

Transition to Adult Roles for Students With Emotional/Behavioral Disturbances:

A Follow-Up Study of Student Exiters From Steps-to-Success

ARUN KARPUR
HEWITT B. CLARK
PETER CAPRONI
HANK STERNER

Transition from adolescence to adulthood is especially challenging for youth and young adults with emotional/behavioral disturbances (EBD). The Transition to Independence Process (TIP) model serves to prepare and facilitate youth and young adults with EBD in their transition into adulthood roles through a person-centered and developmentally appropriate process. Using existing state and program data, this study compared the postsecondary outcomes (e.g., employment, postsecondary education, incarceration) of exiters from the Steps-to-Success Program, a TIP-based system serving secondary school students, to those of matched comparison groups of (a) other young adults with EBD who had services as usual and (b) young adults with no previous classification. Our results demonstrated the efficacy of the Steps-to-Success Program in improving postsecondary outcomes for youth with EBD.

The beginning of transition from adolescence to adulthood is marked by the onset of physical changes during puberty, and the end is marked by the individuals' acceptance of the responsibilities and privileges of early adulthood in the domains of employment, education, living situation, and personal- and community-life functioning (Clark & Davis, 2000; Vander Stoep et al., 2000). In addition to focusing on personal goals and achievements, young people have to meet many general societal expectations. This transition to adulthood is especially challenging for those youth and young adults with emotional/behavioral disturbances. The term *emotional/behavioral disturbance* (EBD) is used to encompass a variety of diagnoses and classifications that are applied differently in different child- and adult-serving systems and states (e.g., severe emotional disturbance [SED], childhood chronic depression, emotionally handicapped [EH], severe mental illness). Young people with EBD tend to have higher dropout rates, higher rates of arrest and unemployment, and lower rates of independent living than their peers without disabilities (Armstrong, Dedrick, & Greenbaum, 2003). Earlier studies have also indicated that young people with EBD have lower academic achievement and higher dropout rates compared with their peers without disabilities (Davis & Vander Stoep, 1997; Wagner, Blackorby, Cameto, & Newman, 1993). In a community-based study of young adults with severe

psychiatric disorders, Vander Stoep and her colleagues observed that these young adults were nearly 14 times less likely to complete secondary school compared with their peers without disabilities, and that 44% of the failure to complete school was a function of their disorders (Vander Stoep et al., 2000; Vander Stoep, Weiss, Saldanha, & Cohen, 2003).

Young adults with EBD also have significantly high unemployment rates (34% to 82%) during the first 5 years after exiting from high school, in contrast to their peers without disabilities (Frank, Sitlington, & Carson, 1995; Neel, Meadows, Levine, & Edgar, 1988; Rylance, 1998). One of the factors associated with poor employment outcomes is the lack of appropriate social skills among young people with EBD (Bullis & Fredericks, 2002; Carter & Wehby, 2003; Chadsey & Beyer, 2001; Frank et al., 1995; Gresham, Sugai, & Horner, 2001; Neel et al., 1988; Vander Stoep et al., 2000). Research by Frank et al. showed that among older adolescents with EBD who were employed, there was greater turnover and a higher firing rate due to their lack of social and job performance skills relevant to maintaining employment.

Sociodemographic risk factors, such as history of abuse in childhood, poverty, homelessness, violence in family and neighborhood, and substance abuse, further complicate the transition of young people with EBD (Blackorby & Wagner, 1996; Davis, 2001; Davis & But-

ler, 2002; Embry, Vander Stoep, Evens, Rayan, & Pollock, 2000; Rylance, 1997). Estimates suggest that about 22% of these young people are using alcohol and illegal drugs, possibly exacerbating their psychiatric disability or interacting with their prescription medication effects (Greenbaum, Foster-Johnson, & Petrilla, 1996). Young people with EBD were three times more likely to become incarcerated or involved with criminal activity compared with their peers without disabilities (Vander Stoep et al., 2000). Furthermore, these young adults were more likely to be involved in unprotected sexual activities due to their impulsivity, had lower self-esteem, and were more likely to abuse drugs and have histories of sexual abuse, resulting in a higher prevalence of sexually transmitted diseases and HIV/AIDS among this population (Davis & Vander Stoep, 1997).

In response to research findings regarding the poor outcomes for young people with EBD, various transition programs for this population have been conceptualized, implemented, and evaluated by researchers and service providers, with encouraging findings that indicate specialized services are helpful (Bullis, Morgan, Benz, Todis, & Johnson, 2002; Cheney, Hagner, Malloy, Cormier, & Bernstein, 1998; Clark, Pschorr, Wells, Curtis, & Tighe, 2004; Cook, Solomon, Farrell, & Koziel, 1997). Two such transition programs (i.e., Project RENEW and the ARIES program) are described below. These two programs share key elements with the Transition to Independence Process (TIP) model (Clark, Deschenes, & Jones, 2000; Clark & Foster-Johnson, 1996), which is the focus of this study.

Hagner, Cheney, and Malloy (1999) studied career-related outcomes for students attending a demonstration project titled Project RENEW (Rehabilitation, Empowerment, Natural Supports, Education, and Work), located at the New Hampshire Community and Technical College. The participants in this study were 18 young people with EBD (ages 16–22 yrs) who were served by three Career Education Specialists (Cheney et al., 1998). Service components of the project included personal futures planning, flexible secondary and postsecondary curricula, support for employment, interagency collaboration, mentoring, social skills development, and access to flexible funding resources to address young persons' critical needs (e.g., housing) or support career or educational goals (e.g., tuition fees for career training). After 2 years of exposure to the program elements in Project RENEW, it was observed that 67% completed high school, 83% were employed, and 50% went on to pursue postsecondary education. Involvement with the

Department of Corrections was reduced from 72% to 17% at the end of the program. Furthermore, participants reported statistically significant increases in their satisfaction with school, their employment, their handling of life problems, and their progress toward personal goals. The graduation and employment outcomes were comparable to, or well beyond, the national survey rates reported for comparable individuals. Results of this study indicated that (a) person-centered planning of transition goals was a viable strategy to enhance employment and other positive postsecondary outcomes, (b) collaboration across transition-related agencies (e.g., vocational rehabilitation, schools, adult mental health agencies) was a key factor in achieving better postsecondary outcomes for young people with disabilities, and (c) social skills training was central to successful transition to adulthood roles.

The ARIES program (Achieving Rehabilitation, Individualized Education, and Employment Success) was implemented as a community-based transition program that served students (16 years and above) with EBD (Bullis, 1999). The ARIES program provided services in the school and in the community to 85 students from several high schools in a suburban Oregon school district during the period from 1995 to 1999. Bullis et al. (2002) studied the quantitative and qualitative impact of the ARIES program. Sixty-one of the 85 adolescents exited the program through graduation, terminating their involvement, or leaving the immediate area, and of these 61 exiters, 36 graduated from secondary school. Fifty-five percent of the total participants who entered the project were employed (47 of the 85), and 65% were "successfully engaged," meaning that they were employed or enrolled in and/or completed school and were not arrested during the project. Qualitative analysis revealed that person-centered planning, individualized educational placement and support, competitive job placement, and service coordination were central to higher positive outcomes at the end of the program for young adults with EBD in the ARIES program.

The Transition to Independence Process model evaluated in this study encompasses the best practices of transition programs for young adults with EBD, including those of Project RENEW, ARIES, and others (Bullis, 1999; Cheney et al., 1998; Clark & Foster-Johnson, 1996; Clark & Stewart, 1992; Clark, Unger, & Stewart, 1993; Davis & Vander Stoep, 1996, 1997; Hagner et al., 1999; Modrcin & Rutland, 1989). The TIP model was developed to engage youth and young adults in their own futures planning process, provide them with developmentally

appropriate services and supports, and involve them, their families, and other informal key players in a process that prepares and facilitates them in their movement toward greater self-sufficiency and achievement of their goals related to each of the transition domains—employment, career-oriented education, living situation, personal effectiveness and quality of life, and community-life functioning.

The seven guidelines that operationalize the TIP system are as follows:

1. engage young people through relationship development, person-centered planning, and a focus on their future;
2. tailor services and supports to be accessible, coordinated, developmentally appropriate, and built on strengths to enable the young people to pursue their goals across all the transition domains;
3. acknowledge and develop personal choice and social responsibility with young people;
4. ensure a safety net of support by involving a young person's parents, family members, and other informal and formal key players;
5. enhance a young person's competencies to assist him or her in achieving greater self-sufficiency and confidence;
6. maintain an outcome focus in the TIP system at the young person, program, and community levels; and
7. involve young people, parents, and other community partners in the TIP system at the practice, program, and community levels.

The purpose of this study was to evaluate postsecondary outcomes for young people with EBD enrolled in the Steps-to-Success Program, a transition program based on the TIP system model. The information on the postsecondary outcome indicators of employment, vocational/technical/college education, and incarceration were secured from existing state and national databases. The postsecondary outcomes for the young people with EBD who exited from the Steps-to-Success Program were compared with frequency-matched comparison groups of young adults with no classification and young adults with EBD in the same geographic area who did not receive the Steps-to-Success Program.

METHOD

Steps-to-Success Program

The Steps-to-Success Program, which is based on the TIP model, was implemented in Robert Morgan Vocational and Technical School in Miami-Dade County. The Steps-to-Success Program was designed to provide (a) educational, psychosocial, and vocational training and (b) critical follow-up services for students (Grades 9–12) with EBD referred from public schools in the Miami-Dade County school district.

The referrals to the Steps-to-Success Program were made based on the young person's interest and the decision of his or her Individualized Education Program (IEP) committee, which included schoolteachers, education specialists, and the young person's parents/guardians. Students with EBD who were on either the standard or special diploma options and had an interest in pursuing a vocational area were enrolled in the Steps-to-Success Program. The major components of the Steps-to-Success Program included (a) person-centered planning regarding education, employment, and other future goals; (b) a community/vocationally oriented academic curriculum and employability training; (c) progressive inclusion of the students into vocational/technical educational courses based on their interests; (d) paid and unpaid practicum work experience for applying employability skills and exploring various work and career options; (e) supports and services tailored to enable students to succeed in their school and work experience endeavors (e.g., tutorial services, co-worker mentors at work sites); and (f) individual and group therapeutic and counseling services (e.g., student and family counseling, group art therapy, social skills development). Clinical services were individually tailored and were provided through individual, family, and/or group therapy. Vocational training was provided through a variety of on-campus school-based programs and in the community. On-the-site supervision was provided at workplaces to help participants carry out their jobs effectively. Educational classes emphasized workplace-relevant academic skills, as well as independent and community living skills.

Participants

Sixty-eight young people exited from the Steps-to-Success Program during the years 1998 through 2000. Of these, 43 were included in analyses, as they had a minimum of

1 year of programmatic exposure. Among those who did not have a minimum of 1 year of exposure ($n = 25$), 11 had to leave the program due to disciplinary reasons, 2 voluntarily discontinued the program, 4 moved out of Miami–Dade County, and 8 had entered the program more recently and had less than 1 year of exposure.

The Merged Data Analysis Method

The Merged Data Analysis (MDA) method was utilized in this study and was designed to assist in the evaluation and continuing improvement of various transition programs that are currently being implemented throughout the state of Florida. The MDA method involves identifying relevant databases, studying data dictionaries for each database, matching across databases to establish merged datasets, and providing reports and publications about the effectiveness of transition-based services and systems. A detailed description of MDA can be found elsewhere (Carroccio, Whitfield, & Clark, 2003). The outcomes examined in this research were (a) employment in Florida or a federal or military agency; (b) enrollment in postsecondary education or vocational/technical training; (c) productivity index (included individuals who were employed and/or in postsecondary education); and (d) incarceration or on controlled release.

Establishment of the Merged Dataset

The merged dataset for this study consisted of data files obtained from (a) the Florida Department of Education (FL DOE) for all students in the state with valid Social Security numbers (who were between the ages of 11 and 20 on June 30, 1998) in the school year 1997–1998 and (b) the matching Florida Education & Training Placement Information Program (FETPIP) and National Student Clearing House (NSCH) datasets for the fourth quarter of the year 2000. The FL DOE file contained the demographic information and disability classifications, whereas the FETPIP and NSCH files contained status information on postsecondary outcomes (e.g., employment, continuing experience in postsecondary education, involvement with the Department of Corrections). In this study the dataset included only those individuals classified as EBD and individuals with no disability classifications who originated from Miami–Dade County and who were 18 years and older as of June 30, 2001 (end of school year 2000–2001). This formed the comparison dataset for this analysis.

Data Security

Electronic datasets were transferred through secure means from state agencies as defined by agreements with each agency. These datasets were stored on a secure remote server at the Florida Mental Health Institute within the University of South Florida (FMHI/USF). Access to this server was restricted; only authorized individuals involved in the data analysis could examine these datasets. The entire data storage and data analysis system was firewall-protected under Health Insurance Portability & Accountability Act (HIPAA) standards. Additionally, after merging, unique identifiers (e.g., SSN, name) were deleted from the merged datasets.

STUDY DESIGN

This was a longitudinal follow-up study of young people who had either exited the secondary school Steps-to-Success Program via graduation or dropped out of the secondary school with at least 1 year of exposure to the program. Comparable cohorts of young people with EBD who were not enrolled in the program and young people without disability classification (nonclassified) from the same geographical area were also followed; they formed the comparison groups. The postsecondary outcomes for the 43 young adults who exited the Steps-to-Success Program were compared to those of the young adults in the comparison groups to assess the efficacy of the Steps-to-Success Program. This study reports data from two substudies: (a) Study 1, which examined the association of exposure variables that some of the Steps-to-Success students experienced and the postsecondary outcomes for these exiters 2 years later, and (b) Study 2, a comparative analysis of the postsecondary outcomes using the Merged Data Analysis (MDA) method across matched groups.

Study 1: Association of Exposure Variables That Some of the Steps-to-Success Students Experienced and the Postsecondary Outcomes for These Exiters 2 Years Later

This study examined the impact of selected exposures in the Steps-to-Success Program on the postsecondary outcomes for young people who exited the program after 1 or more years of exposure. The exposure variables included types of secondary school exit (i.e., graduation

and dropout), paid/unpaid employment experience, and involvement with the foster care or the juvenile justice system. The postsecondary outcomes that were examined included employment in Florida or in a federal or military agency, postsecondary training/education, productivity index, and incarcerated or on controlled release. Study 1 predicted that young people with EBD who had paid/unpaid employment while attending their secondary school, those who graduated, or those who were not involved with the foster care or juvenile justice system would have better postsecondary outcomes (i.e., higher proportions of youth employed, continuing postsecondary education, productively engaged, and not incarcerated/on controlled release).

Method. A dataset was created from the program records for 43 students (now ages 18–22 yrs) who exited the program between 1998 and 2000 with at least 1 year of prior exposure to the Steps-to-Success Program. This dataset consisted of information on selected exposure variables for these student exiters. This file was match-merged with FETPIP and NSCH files for the fourth quarter of the year 2000, which contained status information on employment, enrollment in postsecondary education, and incarceration/controlled release. Proportions of young people for each of the postsecondary outcomes across the exposure variables were ascertained. A binomial test for difference in proportion was used to examine the percentages of young adults for various postsecondary outcomes across each of the binary exposure variables.

Results. Most of the postsecondary outcomes for young adult exiters from the Steps-to-Success Program were in the predicted direction. The group of young adults who graduated had higher percentages of individuals who were employed (44%), enrolled in postsecondary education (36%), and productively engaged (64%) compared with the group of those who dropped out of high school (39%, 17%, and 44%, respectively). The percentage of young adults who were incarcerated or on controlled release was substantially higher among those who dropped out (13%) compared with those who graduated (0%). Similarly, young people with paid/unpaid employment experience during secondary school were more likely to have higher postsecondary outcomes compared with those who did not have any such experience. Additionally, young people who had not been involved in the foster care or juvenile justice system were more likely to be enrolled in postsecondary education (33%), produc-

tively engaged (62%), and not incarcerated or on controlled release (5%). Each of these differences was statistically significant with p values < 0.05 , except for the difference in proportion employed between the young people with foster care or juvenile justice system involvement and those with no such involvement.

Study 2: Comparative Analysis of the Postsecondary Outcomes Using the Merged Data Analysis Method Across Matched Groups

This study compared the postsecondary outcomes for young people who exited the Steps-to-Success Program, a matched group of young people with EBD who did not receive the Steps-to-Success Program, and a matched group of nonclassified young adults originating from the same geographic area who also did not participate in Steps-to-Success. It was predicted that the young people with EBD who exited the Steps-to-Success Program would have better postsecondary outcomes compared with the comparable group of young people with EBD from the same geographical region who were not served in the program. The outcomes for the nonclassified students served as the standard against which comparisons were made.

Demographics and Matching. Table 1 shows the percentage of young people's distribution across the demographic characteristics of gender, age, and ethnicity within each of the three groupings. These distributions of young people differed among the classification groupings, especially across the gender and ethnicity variables. Several Stanford Research Institute (SRI) transition studies on postsecondary outcomes have noted an association between such demographic variables with the disability classification groupings and their postsecondary outcomes (Blackorby & Wagner, 1996; Wagner, 1992; Wagner et al., 2003). To reduce the disparity across the three groups resulting out of gender and ethnicity distributions, a frequency-matching by ethnicity and gender was carried out. The two frequency-matched comparison groups were created by randomly selecting four young adults from the EBD group and four from the nonclassified group contained within the comparison dataset for each Steps-to-Success exiter, matched by gender and ethnicity. The resulting dataset consisted of young adult exiters from the Steps-to-Success Program, young adults with EBD in Miami-Dade County who did not receive specialized transition services, and nonclassified young adults in the ratio of 1:4:4. This type of matching has been shown to control for the possible

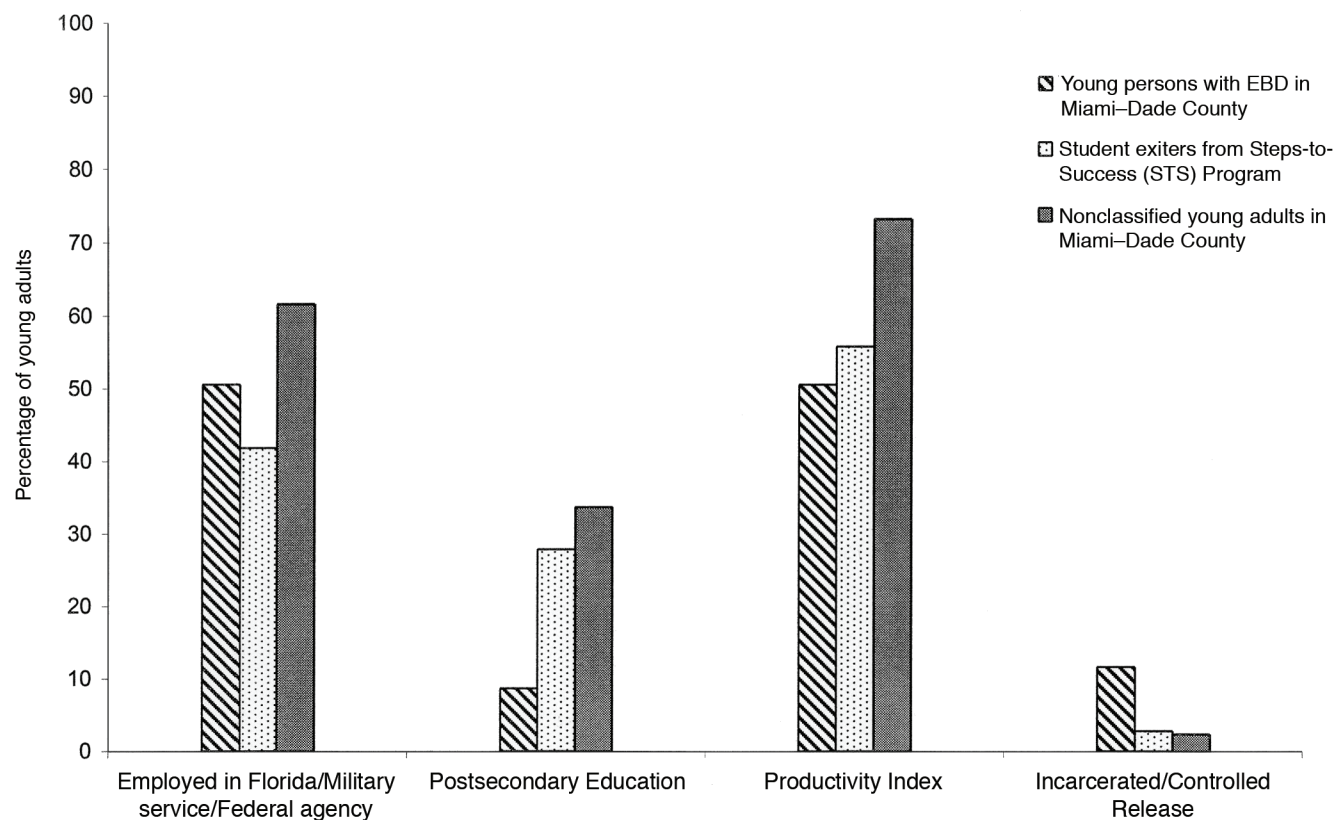


Figure 1. Percentage of matched young people for the four classification groups across postsecondary outcome indicators (employment in Florida or in a federal or military agency, postsecondary vocational or technical training or college education [nationally], productivity index, and incarcerated/controlled release).

TABLE 1
Demographic Variables for the Three Student Classification Groupings

Demographic characteristics	Steps-to-Success exiters ^a (%)	EBD in Miami-Dade County ^b (%)	Nonclassified in Miami-Dade County ^c (%)
Gender			
Females	34.9	25.2	49.9
Males	65.1	74.8	50.1
Age group			
18	36.4	37.8	28.7
19	13.6	31.3	29.3
20	22.7	20.2	23.5
21	13.6	8.1	11.3
22	13.6	2.6	7.3
Ethnicity			
Caucasians	39.5	16.9	12.9
African Americans	16.3	42.9	32.1
Hispanics	44.2	39.9	53.5
Other ethnic groups	0	0.3	1.5

^a*n* = 43. ^b*n* = 990. ^c*n* = 61,285.

confounding effects induced by variations in proportions of young adults across ethnicity and gender in the analysis (Greenland & Morgenstern, 1990; Kupper, Karon, & Kleinbaum, 1981).

Results. As seen in Figure 1, 42% of the student exiters from the Steps-to-Success Program were employed compared with 51% of the matched group of young adults with EBD, and 62% of the nonclassified young adults were employed. Enrollment in postsecondary education by the Steps-to-Success exiters approached the norm reference set by the nonclassified young adults and was substantially higher than that of the matched EBD comparison group. Similar patterns can be observed for the productivity index. It was also found that about 12% of the young adults with EBD, 3% of the Steps-to-Success exiters, and 2% of the nonclassified young adults were incarcerated or on controlled release. Thus, the findings suggest that the pattern was consistent across the last three outcome indicators—with the Steps-to-Success exiters doing better, on average, than the matched comparison group of young adults with EBD but not as well as the matched comparison group of nonclassified young people. The exception to this pattern was for the employment measure.

Table 2 presents a descriptive statistical comparison of the data presented in Figure 1 for the two matched groups of young adults with EBD. A single-sample binomial test for difference of proportions was carried out between the group of exiters from Steps-to-Success and the matched comparison group of young people with EBD. The difference in percentage employed was not in the predicted direction and was not statistically significant between the two groups with EBD. The differences in proportions for the postsecondary educa-

tion and productivity index were statistically significant at ($ps = 0.001$ and 0.05 , respectively). It was also observed that Steps-to-Success exiters were nearly three times more likely to continue postsecondary education compared with the matched group of young people with EBD in Miami-Dade County. The difference in percentage of those incarcerated or on controlled release was marginally statistically significant for the groups of young people with EBD ($p = 0.08$). Young adult exiters from the Steps-to-Success Program were 0.18 times less likely to be incarcerated/on controlled release compared with the matched EBD group. It was observed that the intervention had low effect size for employment and medium effect size for postsecondary education and incarceration/controlled release.

Table 3 provides the comparison of odds ratios between (a) the Steps-to-Success exiters and the nonclassified group and (b) the EBD group in Miami-Dade County and the nonclassified group for each of the postsecondary outcomes originating from Miami-Dade County. This analysis uses the group of young adults with no classifications as a normative reference point against which the other two matched groups were compared. Note that the Steps-to-Success Program exiters were 1.09 times less likely to continue postsecondary education compared with the nonclassified individuals (odds ratio [OR] = 1.09; 95% confidence interval [95% CI]: 0.51–2.29), whereas the EBD comparison group was 3.2 times less likely to be enrolled in postsecondary education compared to nonclassified individuals (OR = 3.20; 95% CI: 1.81–5.66). Also, the Steps-to-Success exiters were 1.8 times less likely to be productively engaged compared with the nonclassified individuals (OR = 1.78; 95% CI: 0.90–3.52), whereas the EBD group was 2.2 times less likely to be productively

TABLE 2
Comparison of Postsecondary Outcomes for Exiters From the Steps-to-Success Program and the Matched Comparison Group of Young People with EBD in Miami-Dade County

Postsecondary outcomes indicators	Steps-to-Success Program students (%)	Young adults with EBD in Miami-Dade County (%)	Effect size
Employment	41.9	50.6	0.04 (low)
Postsecondary education*	27.9	8.7	0.40 (medium)
Productivity index*	55.8	50.6	0.10 (low)
Incarceration/controlled release**	2.8	11.6	0.40 (medium)

Note. EBD = Emotional/behavioral disturbances.
* $p < 0.05$. ** $p < 0.10$.

TABLE 3

Odds Ratios Across Postsecondary Outcomes for (a) Steps-to-Success Exiters Compared With the Nonclassified Group and (b) Young People with EBD Compared With the Nonclassified Group

Postsecondary outcome indicators	Odds ratios for Steps-to-Success exiters vs. nonclassified in Miami-Dade County ^a	Odds ratios for young adults with EBD in Miami-Dade County vs. nonclassified in Miami-Dade County ^a
Unemployed	1.93 (0.99–3.78)	1.80 (1.17–2.75)
No postsecondary education	1.09 (0.51–2.29)	3.20 (1.81–5.66)
Productivity index	1.78 (0.90–3.52)	2.24 (1.45–3.49)
No incarceration	0.79 (0.09–6.99)	4.39 (1.61–11.99)

Note. EBD = Emotional/behavioral disturbances.

^aConfidence interval (CI) = 95%.

engaged compared with the nonclassified individuals (OR = 2.24; 95% CI: 1.45–3.49). Similarly, the exiters from the Steps-to-Success Program were almost as likely to be incarcerated/on controlled release as nonclassified individuals (OR = 0.79; 95% CI: 0.09–6.99), whereas the EBD group in Miami-Dade County was nearly 4.4 times more likely to be incarcerated as the nonclassified cohort (OR = 1.61; 95% CI: 1.61–11.99). No large differences were observed between the odds ratios for employment for the two populations in reference to the group of young adults with no disability classification.

DISCUSSION

The results of the first study illustrated that young adults with EBD who had paid/unpaid employment experience in their secondary school, graduated, and did not have any involvement with the foster care or juvenile justice system had better postsecondary outcomes when compared with those with opposite experiences. This validates the positive influence of experiences such as paid/unpaid employment and graduation on postsecondary outcomes for youth and young adults that were reported in previous studies (Colley & Jamison, 1998; Luecking & Fabian, 2000; Stodden, Dowrick, Stodden, & Gilmore, 2000).

The second study demonstrated that the Steps-to-Success Program resulted in improved postsecondary outcomes for young people with EBD who formerly exited the program, relative to members of the matched comparison group with EBD, who did not have any specified transition services. The improved outcomes

were evident across all measures, except for employment. The differences for the postsecondary education and the productivity index were statistically significant, and the incarceration outcomes were marginally significant. Additionally, the comparison of odds ratios among the young adults who exited the Steps-to-Success Program versus nonclassified individuals, and young adults with EBD in Miami-Dade County versus nonclassified individuals, showed that the Steps-to-Success exiters were approaching more closely the outcome levels observed for the nonclassified group of young adults. It is interesting to note that the Steps-to-Success exiters were substantially more likely than the EBD-matched comparison group to be in postsecondary training or education. This may afford them greater opportunities to secure career-type employment that may lead to earning a wage that supports the critical needs of a young person's life and a greater opportunity for career advancement. However, it was surprising that the percentage of the exiters employed was essentially identical to that of the EBD comparison group. This might have been due to the higher number of Steps-to-Success exiters who attended postsecondary education relative to the comparison group of young people with EBD, whose major option might have been getting a job.

Although the findings seen in the Steps-to-Success group are not as great as those of the nonclassified comparison group, the exiters' outcomes are impressive, particularly in light of the following two facts. First, the Steps-to-Success Program's fidelity to the TIP system model guidelines has been improving, but it has not met all of the guidelines (e.g., service coordination was shown to improve over a 2-year period, but the funding to

hire transition facilitators had not been obtained [Deschenes, Sarkis, Caproni, & Clark, 2003]). Second, it has been shown that many EBDs persist from childhood into adulthood (Greenbaum, Dedrick, et al., 1996), such that even though young people may have access to specialized services, they continue to function more in a “recovery” mode than as fully “healed.”

The findings that transition services can be helpful in facilitating transition into adulthood are supported by some additional studies (Bullis et al., 2002; Cheney et al., 1998; Clark et al., 2004; Cook et al., 1997). Although each of these studies showed improvements in the young people’s progress related to secondary and postsecondary outcomes from entrance to departure from the program, the studies did not include comparison groups or did not track progress following departure from the program. The current study provides a comparison of the postsecondary outcomes for the exiters from a specialized, TIP-based intervention system with (a) those of young adults with EBD who did not receive specialized transition-based services and (b) those of nonclassified young adults—all within the same geographic area. Also, the focus of this study was on the postsecondary outcome indicators of employment, education, and incarceration for young people having exited secondary school 1 to 4 years earlier. The findings from this MDA study on the postsecondary outcomes for young people who have exited a TIP-type program are encouraging, but not without limitations.

It can be noted that the young people who were enrolled in the Steps-to-Success Program were referred by their IEP committee. Therefore, the role of selection bias cannot be ruled out, and the students with EBD who were enrolled in the Steps-to-Success Program might be different from the other students with EBD who were not in the program. While a frequency-matching technique was carried out across gender and ethnicity, it was not possible to get more comparable matches with respect to the different groups’ living situations and/or community life functioning, which have also been shown to affect postsecondary outcomes (Blackorby & Wagner, 1996; Carter & Wehby, 2003; Clark & Davis, 2000).

ADVANTAGES, LIMITATIONS, AND FUTURE DIRECTIONS OF THE MDA METHODOLOGY

This research illustrates an evaluation strategy for examining postsecondary outcomes for exiters from a

transition program. Such analyses provide state and local stakeholders with local “standards” set by the nonclassified young adults against which the postsecondary outcomes for young people with EBD served in a transition-based program can be compared. Differences in the postsecondary outcome indicators can be used by community and state stakeholders to better understand the progression of experience of different groups of young adults, and can serve as a basis for improving transition services and supports. An additional advantage of the MDA method is that, once it has been established, it is relatively easy to secure postsecondary outcome indicators on young adults as they move across facilities (e.g., technical schools, colleges, jobs) and locations (e.g., different counties or states).

Some of the limitations of this study and this evaluation strategy are as follows: (a) Access to complete databases is usually delayed by 6 to 18 months following the reporting year; (b) data security and interagency agreements may take substantial time to establish; (c) relatively large numbers of individuals are required in each group to provide reasonable estimates, particularly if analysis is stratified using other variables, such as gender, ethnicity, and age; (d) young people in the different groups may not be comparable, as they were not randomly assigned to the intervention and comparison groups; and (e) this study examined the postsecondary outcomes at a single point in time (i.e., in the fourth quarter of the year 2000). Future research is needed that samples postsecondary outcomes more frequently and tracks the groups over a longer period of time as they transition through their young adult lives. Future research should also involve random assignment of students to intervention and “service as usual.”

ABOUT THE AUTHORS

Arun Karpur, MPH, is a research faculty member with the Merged Data Analysis (MDA) project at the Florida Mental Health Institute within the University of South Florida (FMHI/USF). **Hewitt B. Clark**, PhD, is a professor at FMHI/USF. **Peter Caproni**, PhD, is a clinical school psychologist and the director of the Steps-to-Success Program at the Robert Morgan Vocational Technical School in the Miami–Dade School District. **Hank Sterner**, DPA, is the project manager for the SEDNET Multi-agency Network in the Miami–Dade School District.

CONTACT INFORMATION

Arun Karpur, 13301 Bruce B. Downs Blvd., MHC 2304, Tampa, FL 33612; e-mail: akarpur@fmhi.usf.edu. For in-

formation related to the Transition to Independence Process (TIP) system or the MDA project, please contact Hewitt B. Clark, Professor & Director, TIP System Development & Evaluation Team, Department of Child & Family Studies, FMHI/USF, 13301 Bruce B. Downs Blvd., Tampa, FL 33612; e-mail: clark@fmhi.usf.edu

AUTHORS' NOTES

1. The authors wish to express their appreciation for the assistance that Leonora Foels and Tracy Hogan (graduate interns and doctoral students at Barry University, School of Social Work) provided with this. The authors would also like to acknowledge Susan Osman and Ray Klein for their role, in concert with Peter Caproni, in creating the Steps-to-Success Program; Debbie Horvitz and the staff of the Palace at Kendall Nursing and Rehabilitation Center for their continuing contributions to the program; and a long list of personnel at the Miami-Dade County Public Schools who have supported Steps-to-Success, including the staff at Robert Morgan Vocational Technical School, and our principal, Antonio Martinez.
2. This Merged Data Analysis (MDA) research project is being conducted by faculty at the Florida Mental Health Institute within the University of South Florida (FMHI/USF) and in collaboration with leadership evaluation personnel at the Florida Departments of Education, Children and Families, Juvenile Justice, and other agencies. This research is being funded by FMHI/USF, grants awarded to FMHI/USF from the Florida Department of Education (grant awards 2002-03, 291-2623A-3C003; 2003-04, 291-2624A-4C003), and Office of Special Education Programs, U.S. Department of Education (Grant H324C010043).

REFERENCES

- Armstrong, K. H., Dedrick, R. F., & Greenbaum, P. E. (2003). Factors associated with community adjustment of young adults with serious emotional disturbance: A longitudinal analysis. *Journal of Emotional and Behavioral Disorders, 11*, 66-91.
- Blackorby, J., & Wagner, M. (1996). Longitudinal post-school outcomes for youth with disabilities: Findings from the National Longitudinal Transition Study. *Exceptional Children, 62*, 399-413.
- Bullis, M. (1999). *Achieving rehabilitation, individualized education, and employment success project for adolescents with emotional disturbance: Final report on the ARIES project*. Eugene: Institute on Violence and Destructive Behavior, University of Oregon.
- Bullis, M., & Fredericks, H. D. (2002). *Vocational and transition services for adolescents with emotional and behavioral disorders: Strategies and best practices*. Champaign, IL: Research Press.
- Bullis, M., Morgan, T., Benz, M., Todis, B., & Johnson, M. D. (2002). Description and evaluation of the ARIES Project: Achieving rehabilitation, individualized education, and employment success for adolescents with emotional disturbance. *Career Development for Exceptional Individuals, 25*, 41-58.
- Carroccio, D., Whitfield, D., & Clark, H. B. (2003). *Description and demographics of Florida students with EBD: School year 1997*. Tampa: Florida Mental Health Institute, University of South Florida.
- Carter, E. W., & Wehby, J. H. (2003). Job performance of transition-age youth with emotional and behavioral disorders. *Exceptional Children, 69*, 449-465.
- Chadsey, J., & Beyer, S. (2001). Social relationships in the workplace. *Mental Retardation and Developmental Disabilities Research Reviews, 7*, 128-133.
- Cheney, D., Hagner, D., Malloy, J., Cormier, G., & Bernstein, S. (1998). Transition services for youth and young adults with emotional disturbance: Description of initial results of Project RENEW. *Career Development for Exceptional Individuals, 21*, 17-32.
- Clark, H. B., & Davis, M. (2000). *Transition of youth and young adults with emotional or behavioral difficulties into adulthood: Handbook for practitioners, educators, parents, and administrators*. Baltimore: Brookes.
- Clark, H. B., Deschenes, N., & Jones, J. (2000). A framework for the development and operation of a transition system. In H. B. Clark & M. Davis (Eds.), *Transition to adulthood: A resource for assisting young people with emotional or behavioral difficulties*. Baltimore: Brookes.
- Clark, H. B., & Foster-Johnson, L. (1996). Serving youth in transition to adulthood. In B. Stroul (Ed.), *Children's mental health: Creating systems of care in a changing society*. Baltimore: Brookes.
- Clark, H. B., Pschorr, O., Wells, P., Curtis, M., & Tighe, T. (2004). Transition into community roles for young people with emotional/behavioral difficulties: Collaborative systems and program outcomes. In D. Cheney (Ed.), *Transition issues and strategies for youth and young adults with emotional and/or behavioral difficulties to facilitate movement in to community life* (pp. 201-226). Arlington, VA: The Council for Children With Behavioral Disorders and the Division of Career Development and Transition, Divisions of the Council for Exceptional Children.
- Clark, H. B., & Stewart, E. S. (1992). Transition into employment, education, and independent living: A survey of programs serving youth and young adults with emotional/behavioral disorders. In K. Kutash, C. J. Liberton, A. Algarin, & R. Friedman (Eds.), *Proceedings of the fifth annual conference: A System of Care for Children's Mental Health: Expanding the Research Base* (pp. 189-198). Tampa: University of South Florida, Louis de la Parte Florida Mental Health Institute.
- Clark, H. B., Unger, K., & Stewart, E. S. (1993). Transition of youth and young adults with emotional/behavioral disorders into employment, education and independent living. *Community Alternatives International Journal of Family Care, 5*, 20-46.
- Colley, D., & Jamison, D. (1998). Post school results for youth with disabilities: Key indicators and policy implications. *Career Development for Exceptional Individuals, 21*, 145-160.
- Cook, J. A., Solomon, M. L., Farrell, D., & Koziel, M. (1997). Vocational initiatives for transition-age youths with severe mental illness. In S. W. Henggeler & A. B. Santos (Eds.), *Innovative approaches for difficult-to-treat populations* (pp. 139-163). Washington, DC: American Psychiatric Press.
- Davis, M. (2001). *Transition supports to help adolescents in mental health services*. Alexandria, VA: National Association of State Mental Health Program Directors.
- Davis, M., & Butler, M. (2002). *Service system supports during the transition from adolescence to adulthood: Parent perspectives*.

- Alexandria, VA: National Association of State Mental Health Program Directors.
- Davis, M., & Vander Stoep, A. (1996). *The transition to adulthood among adolescents who have emotional disturbance*. Delmar, NY: Report prepared for the National Resource Center on Homelessness and Mental Illness Policy Research Associated, Inc.
- Davis, M., & Vander Stoep, A. (1997). The transition to adulthood for youth who have serious emotional disturbance: Development transition and young adult outcomes. *The Journal of Mental Health Administration*, 24, 400–427.
- Deschenes, N., Sarkis, M., Caproni, P., & Clark, H. B. (2003, March). *Case study: A distinctive tool in measuring transition practice*. Paper presented at the International Conference on Career Development and Transition—Council for Exceptional Children, Roanoke, VA.
- Embry, L., Vander Stoep, A., Evens, C., Rayan, K., & Pollock, A. (2000). Risk factors for homelessness in youth released from a psychiatric residential treatment facility. *Journal of the American Academy of Child and Adolescent Psychiatry*, 29, 1293–1299.
- Frank, A. R., Sitlington, P. L., & Carson, R. R. (1995). Young adults with behavioral disorders: A comparison with peers with mild disabilities. *Journal of Emotional and Behavioral Disorders*, 3, 156–164.
- Greenbaum, P. E., Dedrick, R. F., Friedman, R. M., Kutash, K., Brown, E. C., Lardieri, S. P., et al. (1996). National Adolescent and Child Treatment Study (NACTS): Outcomes for children with serious emotional and behavioral disturbances. *Journal of Emotional and Behavioral Disorders*, 4, 130–146.
- Greenbaum, P. E., Foster-Johnson, L., & Petrila, A. (1996). Co-occurring addictive and mental disorders among adolescents: Prevalence research and future directions. *American Journal of Orthopsychiatry*, 66, 52–60.
- Greenland, S., & Morgenstern, H. (1990). Matching and efficiency in cohort studies. *American Journal of Epidemiology*, 131, 151–159.
- Gresham, F. M., Sugai, G., & Horner, R. H. (2001). Interpreting outcomes of social skills training for students with high-incidence disabilities. *Exceptional Children*, 67, 331–344.
- Hagner, D., Cheney, D., & Malloy, J. (1999). Career-related outcomes of a model transition demonstration for young adults with emotional disturbance. *Rehabilitation Counseling Bulletin*, 42, 228–243.
- Kupper, L., Karon, J., & Kleinbaum, D. (1981). Matching in epidemiologic studies: Validity and efficiency considerations. *Biometrics*, 37, 271–292.
- Luecking, R., & Fabian, E. (2000). Paid internships and employment success for youth in transition. *Career Development for Exceptional Individuals*, 23, 205–221.
- Modrcin, M. J., & Rutland, A. C. (1989). Youth in transition: A summary of service components. *Psychosocial Rehabilitation Journal*, 12, 3–13.
- Neel, R. S., Meadows, N., Levine, P., & Edgar, E. B. (1988). What happens after special education: A statewide follow-up study of secondary students who have behavioral disorders. *Behavioral Disorders*, 13, 209–216.
- Rylance, B. J. (1997). Predictors of high school graduation or dropping out for youth with severe emotional disturbance. *Behavioral Disorders*, 23, 5–17.
- Rylance, B. J. (1998). Predictors of post-high school employment for youth identified as severely emotionally disturbed. *The Journal of Special Education*, 32, 184–192.
- Stodden, R. A., Dowrick, P., Stodden, N. J., & Gilmore, S. (2000, 10 June, 2004). *A review of secondary school factors influencing post school outcomes for youth with disabilities*. Retrieved June 24, 2004, from http://www.ncwd-youth.info/resources/_Publications/publications_browse.php?display=53
- Vander Stoep, A., Bersford, S., Weiss, N. S., McKnight, B., Cauce, A. M., & Cohen, P. (2000). Community-based study of the transition to adulthood for adolescents with psychiatric disorder. *American Journal of Epidemiology*, 152, 353–362.
- Vander Stoep, A., Weiss, N. S., Saldanha, E., & Cohen, P. (2003). What proportion of failure to complete secondary school in the US population is attributable to adolescent psychiatric disorder? *Journal of Behavioral Health Services & Research*, 30, 119–124.
- Wagner, M. (1992). *What happens next? Trends in post-secondary outcomes of youth with disabilities*. Menlo Park, CA: SRI International.
- Wagner, M., Blackorby, J., Cameto, R., & Newman, L. (1993). *What makes a difference? Influences on post school outcomes of youth with disabilities. The third comprehensive report from the National Longitudinal Transition Study of Special Education Students*. Menlo Park, CA: SRI International.
- Wagner, M., Marder, C., Levine, P., Cameto, R., Cadwallader, T., & Blackorby, J. (2003). *The individual and household characteristics of youth with disabilities. A report from the National Longitudinal Transition Study-2*. Retrieved from http://www.nlts2.org/pdfs/w1c1_exec_sum-standalone.pdf

Copyright of Career Development for Exceptional Individuals is the property of PRO-ED. The copyright in an individual article may be maintained by the author in certain cases. Content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.