goals. Table 2 summarizes the enrollment status of the students over the five semesters during which data was collected.

Twenty-one students (20%) of the 105 students who remained in the study for three years completed programs of study and during the course of the project attained academic certificates or degrees. Of these students, 11 individuals received certificates, 8 individuals received Bachelor's Degrees, and 2 individuals received Master's Degrees. The primary areas of study were varied. However, 7 individuals completed studies in the helping professions (e.g. substance abuse counseling, education, psychology, health professions, social work), 6 completed studies in areas related to law, business and government and the other 8 were primarily Liberal Arts majors.

3.2. Correlates of education completion

Various demographic and service history characteristics of the study participants were analyzed using a Kaplan-Meier or product-limit analysis [1,2,9,22] to evaluate their correlation to education completion rates. Only 2 variables were found to be correlated to educational completion: the number of previous psychiatric hospitalizations ($x(3, n = 124) = 11.29,\ p < 0.05$) and mode of transportation ($x(1, n = 124) = 4.33,\ p < 0.05$). A sample of other variables examined that were not significant included gender, race, grade point average prior to study participation, medication utilization, type of institution attended, prior college experience, and number of jobs pre-diagnosis.

In addition to the predictors above, the presence or absence of major psychiatric diagnoses (major depression, manic bipolar disorder, schizophrenia) has no perceptible effect on the likelihood of maintaining enrollment. As a follow-up to this result, we performed two ANOVAs to examine the effects of type of psychiatric disability on the number of credits participants completed and their grade point averages. Type of psychiatric disability had no appreciable effect on either credits completed ($F(6205) = 1.22\ p = 0.3067$) or grade point average ($F(611) = 1.84\ p = 0.1055$).

3.3. Employment service utilization and employment outcomes

While employment training and job placement were not targeted interventions in the supported education programs studied, a small portion of the students (14%) reported using vocational services in the community concomitant with their engagement in their educational studies. Slightly less than 20% of the students reported participation in volunteer work or supported employment.

During the initial interviews, 49% of the students reported earned income with an average hourly salary of $6.23. This rate of employment changed very little over time. During the last semester of the study, 42% of the students reported working with an average salary of $7.85, a $1.62 per hour increase from the initial assessment. A sample of the jobs the students reported having included administrative assistant, case manager, food service, peer counselor, apartment manager, production line assembly, retail/sales associate and telemarketing.

Of the 21 students who completed their degree or certificate program, 12 reported working. However, some students continued in school to a more advanced level of education.

One of the goals of supported education is to improve career employment opportunities. Most mental health clients are unemployed or underemployed. We were interested to see if the participants were employed in jobs that reflected their increased education level. In the last three semesters of the study, study participants were asked a series of questions regarding the relationship between their current jobs and their educational attainment, job/education fit. We found that most students (71%) reported being able to perform their jobs better because of their education and 50% reported that their job fit their education level.

In the development of the research project, it was hypothesized that people with psychiatric disabilities who returned to school would report an improvement in their quality of life and an increase in self-esteem. An initial study of supported education had previously reported increased self-esteem using the Rosenburg Self Esteem Inventory [16]. Unlike that study, our study found that there were no significant increases reflected

in the Rosenburg Self Esteem Inventory. An abbreviated version of the Lehman Quality of Life Inventory [11] was used to determine if people in the study reported improvements in their perceived quality of life. There were no significant changes reported in any of the domains investigated.

4. Discussion

The purpose of the study was to advance the knowledge about supported education as a viable rehabilitation intervention. Do the outcomes justify the development of these services? It is clear from the course completion rates (90%) and grade point average (3.14 on a 4-point scale) that mental health clients make good students. Can they maintain that effort over time and complete their educational goals? Because postsecondary education in a long-term process, it is important to evaluate the retention rates of this study in the light of student performances in the general population. Unfortunately, few colleges or universities report their retention rates. However, the Digest of Educational Statistics, US Department of Education [2] indicated that 26.9% of all students, 14–34 years of age, enrolled in institutions of higher education during October 1995, were enrolled for their first year of college. The number of students enrolled for the fourth year of college at that same time was 14.7%, a decrease of almost half the number enrolled from the first year to the fourth year.

Although it is not possible to compare these outcomes with the students' completion rates in this study, it indicates that there is a decrease of almost 50% in the number of people enrolled from freshman to senior years. Another indicator of completion [21] shows that part-time community college students take from 4.3 years to 5.3 years to complete an Associates Degree with an average semester load of 9.7 credits. The report also indicated that only 63% of the part-time students planned to enroll the following semester. These outcomes are similar to the students in our study.

We were interested to see if there were factors in the student's background that might predict successful school completion. A number of characteristics were examined and it was found that having one's own transportation and numbers of hospitalizations were the only predictors of school completion whose effects were evident. It is interesting to note that the type of psychiatric diagnoses participants reported had no detectable effects on success in school. These results are similar to those reported by Leff and McPartland [10] regarding mental illness diagnosis. Their study indicated that psychiatric diagnosis was not a factor in outcomes and that supported education was significantly and positively related to employment status. Although the two studies were conducted for different purposes, both indicate that psychiatric diagnosis was not a predictor of successful outcomes.

Our hypotheses about increased self esteem and improved quality of life were not supported by the study. Similar results were also reported by Bailey et al. [5] and Mueser et al. [12] in their assessments of people who participated in supported employment projects. The increase in levels of employment in the studies did not result in corresponding increases in self-esteem or perceived quality of life. As with education, this may be due in part to the increased self knowledge gained by returning to school or work, increased stress, increased demands on time and energy and, in the case of education, the increased expenses related to school.

Employment rates for people with psychiatric disorders have historically been low, typically below 20% [3]. However, many participants in this study had a history of work. Forty-nine percent reported earned income at the initial interview, and 42% continued to work while pursuing an education. This is slightly below the percentage of all postsecondary students who work. O'Brien [13] reports that half of all students and two thirds of part-time students worked while attending college. The employment rate of the participants of this study is also similar to the employment rate of people with psychiatric disorders who participate in supported employment [6]. The critical question for us, however, was whether education improved the type of work participants were able to perform e.g. were they able to obtain jobs with career opportunities that reflected their education level. Half of the students indicated that their job fit their education level and more that half indicated that their education prepared them for their job.

While these findings are informative, it is important to note the limitations of the present investigation – particularly its duration. Given the length of time part-time students from the general population take to complete their degrees, the five semester period of the present study of people with psychiatric disabilities limited our ability to draw firm conclusions. A three year study, even using some retrospective data, while still informative, gives only a partial picture of whether supported education services lead to completing a certificate or degree program or to corresponding employment opportunities.

5. Conclusions

Students with psychiatric disorders can attend postsecondary education and complete their courses. The effects of their mental disorders on successfully completing were statistically indistinguishable from zero, indicating that the effect, if it does exist, is probably small. Half of the students who completed their educational goal held jobs that reflected their education level. More research is needed to assess the impact of education on improving employment opportunities. However, existing evidence indicates that programs and services that facilitate the participation of people with a psychiatric disorder in postsecondary education can produce positive outcomes.

Acknowledgements

Development of this manuscript was supported by grant #H133G50038 from the National Institute on Disability and Rehabilitation Research. The authors wish to express their gratitude to the study participants and staff of the agencies assisting in the implementation of this study.

References

[1] D. Allison, Event History Analysis: Regression for Longitudinal Event Data, *Applied Social Research Methods Series, 46*, Sage, Newbury Park, CA, 1984.

[2] D. Allison, *Survival Analysis Using the SAS System: A Practical Guide*, SAS Institute, Cary, NC, 1995.

[3] B.A. Anthony and M.A. Jansen, Predicting the vocational capacity of the chronically mentally ill: Research and policy implications, *American Psychologist* **39** (1984), 537–554.

[4] Association on Higher Education and Disability, *Psychological disabilities: A collection of readings prepared for the 1996 AHEAD TRIO Training Program*, Columbus, Ohio, 1996.

[5] E. Bailey, S. Ricketts, S. Becker, H. Xie and R. Drake, Do long term clients benefit from supported employment? *Psychiatric Rehabilitation Journal* **22** (1998), 24–29.

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

[7] J. Cook and M. Solomon, The Community Scholars Program: An outcome study of supported education for students with severe mental illness, *Psychosocial Rehabilitation Journal* **17** (1993), 83–97.

[8] F. Hoffman and X. Mastrianni, The role of supported education in the inpatient treatment of young adults: A two-site comparison, *Psychosocial Rehabilitation Journal* **17** (1993), 11–23.

[9] J.D. Kalbfleish and R.L. Prentice, *Statistical Analysis of Failure Time Data*, John Wiley, New York, 1991.

[10] S. Leff and J. McPartland, Service quality as measured by service fit and employment status among public mental health system service recipients. Facilitating careers for mental health consumers – A vocational rehabilitation research conference, *The UIC National Research and Training Center on Psychiatric Disabilities*, Chicago, IL, April 13–15, 1998.

[11] A.F. Lehman, *Quality of Life Interview Core Version*, Center for Mental Health Services Research, University of Maryland School of Medicine, Baltimore, MD, 1991.

[12] K. Mueser, D. Becker, W. Torrey, H. Xie, G. Bond, R. Drake and B. Dain, Work and nonvocational domains of functioning in persons with severe mental illness, *Journal of Nervous and Mental Disease* **185** (1997), 419–426.

[13] E.M. O'Brien, Part-time enrollment: Trends and issues. Research Briefs: Division of Policy Analysis and Research, *American Council on Education* **3**(8) (1992).

[14] D. Parton, Implementation of a system approach to supported education at four California community college model service sites, *Psychosocial Rehabilitation Journal* **17** (1993), 171–195.

[15] E.S. Rogers, D. Walsh, L. Masotta and K. Danley, *Massachusetts survey of client preferences for community support services* (*Final Report*), Center for Psychiatric Rehabilitation, Boston, MA, 1991.

[16] M. Rosenberg, *Society and the Adolescent Image* (*Rev. ed.*), Wesleyan University Press, Middletown, CT, 1989.

[17] K. Unger, Supported postsecondary education for people with mental illness, *American Rehabilitation Summer* (1990), 10–14.

[18] K. Unger, (Guest ed.), Special Issue on Supported Education, *Psychosocial Rehabilitation Journal* **17** (1993).

[19] K. Unger, *Handbook on Supported Education: Providing Services to Students with Psychiatric Disabilities*, Paul H. Brookes, Baltimore, MD, 1998.

[20] K. Unger, W. Anthony, K. Sciarappa and E.S. Rogers, Development and evaluation of a supported education program for young adults with long-term mental illness, *Hospital and Community Psychiatry* **42** (1991), 838–842.

[21] US Department of Education, National Center for Education Statistics, *Digest of Educational Statistics*, Government Printing Office, Washington, DC, 1997.

[22] K. Yamaguchi, Event History Analysis, *Applied Social Research Methods Series, 28*, Sage, Newbury Park, CA, 1991.