Chapter Twelve

Transition to Adulthood

Symposium

Studies of Youth During the Transition to Adulthood

Symposium Introduction

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Studies of the transition to adulthood for youth with emotional or behavioral difficulties have found alarmingly poor functioning during early adulthood (reviewed in Davis & Vander Stoep, 1997, Vander Stoep et al., 2000, Davis, 2003). Tailoring practices and policies to any group's particular needs requires knowledge about the causes, correlates, and patterns of their needs, and the characteristics of the population that could impact the need for and implementation of treatment or services. Papers in this symposium present studies that clarify important considerations for youth in transition.

The first paper examines methods of identifying, in early adolescence, youth who are at high risk of failure to complete secondary school and get into trouble with the law in early adulthood. The community-based sample of this study makes the conclusions particularly compelling. The second paper presents the needs of young adults as they transition from residential treatment in the child welfare system. These youth represent a particularly high risk group for difficulties with transition to adulthood. The third paper examined the contribution of substance-related disorders to the concerning young adult functioning of youth with psychiatric disorders, in a nationally representative household sample. This sample makes these findings particularly salient for those living in the community with psychiatric disorders.

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Which Measure of Adolescent Psychiatric Disorder–Diagnosis, Number of Symptoms or Level of Adaptive Functioning—Best Predicts Adverse Outcomes in Young Adulthood?

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Background

According to recent prevalence estimates, 3 to 5 million older adolescents with a diagnosable mental illness are currently living in the United States (Costello, 1989; Giaconia, et al., 1993; Davis & Vander Stoep, 1997). Both treatment-based and community-based studies have demonstrated that, during the period of transition to adulthood, adolescents with psychiatric disorder are at high risk of dropping out of school, being arrested, failing to sustain employment, experiencing residential instability and homelessness, and relying on public assistance (Valdez, Williamson, & Wagner, 1990; Wagner, et al., 1991; Wagner et al., 1992; Wagner, Blackarby, & Hebbeler, 1993; Prange, et al., 1992; Silver et al.,

1992; Kutash et al. 1995; Vander Stoep, 1991; Vander Stoep & Taub, 1994; Vander Stoep, Taub, & Holcomb, 1994; Vander Stoep, et al. 2000). An estimated 46% of high school drop out in the U.S. is attributable to adolescent psychiatric disorder (Vander Stoep et al., 2002).

Early identification of adolescents at high risk of adverse young adult outcomes is needed so that efforts can be made to prevent their occurrence. Optimally, simple and valid screening tools could be applied in settings such as schools, where a large majority of the population congregates during their early adolescent years. The aim of this study was to determine which approach to the assessment of adolescent psychiatric disorder—diagnosis, symptom count, or level of adaptive functioning—most accurately identifies adolescents who, in the future would fail to complete secondary school or engage in criminal activity (Vander Stoep, Weiss, Saldanha, & Cheney, 2003).

Methods

A community-based cohort study conducted in two counties in upstate New York over the past three decades (Cohen, et al, 1993) was used to address the study aim. In this study, participants were randomly selected in 1975 from a probability area sampling of representative families with 1-10 year old children; 181 participants were interviewed as adolescents in 1983 and again as young adults in 1985-86.

Psychiatric diagnosis and symptom counts were assessed on the basis of combined information from 1983 administration of the child and parent versions of the Diagnostic Interview Schedule for Children (Costello, et al. 1982). Study information about academic achievement, general sociability, self esteem, interpersonal difficulties, resistance to maternal control, social competence, and participation in normative activities was used to assign an adaptive functioning score based on the Children's Global Assessment Scale (Shaffer, et al., 1996) and the DSM-IV Social and Occupational Functioning Assessment Scale (Bird, Gould, & Staghezza, 1992) rubrics. Secondary school completion and involvement in criminal activities were ascertained from young adult and parent report in 1985-86.

Results

Compared with adolescents without psychiatric diagnoses, adolescents with depressive, anxiety, disruptive behavior and substance abuse disorders were 2.86-9.21 times more likely to fail to complete secondary school. Compared with adolescents without disruptive behavior disorders, adolescents with disruptive behavior disorders were 4.04 times more likely to get into trouble with police during young adulthood.

Future school and community adjustment was predicted more accurately on the basis of a simple count of psychiatric symptoms than by applying more complex diagnostic criteria (see Tables 1 and 2). Combining knowledge of symptom counts, age, gender, and social class in a logistic regression model yielded 89% sensitivity and 87% specificity for predicting future school non-completion at the optimal cutoff. The optimal cut off value in a model incorporating knowledge of disruptive behavior symptoms and demographic characteristics yielded 75% sensitivity and 76% specificity for predicting young adult criminal involvement. The ability of a count of symptoms of psychopathology to predict school non-completion was better among adolescents in the lowest SES stratum, and the ability of disruptive behavior symptom count to predict criminal involvement was better among males.

Limitations

Small sample size limits the ability to draw firm conclusions about the validity of different methods of classifying psychiatric disorder within population subgroups. With a larger study, the confidence intervals around estimates of the magnitude of effects of various measures of psychiatric disorder on young adult outcomes would be narrower. It would be possible to test for statistically significant differences in the validity of specific measures of disorder for predicting young adult outcomes, as well as for significant differences in the validity of specific measures within population subgroups. As it stands, the consistency

Table 1
Validity of Aspects of Adolescent Psychiatric Disorder in Predicting Failure to Complete Secondary School

Aspect of Adolescent Psychiatric Disorder	*No School Completion*	*School Completion*	*Crude Relative Risk*	*95% CI*	*Adjusted** Relative Risk*	*95% CI*	*Sensitivity (95% CI)*	*Specificity (95% CI)*	*Positive Predictive Value (95% CI)*
Psychiatric Diagnosis									
Any Diagnosis	18	51	6.85	2.42-19.37	9.64	2.80-33.24	0.818	0.664	0.261
No Diagnosis	4	101					(.590-.940)	(.583-.738)	(.166-.383)
Depressive Dx	3	5	3.28	1.22-8.81	9.06	1.52-53.86	0.136	0.967	0.375
No Depressive Dx	19	147					(.036-.360)	(.921-.988)	(.102-.741)
Anxiety Dx	8	21	2.86	1.32-6.18	4.41	1.40-13.88	0.364	0.862	0.276
No Anxiety Dx	14	131					(.180-.592)	(.794-.911)	(.134-.475)
Disruptive Dx	14	27	5.68	2.56-12.57	8.20	2.79-24.13	0.636	0.822	0.341
No Disruptive Dx	8	125					(.408-.820)	(.750-.878)	(.206-.507)
Substance Dx	8	16	3.57	1.68-7.59	5.24	1.63-16.92	0.364	0.895	0.333
No Substance Dx	14	136					(.180-.592)	(.832-.937)	(.164-.553)
Psychiatric Symptoms*									
Upper 25%	16	28	7.88	3.29-18.88	9.76	3.15-30.27	0.727	0.816	0.364
Lower 75%	6	124					(.496-.884)	(.743-.872)	(.228-.523)
Adaptive Functioning*									
Lower 25%	15	28	5.13	2.31-12.25	7.79	2.42-25.03	0.682	0.816	0.349
Upper 75%	7	124					(.451-.853)	(.743-.872)	(.215-.510)
Lower 50%	20	71	9.21	2.20-37.84	13.72	2.74-68.76	0.909	0.533	.220
Upper 50%	2	81					(.694-.984)	(.451-.614)	(.142-.321)

* The highest quartiles comprised the target groups on the symptom scales, and the lowest quartile comprised the target group on the adaptive functioning scales
** Adjusted for age, gender and social class

Table 2
Validity of Aspects of Adolescent Psychiatric Disorder in Predicting Young Adult Criminal Activity

Aspect of Adolescent Psychiatric Disorder	*Criminal Involvement*	*No Criminal Involvement*	*Crude Relative Risk*	*95% CI*	*Adjusted** Relative Risk*	*95% CI*	*Sensitivity (95% CI)*	*Specificity (95% CI)*	*Predictive Value Positive (95% CI)*
Psychiatric Diagnosis									
Any Diagnosis	13	56	1.91	.91-4.04	2.78	1.09-7.08	0.542	0.643	0.188
No Diagnosis	11	101					(.332-.738)	(.563-.717)	(.108-.304)
Depressive Dx	2	6	1.97	.56-6.95	3.22	.49-20.97	0.083	0.962	0.250
No Depressive Dx	22	151					(.015-.285)	(.915-.984)	(.045-.644)
Anxiety Dx	1	29	0.22	.03-1.56	0.23	.13-1.88	0.042	0.815	0.033
No Anxiety Dx	23	128					(.002-.231)	(.744-.871)	(.002-.191)
Disruptive Dx	13	28	4.04	1.96-8.32	7.99	2.86-22.29	0.542	0.822	0.317
No Disruptive Dx	11	129					(.332-.738)	(.751-.876)	(.186-.482)
Substance Dx	7	17	2.69	1.25-5.81	3.24	1.07-9.81	0.292	0.892	0.292
No Substance Dx	17	140					(.134-.512)	(.830-.934)	(.134-.512)
Psychiatric Symptoms*									
Upper 25%	11	34	2.56	1.23-5.80	5.42	1.87-15.78	0.458	0.783	0.244
Lower 75%	13	123					(.262-.668)	(.709-.843)	(.134-.399)
Disruptive Symptoms									
Highest 25%	14	31	4.23	2.02-8.85	7.46	2.68-20.73	0.583	0.803	0.311
Lower 75%	10	126					(.369-.772)	(.730-.860)	(.186-.468)
Highest 40%	18	54	4.50	1.88-10.79	8.67	2.90-25.97	0.750	0.654	0.250
Lower 60%	6	102					(.529-.894)	(.573-.727)	(.159-.368)
Adaptive Functioning*									
Lower 25%	4	46	0.52	.19-1.46	0.84	.24-2.87	0.167	0.707	0.080
Upper 75%	20	111					(.055-.382	(.628-.775)	(.026-.201)

* The highest quartiles comprised the target groups on the symptom scales, and the lowest quartile comprised the target group on the adaptive functioning scales
** Adjusted for age, gender and social class

of study findings when different analytic approaches are applied strengthens the ability to draw tentative conclusions. Perhaps the greatest contribution of this study lies in demonstrating the use of a variety of methodological approaches for addressing a question that has important public health implications.

A second limitation has to do with the generalizability of the study findings. Although the methodological approaches are useful, the actual results must be interpreted in light of the fact that, since the 1980s, major revisions have been made to the psychiatric nomenclature, to structured psychiatric diagnostic instruments, and to measures of adaptive functioning. With improved ability to measure adaptive functioning, this aspect of psychiatric disorder may have stronger predictive ability than has been demonstrated in the current study.

Conclusions

For many years, researchers and clinicians have sought operational definitions of psychiatric disorders in children that have practical value in identifying those who need treatment and in guiding decisions regarding appropriate intervention. In recent years the designation of Serious Emotional Disturbance (SED) has moved to the forefront for categorizing children whose psychiatric disorder is causing functional disability and who should be given highest priority for limited service resources. The operational definition of SED varies across service systems and geographic locales, but typically takes into account the presence of a diagnosable psychiatric disorder as well as impairment in the child's ability to function in developmentally normative activities within home, school, and community.

This study demonstrated the application of several methodological approaches to addressing the question of how to identify youth who are at high risk of future trouble. Counting psychiatric symptoms emerged as a promising approach for predicting young adult outcomes. Screening adolescents for psychiatric symptoms can be used to identify those at high risk of adverse young adult outcomes. Screening in neighborhood, school, or primary care settings is a logical first step for early intervention to promote increased rates of school completion and decreased rates of criminal activity in young adulthood.

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The Needs of Young Adults' Transition from Residential Treatment as Wards of the State

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Introduction

The transition to adulthood is a difficult time for most young people (McPherson, Weissman, Strickland, van Dyck, Blumberg, et al. 2004). It is a time of developing independence and self confidence complicated by unresolved feelings of dependence and doubt. It is likely that this transition is particularly challenging for young adults who transition to adulthood as wards of the state (Davis, 2003). This transition is particularly challenging for young people who are entering adulthood from residential treatment settings. Previous data suggest that residential treatment is used differently for individuals over 19 years than for children and adolescents; often there is no other viable placement. Many have spent years in various residential treatment placements. However, at some point, these young people must move often into community setting with much fewer supports. When this move is complicated by the presence of significant emotional or behavioral problems, the young person must learn to negotiate a completely new (i.e., adult) service system. The state has more complex responsibilities for young people who have grown up as wards. For example, young people who struggle with early adulthood often return to their parents for short periods of time. This is generally not an option for young adults who were wards.

This study provides data on the needs of young adults who have been wards of the State of Illinois and who are living in residential treatment settings. The sample is taken from the Residential Treatment Outcome System (RTOS) developed for the Illinois Department of Children and Family Services by the Mental Health Services and Policy Program at Northwestern University. The RTOS is a web-based outcome management system in which all residential treatment providers enter assessment information for all wards served within their programs.

Method

Sample. Currently, there are 131 youth between the ages of 19 and 21 years old who were served by a residential treatment setting in the first year of the RTOS database. This represents about 8% of the total population of youth in residential treatment who are wards of the State of Illinois. The majority (62.5%) of these young persons are male. The racial breakout of the sample is 65% African American, 25% Caucasian, 6% Hispanic, and 4% Multiracial.

Settings. All residential treatment centers and group homes who have youth who are wards of the State of Illinois participate in the RTOS system. During the first year, sixty-three Residential Treatment Center (RTC) and Group Home (GH) settings entered data on youth in their care. The 19 to 21 year olds were placed in 38 different programs representing 60% of all participating RTCs and GHs.

Results and Discussion

The primary clinical assessment for people over 19 years of age is the FARS, a functional assessment tool that has 9-point ratings on 16 items. Figure 1 presents the break out of primary psychiatric diagnoses for these individuals. Depression was the most common diagnosis, followed by anxiety suggesting that internalizing disorders were more common among this cohort. Disruptive Behavior Disorders are far more common among youth younger than 19 years old that are in residential treatment settings. Serious mental illnesses as reflected by diagnoses of Schizophrenia (8%) or Bipolar Disorder (6.5%) also were elevated compared to younger cohorts.

Figure 1
Diagnostic Characteristics
Distribution of Primary Psychiatric Diagnoses
For 19-21 Year-olds Who Are Wards of the State
In Residential Treatment Settings In Illinois

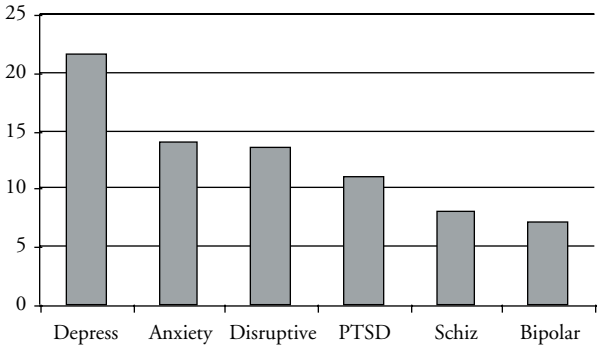


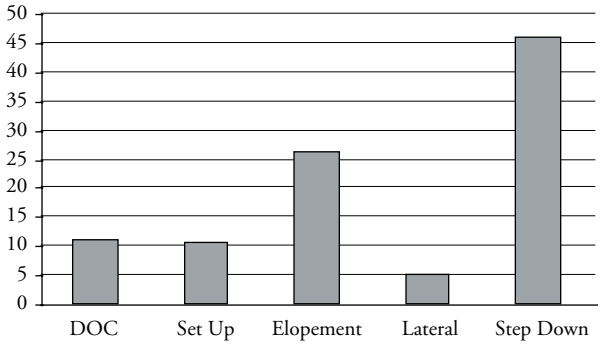
Table 1 presents the admissions FARS item means for all persons 19 years or older currently in the system. Nearly half of all youth in this sample (45%) had either low IQ or mental retardation. Thus many of these individuals were dually diagnosed in terms of psychiatric and developmental disorders.

For those youth 19 to 21 years who had been discharged from their treatment settings, the most common discharge disposition was step down (see Figure 2). However, about one quarter are discharged due to their running away from placements.

Table 1
Item Descriptive Statistics for Wards of the State of Illinois
Over 19 Years Old Who Are Placed In Residential Treatment Centers

FARS item	*Mean*	*sd*	*min*	*max*
Depression	4.0	1.8	1	8
Anxiety	3.2	1.8	1	9
Hyperactivity	3.2	2.0	1	9
Thought Process	2.8	2.0	1	9
Cognitive Performance	3.9	1.9	1	9
Medical/Physical	2.0	1.5	1	7
Traumatic Stress	2.5	1.8	1	8
Substance Use	2.5	1.9	1	8
Interpersonal Relationships	3.9	1.9	1	8
Family Relationships	3.2	1.8	1	7
Family Environment	3.2	1.8	1	7
Socio-Legal	3.6	2.1	1	9
Work or School	3.2	2.0	1	9
ADL Functioning	3.2	2.1	1	8
Ability to Care for Self	2.9	2.0	1	9
Danger to Self	2.1	1.7	1	8
Danger to Others	3.1	2.2	1	8
Security/Management	3.4	2.0	1	9

Figure 2
Distribution of Discharge Dispositions for 19-21 Year-olds Who are Wards of the State in Residential Treatment Settings in Illinois



Discussion

Although this group represents a relatively small percent of the overall population of wards of the State of Illinois in congregate care environments, they are spread widely across the system with very few specialty programs designed to address their specific developmental needs. Most programs have one or two of these transitioning youth. This makes training staff in best practices for assisting transitioning young people from residential treatment particularly difficult. The majority of programs have at least one such youth and therefore, training must be broad-based in order to be successful. Independent and transitional living programs do not currently participate in the RTOS database. These programs have much greater specialization in training and program models. Most of the youth who stepped-down into a lower level of care were moving to these types of specialty programs.

Consistent with other research, most of the youth in this cohort were male (Richardson, Koller, & Katz, 1986). Not surprising given the child welfare population, the majority also were minority group members. Thus, the modal young adult was an African American male. The additional challenges young African American men face without behavioral health difficulties are well documented.

The behavioral health needs of these youth are quite different than that of younger cohorts in child welfare. Disruptive behavior disorders were relatively uncommon. Consistent with research on factors that predict depression, young adults in child welfare treatment placements have an elevated level of Depression and Anxiety disorders (Reinherz, Paradis, Giaconia, Stashwick & Fitzmaurice, 2003). In addition, the prevalence of major mental illness was elevated. In fact, these young people appear similar in description to the most challenging members of the community mental health population (Pepper, Kirshner & Ryglewicz, 1991). Further complicating these challenges, nearly half of the youth had either low IQ or mental retardation. The treatment of behavioral health problems among young persons with limited cognitive abilities is particularly challenging and requires specialized approaches.

A substantial minority of young persons in this cohort were discharged from congregate care settings because they ran away from them. This is one of the most difficult dispositional outcomes to understand. Given their age, there are limited legal consequences to this behavior, so it is a notable treatment goal to create programs that young adults can feel committed to completing. In addition, although the rate of discharge to the Department of Corrections (DOC) is comparable across age groups, it remains that case that about 1 in 10 of these young adults ends up incarcerated. Of course, 19 year olds go to an adult prison rather than a juvenile justice facility. So, the implications for their healthy transition to adulthood may be even more serious.

In sum, wards of the state served in congregate care settings who are between the ages of 19 and 21 appear to have somewhat unique needs that challenge the system. Since these young persons are scattered throughout the system in small numbers at each setting, the challenge of effectively addressing these needs is significant.

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Substance Abuse and the Functioning of Transition-Aged Youth with Psychiatric Disorders

Maryann Davis, Valerie Williams & Bernice Fernandes

Introduction

Numerous longitudinal studies have examined young adult functioning in youth who had a serious emotional disturbance (SED) or psychiatric disorder in childhood or adolescence (Vander Stoep et al., 2000; Davis & Vander Stoep, 1997). Uniformly these studies have found that these youth struggle to complete high school, have a job, stay off the streets and out of trouble with the law. The National Adolescent and Child Treatment Study (NACTS) also documented that the prevalence of substance use disorders increases dramatically from early adolescence to early adulthood in this population (Greenbaum, in Davis & Vander Stoep, 1997). The degree to which poor outcomes are the result of SED, of substance use disorders, or of the combined condition has not been examined. The present study attempted to determine the relative contribution of each condition during the transition stage. This question was addressed using data from the 1,598 15-25 year olds who participated in Part II of the National Comorbidity Survey (NCS; Kessler, 1994).

Methods

Overview. Conducted from 1990 to 1992, this survey was designed to assess the prevalence and correlates of *DSM-III-R* disorders and was administered to a nationally representative household sample of non-institutionalized, civilian persons in the 48 contiguous states. NCS data have been one of the main sources of estimates of treatment need in the United States (U.S. Department of Health and Human Services, 2000) and have been used to address a range of other research questions. As such, the methods and procedures of the NCS have been described in detail elsewhere (Kessler, 1994; Kessler, McGonagle, Zhao, Nelson et al., 1994; Kessler et al., 1995a; Kessler et al., 1995b; Kessler Anthony, Blazer, Bromet, et al., 1997). Data were weighted to adjust for variation in the probability of selection, non-response, and to approximate 1989 national population distributions.

Sample. Four mutually exclusive groups were constructed for all 15-25 year olds (n = 1,598) based on lifetime diagnoses; those without any psychiatric or substance-related disorder (None, n = 756), those with a psychiatric disorder without a substance-related disorder (PD Only, n = 441), those with a substance-use disorder without a psychiatric disorder (SUD Only, n = 122), and those with a psychiatric disorder and a substance-use disorder (Comorbid, n = 216). There were several group differences in sociodemographic and historical variables (see Table 1). There were no differences in head-of-household education level for the family that raised the respondent, $F(3,1415)$ 2.109, p >.05, or in the urbanicity of their residency, χ^2 (df = 6) = 6.3, p > .10.

Table 1
Differences Between NCS Respondents Age 15-25 years
(n = 1598) by Diagnostic Group

Characteristic	*None (n=756)*	*PD Only† (n=441)*	*SUD only† (n=122)*	*Comomrbid (n=216)*
Male Gender*	49%	40%	77%	56%
Non White Race*	35%	36%	9%	19%
Mean Age*	19.4 (±3.2)	19.3 (±3.2)	21.0 (±2.5)	20.9 (±2.9)
Physical Abuse History*	20%	31%	25%	41%
Geographic Region:*				
Northeast	16%	15%	23%	23%
Midwest	26%	24%	31%	26%
South	40%	38%	33%	31%
West	17%	22%	13%	20%
Household Education	12.7 (±3.1)	12.4 (±3.1)	12.9 (±3.0)	12.3 (±3.1)
Urbanicity:				
Metropolitan	44%	47%	44%	40%
Other urban	33%	33%	30%	39%
Non Urban	23%	20%	26%	21%

† PD=psychiatric disorder, SUD=substance use disorder
* Gender χ^2 (df = 3)=63.0, p < .001, Race χ^2 (df = 3) = 58.7, p < .001, Age F(3,1593) 23.5, p < .001, region χ^2 (df = 9) = 21.4, p=.011

Statistical Methods. The following variables of functioning were examined; secondary school incompletion, not working, not positively engaged, living with family, trouble with the police/law in the past 12 months, and pregnancy. Secondary school incompletion was scored for individuals who were not in school and had not completed 12 grades or GED. "Not working" was scored for respondents who reported that they were currently not working and not a homemaker. "Not positively engaged" was coded for those who were not students, not currently working, and not a homemaker. Living with family was scored for those individuals who were living with parental figures, siblings, or extended family, not for those living with their own spouse and/or children. Having been pregnant was scored if the respondent indicated currently being pregnant, or any history of miscarriage/stillbirth, abortion, or having experienced childbirth.

Analysis of variance (ANOVA) was used to examine main effects of psychiatric disorder, substance use disorder, and gender—controlling for age, geographic region, history of physical abuse, minority status. We examined 2-way interactions for the following combinations of variables: mental illness by substance abuse, mental illness by gender, and substance abuse by gender. Three-way interactions involving these variables were also examined (e.g., mental illness by substance abuse by gender). Significant psychiatric disorder by substance use disorder interactions indicate when the comorbid condition is significantly different than the additive effect (sum) of the two conditions individually. The interaction may indicate that the co-occurrence of these two conditions are worse than the impact of the sum of both conditions alone. These findings are preliminary in that weights have not been applied to correct for the level of significance (p-values) due to inflation of standard errors caused by complex sampling.

Results

There were no significant 3-way interactions for any of the functional variables. As can be seen from Table 2, there were significant psychiatric disorder and substance use disorder interactions for school incompletion, living with family, and getting in trouble with the law. For each of these areas of functioning, youth with the comorbid condition fared much worse than simply the additive effects of both conditions. There were main effects for psychiatric disorder and substance use disorders for not being positively engaged, and pregnancy in females. Main effects were all in the direction of poorer functioning.

There were also important effects of gender on these areas of functioning (see Table 3). More males had not completed secondary school and more were living with their families compared to females. The effect of gender depended on diagnostic group for two areas of functioning. The impact of psychiatric disorder on not working was expressed primarily in young women. Young women with a psychiatric disorder were much less likely to be working than young women without a psychiatric disorder, whereas not working in young men was not effected by psychiatric disorder. Conversely, the presence of psychiatric disorder or substance use disorder elevated risk of getting into trouble with the law in males, but not in females.

Table 2
Percent of Subjects Reporting Functional Difficulties by Diagnostic Group

Variable	*No Diagnosis (n = 756)*	*PD Only† (n = 441)*	*SUD Only† (n = 122)*	*Comorbid (n = 216)*
School Incompletion*	7.4	10.3	7.3	27.4
Not Working	45.1	52.5	34.3	52.9
Not Positively Engaged ** ††	3.9	6.1	6.9	13.0
Living with Family*	64.8	60.6	70.8	54.5
Trouble with Law*	1.5	1.5	7.6	16.3
Pregnancy in Females** ††	29.3	42.5	42.3	45.6

† PD=psychiatric disorder, SUD=substance use disorder
* Significant PD x SA interaction; School Incompletion $F(1, 1510)$ 17.9, $p < .001$, Living with Family $F(1,1510)$ 10.4, $p=.001$, Trouble with Law $F(1,1510)$ 13.2, $p < .001$
** Main effect Psychiatric Diagnosis; Positive Engagement $F(1,1510)$ 6.3, $p = .012$, Pregnancy $F(1,1510)$ 13.9, $p < .001$
†† Main effect Substance Use Disorder; Not Positively Engaged $F(1,1510)$ 16.2, $p < .001$, Pregnancy $F(1,1510)$ 6.5, $p = .011$

Table 3
Percent of Subjects Reporting Functional Difficulties by Gender, and Interactions with Diagnostic Group

	Males	*Females*	*Males*		*Females*		*Males*		*Females*	
Variable	*(n = 805)*	*(n = 793)*	*No PD*	*PD*	*No PD*	*PD*	*No SUD*	*SUD*	*No SUD*	*SUD*
School Incompletion**	14.3	11.9								
Not Working*	47.8	44.6	42.8	46.5	36.6	58.9				
Not Positively Engaged	7.9	7.1								
Living with Family**	67.3	58.1								
Trouble with Law*	12.0	1.5	5.1	13.6	0.7	1.6	2.8	21.2	2.8	2.7

* Significant interaction; Gender x PD Not Working $F(1,1510)$ 7.8, $p = .005$, Trouble with Law $F(1,1510)$ 4.7, $p = .031$, Gender x SA Trouble with Law, $F(1,1510)$ 13.2, $p < .001$
** Main effect Gender; School Incompletion F, 1,1510) 5.9, $p = .015$, Positive Engagement $F(1,1510)$ 6.3, $p = .012$, Living with Family $F(1,1510)$ 35.4, $p < .001$
† Main effect Substance Use Disorder; Not Positively Engaged $F(1,1510)$ 16.2, $p < .001$, Pregnancy $F(1,1510)$ 6.5, $p = .011$

Discussion

These preliminary findings are intriguing, suggesting that the presence of a substance-related disorder contributes significantly to many of the negative outcomes in studies of youth with SED, but does not account for them fully. Specifically, while the presence of a psychiatric disorder is associated with difficulty completing secondary school, being positively engaged in daily roles, and living with family, each of these areas of functioning is worse for those who additionally have a substance use disorder. It appears that for school incompletion and living with family, the combined condition is exponentially worse.

Gender was important to understanding the impact of disorders in two areas of functioning. The impact of psychiatric disorder on not working was only meaningful in the context of gender. The presence of a psychiatric disorder was associated with less ability to work in women, but not in men. Analyses related to getting into trouble with the law were particularly interesting. The effect of each diagnostic condition was dependent on the presence of the other or gender. Rates of trouble with the law were particularly high in males with a substance use disorder.

These findings suggest that it is critically important to screen for the presence of comorbid substance use disorders in youth with SED or serious mental illness during the transition stage. Treatment of substance abuse or dependence may help with school completion, being able to remain at home until they are developmentally ready for independence, and staying out of trouble with the law.

There were two important limitations to this study. The first is that it only captured those living in households and does not include homeless, or incarcerated individuals, or those in out-of-home treatment settings. In fact, in the Part II subsample there was an oversampling of college-age youth living in dorms. Thus these findings reflect the functioning of individuals who are doing well enough to be in these living conditions. Second, these findings also reflect on the broader condition of having had a psychiatric disorder at some time, and may be different for the sub group of those who have a serious emotional disturbance as they enter the transition stage. Future studies would benefit from longitudinal tracking of individuals with SED at the outset of the transition stage, and a close tracking of the presence or development of substance use disorders.

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Symposium Discussion

Nancy Koroloff

During this symposium, three leading researchers presented their latest findings with regard to youth with mental or emotional disabilities as they transition into adulthood. Each paper focused on a different set of characteristics that help us identify youth who fit into this category. At this point, it may be helpful to reflect on where we are in the development of a research base that helps us understand youth of transition age. Each of these papers focused on a different set of variables that partially explains which youth will have the most difficulty (or success) in the transition process.

I think of these as explanatory variables, variables that help us develop theories that explain why some youth have more difficulty transitioning to adulthood, and some youth have less. These papers suggest that we are still in the process of defining and describing the social problem that is created by youth with mental health disorders as they move into adulthood. We are still struggling with the shape and form of this social problem and what kinds of theories best explain it. We are beginning, just beginning, to see the emergence of research that is starting to pose and test theories of change, and determine what services and supports are needed to help these young adults create a better life.

A second set of issues raised by these papers is related to what outcomes are important and who gets to define those outcomes. For the most part, these papers focused on outcomes such as school completion and criminal involvement. Although these variables are often the only ones available, it would be to the field's advantage if we could conduct a public discussion about the positive outcomes

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Symposium

Studies of Services and Systems Involved During the Transition to Adulthood

Chair
Maryann Davis

Discussant
Kathleen Pottick

Authors
Mary Wagner
Michael Pullmann et al.
Matthew Johnsen et al.
Arun Karpur et al.

Symposium Introduction

Maryann Davis

Systematic examinations of the services that are involved throughout the period of transitioning into adulthood (ages 14-25) for youth with serious emotional disturbance (SED) have been limited. Longitudinal studies of this population have found alarmingly poor young adult outcomes (reviewed in Davis & Vander Stoep, 1997, Vander Stoep, Davis & Collins, 2000, Davis, 2003). Studies of systems indicate a scarcity of transition support services (Davis, 2001, 2003). The four papers presented in this symposium shed new light on these systems.

The first paper presents some initial findings from the second National Longitudinal Transition Study (NLTS-2) that shed light on the extent to which the school programs of students with SED demonstrate characteristics of interventions that help improve outcomes for youth with SED. Because of the national scope of this study, the findings have particularly important implications. The second study examined differences between older and younger adolescents in an established system of care in both characteristics of youth and in their service utilization. Their study is particularly informative as it reflects youth and services in a model child system, and could be replicated in any of the CMHS-funded system of care grant sites that serve older and younger adolescents. The third paper examined the relationships between agencies and organizations that could provide transition services to youth with SED. This study found very few opportunities for youth to maintain care continuity as they passed their 18th or 21st birthday, and subsystems of child and adult services that communicated little with each other. The last paper examined how existing administrative databases could be used to compare young adult outcomes between students with SED, students with other disabilities, and students without disabilities, and the impact of specific transition services. They present data from one transition program in a secondary vocational/technical school.

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Students with Emotional Disturbances: How Are Schools Preparing Them for Adulthood?

Mary Wagner

Introduction

Studies of youth with emotional disturbance (ED) have documented the negative outcomes experienced by many (Wagner 1995, Wagner, 2003). Research has identified the characteristics of interventions that help improve outcomes for youth with ED, including, for example, individualization of academic and curricular interventions; consultation between educators, service providers, youth, and

families; multimodal interventions; use of positive behavioral supports; and transition planning that sets appropriate and goals and identifies both preparatory activities and post-school services to help youth achieve them (National Association of School Psychologists, 2002; Jolivette, Stitcher, Nelson, Scott & Liaupsin, 2000; Sugai, et al., 2000; U.S. Department of Education, 1998). To what extent do the school programs of students with emotional disturbances (ED) demonstrate these characteristics?

The National Longitudinal Transition Study-2 (NLTS2) addresses this question by describing the school-related transition experiences of a nationally representative sample of secondary school students receiving special education services with a primary disability classification of ED. An initial focus is on understanding the complex array of issues that students with ED "bring to the table" of their transition experiences as a basis for individualizing programs and interventions to improve their outcomes. Findings then focus on what schools are doing to prepare students for their post-school years.

Methods

The National Longitudinal Transition Study-2 (NLTS2), being conducted by SRI International for the U.S. Office of Special Education Programs, involves more than 11,000 youth who were receiving special education services in grade seven or higher when the study began; 825 students are included in the category of ED. Data are reported from the first wave of telephone interviews with parents, conducted in 2001, and from the first wave of mail surveys of school staff serving sample members in the 2001-02 school year; surveyed youth were ages 13 through 18. Percentages and means reported for youth with ED and youth with disabilities as a whole are weighted to represent those groups nationally. Comparisons also are made with youth in the general population where comparable data are available. Results of *F* tests indicate the statistical significance between youth with ED and these comparison groups[1].

Results

Characteristics of Students with ED

Secondary school youth with ED differ from the general population in many ways, other than their disability—differences that can help in understanding their outcomes. For example, more than three-fourths of youth with ED are male (see Table 1). Thus, activities that are more common among young men are likely to be more common among youth with ED than the general population, apart from any effects of their disabilities. Youth with ED also have a cluster of other characteristics that are associated with poorer outcomes in the general population, including a higher likelihood of being African American, living in poverty, and having a head of household who is not a high school graduate, and they are less likely to have a two-parent family.

Almost two-thirds of youth with ED are reported by parents to have attention deficit or attention deficit/hyperactivity disorder (ADHD), and one-fourth are rated low by parents on a scale of social skills (11 items comprise this scale, most taken from the Social Skills Rating Scale [Gresham & Elliott, 1990]) ‡ Perhaps reflecting such skills deficits, secondary-school-age youth with ED are only about half as likely as youth with disabilities as a whole to have parents who say they get along "very well" with teachers or other students. Youth with ED also are more likely than others to be victims of bullying and fighting at school. More than one-third (36%) are reported by parents also to be bulliers. These behaviors may contribute to the fact that 44% of youth with ED are reported to have been suspended in the current school year, twice the rate of suspensions of youth in the general population. Additionally, more than one-third of youth with ED are reported to have been arrested, more than twice the 15% of same-age youth in the general population who have ever been arrested (calculated using data from the 1999 National Longitudinal Survey of Youth).

[1]*Author notes: NLTS2 design details, data tables, and reports are available at www.nlts2.org.*

Table 1
Characteristics of Youth with Emotional Disturbances, Youth with All Disabilities, and Youth in the General Population

	Secondary School Youth		
	With ED	*With All Disabilities*	*General Population*[a]
Demographics			
Percentage who are:			
Male	77.1	65.8***	50.8***
African American	25.0	20.7	15.8***
Living in poverty	29.8	24.8	19.7***
In a single-parent household	38.1	31.1*	22.5***
In a household whose head of household has a high school education or less	60.4	62.4	46.6***
Reported by parents to have ADHD	63.1	36.4***	
Functional abilities			
Percentage whose parents report youth have low:			
Overall social skills	25.2	17.9**	
Self-control subscale	19.8	13.4**	7.5***
Assertion subscale	24.3	19.9	8.1***
Cooperation subscale	28.6	15.4***	
Percentage whose parents report youth have high functional cognitive skills	62.7	48.9***	
Percentage whose parents report youth have at least "a little trouble" with:			
Speaking	19.3	28.9***	
Carrying on conversation	31.3	31.8	
Understanding what others say	29.4	30.1	
Social adjustment			
Percentage whose parents report youth:			
Get along "very well" with:			
Students	21.6	46.2***	
Teachers	29.4	47.3***	
During the school year had:			
Been bullied	41.6	29.3***	11.6***
Bullied others	36.3	16.5***	
Been in fights	41.7	22.8***	4.5***
Been suspended or expelled	72.9	32.7***	22.0***
Have ever been arrested	34.8	13.1***	

[a]Data for gender, race/ethnicity, parent characteristics, and social adjustment for general population are calculated for 13- to 17-year-olds from the National Household Education Survey, 1999. Data on poverty are from U.S. Census Bureau, 2002. Data on social skills are from nationally normed tests of the general population, provided to NLTS2 from American Guidance Services.
Comparisons with youth with ED statistically significant in a two-tailed test at the following levels:
*$p < .05$, **$p < .01$, ***$p < .001$.

Past Experiences with School

Many youth with ED bring a difficult history with them to their high school experiences. On average, they began receiving special education services later than youth with disabilities as a whole (see Table 2). They also experience greater school mobility than other youth with disabilities; 64% have gone to four or more schools since starting kindergarten—more schools than typically attended in progressing from elementary to middle and middle to high school. Youth with ED are more likely than youth in any other category to have parents report that their child's last school change was because he or she was assigned to a different school, not because of personal choice. Academic challenges can result; 38% of youth with ED have been held back a grade in their school careers, according to parents.

Table 2
Past Education-Related Experiences of Children and Youth Classified with ED and with All Disabilities

	Secondary School Youth	
	ED	*All Disabilities*
Average age when youth first received special education services	9.0	8.3***
Percentage whose parents report they:		
Attended four or more schools since kindergarten	63.5	47.3***
Changed schools the last time because reassigned by the school	19.5	5.4***
Ever were retained at grade level	37.7	35.9

Comparisons with youth with ED statistically significant in a two-tailed test at the $p < .001$ level.

School Programs

Post-school goals. The goals youth with ED have for their early years after high school are an important lens through which to view their secondary school programs. The majority are reported by school staff to have primary post-school goals related to competitive employment and independent living (see Table 3). Attending college and getting postsecondary vocational training are somewhat less common.

Course taking. The course schedules of most secondary school students with ED include courses that often are prerequisites for college, such as mathematics and science. Their typical course schedules are less likely to include occupationally specific vocational education despite the prevalence of employment-oriented goals.

Instructional settings. Youth with ED are quite likely to be taking many of their courses in general education classrooms. More than three-fourths of youth with ED take at least one general education class; on average, youth with ED take half of their courses in general education classrooms. About three-fourths of youth with ED take courses in special education classes; they average 44% of all courses they take.

Student supports. According to school staff, 55% of youth with ED have a behavior management plan or participate in a behavior management program, half receive behavioral interventions, and a similar percentage receive mental health services. Substance abuse

Table 3
Characteristics of the Secondary School Programs of Youth with Emotional Disturbances

	Percentage
Postsecondary goals	
Have primary transition goal of:	
Competitive employment	57.8
Independent living	53.3
Attend 2- or 4-year college	44.2
Postsecondary vocational education or training	44.2
Enhance social/interpersonal relationships	45.4
Maximize functional independence	20.7
Supported employment	8.7
Sheltered employment	2.6
Course taking	
In a given semester take:	
Mathematics	93.1
Science	84.3
Foreign language	15.3
Occupationally specific vocational education	51.2
Instructional settings	
In a given semester take:	
Any courses in general education classes	78.5
Average percentage of classes in general education	50.4
All courses in special education classes	74.0
Average percentage of classes in special education	44.3
Services and supports	
In a school year, take part in:	
Conflict resolution/anger management training	43.4
Behavioral intervention program	49.6
Substance abuse education or treatment	38.8
Behavior management program	55.0
Mental health services	48.9
Social work services	30.5
Case management	34.3
Appropriateness of program	
Have a school program considered by school staff to be "very well suited" to helping youth achieve transition goals	32.6

education or services are provided to 45% of youth with ED, and 43% take part in a conflict resolution or anger management program. Case management and social work services are provided to 34% and 30% of youth with ED, respectively.

Appropriateness of programs. Only one-third of youth with ED are reported by school staff to have school programs that are considered "very appropriate" to help them meet their post-school goals.

Transition Planning

Federal law requires that special education students have collaborative planning done for their post-school transition. Almost 90% of youth with ED had begun transition planning by the 2001-02 school year (shown in Table 4), with about two-thirds receiving explicit instruction in how to participate in that planning. Although identifying a course of study to meet students' post-school goals is a requirement of federal law for special education students starting at age 14, fewer than three-fourths of students with ED are reported to have such a course of study identified.

Table 4
Characteristics of Transition Planning for Secondary School Youth with Emotional Disturbances

	Percentage
Transition planning occurring	89.0
Are receiving instruction in transition planning	64.7
Have a course of study identified to help achieve goals	72.8
Have postschool need identified for:	
No services or supports	25.3
Postsecondary education accommodations	41.6
Vocational services	38.7
Behavioral intervention	20.8
Mental health services	12.2
Social work services	11.0
Have participation in transition planning by:	
Parent/guardian	83.7
Youth	83.6
Social education teacher	99.4
General academic education teacher	56.5
General education vocational teacher	30.3
School counselor	71.4
School administrator	58.5
Related services personnel	14.9
Vocational rehabilitation counselor	12.4
Other agency staff	5.6
Have contacts made on their behalf to:	
Vocational rehabilitation agency	37.2
Colleges	17.7
Postsecondary vocational schools/programs	23.4
Other vocational training agencies/programs	21.5
Potential employers	24.4
Job placement agencies	29.1
Mental health agencies	16.5
Military	25.2
Supported employment programs	12.6
Sheltered employment programs	3.7

In the transition planning process, needs for post-school services have been identified for three-fourths of youth with ED; postsecondary education accommodations and vocational services are most common. Services related to the emotional/behavioral aspects of their disabilities are less commonly identified as being needed by youth with ED after high school.

Participants in the transition planning process heavily reflect school staff, most commonly a special educator and a school counselor. Fewer teachers of students' general education academic and vocational courses participate. Related services personal and other agency staff participate relatively infrequently.

A variety of contacts are made with organizations outside the school on behalf of transitioning youth with ED, most frequently to the vocational rehabilitation agency (37%). From 20% to 30% of youth with ED have contacts made with vocational programs, potential employers, and job placement agencies on their behalf. Contacts with mental health service providers occur for 16% of youth with ED.

Discussion

The disabilities of youth with ED often entail poor social skills, and sizable percentages also have some cognitive and communication limitations. They have a cluster of demographic factors associated with poverty to a greater extent than the general population of youth, and many also bring a troubled history with school to their high school experiences.

During secondary school, youth with ED are most likely to have transition goals related to employment, yet they have school programs that emphasize academic courses and access to the general education curriculum. School programs that feature social adjustment/behavior-related supports are provided to between 45% and 55% of youth with ED. With these characteristics, only about one-third of youth with ED are reported by school staff to have school programs that are "very well suited" to help them meet their transition goals. Further, although the transition planning to help youth with ED achieve those goals address their vocational and postsecondary education aspirations, planning includes little emphasis on social adjustment/behavior-related services or supports that may be needed for youth to succeed in school or on the job.

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Youth in Transition: Needs and Service Utilization

Michael D. Pullmann & Nancy Koroloff

Introduction

The unique needs of adolescents with serious emotional disturbances in transition to adulthood have not been systematically addressed within traditional mental health systems (Davis, 2003). These needs include employment, living situations, educational opportunities, and community-life adjustment (Clark, Deschenes, & Jones, 2000). Meeting these needs is complicated by the fact that as youth approach adulthood they enter both a developmental transition (maturation) and an institutional transition (age eligibility requirements for services which may exclude them from many necessary services and supports). Although it is recognized that traditional service systems often fail to address the needs of these youth, service systems that have incorporated systems-of-care values and principles have not been examined for their response to the needs of transition-aged youth. While some systems-of-care principles address issues of concern to transition-aged youth—including the need to ensure smooth transitions to adult systems, providing individualized services, providing services in a normative environment, and others (Stroul & Friedman, 1986)—none of the principles specifically require provision of specialized services to help with the transition into adulthood, rather than adult systems.

This study is a preliminary effort to examine the needs and service utilization of youth being served in a mature system of care.

Method

Sample. Data for this study were collected in Clark County, located in southwest Washington State, a mixed urban and rural setting. It is predominately White (89%), with small percentages of African-American, American Indian, and other races and ethnicities. In 1999 the county received a Comprehensive Community Mental Health Services for Children and Their Families Program grants, funded by the federal Center for Mental Health Services.

Families qualified for the overall evaluation if their child (5 to 17.5 years old): needed services in mental health and another service system, had a disability that was expected to last for more than one year, and had a Global Assessment of Functioning (American Psychiatric Association, 1994) score below 50. Youth in Connections, a specialized Juvenile Justice/Mental Health program, have to meet all of the above qualifications and be on probation for at least one year. Caregivers and youth (11-18) are interviewed soon after intake into a public mental health program or Connections, and are interviewed every six months thereafter. Data are reported separately for youth in Connections because the profile of youth in that program is somewhat different than youth in the general system of care. Youth in that program are less likely to be on Medicaid, more likely to be older, and more likely to be male. They also have more access to individualized planning and services.

Baseline interviews were performed with 331 families. In the general system of care (excluding Connections), we completed interviews with 154 families of youth aged 5-12, 72 interviews with families of youth aged 13-15, and 32 interviews with families of youth aged 16+. In Connections, we completed interviews with 37 families of youth aged 13-15 and 36 interviews with families of youth aged 16+.

Measures. This analysis uses data collected as part of the National Evaluation Study, coordinated by ORC-Macro. For demographics and risk factors, we used the Descriptive Information Questionnaire (DIQ). To measure child functioning, we administered the Child and Adolescent Functional Assessment Scale, parent report (CAFAS; Hodges 2000) and the Behavioral and Emotional Rating Scale (BERS; Epstein & Sharma, 1997). Youth substance use was measured by the Substance Use Survey (SUS), education was measured by the Education Questionnaire (EQ), living environments was measured by the Restrictiveness of Living Environments and Placement Stability Scale-Revised (ROLES-R; Hawkins, Almeida, Fabry, & Reitz, 1992), service utilization was measured by the Multi-sector Service Contacts questionnaire (MSSC) and the Family Participation Measure (FPM).

Data Analyses. In order to compare needs and service utilization among younger and older youth, we divided the general systems-of-care youth into three groups—youth who were 5-12, 13-15, and 16+ years old. Connections was divided into two groups, 13-15, and 16+ years old (only one youth in Connections was younger than 13). Using these groups as independent variables, we ran Chi-square tests on crosstabulations of categorical dependent variables, and ANOVAs on continuous dependent variables. Findings were consistent between Connections and the general SOC unless noted otherwise.

Results

Table 1 depicts significant differences at baseline. Table 2 depicts the significant differences for services received between baseline and 6-month follow-up. Non-significant findings for both tables are not displayed due to space considerations, but are described below.

Risk factors. Five of six child risk factors were significantly more prevalent in older youth (13-16 years old) when compared to younger youth (5-12 years old)—older youth were more likely to have a history of substance use, attempted suicide, running away, sexual abuse, and physical abuse. They were no more likely to be sexually abusive of others. There were no significant differences between older and younger youth in family risk factors, including a family history of domestic violence, mental illness, substance use, criminal convictions of biological parents, or psychiatric hospitalization of biological parents.

Table 1
Significant Differences Between Younger and Older Youth at Baseline

	General SOC			*Connections*	
Variable	*5-12 n = 154*	*13-15 n = 72*	*16+ n = 32*	*13-15 n = 37*	*16+ n = 36*
Child history of substance use	.6%*	33%	50%	36%**	75%
Child has attempted suicide	8%*	34%	41%	16%**	29%
Child has run away	14%*	47%	41%	56%**	72%
Child has been sexually abused	24%*	40%	34%	30%	30%
Child has been physically abused	22%*	42%	36%	36%**	27%
Ever tried alcohol	22%*	70%	74%	79%**	96%
Ever tried cigarettes	38%*	64%	74%	82%	89%
Ever tried marijuana	17%*	56%	65%	70%**	96%
Ever tried psychedelics	0%*	11%	27%	12%**	41%
Ever tried amphetamines	0%	8%	15%	3%**	41%
Child in school at any time 6 months before baseline	99%*	88%	81%	97%**	78%
Living in jail, hospital, or restrictive treatment at any time 6 months before baseline	4%*	26%	31%	27%**	41%
CAFAS Substance use subscale	0.2*	5.0	8.0	9.0**	20.0
CAFAS Community role subscale	8.0*	10.0	13.0	24.0	27.0
CAFAS Total problem score	114.0*	130.0	131.0	154.0	166.0
BERS Affective strength	11.9*	10.7	12.1	10.6	11.5
BERS School functioning	9.7*	8.4	9.0	8.4	7.9
Grade point average (4-point A through F scale; A=4, F=0)	2.3*	1.3	1.4	1.3	0.9

* $p < .05$ for chi-square test or ANOVA within general SOC
** $p < .05$ for chi-square test or t-test within Connections

Table 2
Significant Differences In Services Received
Between Older and Younger Youth at 6-Month Follow-Up

	General SOC			*Connections*	
Variable	*5-12*	*13-15*	*16+*	*13-15*	*16+*
Youth and/or your family received any services between baseline and 6 months	91%*	80%	79%	100%	95%
Services received, out of those who received services:					
Crisis stabilization	12%*	31%	18%	9%	5%
Inpatient hospitalization	2%*	4%	14%	4%	10%
Recreational activities	21%*	24%	7%	35%	30%
Independent living	0%*	7%	5%	0%	5%
Life skills training	2%*	2%	13%	0%	5%
Vocational training	0%*	0%	8%	0%	5%

* $p < .05$ for chi-square test or ANOVA within general SOC

Child functioning. At baseline, caregivers reported that older youth had more total problems, more substance use problems, and more community problems (CAFAS scores). There were no differences on the remaining CAFAS subscales. On the BERS, younger youth had more strengths in school, and affective strength scores were variable (5-12 and 16+ year olds had higher scores than 13-15 year olds), but there were no other differences. Older youth were significantly more likely to report substance use.

Child education. Caregivers reported at baseline that older youth were less likely to be in school (in the general systems-of-care population, 12% of 13-15 year olds and 19% of 16+ were not in school, compared with 1% of the 5-12 year olds); of those who were not in school, there was an apparent trend for older youth to not be in school for negative reasons such as being expelled or refusing, rather than for being in a GED program or being home schooled. Of those who were in school, older youth had a significantly lower grade point average than younger youth.

Housing. At baseline, there were no differences between older and younger youth on whether they had lived with their parents or any other type of non-restrictive setting at any point in the previous six months. However, older youth were more likely to have lived in restrictive settings such as detention centers, jails, or hospitals at some point in the previous six months.

Services received. Caregivers reported on the types of services their child and family received between baseline and six months. Older youth were significantly less likely to receive services at all during the previous six months i.e., 80% of older youth, 91% of younger youth), which means they were more likely to only come in for an intake appointment and possibly a few follow-up appointments. This was not true of Connections, which had nearly universal reports of receiving services during the previous six months. Of those who did receive services there were some significant differences. Older youth were more likely to receive crisis stabilization, inpatient hospitalization, independent living, life skills training, and vocational training. The oldest youth (16+) were less likely to receive recreational services than youth 5-15 years old. There were no differences on 17 other types of services, including transition to adult services, medication, therapy, residential treatment, flexible funding, respite care, family support, transportation services, behavioral aides, and more.

We closely examined the services received by transition-aged youth, looking at the percentage of youth 16+ receiving transition-type services. Only a small percentage of caregivers of the oldest youth reported that their child received services to prepare them for adulthood. These included transition to adult services (4%), independent living services (7%), vocational training (8%), and life skills training (10%).

Discussion

Limitations. Two limitations need to be addressed. First, this was a secondary analysis of data not designed to deal with these questions. Second, all of these data were either caregiver or youth reported; services received by transition-aged youth may be more focused on issues of adulthood than is revealed in the data. For instance, individual therapists may work with the youth on independent living or life skills work, which may not be known to the caregiver.

Implications. This analysis demonstrated that older youth have distinct needs that may not be addressed in a mature system of care. Findings consistently revealed that older youth have more serious risk factors; they also have more problems with substance use, housing and education. However, they are less likely to receive services beyond initial intake and assessment. Additionally, regardless of the decreased functioning and increased problems of older youth, those that do receive services are unlikely to receive most services more often than younger children. The exceptions to that statement are crisis stabilization, hospitalization, and the three transition-specific services, which older youth are more likely to receive. While the fact that older youth are more likely to receive the three transition-specific services, independent living, life skills training, and vocational training, is promising, the percentage of transition-aged youth that reported actually receiving these services is quite small.

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Exploring Gaps and Continuities within Transition Networks

Matthew Johnsen, Maryann Davis, Barbara E. Starrett, Nancy Koroloff, Colleen McKay & Dianne Sondheimer

Introduction

The often rocky transition into adulthood of adolescents with serious emotional disturbances (SED) calls for examination of transition service systems. Clark and Davis (2000) point to the daunting issues facing young people as they leave children's services and enter adulthood. They face the challenges that all young people face at these times, yet they carry the added burden of an invisible disability. Few appropriate services exist to support them (Davis, 2001) and no unified public agencies are available to assist them and their families throughout the transition stage. In making this transition, they also face what might be termed structural and cultural impediments. Many programs have a specific age focus (i.e., they serve only adolescents or adults), which typically shapes the treatment culture. This can result in gaps in service continuity as youth age into adulthood, and age-inappropriate services for this population, newly vulnerable to more adult risks such as homelessness, unemployment, and crime (Davis, 2003).

This summary delineates structural strengths and impediments that can exist within the network of services that address the health, mental health, and functional needs of 14-25 year olds with serious emotional disturbances (SED) or serious mental illnesses (SMI), referred to here as the transition services network. Using an interorganizational network approach, we present findings from the transition service network in Clark County, Washington. Social network analysis is used to explore features of the transition network, identify clusters of organizations involved in serving individuals of different ages, examine key structural positions within the network, and explore the inter- and intra-organizational barriers to seamless transitions from adolescent to adult mental health services to bring policy considerations into sharper focus.

Methods

Clark County, Washington is one of five Center for Mental Health Services' Partnership for Youth Transition grant sites that are attempting to create comprehensive transition supports that can be continuously offered to individuals with SED as they age from 14-25 years. Such a system does not currently exist anywhere in the US (Davis, 2001). This paper presents baseline data on the Clark County transition network. Data were collected in the month prior to the scheduled initiation of the implementation stage of the grant (October, 2003).

We used an adaptation of a social network analysis approach utilized by Morrissey and his colleagues in a variety of studies of child and adult service systems (Morrissey, Johnsen & Calloway, 1998). In order to "bound" the transition system, knowledgeable community informants were provided a list of program types often found in child or adult service delivery networks including; mental health, substance abuse, educational, health and medical, child welfare, housing, vocational, and legal/advocacy services. Community informants were then asked to generate a list of the specific programs in Clark County that served individuals between 14 and 25 years old with SED or SMI. Examining this age range clarifies organizational responses before and after statutorily defined transition points (often at ages 18 and 21). We sampled from three of the seven school districts in Clark County.

Data were collected using interviews with organizational respondents, who were chosen as those who would be in the best position to answer questions about the organization's interactions with other organizations. This discussion focuses on two parts of a three-part interview:

Part I asked for information about the organization, the services it provided and individuals who served within the organization;

Part II asked for information about the interaction of the organization with each other organization in the network in: (1) meeting for client planning purposes, (2) meeting to discuss issues of mutual interest, and (3) sending and receiving referrals. One question addressed age continuity of services from an intra-organizational perspective. We analyzed the interorganizational network data using UCINET, a network software program, using a structural equivalence approach (CONCOR). This approach involves looking at interaction patterns of organizations within networks to determine which organizations play similar roles, using structural equivalence algorithms.

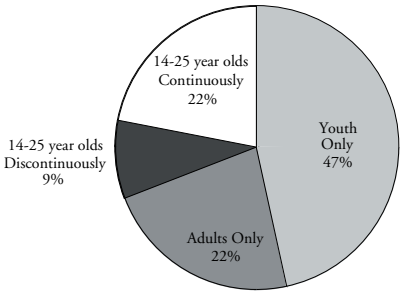
Of 107 agencies/programs initially identified, four were eliminated that had either ended or were in fact contained within other programs. Thus, the final transition services network consisted of 103 agencies, 100% of which participated in interviews.

Results

The sample of organizations in these preliminary analyses embodied the broad spectrum of service sectors initially targeted, with agencies represented in each service delivery sector. Participating programs and agencies were on average, quite well-established, and fairly large.

Continuity of Service. These preliminary analyses focus on information obtained in a service matrix. The matrix assembled information about the kinds of services that each agency provided, to what age groups they provided them, and whether services were provided continuously across the various age groups. Age groups consisted of (a) 14-17 years, (b) 18-21 years, (c) 22-25 years, and (d) 26 years and older. We examined the extent to which programs served: (a) youth only (that is, individuals up to 18 or 21), (b) adults only (that is individuals 18 or 21 and older), (c) youth and adults (14-25 year olds), but discontinuously meaning there was a change in staff or programs mandated at certain ages, or (d) youth and adults (14-25 year olds) continuously, without having to change staff or programs because of a change in age (see Figure 1).

Figure 1
Distribution of Programs by Age Groups Served (*n* = 103)



Youth-only programs serve individuals up to ages 18 or 21;
Adult only programs serve individuals 18 to 21 and older;
14-25 yr olds discontinuously programs require a change
of staff or programs because of age change;
14-25 year olds continuously allow for continuity of programs
or staff throughout this age range.

Overall, organizations within the transition services network provide a wide array of services to individuals at all age levels within Clark County. Of a menu of 57 services types (e.g., case management, groups homes, parent training) that might be provided to adolescents or young adults, a large proportion (94.7%) of services are available in the Clark County area to at least one of the four age groups. However, the mere presence of services across a wide array of service types and ages does not necessitate seamless transitions. Figure 1 reveal that only 22% of the programs reported that they could serve individuals across the 14-25 year old age spectrum. The vast majority of programs served only adults (22%), only youth (47%), or served both groups, but discontinuously (9%).

Another way of examining this question is to look at the number of services offered by organizational participants in the service delivery network which offered continuity in their services between ages 14-25: only 12.5% of the 789 services offered by network members were offered continuously across the transition age spectrum.

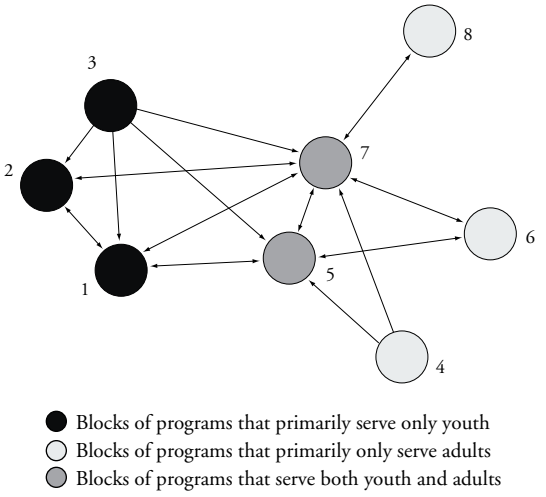
Structural Equivalence. In examining the interorganizational network, application of the structural equivalence algorithms led to an 8-position solution which explained one-third of the variation within the network. These positions and their membership are described in Table 1.

Table 1
Structural Positions within Transition Network

			Sector					
Position		*N*	*Education*	*MH*	*Justice*	*Child Welfare*	*Vocational*	*Multiple/ Other*
1	Child education	16	9	3	1	0	0	4
2	Child MH	16	0	11	1	1	0	3
3	Rural Child Education	20	11	0	0	0	0	4
4	Adult Mixed	9	2	0	0	1	1	4
5	Child/Adult MH	10	2	5	0	0	1	2
6	Adult Vocational	6	0	0	0	0	6	0
7	Child/Adult MH	8	0	4	1	0	0	3
8	Adult MH	16	0	14	0	0	0	2

Figure 2 presents a graphic representation of the blockmodel suggested by the structural equivalence analysis. In examining connectedness within this blockmodel, it appears that what one might characterize as the child service delivery network (positions 1, 2, 3, 5 and 7) is relatively well-connected, reflecting ties between all positions in the networks: each position is connected with all others. Position 3 is less connected, because its ties are unidirectional. Geographically, it appeared that many of the organizations in position 3 came from rural areas of the county.

Figure 2
Critical Linkage Points between Child and Adult Systems in Exchange of Information for Client Planning Purposes



As we looked at what might be characterized as the adult service delivery network (positions 4, 5, 6, 7, and 8), a different picture emerges. These positions are less connected than the child network, with positions 5 and 7 serving to link the other positions together. These two positions (5 and 7), because they are in both the child and adult networks, appear to hold key linkage roles between the child and adult service delivery systems. It is through these positions that the child and adult service delivery systems are connected.

Discussion

These initial findings suggest the complexity encountered in trying to discern, and then improve, services to young people with SED or SMI transitioning into adulthood. An initial look at the array of services types and ages served in this subset of the transition network suggests the availability of a comprehensive array of services across transition ages. However, this preliminary analysis highlights that only a small proportion of agencies offer continuity of services across the age thresholds of 18 or 21.

Similarly, the network analysis revealed distinct differences between the child and adult service delivery networks. While the positions in the child service system seemed to be well-connected, the connections within the adult system were less well connected. On the whole, the transition services network relied on two positions (members of which served both children and adults) to knit together what would otherwise be characterized as quite distinct and separate service delivery systems.

The results in this paper strongly suggest the importance of examining and addressing structural impediments (both within and between organizations) that stand in the way of providing smooth transitions for young people with serious emotional disturbances who require adult mental health services.

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Evaluating Post-Secondary Outcomes for Young People with Emotional/Behavioral Disturbances using Existing State-Wide Databases

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Introduction

Young people, especially those with emotional/behavioral disturbances (EBD) are challenged during their transition to adulthood roles. This group experiences some of the poorest secondary school and post-secondary school outcomes among any of the disability groups (Vander Stoep, Davis, & Collins, 2000). Their high school experience is often marked by high absenteeism rates, frequent discipline problems, juvenile crime, social isolation, school failure, and substance abuse (Clark & Davis, 2000; Greenbaum, Prange, Friedman, & Silver, 1991; Marder & D'Amico, 1992; Wagner, 1992).

The middle and secondary schools have not provided the community-relevant skills and supports needed to facilitate successful transitions from home and school to young adult roles for youth and young adults with EBD (Patton, Cronin, & Jairrels, 1997). A better understanding of the course and experiences of these young people is needed to assist in the refinement of service strategies to improve the likelihood of them becoming contributing members of society (Armstrong, Dedrick, & Greenbaum, 2003; Bullis, Morgan, Benz, Todis, & Johnson, 2002; Davis, 2001; Davis & Butler, 2002).

The present analysis illustrates methods of assessing the post-secondary outcomes for young people with EBD using existing statewide databases. State and school district personnel can use findings from these types of analyses to evaluate the comparative post-secondary outcome indicators for young people with various ESE classifications in contrast to those of individuals with no classifications. A second study within this article shows how these sources and analyses can also be used in comparing the outcomes of students who receive specialized transition services versus those who are in services as usual.

Methods

Establishment of the Merged Dataset[1]

The dataset for this study was established by merging the master file-the data file obtained from Florida Department of Education (FL DOE) that consisted of all unique students with valid social security numbers, demographic information, and disability classifications for the school year 1997-98-with data files obtained from the Florida Education and Training Placement Information Program (FETPIP) and the National Student Clearing House (NSCH) for the fourth quarter of the years 2000 and 2001. The FETPIP dataset consisted of information on post-secondary outcomes such as employment in Florida and involvement with Department of Corrections. The NSCH file consisted of nationwide information on continuing post-secondary education. Transfer and access to datasets were managed in accordance with the agreement with FL DOE, and the entire data storage and data analyses system was protected under Health Insurance Portability & Accountability Act (HIPAA) standards.

Analyses

This study was designed to provide illustrations of: (a) evaluating the post-secondary outcomes of young people with EBD and to compare with outcomes for young individuals with other disabilities and *Non-classified* (i.e., students without disabilities) on a statewide basis; and (b) assessing the impact of specialized transition-based intervention programs on the post-secondary outcomes for young adults with EBD. Post-secondary outcomes such as employment including the military/federal employment, post-secondary education, and incarceration are analyzed across three groups (i.e., young persons with EBD, individuals with other disabilities and Non-classified). Stratified analyses were also conducted across gender, ethnic classifications and age groups. The dataset consists of individuals 18 years and older; persons classified as "Gifted" in the master dataset were excluded from the datasets.

Study 1: Florida Statewide Analyses

Results

Figure 1 summarizes the post-secondary outcomes for young people in the three classification groups. The percentage of young adults employed across the classification groups had a stepwise pattern, with lowest percentages for the young adults observed with an EBD classification, and the highest for young adults with no disability classification (Non-classified). This same relative pattern is evident for post-secondary education, except at lower percentage levels. The productivity index, which reflects being employed or in school, portrays this same pattern. The reverse pattern is revealed for the percent of young adults incarcerated or under controlled release, with a much larger proportion of young adults with EBD being involved with the criminal justice system.

It was observed that young adults with EBD were nearly 1.8 times more likely to be unemployed when compared to the Non-classified (*OR* = 1.8, 95% *CI:* 1.7 to 1.8). Young adults with EBD were 5.5 times less likely to be in post-secondary education compared to the Non-classified (*OR*= 5.5, 95% *CI*: 5.1 to 5.9) and nearly 3.7 times more likely to be incarcerated compared to the Non-classified group (*OR* = 3.7, 95% CI: 3.5 to 4.0). Stratified analyses across gender and ethnicity revealed similar patterns consistent with those shown in Figure1; details of this can be found elsewhere (Karpur, Carroccio, Whitfield, & Clark, 2003).

[1]*Author notes: The 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.*

Study 2: Evaluation of a Specialized Transition-based Program Center

In addition to understanding differences in the post-secondary outcomes across the disability classifications, these statewide databases were utilized in assessing the programmatic impact of a transition based program within a particular county within the state. The following section illustrates the program, methodology, and findings.

The Steps-to-Success program was implemented in Robert Morgan Vocational and Technical school in Miami-Dade County Florida. The Steps-to-Success program was designed to provide educational, psychosocial, vocational training, and critical follow-up services and supports which students with EBD need on an individual basis for their successful transition into adulthood roles. The referrals to the Steps-to-Success program were made based on the IEP evaluation, and the decisions made by the young person's transition team that included school teachers, education specialists, and young person's parents/guardians.

Sixty-eight students had exited the program from its beginning to the end of 2002, out of which 43 young adults (ages 18-22 years) received at least one academic year of exposure to the program. The comparison group consisted of frequency matched (matched by age, gender, and ethnicity) comparison groups of: (a) young adults with EBD in Miami/Dade County, and (b) young adults with no disability classification (Non-classified) in the same geographic region.

Results

The assessment of the post-secondary outcomes for the Steps-to-Success exiters in contrast to two comparison groups of young adults in Dade County showed that about 42% of young persons in the Steps-to-Success exiters were employed compared to only 37% of individuals with EBD, and 60% of the Non-classified young people were employed. A similar pattern was observed for the post-secondary education and productivity index. Nearly 7% of young persons with EBD, 3% of Steps-to-Success exiters, and 1% of Non-classified were incarcerated or on controlled release. The difference in proportions of young people across various disability classifications for the post-secondary education and productivity index were statistically significant at $\alpha = .05$ (p-values: 0.001 and 0.05 respectively). These findings generally suggested that the young adults who exited the Steps-to-Success had substantially better post-secondary outcomes than the comparison group of young adults with EBD in Dade County. Additionally, analyses of odds ratios revealed that the young adult exiters from the Steps-to-Success were approaching the outcome levels observed for the Non-classified group of young adults compared to young people with EBD in Dade County.

Discussion

This study illustrated a method for examining post-secondary outcome indicators for young adults with EBD in the state of Florida using comparison groups of young people with Other Disabilities and Non-classified young people. The findings in our study indicate that young people with EBD have poorer post-secondary outcomes when compared to those with Other Disabilities as well as Non-classified. These findings are supportive of previous transition studies (Greenbaum et al., 1996; Wagner, 1992) and contribute to a more complete understanding of post-secondary outcomes for young people with EBD, particularly in that this study provides a comparison to the outcomes for young people with no classification. In addition, this research provides an illustration for using existing state datasets in the evaluation of the impact of various transition programs that are being implemented to serve the unique needs of young adults with EBD as they transition to adulthood roles. A more complete description of the MDA research methodology and related studies can be found on the TIP website http://tip.fmhi.usf.edu/.

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Symposium Discussion: The Collision between Developmental Need and Mental Health Service Failure: The Case of Youth in Transition

Kathleen J. Pottick

The four papers in this symposium address a poorly understood time in the life of youth with serious emotional disorders: the transition from adolescence to young adulthood. Transition time signals their changing developmental tasks and role assignments, and challenges organizations traditionally organized around child *or* adult service delivery to respond. Together, with different data sets and methods, the papers demonstrate that the transition years reflect a collision between developmental need and service failure.

Using a nationally representative survey sample data on youth, including youth with emotional disorders (ED), Wagner's research is based on interviews of parents and other caregivers and school staff. It shows that schools—even ones designed to provide services to ED youth—fall short in the provision of services, frequently not meeting minimum standards required by federal law. Pullman and colleagues base their analyses on families of ED youth seen in an integrated system of care. Their findings, building

on the ones above, demonstrate that older youth are less likely to receive services when intervention is most crucial to ready them for the role transition. Johnson and co-authors conduct a network analysis of organizations in Clark County, Washington serving seriously emotionally disturbed youth and adults, and like the studies above, they find that only about one-third of organizations had services that supported continuity of care within a single facility for 18-21 year olds. Karpur and colleagues demonstrate that a model intervention designed to prepare ED youth for adult roles can work in the real world, revealing that services do not have to fail our youth if we pay attention.

Overall, the collection shows very dramatically that ED adolescents who are entering adulthood are at the cusp, and that services to them are delivered at the margins.

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Adult Outcomes of Girls and Boys Town Youth: A Follow-Up Report

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Introduction

Residential care and education has been a component of most systems of care, but both practitioners and policy makers have questioned the long-term outcome of this type of intervention. While many residential programs have demonstrated a powerful influence on youths' behavior while in care, an enduring question has been whether these behavior changes continue into life after discharge and especially into adulthood. Carefully designed longitudinal research on residential outcomes is needed to address these issues (Whittaker & Pfeiffer, 1994).

The Girls and Boys Town long-term residential program includes a family-style living environment combined with life skill teaching, behavior modification, character education, and self-government. There is also an on-campus school, which works with the campus homes to provide consistent social and academic teaching. To assess outcomes during and after care, we conducted a longitudinal outcome study during the 1980s. Participants were youth who had been accepted into the program between 1981 and 1985 and a comparison group of youth who were eligible for admission but were not enrolled. Results at that time indicated that not all gains reported during care were maintained at follow-up (an average of four years after discharge). However, residential youth did have significantly more positive outcomes in educational attainment and expectations, contact with family and friends, and positive experiences with the intervention. Also, youth with longer stays had more positive outcomes (Friman et al., 1996; Oswalt, Daly, & Richter, 1991; Thompson et al., 1996).

The purpose of the current study was to re-contact individuals who participated in the original study to assess outcomes in adulthood. The specific research questions were: (1) Does this type of family style residential program produce lasting positive outcomes in adulthood? (2) To what degree do these positive outcomes differ from a group of similar at-risk youth that did not receive this type of residential care and education? (3) How do these two groups compare to national samples of their peers?

Method

The current study was initiated with those individuals in the residential and comparison groups from the original longitudinal study who had not requested, "no further contact." Four hundred and sixty-four individuals from the original sample were eligible for the current study. Efforts to locate these individuals included comprehensive calling of individuals on contact lists (e.g., relatives), hiring professional finding services, and extensive use of Internet resources. We were able to contact 271 of the eligible participants, for a 58% find rate. Of these 271 individuals, 252 completed a survey for a 93% response rate. This equates to 54% of the eligible population participating. These individuals were between the ages of twenty-seven and thirty-seven and were primarily Caucasian (69%) and male (92%) because of the admission patterns in the early 1980s. The residential group had been discharged 16 years earlier, on average. The comparison group had received a variety of interventions and therefore was not a "no-treatment" group.

The current survey was different than the ones used in the original study for two reasons. First, participants were now in their late twenties to early thirties as opposed to their late teens to early twenties. Consequently, the outcome indicators selected were somewhat different. Second, a key objective of the current study was to compare the results with national samples (information from the US population at large). Where possible, the questions used in the survey were selected from various national surveys. The national data sets used were: the Behavioral Risk Factor Surveillance System (2003), the General Social Survey (Davis, Smith, & Marsden, 2003), the National Survey of Families and Households (Sweet &

Bumpass, 1996), the Roper Social Capital Community Benchmark Survey (2000), and the National Household Survey on Drug and Alcohol (1985). Matched random samples were taken from these data sets so that the age, sex, and racial proportions mirrored our sample.

The current survey consisted of 151 items and was administered either by telephone or by mail. The general topic areas included: (1) living environment and community involvement; (2) physical and mental health and well-being; (3) substance use; (4) household composition and family relationships; (5) safety, victimization, and criminality; (6) friendships and social activities; (7) education and employment; and (8) current perspective of the intervention (asked of the residential group only). Most surveys were completed during February through December of 2002. The phone interview took approximately 45 minutes. Each respondent received $50 for participating in the interview.

Chi-square goodness of fit tests were used to compare study groups with national normative data. The national data was used as the basis for the expected values. Chi-square tests of homogeneity were used to test for differences between residential and comparison groups, as well as residential groups with varying lengths of stay. Consistent with the results of the original study, there were significant differences in outcomes between length-of-stay categories. Therefore, in the current analysis, the residential group was limited to youth who remained in the program for a minimum of eighteen months (n = 116).

Results

Consistent with the original study, there were positive residential outcomes in educational attainment. When we combined the attainment of a high school diploma with G.E.D. there were no significant differences between residential, comparison, and national groups. However, when attainment of a high school diploma was isolated, the comparison group had a significantly higher percentage of those obtaining a GED rather than a diploma (see Table 1). Studies have shown more positive outcomes for youth who obtain a high school diploma as opposed to a G.E.D. (Chaplin, 2002), so we considered these results very positive. Unfortunately, neither of the at-risk groups was as likely as youth in the national data to participate in post-secondary education.

A positive outcome that was measured in the current study but not in the original study was the incidence of intimate partner violence. The residential group had fewer physical confrontations with intimate partners than the comparison group and the national norms (Table 2). Since youth who are admitted to residential care and education are frequently exposed to family violence, this was a very important positive adult outcome.

Table 1
Percentages of Participants in the Comparison, Residential, and a National Sample Groups with at Least a High School Education

	At Least a HS Education	*GED*	*HS Diploma or Higher*
Comparison	88% (n = 36)	42%[a] (n = 17)	46% (n = 19)
Residential	94% (n = 109)	14%[a] (n = 16)	80% (n = 93)
National	91% (n = 611)	Not Available	Not Available

Note. National normative data was unavailable to determine if those with at least a High School level education obtained a GED or a High School diploma or higher.

[a]Participants in the Comparison group with at least a High School education were significantly more likely than the Residential group to have obtained a GED (χ^2=16.30, df = 1, p < .001).

In the current study, we did not find significant differences between residential and comparison groups for contact with family and friends, criminality, or use of alcohol and drugs in adulthood (see Table 2). When we compared these at-risk groups with national norms, however, we found some interesting trends. In the frequency of contact with friends, we found that both at-risk groups had significantly more contact than national samples. In terms of contact with family, the residential group had significantly less contact than the national sample. For adults who had been arrested in the past 12 months, both the at-risk groups were higher than national samples, with the residential group significantly so. Nevertheless, between 87 and 90% of these adults who had been at-risk as an adolescent answered "no" to the arrest question. We felt that these were positive outcomes, but we could not attribute them to the residential intervention. With alcohol and drug use, both residential and comparison groups were significantly more likely to have used illicit drugs than the national sample, but there were no significant differences between at-risk and national samples on binge drinking. Since the time that these adults were in residential care, we have made significant improvements in the quality and quantity of treatment for drug and alcohol problems, and hopefully that will impact outcomes in future follow-up studies.

Finally, there were several other areas in which outcomes for both at-risk groups were as positive or nearly as positive as the population at large (see Table 3). These included the percentage of adults having health care coverage, having higher family incomes ($75,000 or more), and having served in the military. Other areas (full or part-time employment and being registered to vote) did not reach the level of national norms but were still considered positive for at-risk youth. These outcomes were not assessed in the original study because of the age of the participants at that time. Although it is difficult to attribute these outcomes to the residential intervention, results indicate that at-risk youth served in residential care can experience important positive adult outcomes, contrary to popular opinion and research on iatrogenic effects of grouping at-risk youth (Dishion, McCord, & Poulin, 1999).

Table 2
Percentages of Positive Adult Outcomes for Participants in the Comparison, Residential, and a National Sample Groups

	No Partner Violence[a]	*Contact w/Friends*	*Contact w/Family*	*Arrest Free-Past 12 Months*	*No Binge Drinking (5+ Drinks)*	*No Drug Use*
Comparison	75% (n = 18)	84%[b] (n = 32)	72% (n = 28)	90% (n = 37)	81% (n = 33)	66%[e] (n = 27)
Treatment	94% (n = 74)	75%[b] (n = 84)	70%[c] (n = 78)	87%[d] (n = 101)	70% (n = 81)	67%[e] (n = 78)
National	92% (n = 382)	65% (n = 308)	83% (n = 401)	95% (n = 738)	66% (n = 698)	83% (n = 645)

[a]Significant differences for intimate partner violence were found (χ^2 = 6.25, df = 1, p < .05) but no cell met the criteria for significance. However, the Residential group's observed cases of no partner violence were higher than the expected value whereas the comparison group's observed cases of no partner violence were less than the expected value.

[b]Both the Residential and Comparison groups had significantly more social contact with friends than the National Sample (χ^2 = 13.40, df = 1, p < .001).

[c]The Residential group had significantly less social contact with family than the National Sample (χ^2 = 15.17, df = 1, p < .001).

[d]The Residential group participants were significantly more likely to have been arrested within the past 12 months than the National Sample (χ^2=15.17, df=1, p<.001).

[e]Both the Residential and Comparison groups had significantly higher drug use than National Sample (χ^2 = 29.47, df = 1, p < .001).

Table 3
Percentages of Participants in the Comparison, Residential, and National Sample Groups Endorsing Positive Adult Outcome Questions

	Employment	*Healthcare Coverage*	*Household Income $75K+*	*Voter Registration*	*Military Service*
Comparison	70%[a] (n = 28)	70% (n = 28)	8% (n = 2)	55%[b] (n = 21)	13%[c] (n = 5)
Treatment	82%[a] (n = 94)	77% (n = 88)	19% (n = 15)	70%[b] (n = 81)	36%[c] (n = 41)
National	88% (n = 76)	79% (n = 78)	24% (n = 186)	80% (n = 1516)	2% (n = 5)

[a]Participants in the Comparison and Residential groups had significantly lower employment rates than the National Sample (χ^2=18.06, df=1, p < .001).

[b]Participants in the Comparison and Residential groups were significantly less likely to be registered voters than the National Sample (χ^2=21.25, df=1, p < .001).

[c]Participants in the Comparison and Residential groups were more likely to have served in the military than the National normative sample, with the Treatment group being much more likely (χ^2=644.38, df=1, p < .001).

Conclusion

The purpose of the current study was to measure adult outcomes for youth served in a long-term residential care and education program. The results do indicate significant treatment effects and other positive adult outcomes for youth in several important areas including educational attainment and intimate partner violence, but concerns remain in the areas of post secondary education, employment, and illicit drug use. Current findings also continue to support the hypothesis that a longer length of stay in residential care is associated with better long-term outcomes. These results do suggest that quality residential care and education can have lasting positive effects and should continue to be an important component of systems of care for children and youth. The Girls and Boys Town Teaching Model, which was evaluated in this study, is a unique approach to residential care and education. It has five hallmarks: building healthy relationships among staff and peers, teaching life skills, encouraging spiritual development, using family-style living, and emphasizing self-government and internal motivation. These results may not generalize to other residential programs. Future research should be directed to find out which youth benefit the most from this type of intervention. This will require well articulated interventions and measurement of model fidelity along with a careful analysis of relationships among child and family characteristics, treatment components, and outcomes.

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