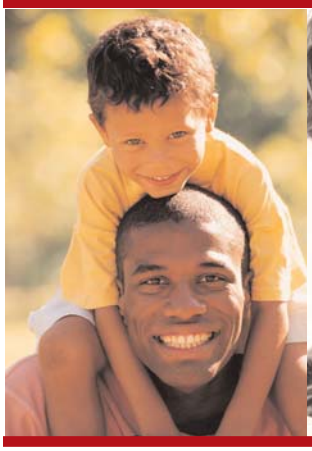
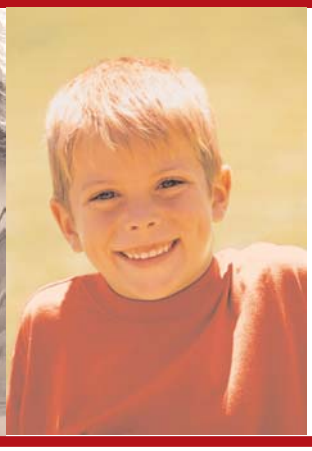
Indiana Consortium for Mental Health Services Research

Sixth Annual Evaluation Briefing of the Dawn Project Evaluation Study





September 2005

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- Presents the design of the Dawn Project Evaluation Study (DPES)
- Discusses work which has been completed within each of the seven study areas

Demographic Composition of Young People Enrolled in the Dawn Project

- The young people in the Dawn Project face many emotional and behavioral challenges and have severe cross-system needs.
- The young people in the DPES are representative of the Dawn Project in most characteristics.

Baseline Clinical Characteristics of Young People in the Dawn Project Evaluation Study

- The young people in the Dawn Project are most commonly diagnosed with conduct-related and attention-related disorders
- A large percentage of young people in the Dawn Project have extensive service histories as well as family histories of mental illness, domestic violence, and substance abuse
- At enrollment most young people are rated as having severe impairment in functioning, clinically significant levels of problem behaviors, and below average to poor levels of emotional and behavioral strengths.

Social Networks of Youth at Enrollment

- The young people in the Dawn Project receive the majority of their social support resources (i.e., emotional and functional support) from family members.
- On average, a quarter of youths' social support networks have engaged in a delinquent behavior in the past.

Educational Profiles at Enrollment

- Baseline levels of higher school discipline problems were predicted by having a special education level and higher levels of externalizing behavior.
- Age, race, referral source, caregivers' ratings of their child's school performance, and behavioral strengths predicted a young person's academic achievement at enrollment in the DPES.
- No variables predicted attendance rates at the time of a young person's enrollment in the DPES.

Changes in Restrictiveness of Placements Over Time

- At the time of enrollment into the DPES, most young people were living in community-based settings.
- The Dawn Project was able to maintain the majority of its participants within community-based care settings throughout the 24-month evaluation period.

Changes in Clinical Functioning Over Time

- Ratings of participants' functional impairments improved significantly over time as rated by the Child and Adolescent Functional Assessment Scale.
- Ratings of participants' problem behaviors improved significantly over time as rated by the Child Behavior Check List.
- Ratings of participants' strengths increased significantly over time as rated by the Behavioral and Emotional Rating Scale.

Changes in Substance Use Behaviors and Severity Over Time

- Very few youth engage in substance use behaviors at any point in their Dawn enrollment.
- Cigarettes are the most frequently used substance, and their use slightly decreased over time.

Changes in Delinquent Behavior Over Time

- Overall, the number of offenses committed by young people in the Dawn Project declined over time.
- Gender and symptomatology predict the likelihood that a young person will engage in criminal activity.

Changes in Educational Profiles Over Time

- Young people in the DPES were rated as showing significant improvement over time in their rates of school attendance, their level of discipline problems, and their academic performance.
- Changes in measures of educational performance were affected by referral source, race, and gender.

School Involvement and the Restrictiveness of School Placements Over Time

- Youth ethnicity, gender, age, and placement at enrollment predicted their educational placement at disenrollment, while the intensity of school involvement did not.
- Trends in the data suggest that higher school involvement may be associated with placement in settings outside of school.

Predicting Success in a System of Care

- Sixty-five percent of young people in the Dawn Project leave the program by meeting the goals established by their Child and Family Team.
- Age at enrollment, substance abuse, and impulsive behavior directed towards others predict discharge from the Dawn Project for reasons other than meeting Child and Family Team goals.

Recidivism Among Disenrolled Youth

- Young people who are discharged from the Dawn Project after meeting their Child and Family Team goals are 78% less likely to return to a child-serving agency than are young people discharged for other reasons.

Caregiver Satisfaction with Services

- The majority of caregivers enrolled in the DPES report being either satisfied or very satisfied with the services provided by the Dawn Project, the cultural competence of the Dawn Project staff, and the level of involvement they have in planning treatment for their child.
- The majority of young people enrolled in the DPES report levels of satisfaction similar to those of their caregivers in all areas.

Impact of the Dawn Project on Families

- Caregivers of young people enrolled in the Dawn Project reported a significant improvement over the 24-month evaluation period in their family's overall functioning and in their perceived level of caregiver-related strain.
- Caregivers of young people enrolled in the Dawn Project reported a significant improvement over the 24-month evaluation period in both their overall resources and in their employment status.

Service Utilization, Expenditures, and Program Success

- The Dawn Project provides a very diverse mix of services which are targeted to specific problems experienced by the young people in the program.
- Total expenditures per young person do not greatly impact a young person's probability of leaving the Dawn Project by meeting their treatment goals.
- The two services most closely related both to less positive outcomes and increased expenditures are crisis/respite and residential treatment services.

The Structure of Service Coordination Teams and Program Outcomes

- Five common Child and Family Team structures were identified within the Dawn Project.
- The cluster most predictive of positive outcomes in the Dawn Project when compared to the other clusters was moderate in size and complexity.

The Presence of Key Roles on Service Coordination Teams and Outcomes

- Family and youth participation in teams is high within the Dawn Project
- Success in the Dawn Project is predicted by having a father or father surrogate as a team member.

Impact of the Dawn Project on the Marion County Children's Social Services System

- The presence of the Dawn Project in Marion County increased collaboration and coordination among child-serving systems.
- The presence of the Dawn Project in Marion County highlighted the importance of family involvement in all aspects of treatment.
- The presence of the Dawn Project in Marion County has helped draw attention to child and family strengths as the basis of treatment planning.

ACKNOWLEDGEMENTS

The Dawn Project Evaluation Study (DPES) would not have been possible without the invaluable contributions of countless people and the support of the Indianapolis community.

First and foremost, we would like to thank the young people and their families, who in especially difficult times in their lives took the time to think of others by participating in this research study. Through our interactions with individual family members and the staff and members of *Families Reaching for Rainbows*, the local chapter of the Federation of Families, we learned first hand about the incredible challenges that families face with courage and grace and how system of care values combined with coordinated support from the multiple social service systems can empower families. Without their support, this study would not have been possible.

Second, we wish to acknowledge the consistent support and confidence of the local and state agencies that comprise the Dawn Project Consortium, including the State and Marion County Offices of the Indiana Department of Child Services, the Marion Superior Court Juvenile Division, Probation Department, Indiana Department of Education, Indianapolis Public Schools, the Indiana Division of Mental Health and Addiction, the Mental Health Association in Marion County and Larue Carter Hospital. It was through their initiative and commitment that the Dawn Project was conceived and implemented to address the needs of children with serious emotional and behavioral challenges and their families and their support helped ensure that the DPES was successful. We likewise recognize the DPES Advisory Board for supporting the evaluation. We are grateful that representatives from the various systems and agencies associated with the Dawn Project, including Families Reaching for Rainbows, supported the DPES over the years through their participation on this body. Noticeable outcomes of the Advisory Board included not just the annual community briefings, but also the substance of those briefings. For example, it was the Board that initiated joint presentations between DPES and Families Reaching for Rainbows for several of the annual briefings.

We also would like to thank the staff at Choices, Inc. for their unflinching support and assistance in incorporating the evaluation protocol alongside the service program. In particular, we appreciate the thoughtful leadership of Knute Rotto, Janet McIntyre, Vicki Sprague Effland, Dan Embree, and Courtney Kasinger. We also are indebted to the special contributions of the many service coordinators over the past five years, who helped us in making and maintaining contact with the Dawn families.

Like all large research studies, we would not have been able to carry out the Dawn Project Evaluation Study without the capable assistance of a talented research team. In particular, Harold Kooreman, Project Manager, and Lyndy Kouns, Field Supervisor deserve special credit for the quality of the data because of their tireless dedication to carrying out the study. We also were incredibly lucky to have a team of skilled field interviewers who were responsible for interviewing youth and families and collating the data on which the results are based, including: Andrew Abdul, Micheal Anderson, Kerri Barclay, Chandra Cohran, Jon Fader, Alora Fleshman,

Leah Friend, Mindy Friend, Jeff Glant, Michael Hendrix, Staci Inskeep, Amy Kleiner, Amy Lay, Tim Marcello, Adri McDonough, Jaimie Moser, Barb Myers, Candace Radford, Jennifer Rewerts, Janna Schmidt, Annie Sever-Dimitri, Maxx Somers, Cassandra Shaw, Cathy Twombley, Amy Welsch, and Kendra Wesley.

Over the years, many colleagues, students, and part-time analysts have assisted us with data analysis, including Lisa Russell, Geoffrey Warner, Wanda Mohr, Dustin Wright, Wyndy Smelser, Matt Aalsma, Lakeisha Meyer, Michele Gray, Dave Robertson, Rhonda Meyer, Stephanie Butler, Morgan Close, and Elizabeth Henderson.

Finally, this study was generously supported by grants from the Comprehensive Community Mental Health Services for Children and Families Program of the Center for Mental Health Services, Substance Abuse Service Administration (Grant No. 6 HS5 SM52910) to Marion County Health and Hospital Corporation and Choices, Inc. and from the Indiana Consortium for Mental Health Services Research at Indiana University.

Eric R. Wright, Principal Investigator
Jeffrey A. Anderson, Co-Principal Investigator

INTRODUCTION AND STUDY OVERVIEW

Eric R. Wright, Ph.D. & Jeffrey A. Anderson, Ph.D.

Since 1997, The Dawn Project has provided an interagency system of care for youth with emotional and behavioral challenges and their families in Marion County. Dawn is responsible for creating and maintaining a coordinated, community-based system of services, as well as developing new and natural supports for children and youth with the most serious emotional and behavioral challenges and additionally, putting families at the center of decision-making in the provision of services. A grant was awarded to Marion County by the Center for Mental Health Services (CMHS) of the Substance Abuse and Mental Health Services Administration in 1999. The grant provided six years of funding to enhance the Dawn Project and to conduct a comprehensive evaluation of the model and expanded service programs. The grant provided technical assistance to Dawn and training and allowed Dawn to serve new populations, enhance its cultural competence, improve its social marketing, and increase family involvement in program planning, implementation, and evaluation. Additionally, the grant provided support for the family advocacy and support network called Families Reaching for Rainbows. The grant also supported the development and implementation of the Dawn Project Evaluation Study (DPES), which integrated the requirements of a national evaluation effort with local interests and needs for data.

The Dawn Project Evaluation Study (DPES) was originally conceived by a multidisciplinary team of researchers that included individuals from Indiana University Purdue University Indianapolis (IUPUI) and Indiana University (IU), to provide an outside, independent evaluation. DPES was designed in collaboration with parents; representatives from child welfare, probation, corrections, mental health, and education; and academics from a wide range of disciplines, including education, sociology, nursing, economics, psychology, and psychiatry. An evaluation advisory board was established to include representation from the many stakeholders, including Choices, Inc., the Division of Mental Health and Addiction, The Indiana Department of Correction, Marion County Department of Child Services, Indianapolis Public Schools, Marion Superior Court Juvenile Division, Marion County Mental Health Association, and family members from Families Reaching for Rainbows support group. This board, which was known locally as the "Evaluation Team" or "E-Team," was instrumental in the initial design process and has continued to meet to monitor the research team's work over the full six years of the demonstration. The E-team completed the evaluation planning activities in the spring of 2000, and the study protocol and data collection were implemented in the fall of 2000.

Overview of the Data Sources and Data Collection Methods

Data for these evaluation areas were collected from both quantitative and qualitative sources. Most of the data analyzed for this report come from three primary sources:

1) **The Clinical Manager (TCM) --** the Dawn Project's management information system. TCM provided us with basic information on the demographic and clinical background, services utilized and paid for by the Dawn Project, as well as qualitative information on the clinical progress and treatment planning process maintained in case notes by the service coordinators. TCM provides a census of all children served through the Dawn Project, and we use these data in a number of reports to highlight broad trends and patterns for the entire cohort of children who have experienced the Dawn Project.

2) **In-depth Interviews with the Youth and their Primary Caregiver**. Part of the requirements of the federal grant included conducting in-depth interviews with the youth and their primary caregivers at the time of enrollment and at six-month intervals for the thirty-six months following their admission into the program. While the federally mandated questions were extensive, we modified the protocol to the extent allowed and included a few additional questions designed to answer key questions raised by local stakeholders during the initial evaluation planning process. Both the youth and primary caregiver interviews were conducted as face-to-face interviews by thoroughly trained, professional interviewers. All interviews were conducted at times and places that were convenient for the subjects. At the beginning of each interview, the subjects were informed that their participation in the evaluation was completely voluntary and that their decision to participate or not participate would have no effect on the services they received from the Dawn Project. We also explained that any information collected during the interview would be treated as confidential and not shared with anyone outside of the research team, including Dawn Project staff or the agencies comprising the Dawn Consortium. The youth interview took on average an hour to complete; the primary caregiver interview protocol was slightly longer on average at one hour and thirty minutes. Both the youth and primary caregiver received a financial incentive, in the form of a gift card from a local store, for their participation at the conclusion of each interview. Because the resources of the grant did not permit us to do adequate follow-up with all families who enrolled in the evaluation for the full 36 months, we focused our efforts and analysis on the two-year follow-up data. For the baseline interviews, 81.4% of the families approached about the evaluation agreed to participate. The follow-up rates for 6, 12, 18, and 24-month interviews are 78.5%, 68.8%, 64.9%, and 62.7% respectively.

3) **Field observations, in-depth qualitative interviews with stakeholders, and focus groups with families and stakeholders**. Since the beginning of the project, the research team has made an effort to compile qualitative observational and interview data to better understand system level processes and the local social context in which the Dawn Project operated. These types of data were critically important for the research to better understand some of the complex trends in the quantitative data, and these insights are reflected in many of the reports that follow. We also used these data as a formal assessment tool to document the changes observed both in the Families Reaching for Rainbows organization as well as in the local Dawn system of care more generally.

Consistent with the professional and ethical regulations governing academic research, the information collected during this evaluation is held in strict confidence and known only to the principal investigators and project staff. No references are made to the identification of individual respondents, either verbally or in writing. Results of this study are presented to Dawn

Project personnel, consortium and family members, personnel from the federal grantors office and their designee, and other interested parties, solely in a manner that guarantees the anonymity of all study participants. As required by the federal grant, some of the data gathered for this study has been shared with ORC Macro International, the national evaluator working under contract with the Center for Mental Health Services. These data, however, have been reported without identifying information.

Guiding Research Questions

During the evaluation planning process, the E-team identified six research areas or sets of research questions to guide the study. While extensive protocol allows us to answer many questions about the youth and families served in the program, we used these areas to organize and focus our analysis on questions of most significant concern to the community.

Research Area I: Profile and Outcomes of Dawn Project Participants. This area examined questions such as what is the clinical profile of the youth and families being served by Dawn. How do profiles change over time? Data are collected as youth and families enter Dawn, including the types of experiences that they had prior to entering Dawn, demographic information, and information about functioning in the home, community, and school. The purpose is to understand who is it that Dawn serves well and whether there is a difference between this group and clients who are not successful in Dawn.

Research Area II: Patterns of Service Use. This area explored the configuration of services used by participants in the Dawn Project and examines the operating costs of Dawn. Documenting the cost structure, how costs vary with treatment decisions and Dawn's use of managed care differs from more traditional types of programs for this population of children and youth. Additionally, understanding Dawn's ability to use funding flexibly is particularly important.

Research Area III: Dynamics of Service Coordination Teams. A central component of the Dawn Project is the service coordination team. Service coordination teams include a variety of professionals, lay people, family members, and the child or youth, all of whom work together to assess strengths and needs, develop treatment plans, and monitor success. Because service coordination teams are at the heart of the intervention and, in many, will condition the effectiveness of the services actually provided, a key focus of the evaluation is assessing how well the service coordination teams work together. Thus, this component specifically aims to document the structure of the teams and how team structures change over time.

Research Area IV: Effectiveness. This evaluation area has evolved out of the other areas of the evaluation and provides a summary of the evidence of Dawn's effectiveness in improving outcomes for children and youth and their families.

Research Area V: Families Reaching for Rainbows. This evaluation area, which was conducted during the first several years of the DPES, focused on the Families Reaching for Rainbows support and advocacy organization, a local chapter of the national Federation of Families for Children's Mental Health. Using an assessment of issues germane to family

advocacy, an evaluator with expertise and experience in qualitative evaluation conducted a focused ethnographic of Families Reaching for Rainbows.

Research Area VI: System level Functioning. The purpose of this evaluation component was to understand how well the Dawn Project adheres to the guiding principles established for systems of care for children and their families, including service coordination, family centeredness, cultural competence, and community-based treatment. A system-level study was conducted to examine the impact that the Dawn Project had on the wider children's social services system in Marion County.

Together, the analyses presented in this report, represent our effort to answer these critical questions. Our overall objective here is to provide a clear overview of critical patterns to help the community evaluate the impact of the Dawn Project on the youth and families it served as well as its impact on the wider community. For the past several years, we have disseminated preliminary findings in response to these questions in prior Community Briefings and at local and national professional conferences. In this regard, the outcomes of this research and the Dawn Project experience have already contributed to national, state, and local discussions about the effectiveness of interagency collaboration for children and youth who have needs that involve multiple service providers and their families. While this document represents the final formal community report from regarding the DPES, we will continue to work with these data even beyond the federal grant period, to the extent resources allow, to refine our analyses and develop manuscripts for publication in the professional journals.

As always, we welcome your questions and comments.

DEMOGRAPHIC COMPOSITION OF YOUNG PEOPLE IN THE DAWN PROJECT

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Introduction

The main impetus for the development of systems of care in communities throughout the United States has been to provide a broad array of coordinated services to young people with severe multi-system needs (Stroul and Friedman, 1986). The purpose of this short report is to briefly describe the demographic make up of the young people served by the Dawn Project, a system of care in Marion County, Indiana. The demographic characteristics of two populations will be discussed: 1) the entire group of young people served by the Dawn Project from May 1997 through August 1, 2005 and 2) the subset of young people enrolled in the Dawn Project after October 31, 2000 that has participated in the federally-funded longitudinal evaluation.

Methods

Over the course of this evaluation, children and families have been referred to the Dawn Project from a number of different sources: Marion County Department of Child Services (MCDCS), Marion County Department of Child Services Pilot (MCDCS-Pilot), Juvenile Court/Probation (JCP), Juvenile Court/Probation Pilot Program (JCP-Pilot) Department of Education (DOE), Indianapolis Public Schools (IPS), Larue Carter State Hospital Pilot Program (LCSH-Pilot), and Department of Correction Pilot Program (DOC-Pilot). As of August 1, 2005, 1106 youth have received Dawn Project services. MCDCS made 402 standard referrals and 61 MCDCS-Pilot referrals; DOE referred 65 youth (DOE did not make any Dawn Project referrals from spring 2000 until fall 2001); and IPS referred 149 youth. JCP referred 296 youth through their standard program and 61 youth were referred through the JCP-Pilot program. LCSH-Pilot referred 39 youth, and DOC-Pilot referred 33 youth. The total number of youth enrolled in the Dawn Project reflects all enrollments since May 1997 and includes youth with multiple enrollments from different referring agencies.

Results

The majority of young people referred to the Dawn Project are African-American or biracial males (n = 444, 40.1%), followed by Caucasian males (n = 330, 29.8%), African-American or biracial females (n = 189, 17.1%), and Caucasian females (n = 143, 12.9%). Gender and ethnic makeup varies somewhat, based on referral source. Youth referred to the Dawn Project from DOE and LCSH-Pilot are more likely to be Caucasian males (n = 34, DOE; n = 19, LCSH-Pilot). JCP, DOC-Pilot and JCP-Pilot are more likely to refer young people who are Caucasian or minority group males (n = 221, JCP; n = 22, DOC-Pilot; n = 44, JCP-Pilot). Youth

accepted into the Dawn Project from MCDCS, MCDCS-Pilot and IPS are likely to be minority males (*n* = 142, MCDCS; *n* = 21, MCDCS-Pilot; *n* =100, IPS).

The average age at enrollment for Dawn youth varies somewhat across referral source. MCDCS-Pilot youth are the youngest, being typically 11.17 years at enrollment. IPS referrals are just slightly older at 11.85 years. Referrals from the LCSH-Pilot are approximately 12-and-a-half –years old at enrollment. Youth entering the Dawn Project from MCDCS, JCP, JCP-Pilot, and DOE are all approximately 13-years-old at enrollment. Youth entering the Dawn Project from DOC-Pilot are the oldest of any referral source, being at least 15-years-of-age at enrollment.

Young people entering the Dawn Project generally have a variety of presenting problems at the time of enrollment. The most commonly reported presenting complaints involve conduct problems or involvement with law enforcement (80.4%); school-related problems (57.7%); family problems (56.1%); mental health-related concerns (55.0%); physical abuse, sexual abuse, and neglect (50.8%); and alcohol/drug abuse (13.4%). These presenting concern categories are not exclusive and young people typically have challenges in more than one category (see Tables 1-3).

Table 1. Demographic characteristics of Dawn Project population and original referring agencies.

	All Youth (*n*=1106)		MCDCS (*n*=402)		JCP (*n*=296)		DOE (*n*=65)	
	n	*%*	*n*	*%*	*N*	*(%)*	*n*	*%*
Minority males	444	40.14	142	35.32	117	39.52	20	30.77
Caucasian males	330	29.84	98	24.38	104	35.14	34	52.31
Minority females	189	17.09	97	24.13	40	13.52	5	7.69
Caucasian females	143	12.93	65	16.17	35	11.82	6	9.23
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Age	12.84	2.64	12.74	2.85	13.35	1.68	13.14	2.52
Months in Dawn Project	13.08	8.48	15.53	9.99	14.98	7.96	18.12	7.81
Risk Factors[1]	*n = 965*	%	*n = 347*	%	*n = 251*	%	*n = 55*	*%*
Mental Health	531	55.00	206	59.40	125	42.20	33	60.00
School	557	57.70	166	47.80	152	60.60	45	81.80
Alcohol/Drugs	129	13.40	47	13.50	45	17.90	6	10.90
Family Problems	541	56.10	207	59.70	151	60.20	30	54.50
Abuse	490	50.80	254	73.20	108	43.00	31	56.40
Conduct/Law Enforcement	776	80.40	237	68.30	242	96.40	41	74.50

[1]Percentages based on young people who had data available. Young people can have more than one risk factor.

Table 2. Demographic characteristics of pilot programs established in 1999.

	MCDCS-Pilot (*n*=61)		LCSH-Pilot (*n*=39)		DOC-Pilot (*n*=33)	
	n	%	*N*	%	*n*	%
Minority males	21	34.40	8	20.50	12	36.40
Caucasian males	11	18.00	19	48.70	10	30.30
Minority females	16	26.20	7	17.90	8	24.20
Caucasian females	13	21.30	5	12.80	3	9.00
	M	*SD*	*M*	*SD*	*M*	*SD*
Age	11.17	3.61	12.45	2.71	15.88	1.21
Months in Dawn Project	7.86	5.11	13.70	6.29	9.04	5.66
Risk Factors[1]	*N=56*	%	*n=38*	%	*n=27*	%
Mental Health	22	39.30	24	63.20	11	40.70
School	29	51.80	20	52.60	14	51.90
Alcohol/Drugs	8	14.30	1	2.60	9	33.30
Family Problems	36	64.30	24	63.20	17	63.00
Abuse	42	75.00	15	39.50	10	37.00
Conduct/Law Enforcement	34	60.70	34	89.50	25	92.60

[1]Percentages based on young people who had data available

Table 3. Demographic characteristics of pilot programs established in 2002.

	JCP – Pilot (*n*=61)		IPS System of Care (*n*=149)		Overall Statistics	
	N	%	*n*	%	$\chi 2$	p
Minority males	24	39.34	100	67.11	Race	.00*
Caucasian males	20	32.79	34	22.82	Gender	.00*
Minority females	9	14.75	7	4.70		
Caucasian females	8	13.12	8	5.37		
	M	*SD*	*M*	*SD*	F	p
Age	13.30	2.08	11.85	2.74		.00*
Months in Dawn Project	7.55	4.61	11.19	6.92		.00*
Risk Factors[1]	*n=54*	%	*n=137*	%		
Mental Health	19	35.20	91	66.40		
School	38	70.40	93	67.90		
Alcohol/Drugs	8	14.80	5	3.60		
Family Problems	30	55.60	46	33.60		
Abuse	12	22.20	18	13.10		
Conduct/Law Enforcement	51	94.40	112	81.80		

[1]Percentages based on young people who had data available

Youth Enrolled In The Evaluation. Enrollment into the longitudinal evaluation was discontinued on June 30, 2004. Three hundred fifty-nine (359) youth and their families have been enrolled in the evaluation. Males from a minority background make up the largest group of youth enrolled (39.6 %) followed by Caucasian males (31.2%), minority females (15.3%) and Caucasian females (13.9%). The typical youth is 12-and-a-half years of age at enrollment and most likely was referred to the Dawn Project by either the MCDCS or JCP. The most frequently reported presenting concerns for the youth in the evaluation were conduct/law enforcement problems (82.5%) school-related problems (61.7%) and family problems (54.6%).

To determine the degree to which the sample of young people enrolled in the evaluation are representative of the overall Dawn population, young people in the evaluation were compared with all young people enrolled in the Dawn Project on demographic variables. No differences were found in regards to race, gender, age at time of enrollment, or length of stay in the Dawn Project. On the other hand, a significantly smaller percentage of youth in the evaluation come from MCDCS and DOE when compared to the rest of the Dawn population. A significantly larger percentage of the youth enrolled in the Dawn Project come from the LCSH-Pilot, and the JCP-Pilot when compared to youth in the evaluation. These findings reflect the varied starting dates of each pilot project, as well as changes in the rates of referrals from various agencies over time.

Young people in the evaluation were generally similar to the overall Dawn Project population on presenting concerns with the only exception being abuse-related concerns. Dawn Project service coordinators rated young people in the evaluation as having a significantly lower level of abuse-related concerns at enrollment than the overall Dawn Project population (see Table 4).

Considerations for Analysis. As can be seen in table 4, only a small number of young people in the evaluation were referred from the MCDCS-Pilot program, the JCP-Pilot program, the DOC-Pilot program, and DOE. For the purpose of analysis, referral sources were collapsed into four broader categories: Child Welfare, composed of both MCDCS and MCDCS-Pilot program referrals; Juvenile Justice, composed of JCP, JCP-Pilot program and DOC-Pilot program referrals; Education, composed of DOE and IPS referrals; and Mental Health, which represents young people referred from the LCH-Pilot program.

Conclusions

The young people served by the Dawn Project have a wide range of needs that cut across several of the child serving agencies in Marion County, Indiana. The Dawn Project was initially established in order to provide services to those young people in the community with the most severe needs. A review of the demographic characteristics of the young people who have participated in the Dawn Project shows that the Dawn Project is indeed providing services to the group of young people it was designed to target.

Table 4. Comparison of youth in the Dawn Project and those in the evaluation.

	Enrolled Youth (n = 359)		All Youth (n = 1106)		
	n	*%*	*n*	*%*	*χ2*
Minority Males	142	39.60	444	40.14	.034
Caucasian Males	112	31.20	330	29.84	.24
Minority Females	55	15.30	189	17.09	.61
Caucasian Females	50	13.90	143	12.93	.24
MCDCS	110	30.60	402	36.35	3.88*
JCP	105	29.20	296	26.76	.84
DOE	6	1.70	65	5.88	10.40***
MCDCS-Pilot	20	5.60	61	5.52	.00
LCH-Pilot	23	6.40	39	3.53	5.55*
DOC-Pilot	8	2.20	33	2.98	.57
JCP-Pilot	35	9.70	61	5.52	7.93***
IPS	52	14.50	149	13.47	.24
Risk Factors[1]	*n=337*	*%*	*n =965*	*%*	
Mental Health	178	52.80	531	55.00	.49
School	208	61.70	557	57.70	1.65
Alcohol/Drugs	39	11.60	129	13.40	.72
Family Problems	184	54.60	541	56.10	.22
Abuse	143	42.40	490	50.80	6.96***
Conduct/Law Enforcement	278	82.50	776	80.40	.70
	M	*SD*	*M*	*SD*	*t*
Age at Enrollment	12.67	2.59	12.84	2.64	1.11
Months Enrolled	13.05	7.37	13.08	8.48	.06

[1]Percentages based on young people who had data available

* $p < .05$. ** $p < .01$. *** $p < .001$.

BASELINE CLINICAL CHARACTERISTICS OF YOUNG PEOPLE IN THE DAWN PROJECT EVALUATION STUDY

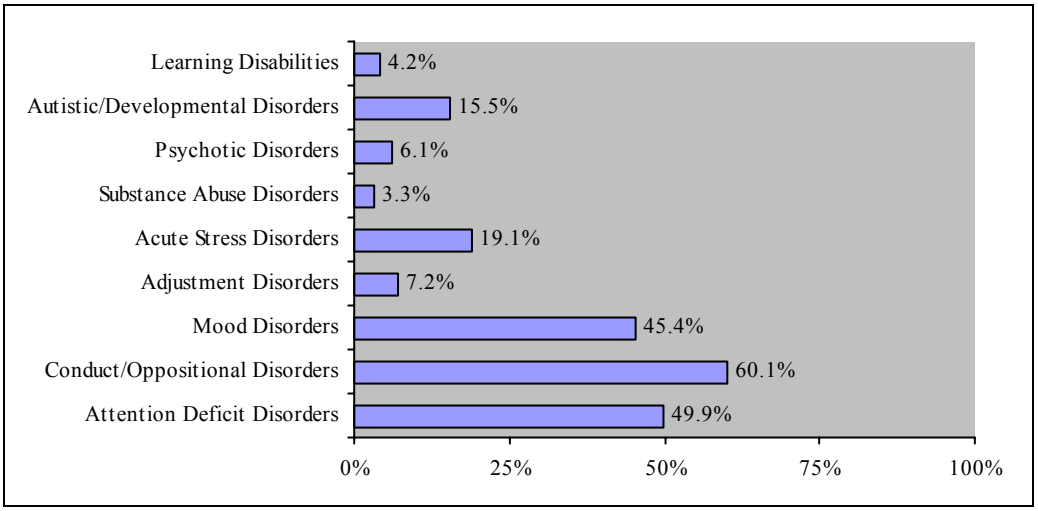
Harold E. Kooreman, M.A., Eric R. Wright, Ph.D., & Jeffrey A. Anderson, Ph.D.

This briefing paper describes the diagnostic composition, service history, family background, and clinical functioning of the young people enrolled in the Dawn Project Evaluation Study (DPES) for whom a baseline caregiver interview was completed (n = 350).

Results

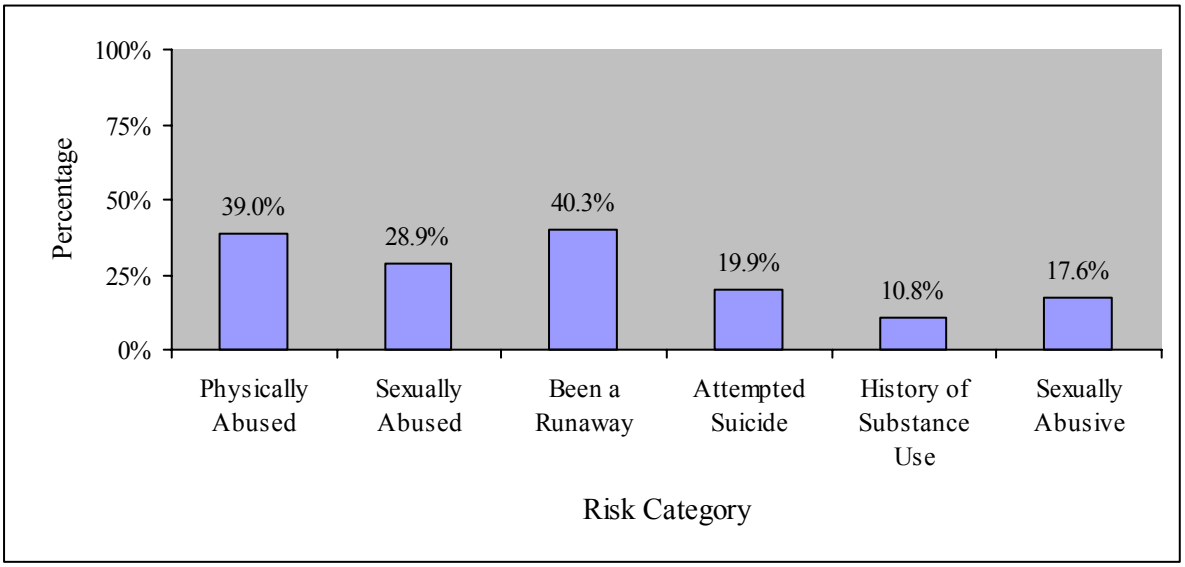
Diagnostic Composition. As part of the enrollment criteria for the Dawn Project, all young people should have a diagnosable mental illness recognized by the Diagnostic and Statistical Manual of Mental Disorders–IV (DSM-IV, 1992). Diagnostic information at enrollment into the Dawn Project is available in the Dawn Project's electronic charting system, The Clinical Manager (TCM). Because the young people enrolled in the Dawn Project have a wide variety of mental health concerns, diagnoses were collapsed into nine categories that correspond to those used by the national evaluator, ORC Macro. The typical DPES enrollee has, on average, two psychiatric disorders (M = 2.07, SD = .81) at the time of enrollment in the Dawn Project. The most frequently diagnosed conditions fall into the conduct/oppositional disorders category; just over 60% of young people have a diagnosis in this category. The next most prevalent disorders are attention deficit disorders. Nearly half of the young people enrolled in the DPES have an attention deficit disorder diagnosis (49.9%). The third most frequently diagnosed conditions are mood disorders. Forty-five percent (45.4%) of young people have mood-related concerns at the time of their enrollment into the DPES. Adjustment disorders, psychotic disorders, learning disabilities, and substance abuse disorders are not frequently reported as problems for DPES youth (see Figure 1).

Figure 1. Diagnostic characteristics of young people enrolled in the longitudinal evaluation.



Risk History. At the time of enrollment into the DPES, many young people are identified as having a history of exposure to or participation in situations that could put them at risk for future difficulties. Over 60% of young people entering the DPES report being victims of either physical abuse (39.0%) or sexual abuse (28.9%). Forty percent of youth have run away from home for more than a day and to a location unknown by their caregiver. Twenty percent of DPES enrollees have made at least one suicide attempt. Smaller percentages of young people enrolled in the DPES have been sexually abusive to others (17.6%) or have a history of substance use (10.8%; see Figure 2).

Figure 2. Risk history of youth enrolling in the Dawn Project Evaluation Study.



Living Situation and Family Background. At the time of their enrollment into the DPES, the majority of young people were reported by their caregivers to be living in the community, with biological or adoptive family members (57.1%), or with a foster family (12.1%). However, despite the large number of young people in the community at enrollment, nearly 30% of young people were reported to be living in more restrictive settings such as residential treatment centers (25.7%) or juvenile correctional facilities (3.7%).

The families of the young people enrolling in the DPES report multiple challenges. Economically, families reported annual incomes that were either at or below the poverty level (55.7%). The average annual income for families in the DPES at enrollment is between $15,000 and $19,999. Most young people enrolled in the DPES were reported by their caregivers to have family histories of domestic violence (50.0%), mental illness (51.1%), criminal activity (61.6%), and substance abuse (65.0%).

Service History and Entry Pathway. In the year prior to their enrollment in the DPES, young people were reported by caregivers to have used a variety of mental health services. The most commonly used services were outpatient services such as counseling (67.5%); school-based services such as special classroom settings (60.7%); and residential treatment (51.9%). Very few young people were reported to have received day treatment (17.9%) or substance abuse therapy

(6.8%) in the year prior to their enrollment in the DPES. Table 1 provides a breakdown of service use by referring agency. These figures suggest that the young people in the DPES have extensive prior involvement with the treatment system.

Table 1. Service use by referring agency.

	Service Category									
	Outpatient		School-Based		Day Treatment		Residential Treatment		Substance Abuse Treatment	
Referral Source	N	%	N	%	N	%	N	%	N	%
Child Welfare	74	63.2	66	56.9	15	13.2	69	58.0	6	5.1
Juvenile Justice	89	67.9	82	62.1	19	14.5	57	43.2	13	9.9
Education	46	73.0	54	85.7	17	27.0	27	42.9	1	1.6
Mental Health	19	70.4	17	63.0	9	33.3	24	88.9	3	11.5

The use of residential treatment is of particular interest as this service is not only one of the most restrictive but also one of the costliest. Preliminary examinations by Dawn Project personnel have uncovered four distinctly different patterns related to the use of residential treatment services: no residential treatment (NR), placed at least 31 days after enrollment (PA), placed before or within 31 days of enrollment (PP), and in residential at the time of enrollment, but transition out within 90 days (TO). Table 2 summarizes the demographic characteristics of the young people enrolled in the DPES based on their particular residential treatment category.

Table 2. Demographic characteristics by residential treatment category.

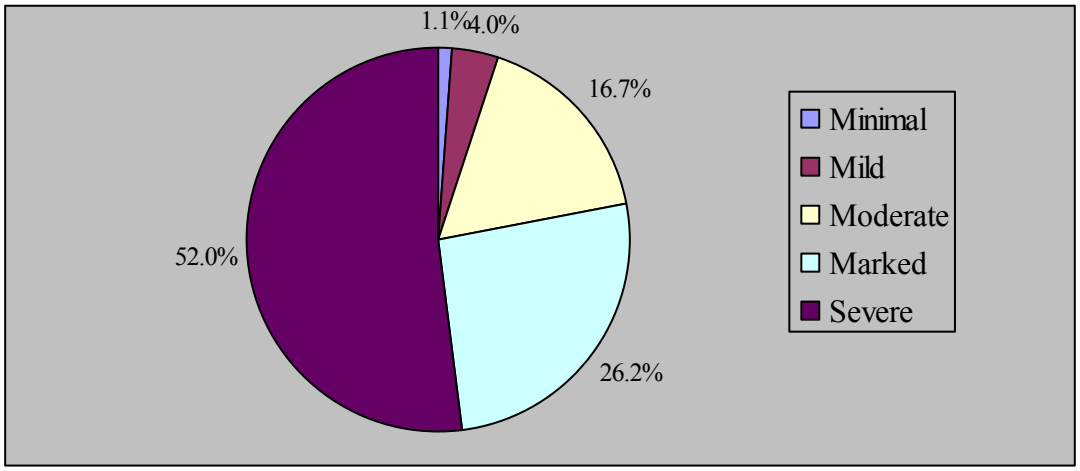
	No Residential		Placed After		Placed Prior		Transition Out	
	n = 207	*%*	*n* = 36	*%*	*n* = 82	*%*	*n* = 34	*%*
Demographics								
African-American males	94	45.41	10	27.78	28	34.15	10	29.41
Caucasian males	59	28.50	18	50.00	27	32.92	8	23.53
African-American females	27	13.04	2	5.56	15	18.29	11	32.35
Caucasian females	27	13.04	6	16.67	12	14.63	5	14.71
Referral Source								
Child Welfare	51	24.64	12	33.33	45	54.88	22	64.71
Juvenile Justice	76	36.71	23	63.89	37	45.12	12	35.29
Education	57	27.54	1	2.78	0	0.00	0	0.00
Mental Health	23	11.11	0	0.00	0	0.00	0	0.00
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Age at enrollment	12.24	2.78	12.71	2.09	13.38	2.09	13.37	2.50

Clinical functioning. As part of the DPES evaluation, caregivers are asked to complete one measure of behavioral functioning: the Child and Adolescent Functional Assessment Scale (CAFAS); one measure of psychiatric symptoms: the Child and Behavior Checklist (CBCL); and

one measure of behavioral and emotional strengths: the Behavioral and Emotional Rating Scale (BERS).

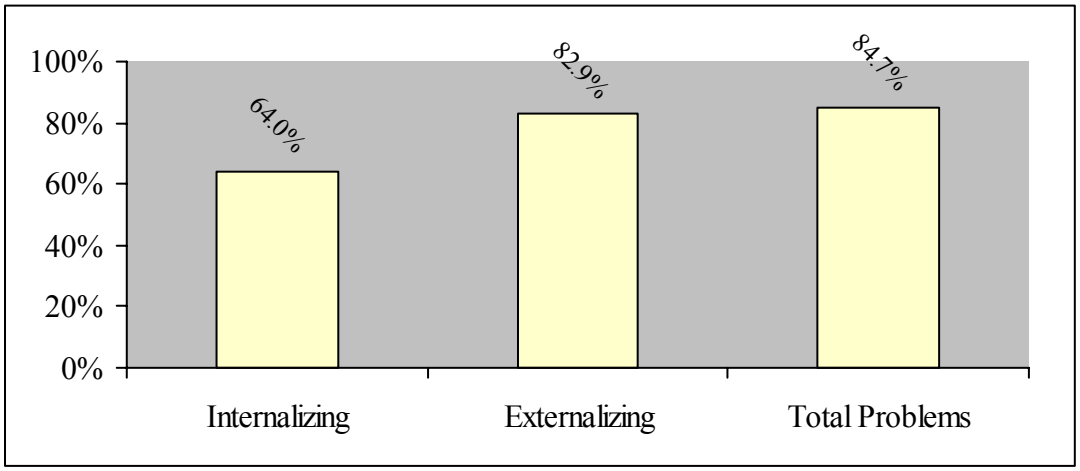
CAFAS. The CAFAS is an instrument designed to assess eight functioning domains: school/work, home, community, behavior towards others, moods/emotions, self-harmful behavior, substance abuse, and thinking. Each functioning domain is rated on a scale from 0 to 30 with higher scores indicating more severe impairment. An overall functioning score can be determined by summing the scores of all eight scales. The overall score can range from a low of 0 to a high of 240. At the time of enrollment into the DPES, over 70 percent of the young people were described by caregivers as having severe problems functioning in school (76.4%) and at home (70.7%). Most young people were rated by caregivers as having at least moderate problems functioning in the community (60.7%) and functioning with others (83.5%). Psychologically, the majority of enrolled young people were having at least moderate problems dealing with their moods and emotions (77.8%). A smaller percentage of young people were rated as having moderate or severe problems with thinking (41.4%), with self-harmful behavior (31.4%), or with substance use (6.3%). In terms of overall functioning, over 78 percent of young people had total CAFAS scores that would put them in either the marked (26.2%) or severe (51.9%) levels of functioning at the time of enrollment (see Figure 3).

Figure 3. Percentage of young people at each CAFAS functioning level.



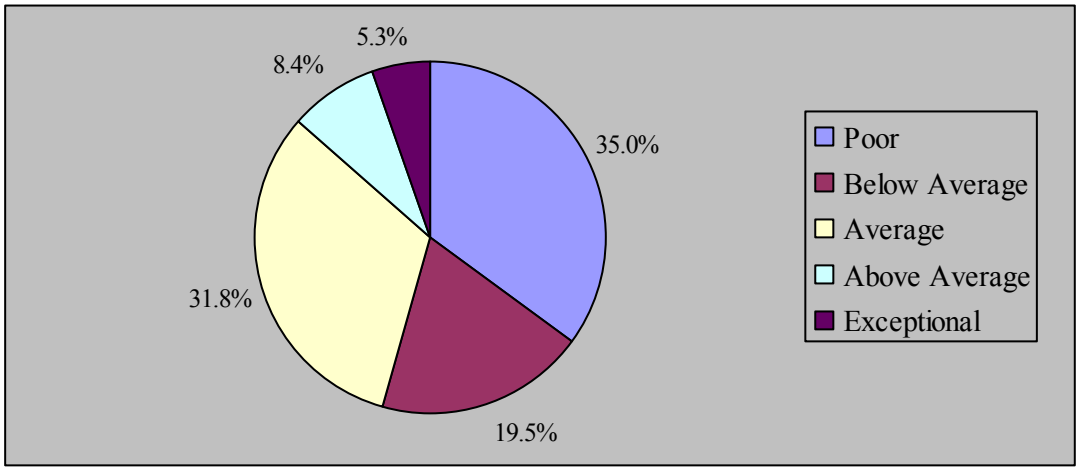
CBCL. The CBCL asks caregivers to rate 113 psychiatric symptoms as to whether they are like their child, somewhat like their child, or not like their child. The ratings for the various symptoms can be combined to yield eight syndrome scores and three summary scores. The three summary scores are the most reliable and include a score for internalizing behaviors, a score for externalizing behaviors, and an overall total problem score. Scores of 60 or above are associated with clinically significant levels of impairment. At the time of enrollment, most young people were rated as being in the clinical range for internalizing behaviors (64.0%), externalizing behaviors (82.9%), and total problems (84.7%; see Figure 4).

Figure 4. Percentage of young people in the clinical range on CBCL summary scales.



BERS. The BERS asks caregivers to rate on a 4 point scale the extent to which 52 behavioral and emotional strength items are very much like their child, like their child, not much like their child, or not at all like their child. The BERS provides scores for five strength dimensions and one overall strength score, the strength quotient (SQ). The SQ is the most reliable of the scores. SQ scores of 79 and below describe poor strengths, scores from 80 to 89 describe below average strengths, scores between 90 and 110 describe average strengths, scores between 111 and 120 describe above average strengths, and scores above 120 describe exceptional strengths. At the time of enrollment into the DPES, most young people were rated by their caregivers as having either below average (19.70%) or poor (35.40%) levels of strengths (see Figure 5).

Figure 5. Percentage of young people in each strength category at enrollment.



Conclusions

The young people enrolled in the DPES represent a group of children and adolescents who are experiencing severe difficulties at the time they enter the Dawn Project. Not only do these young people have significant emotional and behavioral challenges and multiple risk factors, their families often have difficulty accessing the intensive level of services necessary for treatment, often due to limited financial resources. The Dawn Project was designed to assist young people and families in the community most in need of services. Based on the demographic and clinical data of the young people enrolled in the DPES, it appears that the Dawn Project is indeed reaching its target population.

SOCIAL NETWORK SUPPORTS OF YOUTH AT ENROLLMENT

Dustin E. Wright, M.S., Eric R. Wright, Ph.D., & Wynelle G. Smelser, B.G.S.

Introduction

Another challenge often faced by young people with serious emotional disorders (SED) is their limited access to a social network that provides emotional support, and positive role-modeling. The purpose of this report is to describe the social support resources available to youth in the Dawn Project upon their enrollment in the program.

Methods

The data reported in the following analyses comes from interviews conducted with young people enrolled in the Dawn Project for the national evaluation at the time of their enrollment. Each youth provided information about the important members of their social networks during the past six months. These networks were primarily made up of family members, friends/peers, and the professionals involved in some aspect of their treatment. This paper reports findings from three sets of items from the interview: (a) the nature of the youth's relationship with each social network subgroup, (b) the frequency at which the youth receives assistance and emotional support from each social network subgroup, and (c) the social network subgroup's engagement in delinquent behaviors.

Nature of Relationship with Network Members. The nature of the relationship with members of the youth's social network was assessed with a series of single items asking the youth to report: (a) the length of time they had known the network member, (b) how close they are to the network member, (c) how frequently they have contact with the network member, and (d) how much the network member knows about the youth's problems and/or problem behaviors.

Assistance and Support from Network. The frequency of functional assistance and emotional support from the youth's social network was assessed with a series of single items asking the youth to report how frequently: (a) the youth feels "hassled" by the network member, (b) the network member listens to the youth, (c) the network member tells the youth they care about their well-being, and (d) the network member provided financial assistance and assistance in performing daily tasks.

Network Delinquency. The degree to which each youth's social network had engaged in delinquent activities was assessed by asking the youth to select the delinquent acts (if any) in which each network member had ever engaged. Delinquency was further categorized along four dimensions: authority defiance/status offenses (e.g., skipping school, running away, speeding), violence (e.g., fighting, hurting someone to see them squirm, using force to obtain money), property offenses (e.g., stealing, deliberate property damage), and substance use (i.e., drugs and alcohol).

Results

The social network profiles presented in this report are based on a sample of 264 young people interviewed upon their enrollment to the Dawn Project. Tables 1 and 2 provide a summary of the primary network measures.

Network Description. At enrollment, youth identified an average of 4.44 (*SD* = 2.67) individuals in their social network with whom they discussed important matters. The vast majority (68%) of these individuals were family members (*M* = 2.81; *SD* = 2.0). Additionally, on average, a youth's network was 64% female (*M* = 2.81; *SD* = 1.93) and 45% non-white (*M* = 1.92; *SD* = 2.32) with an average age of 33.97 years (*SD* = 9.54). Youth reported having known the members of their family network the longest (*M* = 4.63; *SD* = 0.91) and members of their professional network the shortest (*M* = 1.61; *SD* = 1.26). Youth also reported being very close to members of their network (*M* = 2.62; *SD* = 0.41) and that the members of their network knew them well (*M* = 2.51; *SD* = 0.55). Paired samples t-tests comparing the family and friend networks indicated that youth believe their family members know significantly more about them than their friends (see Table 2).

Network Support. Youth reported that they are infrequently hassled by members of their network (*M* = 0.67; *SD* = 0.74). Conversely, youth reported that they are listened to (*M* = 2.98; *SD* = 1.03), told they were cared for (*M* = 3.05; *SD* = 1.09), and received advice or help accessing resources (*M* = 2.91; *SD* = 1.19) on a relatively frequent basis. A series of paired samples t-tests indicated that youth reported significantly more frequent hassling, advice, assistance with daily activities and money, and times being told they were cared for from family network members than from friends (see Table 2).

Network Delinquency. On average, youth indicated that about a quarter of their social network (26%) had engaged in at least one delinquent activity prior to their enrollment in the Dawn Project (*M* = 1.16; *SD* = 1.53). The greatest proportion of these individuals were family members of the youth (*M* = 0.87; *SD* = 1.16), while professionals represented the smallest proportion (*M* = 0.11; *SD* = 0.52). Additionally, youth reported that authority defiance (17.47%) and violence (15.29%) were the most common delinquent behaviors in their networks. A comparison of the family and friend networks of youth indicated that family members were significantly more likely to have engaged in delinquent behaviors, particularly property damage (see Table 2).

Table 1. Description of overall social networks (N = 264).

	Entire Network	
	Absolute Number	Relative Percent of Total Network
	M (SD)	*M (SD)*
Total network size	4.44 (2.67)	
Number of family	2.81 (2.00)	68.39 (30.97)
Number of friends	0.80 (1.34)	14.71 (22.76)
Number of professionals	0.80 (1.25)	16.47 (24.53)
Number of women	2.81 (1.93)	64.45 (25.84)
Number of nonwhite	1.92 (2.32)	45.06 (42.90)
Number who have engaged in delinquent act	1.16 (1.53)	26.22 (31.81)
Number who have engaged in authority defiance	0.81 (1.32)	17.47 (26.57)
Number who have engaged in violent acts	0.67 (1.17)	15.29 (25.61)
Number who have engaged in property damage	0.47 (0.91)	10.28 (20.19)
Number who have used drugs or alcohol	0.17 (0.59)	3.56 (12.87)
Average age	33.97 (9.54)	
Average length of time known[a]	3.82 (1.24)	
Average closeness[b]	2.62 (0.41)	
Average frequency of contact[c]	3.40 (0.56)	
Average amount knows about client[d]	2.51 (0.55)	
Average frequency of "hassles"[e]	0.67 (0.74)	
Average frequency listens to client[f]	2.98 (1.03)	
Average frequency tells client they care[f]	3.05 (1.09)	
Average frequency suggests solutions[f]	2.91 (1.19)	
Average frequency helps with daily activities[f]	1.90 (1.37)	
Average frequency helps with money[f]	2.02 (1.34)	

[a] Six point scale, where 0 = '≤ 3months' and 5 = '≥ 6 years'
[b] Three point scale, where 1 = 'not very close' and 3 = 'very close'
[c] Four point scale, where 1 = 'less than once a month' and 4 = 'every day or almost every day'
[d] Four point scale, where 0 = 'nothing' and 3 = 'a lot'
[e] Four point scale, where 0 = 'not at all' and 3 = 'a lot'
[f] Five point scale, where 0 = 'never' and 4 = 'regularly'

Table 2. Description of family, friend, and professional networks.

	Family Network		Friend Network			Professional Network	
	Absolute Number	Relative Percent of Family Network	Absolute Number	Relative Percent of Friend Network	Family vs. Friend Comparison	Absolute Number	Relative Percent of Professional Network
	M (SD)	*M (SD)*	*M (SD)*	*M (SD)*	*t*	*M (SD)*	*M (SD)*
Total network size	2.81 (2.0)		0.80 (1.34)			0.80 (1.25)	
Number of women	1.76 (1.35)	63.36 (30.34)	0.44 (0.83)	22.00 (38.23)	14.61***	0.60 (1.03)	0.60 (1.03)
Number of nonwhite	1.34 (1.98)	45.11 (48.43)	0.32 (0.75)	16.36 (34.70)	8.31***	0.26 (0.59)	14.19(31.73)
Number who have engaged in delinquent act	0.83 (1.15)	29.96 (26.74)	0.27 (0.73)	35.20 (43.97)	2.62**	0.05 (0.34)	5.11 (20.57)
Number who have engaged in authority defiance	0.56 (0.97)	19.16 (30.48)	0.20(0.66)	26.14 (40.74)	1.17	0.04 (0.33)	3.75 (17.93)
Number who have engaged in violent acts	0.46 (0.89)	17.10 (31.11)	0.18(0.57)	22.01 (37.62)	1.76	0.02 (0.17)	2.48 (12.29)
Number who have engaged in property damage	0.34 (0.68)	12.50 (25.01)	0.10(0.51)	10.86 (28.99)	2.31*	0.02 (0.15)	1.80 (11.54)
Number who have used drugs or alcohol	0.11 (0.40)	3.67 (14.19)	0.06 (0.39)	5.53 (21.07)	0.28	0.01 (0.09)	0.68 (5.29)
Average age	36.97 (9.76)		20.50 (10.79)		9.58***	33.80 (9.35)	
Average length of time known[a]	4.63 (0.91)		2.50 (1.62)		11.09***	1.61 (1.26)	
Average closeness[b]	2.71 (0.41)		2.55 (0.58)		1.06	2.19 (0.70)	
Average frequency of contact[c]	3.49 (0.59)		3.40 (0.70)		0.10	3.09 (0.93)	
Average amount knows about client[d]	2.57 (0.60)		2.29 (0.81)		4.25***	2.50 (0.76)	
Average frequency of "hassles"[e]	0.75 (0.82)		0.47 (0.75)		3.61***	0.65 (1.03)	
Average frequency listens to client[f]	2.99 (1.15)		3.08 (1.26)		0.51	3.02 (1.30)	
Average frequency tells client they care[f]	3.22 (1.11)		1.66 (1.44)		3.33***	2.83 (1.46)	
Average frequency suggests solutions[f]	2.93 (1.28)		2.60 (1.48)		2.26*	3.00 (1.38)	
Average frequency helps with daily activities[f]	2.28 (1.50)		1.31 (1.57)		5.17***	0.78 (1.33)	
Average frequency helps with money[f]	2.51 (1.42)		1.33 (1.48)		6.15***	0.40 (0.88)	

[a] Six point scale, where 0 = '≤ 3months' and 5 = '≥ 6 years'
[b] Three point scale, where 1 = 'not very close' and 3 = 'very close'
[c] Four point scale, where 1 = 'less than once a month' and 4 = 'every day or almost every day'
[d] Four point scale, where 0 = 'nothing' and 3 = 'a lot'
[e] Four point scale, where 0 = 'not at all' and 3 = 'a lot'
[f] Five point scale, where 0 = 'never' and 4 = 'regularly'
* p < .05. ** p < .01. *** p < .001.

Conclusions

These analyses provide valuable insight into the size and makeup of the social networks of youth upon their enrollment in the Dawn Project, the frequency and source of the emotional and practical support they receive, and the frequency at which the individuals with whom youth are closest participate in delinquent behaviors. Overall, the family is the primary social support resource among youth enrolled in the Dawn Project. Not only does family make up the greatest proportion of members in the social networks of these youth, but this group also provides the most frequent emotional support by listening, expressing concern and care, and even hassling the youth. As might be expected, family also provides the most frequent functional support as well. Strikingly, friends provide emotional and functional support significantly less frequently than family, despite having contact with the youth nearly as often. Finally, these results indicate that youth may primarily view their professional network as individuals who will listen and provide advice.

These data also indicate that, on average, a quarter of the members of a youth's social network have engaged in at least one delinquent act in the past, the majority of whom were family members. The relatively small rate of delinquency among the friends of Dawn youth may reflect the relatively young age of youth and their peer networks in our sample, and thus a decreased likelihood that the youth or their friends might be engaging in delinquent behaviors. Additionally, the small number of network members identified as friends by the Dawn youth suggests that most children and youth have limited peer support resources.

EDUCATIONAL PROFILES AT ENROLLMENT

Jeffrey A. Anderson, Ph.D. & Harold Kooreman, M.A.

Introduction

Systems of care have demonstrated improved outcomes for youth and families in a variety of domains; however, little empirical information is available about how these approaches improve school functioning. The purpose of this report is to describe the educational profiles of students upon their enrollment in the Dawn Project.

Methods

The outcome variables in this study (attendance, grades, and discipline) were derived by combining several items from the Educational Questionnaire (EQ), a 21-item scale developed by ORC Macro (2000) as part of the protocol for the national evaluation. The items on the EQ ask caregivers to rate their child's educational status and school performance during the previous 6 months. The three outcome variables used for this study, attendance, grades, and discipline, were each categorized into one of three values: below average functioning, average functioning, and above average functioning, as described below.

Attendance. Students were considered to have below average attendance if they were rated by their caregivers as having attended school less than 50% of all possible school days. A student received a rating of average attendance if the caregiver rating indicated that attendance was up to 75% of all possible school days. Caregiver ratings of either missing no school or attending school more than 75% of the time were considered to be above average attendance.

Grades. This variable was based on caregiver ratings of a student's average grades in school. This variable was considered below average if student grades were rated as being typically D's or F's, or if their performance was rated as being either unsatisfactory or needing improvement. Students rated by their caregivers as having typically C's and/or performing satisfactorily were considered to have average grades, while grades were categorized as above average when caregivers rated achievement as typically A's or B's.

Discipline. Discipline levels were based on the number of detentions, suspensions, or expulsions, as rated by caregivers. A student who had received out-of-school suspension or expulsion was considered to have below average discipline, where as a student who only received in-school detentions was considered to have average discipline. Students who had received no detentions, suspensions, or expulsions were rated as above average discipline.

The predictor variables for this study included demographic information, referral source, diagnosis, school quality, special education label, and ratings obtained from the several clinical instruments.

Child Behavior Checklist (CBCL). The CBCL is a caregiver report designed to measure competencies and behavioral and emotional problems among children ages 4 through 18 years. A Total Problem scale, derived from all of the syndrome scales is available; however, in the present investigation, only the Internalizing and Externalizing scales were used (Achenbach, 1991).

Behavioral and Emotional Rating Scale (BERS). The BERS asks caregivers about a series of 52 strengths-related items. For the purposes of this investigation, only the overall Strength Quotient (SQ) ratings on all 52 items was used, as it is considered by Epstein and Sharma (1998) to be the best measure of a student's overall strengths.

Family Assessment Device-General Functioning Scale (FAD-GFS). The FAD-GFS is a subscale of the Family Assessment Device that measures family functioning based on the six dimensions provided in the McMaster Model of Family Functioning (Epstein, Baldwin & Bishop, 1983).

Family Resource Scale (FRS). The FRS is a 30-item scale that assesses adequacy of a family's resources during the previous six months (Dunst & Leet, 1987; ORC Marco, 2000).

School Quality. Caregiver assessment of school quality was determined from a question on the EQ. This item asks the caregiver to grade the school and how well it has met the child's needs using an A to F scale (A = excellent; B = good; C = fair; D = poor; F = failing).

Analysis. There were two phases to this study. First, descriptive statistics were calculated and reported in an effort to better understand the educational characteristics of students enrolling in the Dawn Project system of care (see Table 1). Second, ordinal logistic regression analyses were performed (see Tables 2 and 3) to determine the degree to which the variables of interest predicted grades, attendance, and discipline at the time of students' enrollment in the Dawn Project.

Results

Table 1 presents the educational characteristics of the three groups (below average, average, above average) at the time students enrolled in the Dawn Project. Attendance did not appear to be a primary concern, with most caregivers (72.3%) rating their children as having above average school attendance during the previous six months. On the other hand, discipline appeared to be more of a concern with over 47% of the sample demonstrating below average discipline (i.e., higher rates of school suspensions, detentions, and/or expulsions); however, slightly more than half of the sample was rated as having average (21.9%) or above average (30.8%) discipline. Academically, 60% of the sample was rated by their caregivers as having either average (33.0%) or above average (26.8%) grades, while 40% of the sample rated with below average grades (see Table 1). Students from minority backgrounds were more likely than Caucasian students to be rated with above average grades (χ^2 (2, N = 224) = 15.32, $p \leq .001$).

Table 1. School functioning by demographic characteristics.

	Below Average		Average		Above average	
	n	*%*	*n*	*%*	*n*	*%*
Attendance	23	10.27	39	17.41	162	72.32
Gender						
Male	14	8.59	29	17.79	120	73.62
Female	9	14.75	10	16.39	42	68.85
Race	23		39		162	
Caucasian	9	9.47	15	15.79	71	74.74
African-American/Biracial	14	10.85	24	18.60	91	70.54
Referral Source						
Child Welfare	2	3.08	11	16.92	52	80.00
Juvenile Justice	15	15.79	17	17.89	63	66.32
Education	4	9.30	10	23.26	29	67.44
Mental Health	2	9.52	1	4.76	18	85.71
Discipline	106	47.32	49	21.88	69	30.80
Gender						
Male	84	51.53	33	20.25	46	28.22
Female	22	36.07	16	26.23	23	37.70
Race						
Caucasian	48	50.53	18	18.95	29	30.53
African-American/Biracial	58	44.96	31	24.03	40	31.01
Referral Source						
Child Welfare	23	35.38	13	20.00	29	44.62
Juvenile Justice	51	53.68	19	20.00	25	26.32
Education	23	53.49	13	30.23	7	16.28
Mental Health	9	42.86	4	19.05	8	38.10
Grades	90	40.18	74	33.04	60	26.79
Gender						
Male	64	39.26	52	31.90	47	28.83
Female	26	42.62	22	36.07	13	21.31
Race						
Caucasian	50	52.63	31	32.63	14	14.74
African-American/Biracial	40	31.01	43	33.33	46	35.66
Referral Source						
Child Welfare	18	27.69	23	35.38	24	26.92
Juvenile Justice	46	48.42	27	28.42	22	23.16
Education	16	37.21	17	39.53	10	23.26
Mental Health	10	47.62	7	33.33	4	19.05

Table 2. Ordinal logits of grades and discipline.

	Discipline coefficient	Grades coefficient
Demographics		
Gender	0.51	-0.20
Race	-0.10	0.79*
Age at Enrollment	-0.09	-0.14*
Special Education Designation	-0.70*	-0.31
Referral Source[a]		
Juvenile Justice	-0.53	-.087*
Education	-0.61	-1.10*
Mental Health	0.22	-0.49
Diagnostic Categories		
Affective Psychotic Disorders	-0.11	-0.05
Attention Deficit Disorders	-0.23	-0.38
Conduct-Based Disorders	0.09	-0.31
MR/DD/LD Disorders	0.62	-0.31
Reactive Stress Disorders	0.34	-0.14
Other Disorders	0.12	0.27
Clinical Measures		
CBCL Internalizing Scale	0.05**	0.01
CBCL Externalizing Scale	-0.06**	-0.03
CAFAS Total Score	-0.01	0.01
BERS Strength Quotient	0.01	0.03*
FAD Total Score	0.12	-0.46
FRS Total Score	-0.36	-0.11
School Measures		
Rating of School Quality	-0.17	-0.45***
$\chi 2$	*62.51***	66.39***
Nagelkerke R^2	0.13	0.14

[a.] Child Welfare served as the comparison category
*$p \leq .05$. **$p \leq .01$. ***$p \leq .001$.

Discipline. Several predictors were significantly associated with discipline ratings (see Table 3). First, students with a special education label were more likely to be in the below average discipline group, while controlling for other predictors in the model. Additionally, internalizing and externalizing behaviors, as measured by the CBCL, were also found to significantly predict discipline group membership. Specifically, students with higher internalizing scores were more likely to be in the above average discipline group, while students with higher levels of externalizing symptoms were more likely to be in the below average discipline group. Findings also indicated that the probability of being in the above average group steadily increases as internalizing T scores increase, controlling for all other predictors in the model. Conversely, with externalizing T scores, the chances of being in the above average discipline group steadily decrease as scores increase.

Grades. A number of variables were significant predictors of grade performance (see Table 3). First, students from a minority background were more likely than Caucasian students to have average grades, while Caucasian youth had a higher probability of having below average grades. Second, when compared to youth referred to the Dawn Project from Child Welfare, students referred from both Education and Juvenile Justice were more likely to be rated as

having below average grades, controlling for all other predictors in the model. Third, the probability of being in the above average grade group steadily decreases with age at enrollment. Conversely, the probability for being in the below average grade group increases with age at enrollment, while the probability of being in the average grade group remains somewhat constant across the age span. Fourth, students were more likely to be in the high or average grade performance groups if their caregivers rated the school as performing at either an 'A' or 'B' level. If caregivers rated the school as performing at a 'C' level or below, students were more likely to be in the below average grade group. Finally, students with a higher level of overall strengths (as measured by the BERS) were more likely to be in either the average or high grade performance groups.

Table 3. Predicted probabilities of group membership for significant variables.

	Below Average	Average	Above Average
Discipline			
Special Education			
Yes	53.37	25.08	21.55
No	36.30	28.14	35.56
CBCL			
Internalizing T Scores			
50	62.10	21.89	16.01
70	37.85	28.25	33.80
90	18.58	23.65	57.77
Externalizing T-Scores			
50	18.44	23.56	58.00
70	43.46	27.65	28.89
90	72.33	17.00	10.67
Grades			
Race			
Caucasian	48.61	36.20	15.19
African-American/Biracial	30.00	41.67	28.34
Referral Source			
From Juvenile Justice	49.62	35.70	14.67
From Another Agency	29.37	41.68	28.95
From Education	59.22	30.34	10.45
From Another Agency	32.70	41.45	25.85
Age at Enrollment			
8	23.98	41.02	35.00
12	35.68	40.88	23.45
16	49.37	35.80	14.84
Parent Rating of School Performance			
A	23.59	40.98	35.43
B	32.54	41.47	25.99
C	42.98	38.67	18.34
D	54.08	33.34	12.57
F	64.80	26.78	8.43
BERS SQ			
40	68.25	24.42	7.32
70	49.73	35.62	14.66
100	31.27	41.54	27.18
130	17.31	37.89	44.80

Note. Predicted probabilities indicate the chance of being in a given group.

Conclusions

The findings presented here indicate that that discipline problems were more common among students entering the system of care than attendance problems, while most students were performing academically at an average or above average level. Additionally, minority students were more likely to have above average grades, while Caucasian students were more likely to have below average grades. Compared to students from child welfare, students from both education and juvenile justice were more likely to have poor grades. Students who were younger upon enrollment in the Dawn Project were more likely to have better grades, as were students whose caregivers rated the school highly. Finally, having a greater number of strengths was found to be associated with average academic performance or above. Somewhat surprising was the fact that scores on the FAD-GTS, and FRS were generally not predictive of grades or discipline.

The findings from this exploratory study need to be interpreted with some caution. First, caregivers' self-report of the child's school functioning is limited to respondent perceptions. Using a single measure of school functioning based on second party self-report may fail to capture the depth or breadth of school characteristics of participating children and adolescents. Second, attendance data are skewed as the interview questions about attendance do not fully capture a range of attendance that might discriminate among respondents.

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CHANGE IN RESTRICTIVENESS OF PLACEMENTS OVER TIME

Harold E. Kooreman, M.A., Eric R. Wright, Ph.D., & Jeffrey A. Anderson, Ph.D.

Introduction

A central objective of the Dawn Project is to reduce the amount of time young persons spend receiving services in highly restrictive settings and increase their presence in community-based settings. This brief report provides information on changes in the restrictiveness of placements over time for young people enrolled in the Dawn Project Evaluation Study (DPES).

Methods

Data about the living arrangements of the young people participating in the DPES were collected during evaluation interviews using the Restrictiveness of Living Environments Scale – Revised (ROLES). The ROLES asks caregivers to list all the places their child has lived during the past six months. Using a key, the research interviewer assigns a restrictiveness score to each living situation. Restrictiveness scores can range from 1 (independent living) to 26 (juvenile correctional facility). Higher scores indicate a more restrictive living environment. To aid in analysis, the ROLES was collapsed into a 8-point scale with the following categories: 1 = independent living; 2 = living with at least 1 biological parent; 3 = living with extended family or adoptive family; 4 = living with a foster family; 5 = living in a group shelter or group home; 6 = living in a residential treatment facility; 7 = living in a psychiatric hospital; and 8 = living in a juvenile detention/correctional facility.

The placements included in the analysis represent where a young person was living at the time of each evaluation interview from enrollment through 24 months. The impact that factors such as age, gender, and ethnicity have on the level of restrictiveness of placements over time was explored using hierarchical linear modeling (HLM).

Results

At the time of enrollment into the DPES, the majority (69.9%) of young people were living in a family setting with a biological parent (39.3%), a relative or adoptive family (18.5%), or a foster family (12.1%). When compared to young people from mental health, young people from both the juvenile justice system and the education system were living in significantly less restrictive placements (see Figure 1). Additionally, evaluation participants who were younger when they entered the DPES were living in less restrictive placements than those who were older at entry (see Figure 2).

Figure 1. Baseline restrictiveness score by referral source.

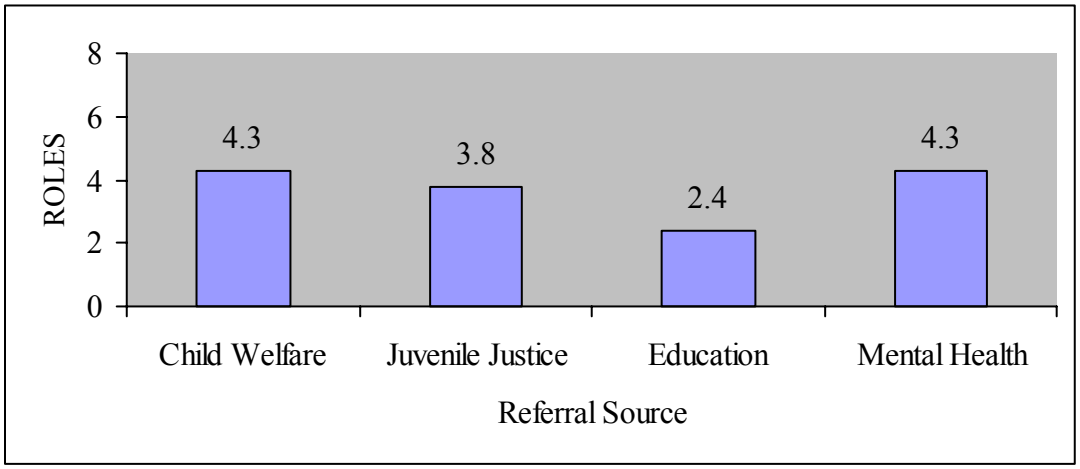
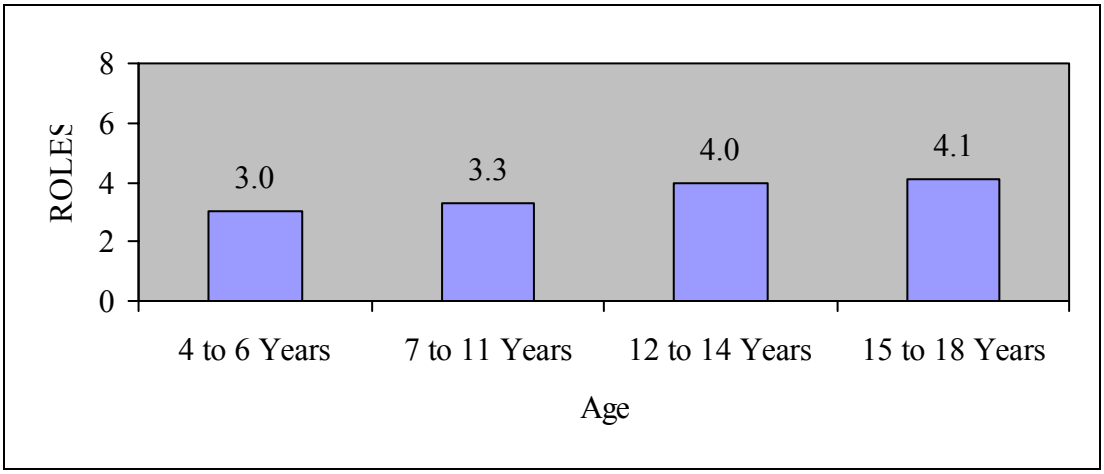


Figure 2. Baseline restrictiveness score by age.



Though restrictiveness of placements did not change significantly over time for the DPES population as a whole, referral source did affect placement restrictiveness over the 24-month study period. When compared to young people from mental health, DPES participants referred from juvenile justice experienced an increasing level of placement restrictiveness over time. Similarly, young people from education also experienced an increase in the restrictiveness level of their placements over time when compared to young people referred from mental health. For both young people from juvenile justice and young people from education, the predicted level of restrictiveness remains within the range of some type of community-based, family setting (see Figures 3 & 4).

Figure 3. Comparison of the level of restrictiveness of youth referred by juvenile justice to all other youth over time.

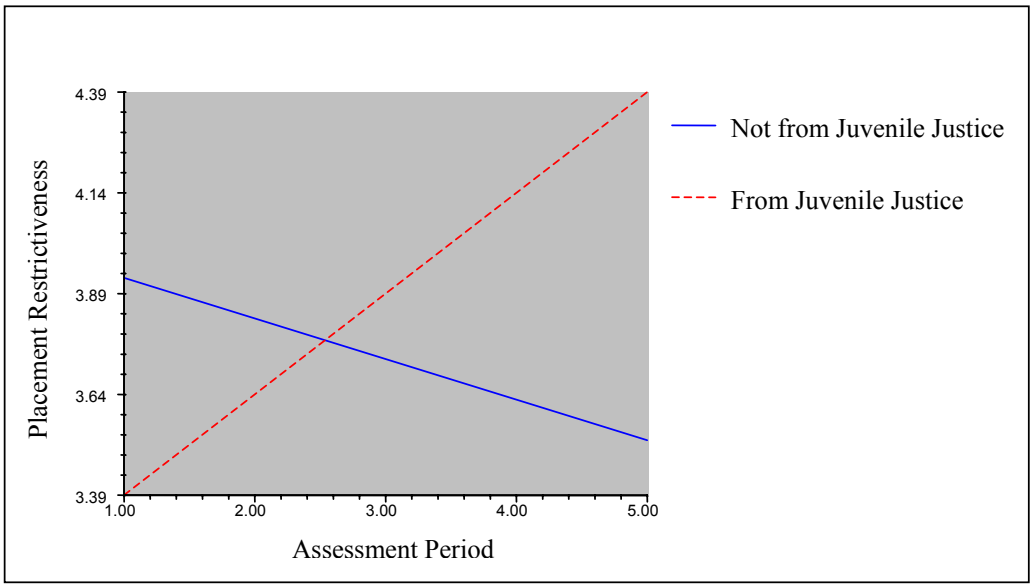
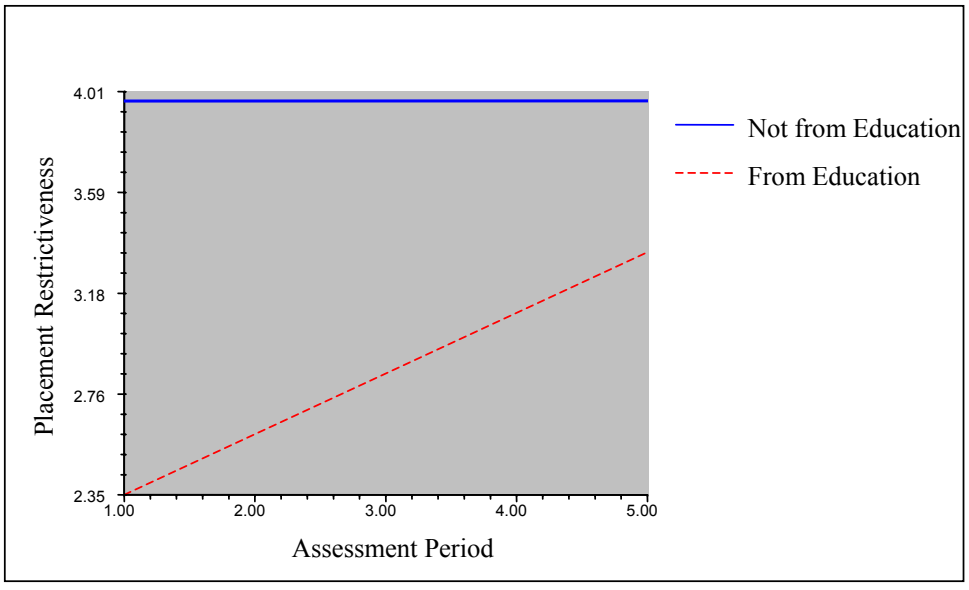
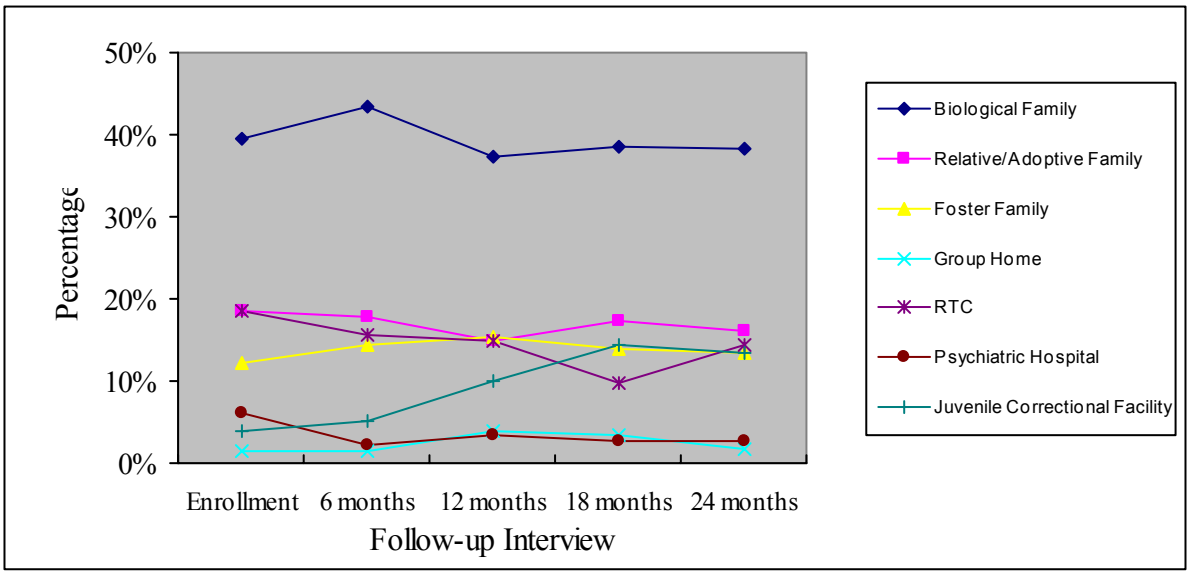


Figure 4. Comparison of the level of restrictiveness of youth referred by education to all other youth over time.



Overall, time did not affect the placement restrictiveness of DPES participants. A cross-sectional inspection of the mean restrictiveness scores at each data collection interval indicate that as a whole, most young people in the DPES remained in community-based, family living situations characterized by low to moderate restrictiveness (see Figure 5).

Figure 5. Percentage of youth in placements over 24-month follow-up period.



Conclusions

Analyses of the available placement data suggest that the Dawn Project is successful in keeping youth in community-based settings. Longitudinal reductions in the use of residential treatment and hospitalization are observed. While some referral sources are associated with increasing levels of restrictiveness, placements tend to remain at the community level as opposed to more restrictive settings. The exception appears to be the use of correctional placement, which may be more closely associated with legal mandates than the system of care values. Overall, however, it appears that Dawn is indeed reducing the use of highly restrictive types of services for adolescents who have a history of such placements.

CHANGES IN CLINICAL FUNCTIONING OVER TIME

Harold E. Kooreman, M.A., Jeffrey A. Anderson, Ph.D., & Eric R. Wright, Ph.D.

Introduction

The DPES has been examining longitudinal changes in clinical functioning since its inception. The purpose of this brief report is to update and expand previous studies examining relationships between participating in the Dawn Project and clinical functioning over time.

Methods

The data reported in these analyses comes from interviews conducted with the caregivers of young people enrolled in the Dawn Project for the national evaluation. Interviews are conducted at the time of enrollment and at 6-month intervals thereafter. This paper reports findings from three distinct outcome measures assessing clinical functioning, psychiatric symptomatology, and behavioral and emotional strengths.

Child and Adolescent Functional Assessment Scale (CAFAS). The CAFAS (Hodges, 1994) assesses the degree to which emotional, behavioral, or substance problems are disruptive to functioning. The CAFAS, which is completed as part of the 6-month evaluation interviews and scored by the interviewer, provides detailed behavioral descriptions for multiple psychosocial domains. The most severe level of impairment for each domain is scored based on the previous 180-day period, with higher scores indicating greater impairment: 30 indicates severe disruption or incapacitation; 20 indicates moderate or persistent disruption; 10 indicates mild disruption; 0 indicates no disruption of functioning. Aggregating domain scores provides a total score that ranges from 0 to 240. An overall score from 0-10 indicates minimal to no impairment; 20-40 indicates mild impairment; 50-90 indicates moderate impairment; 100-130 indicates marked impairment; and 140 and higher indicates severe impairment.

Child Behavior Checklist (CBCL). The CBCL (Achenbach, 1991) is used to determine the level of behavioral and psychiatric symptoms in the young people enrolled in the longitudinal evaluation. Caregivers are asked to rate if 103 behavioral and psychiatric symptoms are not at all true, somewhat true, or very true of their child. The CBCL provides ratings of internalizing behaviors (e.g., withdrawal, somatic complaints, anxiety, and depression), externalizing behaviors (e.g., delinquency and aggression), and total problems. Scores on all scales can range from 50 to 100. Scores of 60 points or greater indicate clinically significant impairment.

Behavioral and Emotional Rating Scale (BERS). The BERS (Epstein & Sharma, 1998) assesses the emotional and behavioral strengths of young people enrolled in the Dawn Project. Caregivers are asked to determine whether the 52 items on the BERS are very much like their child, like their child, not much like their child, or not at all like their child. The BERS provides

an overall strength score as well as scores for interpersonal strengths, intrapersonal strengths, family involvement, school functioning, and affective strengths. Higher scores indicate greater strengths. The overall strength score can range from less than 70 to over 130. Scores below 70 indicate very poor strengths; scores from 70 to 79 indicate poor strengths; scores from 80 to 89 indicate below average strengths; scores from 90 to 110 indicate average strengths; scores from 111 to 120 indicate above average strengths; scores from 121 to 130 indicate superior strengths; and scores above 130 indicate very superior strengths.

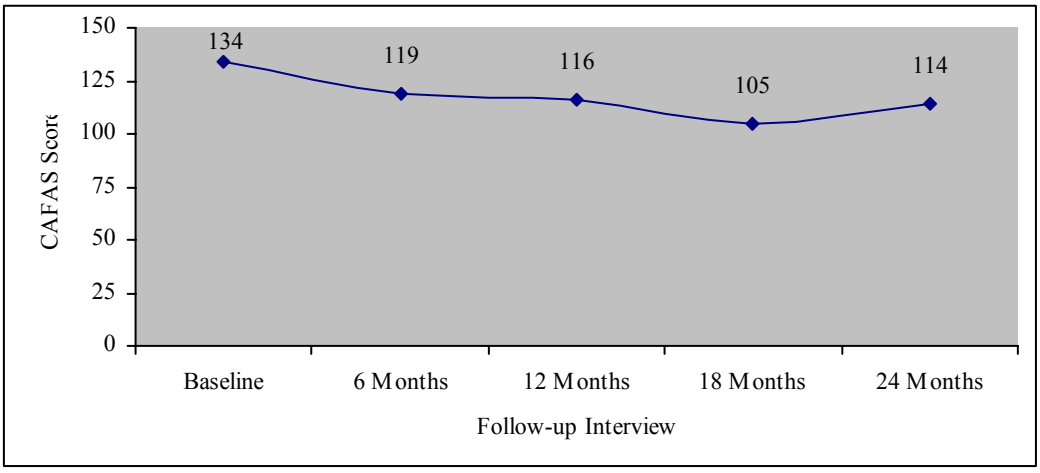
Study participants. To be included in the analysis, young people had to have data available for at least two interview time points from enrollment through 24 months.

Analysis. Longitudinal analyses were conducted with hierarchical linear modeling (HLM; Raudenbush & Bryk, 2002). We chose HLM over other analysis methods as HLM allows one to work with cases that may have missing data at one or more time points.

Results

CAFAS. Overall, young people in the Dawn Project had a statistically significant drop in CAFAS scores during the 24-month follow up period after controlling for demographic characteristics (see Figure 1 for a cross-sectional representation of CAFAS scores over the evaluation period). Additionally, young people referred from Child Welfare had CAFAS scores (M = 121.75, SD = 50.02) that were significantly lower than young people referred from other agencies (M = 140.31, SD = 47.33). Caucasian youth had CAFAS scores that were significantly higher (M = 144.74, SD = 47.87) than young people who were either African-American or biracial (M = 124.92, SD = 48.26). Youth who were younger upon enrollment in the Dawn Project had significantly higher CAFAS scores than older youth.

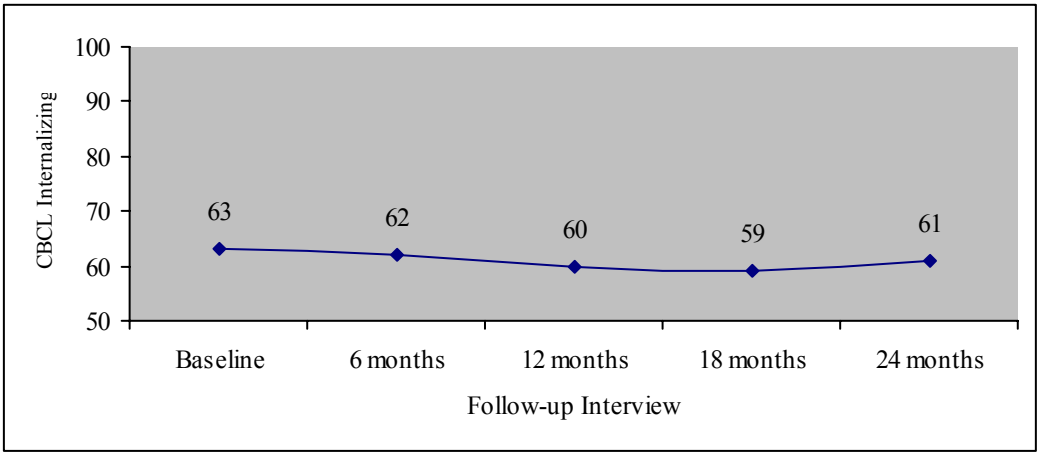
Figure 1. CAFAS scores over time.



CBCL Internalizing subscale. Overall, CBCL internalizing subscale scores showed a statistically significant decrease during the 24-month evaluation period. Additionally, Caucasian youth had a significantly higher CBCL internalizing subscale score (M = 65.73, SD = 11.72) than did African-American or biracial youth (M = 61.44, SD = 11.92). Demographic and referral

source variables did not affect change over time for CBCL internalizing scores (see Figure 2 for a cross-sectional representation of CBCL internalizing scores).

Figure 2. CBCL Internalizing subscale scores over time.



CBCL Externalizing subscale. Females had a significantly higher externalizing score (M = 73.90, SD = 10.66) than did males (M = 70.03, SD = 11.07). Caucasian youth had an average externalizing t-score that was significantly higher (M = 73.07, SD = 10.72) than African-American or biracial youth (M = 69.44, SD = 11.14). Being younger at enrollment also predicted higher baseline CBCL externalizing scores. The longitudinal analysis showed a statistically significant and positive change in Externalizing subscale scores during the 24-month evaluation period. When compared to young people referred from Mental Health, young people referred from the Child Welfare, Education and Juvenile Justice systems had significantly different patterns of overtime change in their externalizing scores (see Figure 3 for a cross-sectional representation of CBCL Externalizing scores by referral source). Additionally, Caucasian youth had a pattern of change significantly different from African-American or biracial youth (see Figure 4 for a cross-sectional representation of CBCL Externalizing subscale scores by race).

Figure 3. CBCL Externalizing subscale scores over time by referral source.

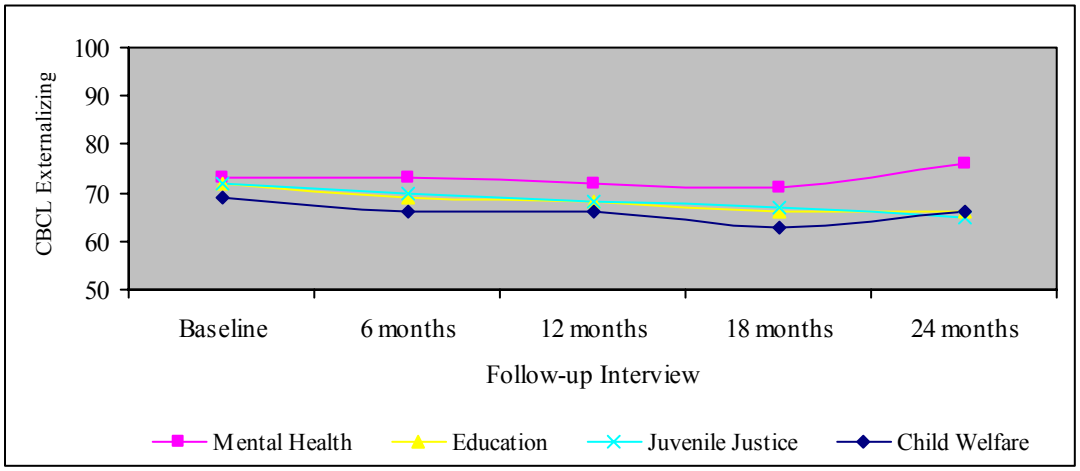
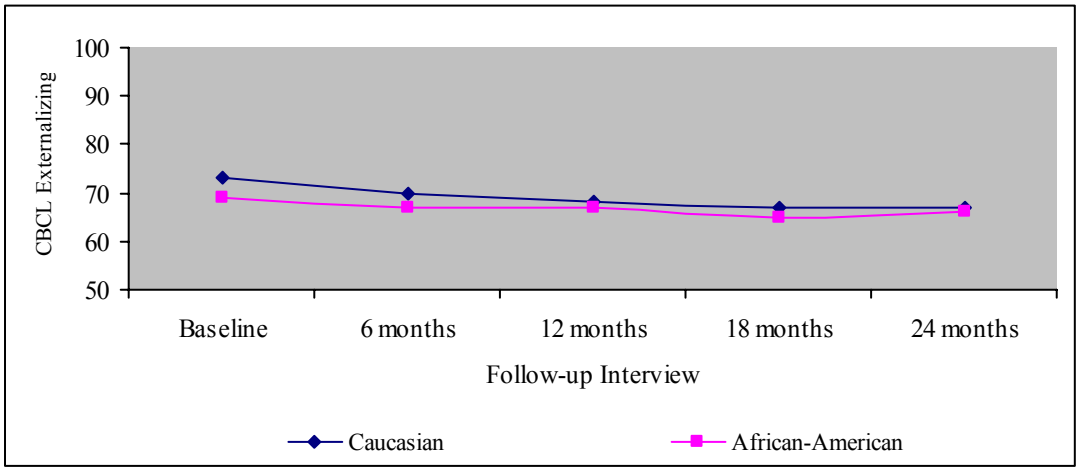


Figure 4. CBCL Externalizing subscale scores over time by race.



CBCL Total Problems. Overall, CBCL Total Problems scores decreased significantly over the 24-month evaluation period (see Figure 5 for a cross-sectional representation of CBCL Total Problems over time). When compared to young people referred to the Dawn Project from Mental Health (M = 74.70, SD = 8.33) young people referred from Child Welfare had significantly lower total problem scores at enrollment (M = 69.44, SD = 11.04). Also, females had significantly higher total problem scores at baseline (M = 73.13, SD = 10.74) than did males (M = 69.90, SD = 11.07). African-American and biracial youth had significantly lower total problem scores at enrollment (M = 68.51, SD = 11.14) than did Caucasian youth (M = 73.53, SD = 10.34). A significant decrease in Total Problems scores was also observed as age at enrollment increased. Over time, young people from both Juvenile Justice and Education had significantly different rates of change over the evaluation period than young people referred from Mental Health (see Figure 6 for a cross-sectional representation of change over time by referral source). Additionally, African-American and bi-racial youth had a significantly different rate of change over time than Caucasian youth (see Figure 7 for a cross-sectional representation of CBCL Total Problem scores over time by race).

Figure 5. CBCL Total Problem*s scores over time.*

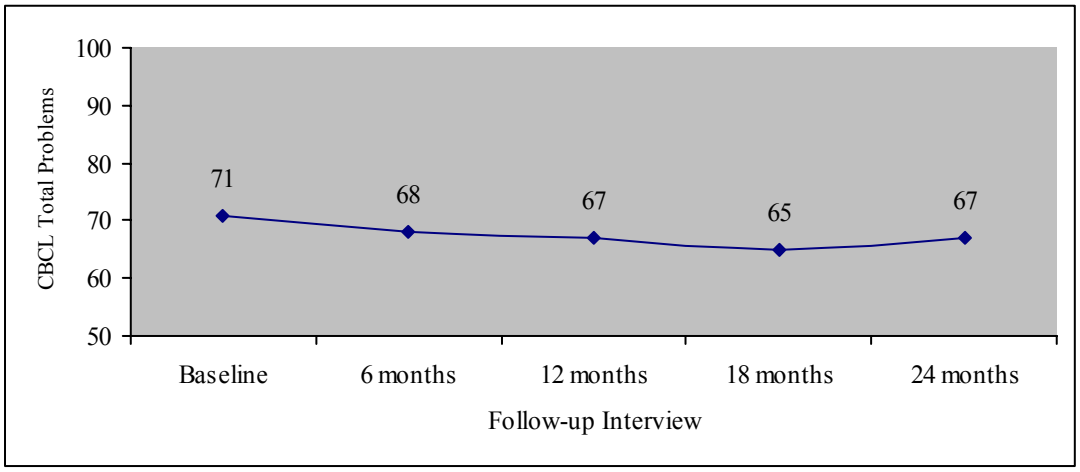


Figure 6. CBCL Total Problems over time by referral source.

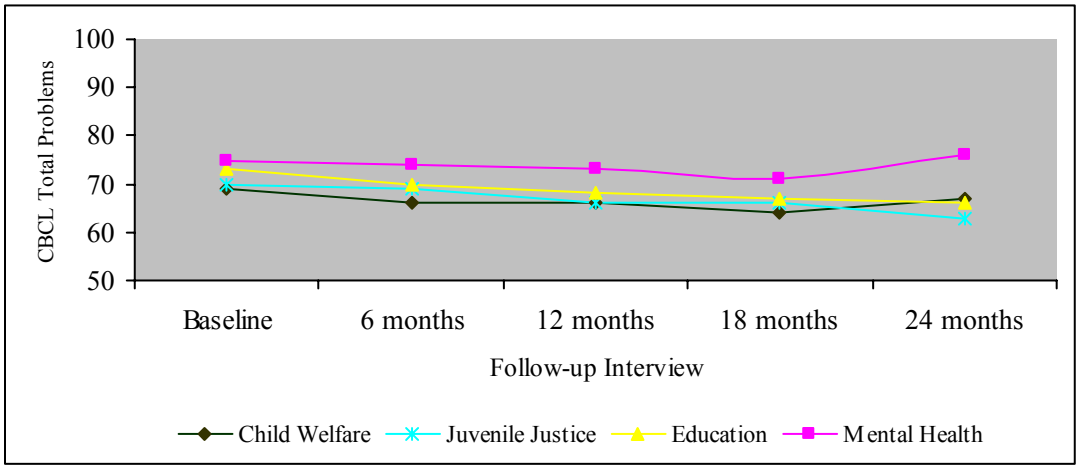
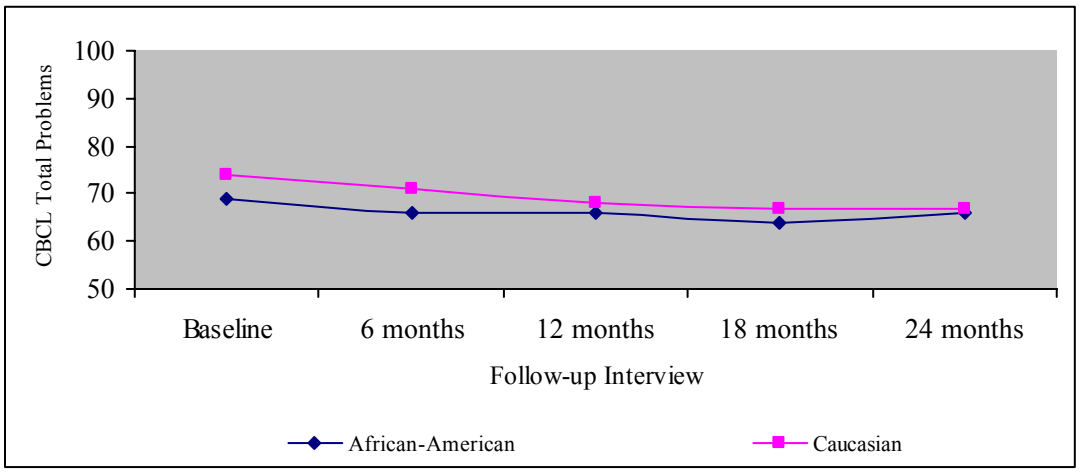


Figure 7. CBCL Total Problems over time by race.



BERS. Overall BERS Strength Quotient (SQ) scores were found to increase significantly over time (see Figure 8 for a cross-sectional representation of SQ scores over time). At baseline, males had SQ scores that were significantly higher (M = 91.18, SD = 17.00) than those of females (80.94, SD = 19.26). Caregiver ratings of overall strengths were significantly higher for African-American or biracial youth (M = 92.00, SD = 18.66) than were caregiver ratings for Caucasian youth (M = 83.99, SD = 16.63). Ethnicity did affect the rate of change over time with African-American or biracial youth showing a significantly different rate of change over time than Caucasian youth (see Figure 9 for a cross-sectional representation of SQ scores by race).

Figure 8. BERS Strength Quotient scores over time.

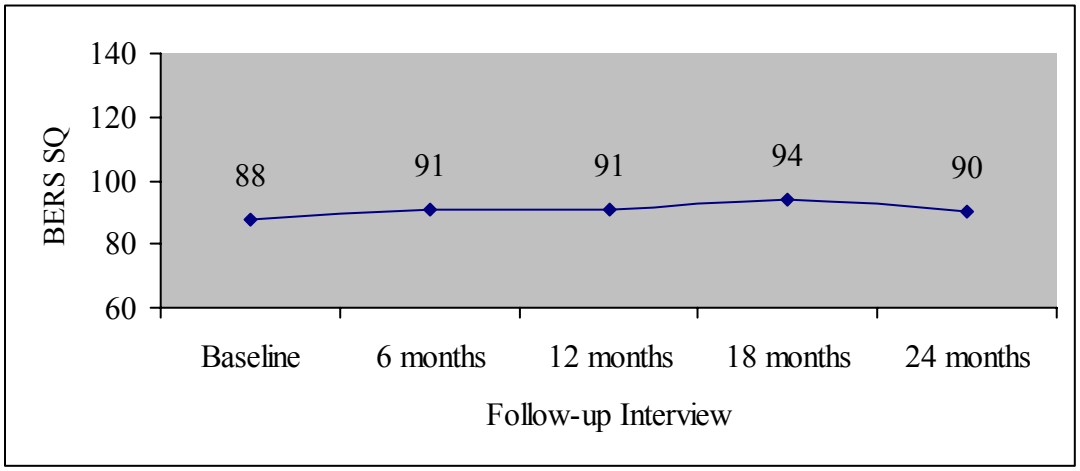
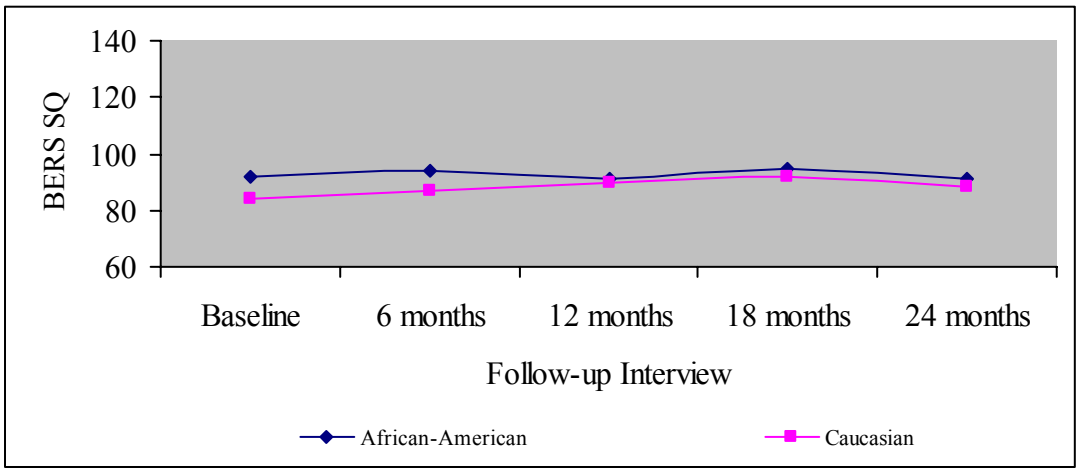


Figure 9. BERS Strength quotient scores over time by race.



Conclusions

A fundamental purpose of the Dawn Project is to improve functioning and strengths, while simultaneously decreasing impairment in the young people in the project. Ongoing analyses of the available data suggest that the Dawn Project is successful in reducing impairment in a number of domains among participating youth and adolescents. While there are differences among some demographic cohorts in the degree to which improvements are observed, overall, the available evidence is that the Dawn Project does lead to improvements in functioning, impairments, and strengths for the youth who participate.

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CHANGES IN SUBSTANCE USE BEHAVIORS AND SEVERITY OVER TIME

Dustin E. Wright, M.S. & Eric R. Wright, Ph.D.

Introduction

Given the high rate of substance abuse among adolescents with serious emotional disturbances (SED; Boyle et al., 1993; Hill, Shen, Lowers, & Locke, 2000; SED; Kilpatrick et al., 2000; Kilpatrick et al., 2003; Lederman, Dakof, Larrea, & Li, 2004; Mason, 2004), it is important to assess the impact of a system of care on the rate of substance use over time. The purpose of this brief report is to describe the extent of self-reported substance abuse and changes in substance abuse behaviors that occur over time for children and youth in Dawn.

Methods

The data reported in the following analyses come from interviews conducted with youth and their caregivers enrolled in the Dawn Project. Interviews were conducted at the time of enrollment and at 6-month intervals up to 36 months. This report presents findings for the first 24 months on five outcome measures: an overall assessment of a young person's substance use behavior, and four behavioral measures of substance abuse within three major drug categories. Data were obtained from the following measures.

Child and Adolescent Functional Assessment Scale (CAFAS). The CAFAS (Hodges, 1994) assesses the degree to which emotional, behavioral, or substance problems are disruptive to functioning. The CAFAS, which is completed as part of each 6-month evaluation interview and scored by the interviewer, provides detailed behavioral descriptions for multiple psychosocial domains. The most severe level of impairment for each domain in the previous 180-day period is scored with higher scores indicating greater impairment: 30 indicates severe disruption or incapacitation; 20 indicates moderate or persistent disruption; 10 indicates mild disruption; 0 indicates no disruption of functioning. For the purposes of this report, only the substance abuse subscale of the CAFAS will be used.

Behavioral Measures of Substance Use. Youth age 11 or older who were enrolled in the Dawn Project were asked to report how frequently they had used alcohol or other drugs in the past 30 days at each 6-month interview. Respondents were asked about their use of a number of different illicit drugs, as well as alcohol and cigarette use. For drug and alcohol use, youth were asked to report the number of days they had used each in the past 30 days. Youth indicated the frequency of their cigarette use by responding to a 7-point scale ranging from "none at all" to "more than 1 pack per day."

Results

The clinical profiles presented in this report are based on a sample of 366 young people enrolled in the longitudinal evaluation who had data available from the baseline, 6-month, 12-month, and 24-month interviews.

Longitudinal Change in Substance Use for the Entire Sample. Table 1 displays the mean scores for the substance abuse measures used in this study. Overall, very few youth reported any substance use during the study period. For the previous one-month period, alcohol and marijuana use were reported in only 2.0% ($N = 15$) of the interviews, and cigarette use in 16.5% ($N = 125$) of the interviews. Independent samples t-tests indicated that females reported more frequent alcohol use than males ($t = 2.52$, $p < .05$). Additionally, non-white youth reported more frequent alcohol use ($t = 2.16$, $p < .05$) and cigarette smoking than white youth ($t = 3.77$, $p < .001$). Finally, a series of bivariate correlations indicated that the days of marijuana use in the past month was positively correlated with the days of heavy alcohol use ($r = 0.41$, $p < .001$).

Table 1. Reported substance use at each follow-up interview.

	Enrollment *M (SD)*	6 months *M (SD)*	12 months *M (SD)*	18 months *M (SD)*	24 months *M (SD)*
Substance use severity (CAFAS)	2.38 (7.14)	1.59 (6.24)	1.26 (5.04)	0.88 (4.63)	1.35 (5.81)
Days of alcohol use	0.05 (0.54)	0.06 (0.74)	0.04 (0.35)	0.22 (1.35)	0.04 (0.33)
Days of heavy alcohol use	0.03 (0.45)	0.06 (0.75)	0.01 (0.17)	0.24 (1.42)	0.00 (0.00)
Days of marijuana use	0.02 (0.21)	0.02 (0.13)	0.05 (0.39)	0.31 (3.00)	0.26 (1.70)
Frequency of cigarette use	1.42 (1.10)	1.45 (1.21)	1.45 (1.06)	1.42 (1.08)	1.62 (1.40)

In order to account for the longitudinal nature of the substance abuse measures and to include data for all available subjects, hierarchical linear modeling was used to examine longitudinal change in each of the five outcome measures: CAFAS Substance Abuse Subscale, days of alcohol use, days of heavy alcohol use, days of marijuana use, and frequency of cigarette smoking (see Table 2). Due to the significantly skewed distribution of substance use behavior, the natural log of each variable was used as the dependent variable in all analyses.

A series of level-1 hierarchical linear models indicated no significant longitudinal change on any of the substance use variables. However, a series of Level-2 hierarchical linear models indicated several significant differences in smoking behavior between demographic groups. Older youth and youth referred from the Child Welfare, Juvenile Justice, and Education systems smoked significantly more upon admission to the program, while non-white youth were significantly less likely to have smoked prior to admission to the program. Youth who were referred to the Dawn Project from the Child Welfare system displayed a slight but statistically significant decrease in cigarette use over time while females significantly increased their cigarette use over time.

Conclusions

The findings presented here indicate that very few youth report using alcohol, drugs, or cigarettes at any given follow-up interview and that demographic and referral characteristics are most likely to predict changes in smoking behavior during enrollment in the Dawn Project. The low reports of substance use in this sample may be an indication of attempts to hide or disguise a level of use that is actually much higher. An alternate explanation is that this finding reflects the relatively young age of the youth in this sample. It is possible that the majority of youth in the Dawn Project are enrolled prior to the age at which most youth begin using drugs and alcohol.

Overall, no change in substance use behavior was observed over time. Mental illness and infrequent contact with peers may interfere with the normal social processes involved in youth substance abuse, resulting in the low base rate of substance abuse observed in this sample. These results may also indicate that improvements in clinical, social, school, and family functioning may place youth in a position to make better decisions, improve their social network, and set appropriate goals, suggesting that the Dawn Project may play a role in reducing the likelihood that youth will be exposed or resort to substance abuse and other risk behaviors.

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CHANGES IN DELINQUENT BEHAVIORS OVER TIME

Matthew C. Aalsma, Ph.D. & Eric R. Wright, Ph.D.

Introduction

One of the primary goals of the Dawn Project is to reduce the likelihood that youth will engage in delinquent and/or criminal behaviors. The purpose of this briefing is to assess the change in the number of delinquent behaviors committed by participants in the Dawn Project over time.

Methods

The data reported in the following analyses comes from interviews conducted with the caregivers of young people enrolled in the Dawn Project for the national evaluation. Interviews are conducted at the time of enrollment and at 6-month intervals. Areas assessed and included in this analysis include:

Demographic Information. Participants were asked their age, identified race (coded as 0 = nonwhite; 1 = white), and gender (coded as 1 = male, 2 = female). Referral agency was also used as a predictor (education, child welfare, juvenile justice, and mental health).

Child Behavior Checklist (CBCL). The CBCL (Achenbach, 1991) is used to determine the level of behavioral and psychiatric symptoms in the young people enrolled in the longitudinal evaluation. Caregivers are asked to rate if 103 behavioral and psychiatric symptoms are not at all true, somewhat true, or very true of their child. The CBCL provides ratings of internalizing behaviors (e.g., withdrawal, somatic complaints, and anxiety/depression), externalizing behaviors (e.g., delinquency and aggression), and total problems. Scores on all scales can range from 50 to 100. Scores of 60 points or greater indicate clinically significant impairment. We did not include the delinquency scale in this analysis given the correlation with our outcome (offense number).

Psychological Diagnosis. Participants were diagnosed with a series of psychological disorders at enrollment in the program if they met the criteria. Diagnoses include ADHD, conduct disorder, mood disorder, adjustment disorder, post-traumatic stress disorder, substance use disorder, psychotic disorder, learning disorder, and an autistic spectrum disorder. In addition, a measure of total number of disorders was included in the analysis.

Offense Number. Participants were asked how many offenses they committed in the last six months. Responses were coded (0 = none; 1 = 1 offense; 2 = 2 or more offenses) and then totaled into a summary scale. Nineteen offenses were assessed; examples of items asked include crimes against property, running away, and carrying a weapon.

Analysis. Longitudinal analyses were conducted with hierarchical linear modeling (HLM; Raudenbush & Bryk, 2002). We chose HLM over other analysis methods as HLM allows one to work with cases that may have missing data at one or more time points. Additionally, we were able to predict both initial number of offenses and change in offense number over time.

Results

Intake Offenses. Table 1 represents the total number of offenses committed by participants in the last six months at baseline. We divided the sample by gender in order to see the difference in male and female offending. In general, males admitted to committing more offenses than females. The most common offenses included being a part of a gang, been rowdy in public, damaged property, carried a weapon, broken into a home, and threatened with a weapon.

Table 1. Involvement in delinquent behavior in previous 6 months by gender.

	Never		Once		2 or more	
	Male *N (%)*	Female *N (%)*	Male *N (%)*	Female *N (%)*	Male *N (%)*	Female *N (%)*
Been a part of a gang	89 (82%)	46 (78%)	11 (10%)	6 (10%)	9 (8%)	7 (11%)
Set fire to property	95 (91%)	57 (97%)	5 (4%)	1 (1%)	5 (4%)	1 (1%)
Been rowdy in a public	65 (60%)	39 (66%)	23 (21%)	13 (22%)	21(19%)	7 (11%)
Damaged property	85 (78%)	50 (84%)	13 (11%)	4 (6%)	11 (10%)	5 (8%)
Bought/sold stolen goods	97 (89%)	47 (80%)	5 (4%)	5 (8%)	7 (6%)	7 (11%)
Had sex for money	103 (95%)	53 (90%)	2 (1%)	3 (5%)	4 (3%)	3 (5%)
Carried a weapon	78 (71%)	44 (74%)	18 (16%)	9 (15%)	13 (11%)	6 (10%)
Gotten a traffic ticket	100 (97%)	58 (98%)	3 (2%)	0 (0%)	0 (0%)	1 (1%)
Broken into home	88 (80%)	50 (36%)	12 (11%)	6 (10%)	9 (8%)	3 (5%)
Set fire to hurt others	103 (94%)	57 (96%)	3 (2%)	1 (1%)	3 (2%)	1 (1%)
Gone joyriding in car	98 (90%)	51 (86%)	6 (5%)	6 (10%)	4 (3%)	2 (3%)
Attempt to/stole car	101 (92%)	55 (93%)	6 (5%)	2 (3%)	2 (1%)	2 (3%)
Sold drugs	99 (91%)	50 (84%)	3 (2%)	5 (8%)	6 (5%)	4 (6%)
Threatened with weapon	88 (80%)	47 (79%)	14 (12%)	8 (13%)	7 (6%)	4 (6%)
Threaten for money	106 (97%)	58 (98%)	2 (1%)	0 (0%)	1 (1%)	1 (1%)
Robbed/attempted robbery	103 (94%)	56 (94%)	2 (1%)	1 (1%)	4 (3%)	2 (3%)
Purse snatch	109 (100%)	59(100%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Hurt other to have sex	108 (99%)	59 (100%)	1 (1%)	0 (0%)	0 (0%)	0 (0%)
Use gun/beaten other	97 (89%)	55 (93%)	8 (7%)	3 (3%)	4 (3%)	1 (1%)

Number of Intake Offenses. Results of HLM analysis on number of offenses determined that four variables were related to a young person's level of offenses at intake. Young people referred from mental health had committed significantly fewer offenses (M = 1.4, SD = 2.0) than young people referred from other agencies (M = 3.5, SD = 4.8). However, it should be noted that few young people were referred from mental health agencies (17 subjects or 7% of participants). Gender was also a significant predictor of initial offending status with females reporting fewer offenses at enrollment (M = 2.9, SD = 4.1) than males (M = 3.5, SD = 5.0). Having a substance use diagnosis was related to higher number of offenses (M = 4.3, SD = 6.2 versus M = 3.2, SD = 4.6) although few subjects received a substance use diagnosis (8 subjects or 8% of sample). Lastly, a higher score on the aggression subscale of the CBCL was related to more offenses (β = 0.16; $p < .01$).

Number of Offenses Over Time. The HLM analysis determined that young people in the Dawn Project had a statistically significant drop in number of offenses over time (see Figure 1). Several variables were significant predictors of change in offense number. Having a substance use diagnosis was related to greater reduction in offense number over time (β = -3.82; $p < .01$). The important caveat of this effect is the low number of subjects. Somatic complaints at baseline was a significant predictor of lower offenses over time (β = -0.02; $p < .05$). Both gender and anxiety/depression were independent predictors of offense number over time. However, we created an interaction term (Gender x Anxiety/Depression) which was a significant predictor of change in offense number (β = 0.07, $p < 01$; see Figure 2). In order to appropriately display the interaction effect, we divided the subjects into a low anxiety/depression group and a high anxiety/depression group. In sum, three of the groups (high anxiety/depression males, low anxiety/depression females, high anxiety/depression females) committed fewer offenses at each time point. Low anxiety/depression males did not change much in terms of number offenses across the time points. Hence, it appears that this group, in particular, committed a similar number of offenses across the intervention time period. Gender interactions with somatic complaints and aggression were not significant.

Figure 1. Number of offenses over 24-month follow-up period.

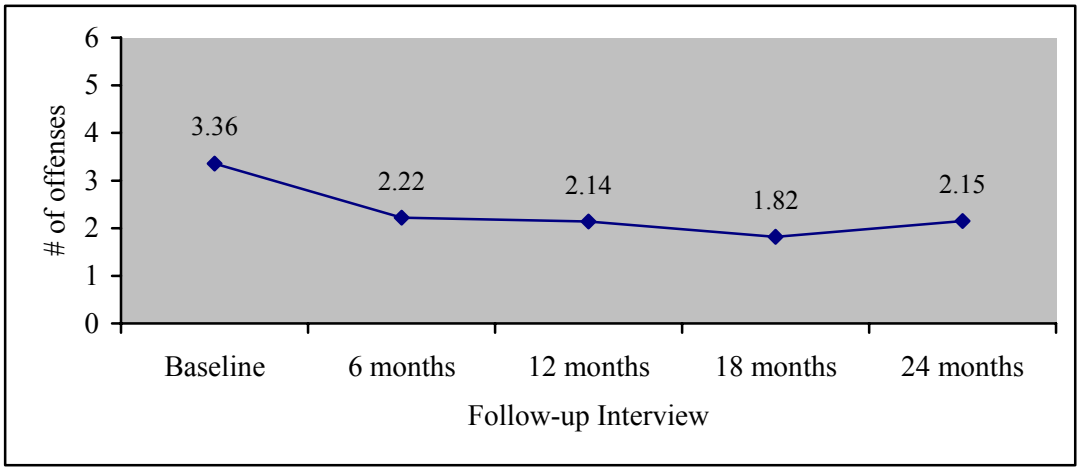
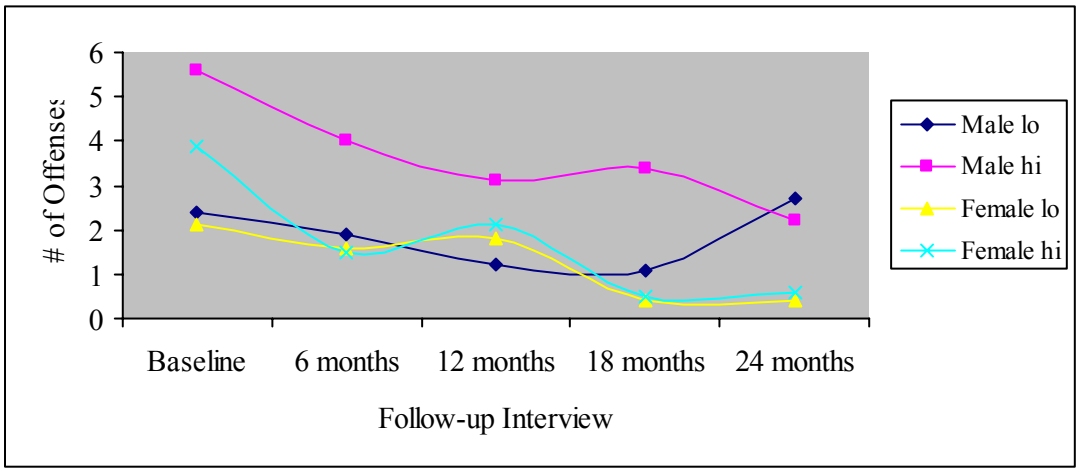


Figure 2. Gender by anxiety/depression interaction on number of offenses over 24-month follow-up period.



Conclusions

In general, the Dawn Project enrolled males committed more offenses than females, which is expected given gender differences in offense patterns. Additionally, the number of offenses decline over time, which would appear to be a positive indication on the effectiveness of the Dawn Project. One of the more interesting statistical effects of this study includes the role of anxiety/depression symptoms and gender in offense number over time. For instance, both males and females with high anxiety/depression "started" at a higher level of offenses than males and females with low anxiety/depression. However, regardless of anxiety/depression status, females in the Dawn Project reduced their number of offenses at a similar rate. This was not true of males. Males with high anxiety/depression reduced their offense number but still committed just over two offenses at 24 months. Low anxiety/depression males started lower and were the only group to commit more offenses at 24 months.

In sum, psychopathology (i.e. depression/anxiety) appears to have a gender specific effect on number of offenses in this population. Presumably, females responded especially well to the Dawn Project resulting in much lowered offense number. It would be useful to assess concurrent growth curves of anxiety/depression symptoms and offense over time by gender. This method would allow us to understand if psychopathology symptoms also decrease over time or if they are directly related to offense and gender effects over time.

CHANGES IN EDUCATIONAL PROFILES OVER TIME

Jeffrey A. Anderson, Ph.D., Eric R. Wright, Ph.D., & Harold E. Kooreman, M.A.

Introduction

While systems of care have been associated with improved outcomes for youth and families in a variety of domains, little empirical information about how these approaches impact school functioning has been published. The purpose of this report is to describe the educational profiles of students served in the Dawn Project and the pattern of change in educational profiles over time.

Methods

Data for this study were gathered from interviews with caregivers and youth who were enrolled in the Dawn Project as part of the national evaluation. Caregiver interviews for this evaluation are conducted at enrollment and at 6-month intervals, up to and beyond 24 months. Specific data for this study were drawn from a subset of interview questions that asked caregivers to rate students' educational functioning during the past six months.

The outcome variables in this study were derived by combining several items from the Educational Questionnaire (EQ), a 21-item scale developed by ORC Macro (2000) as part of the protocol for the national evaluation. The items on the EQ ask caregivers to rate their child's educational status and school performance during the previous 6 months. The three outcome variables used for this study, attendance, grades, and discipline, were categorized into one of three values: below average functioning, average functioning, and above average functioning, as described below.

Attendance. Students were considered to have below average attendance if they were rated by their caregivers as having attended school less than 50% of all possible school days. A student received a rating of average attendance if the caregiver rating indicated that attendance was up to 75% of all possible school days. Caregiver ratings of either missing no school or attending school more than 75% of the time were considered to be above average attendance.

Grades. This variable was based on caregiver ratings of a student's average grades in school. This variable was considered below average if student grades were rated as being typically D's or F's, or if their performance was rated as being either unsatisfactory or needing improvement. Students rated by their caregivers as having typically C's and/or performing satisfactorily were considered to have average grades, while grades were categorized as above average when caregivers rated achievement as typically A's or B's.

Discipline. Discipline levels were based on the number of detentions, suspensions, or expulsions, as rated by caregivers. A student who had received out-of-school suspension or

expulsion was considered to have below average discipline, where as a student who only received in-school detentions was considered to have average discipline. Students who had received no detentions, suspensions, or expulsions were rated as above average discipline.

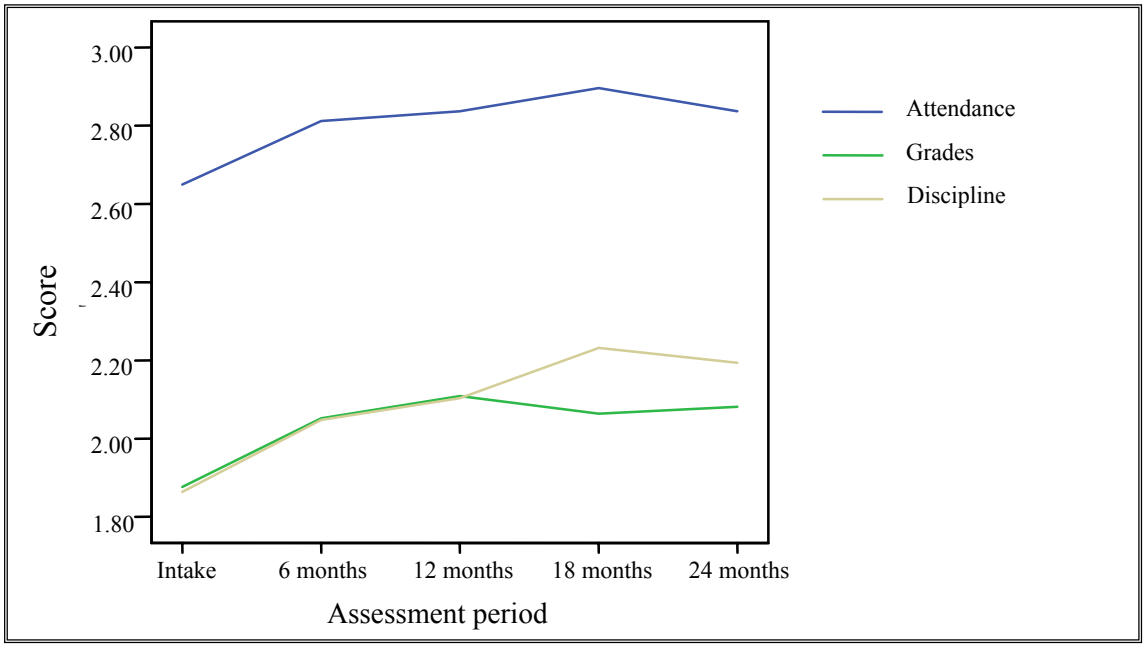
Predictor Variables. The predictor variables for this study included referral source, demographic information (age at enrollment, gender, race), whether or not a child was receiving special education services, and the amount of special education services received (1 = 0-25% of the school day; 2 = 25-50% of the day; 3 = 50-75%; 4 = 75-100%; 5 = "Other").

Analysis. Longitudinal analyses were conducted with hierarchical linear modeling (HLM; Raudenbush & Bryk, 2002), which was used other methods specifically because HLM allows for analyses when cases may have missing data at one or more time points.

Results[1]

Table 1 presents the scores over time in terms of caregiver's perceptions of grades, attendance, and discipline for the young people participating in the Dawn Project (Figure 1 presents the same information in graphical form). HLM results suggest that changes over time in grades, attendance, and discipline improve are statistically significant, suggesting that improvement is occurring for each variable.

Figure 1. Average scores for grades, attendance, and discipline over time.



[1] Additional information is available in the "Educational Profiles at Enrollment for Young People in the Dawn Project" briefing.

Table 1. Average scores for grades, attendance, and discipline over time.

	Intake *M (SD)*	6 months *M (SD)*	12 months *M (SD)*	18 months *M (SD)*	24 months *M (SD)*	Overall *M (SD)*
Grades	1.86 (0.79)	2.04 (0.80)	2.12 (0.77)	2.06 (0.78)	2.09 (0.77)	2.01 (0.79)
Attendance	2.66 (0.64)	2.82 (0.48)	2.83 (0.48)	2.91 (0.36)	2.85 (0.43)	2.78 (0.53)
Discipline	1.88 (0.87)	2.05 (0.91)	2.10 (0.89)	2.22 (0.89)	2.19 (0.91)	2.04 (0.90)

Note. 3 = above average; 2 = average; 1 = below average.

Follow up t-tests demonstrate that when compared to baseline scores, improvement in attendance is significant over time, including 6 months ($t = 2.81$, $p < .01$); 12 months ($t = 2.05$, $p < .05$); 18 months ($t = 4.01$, $p < .001$); and 24 months ($t = 3.56$, $p < .01$). When compared to baseline scores, improvement in grades is significant over time at 6 months ($t = 3.76$, $p < .001$); 12 months ($t = 2.72$, $p < .01$); and 24 months ($t = 2.09$, $p < .05$). However, grades at 18 months were not statistically significantly different than compared to baseline. For discipline, when compared to baseline scores, improvement is significant over time, including 6 months ($t = 2.90$, $p < .01$); 12 months ($t = 2.42$, $p < .05$); 18 months ($t = 2.76$, $p < .01$); and 24 months ($t = 2.21$, $p < .05$).

HLM was also used to test the impact that the variables of interest (referral source, demographics, and special education) have on change over time in educational functioning. Being referred from child welfare was associated with a slower rate of improvement in attendance over time (compared to all other referral sources; see Figure 2), while being a female was associated with a faster rate of improvement in attendance over time (see Figure 3). For grades, being from a minority background was associated with having higher grades at the time of enrollment in the Dawn Project (see Figure 4). For discipline, none of the variables were significant, suggesting a universal pattern (i.e., no differences across characteristics) for children and youth in terms of academic grades.

Figure 2. Change in ratings of attendance over time for youth referred by Child Welfare as compared to all other referral sources.

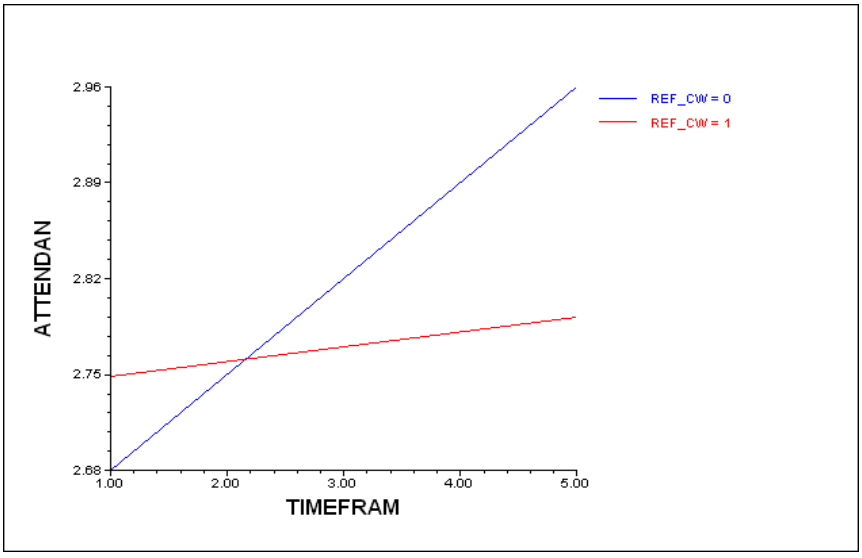


Figure 3. Change in ratings of attendance over time by gender.

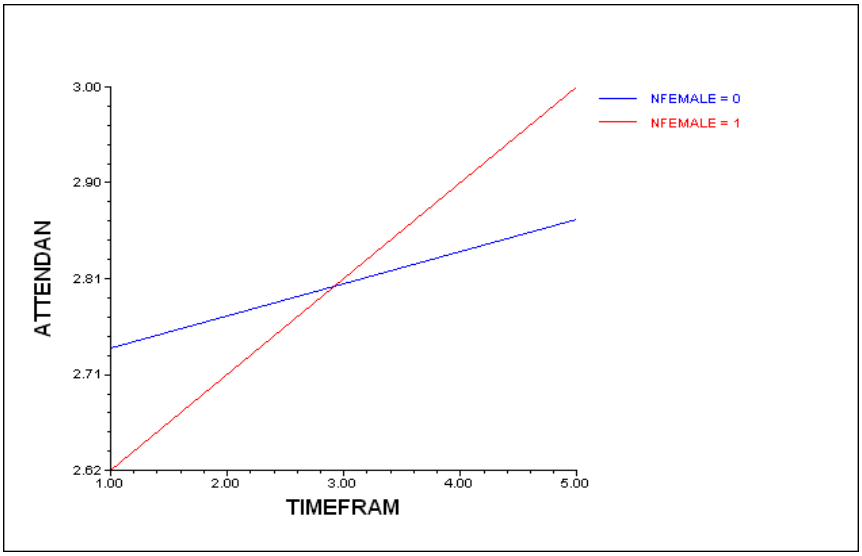
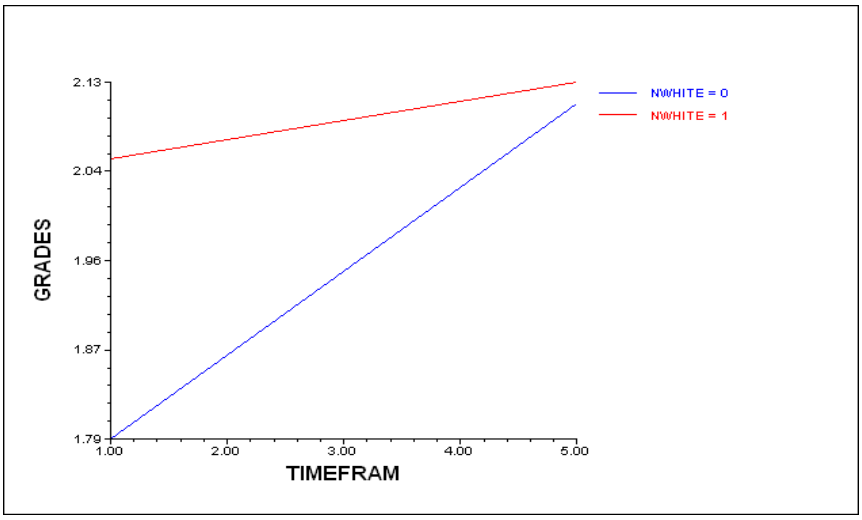


Figure 4. Change in ratings of grades over time by race.



Conclusions

This study found that participation in the Dawn Project is associated with improvements in the educational outcomes of the children and youth who participate. Indeed, it is encouraging that improvement over time was seen in attendance, grades, and discipline. However, the findings from this exploratory study need to be interpreted with some caution. First, caregivers' self-report of the child's school functioning is limited to respondent perceptions. Using a single measure of school functioning based on second party self-report may fail to capture the depth or breadth of the school characteristics of interest in this study. Second, attendance data are skewed, as the interview questions about attendance may not adequately capture a range of attendance that would fully discriminate among respondents.

In conclusion, we speculate that there may be an underlying model in the Dawn Project model that is worth considering. Because schools play such a central role in the lives of students, an early focus of the Dawn Project child and family team is often consistent attendance at school. We speculate that once attendance is stabilized, child and family teams work with schools to help students engage in school-appropriate behavior. Prior research suggests that students with serious emotional and behavioral challenges often are excluded from instructional time, especially when behavioral problems are not alleviated in the classroom. In fact, in this study, almost half of students had been suspended from school during the past six months. Therefore, we cannot overstate the importance of supporting students (as well as their teachers and other school personnel) to stay in school. Indeed, when attendance and appropriate behavior are stable, we may be able to expect improvements in academic achievement.

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SCHOOL INVOLVEMENT AND THE RESTRICTIVENESS OF SCHOOL PLACEMENTS OVER TIME

Lakeisha D. Meyer, Ph.D. & Jeffrey A. Anderson, Ph.D.

Introduction

A primary goal of the Dawn Project is to fully involve families in coordinating all the services and supports a child and family is receiving, while ensuring that service provision occurs in the community, as opposed to more restrictive settings (see Stroul & Friedman, 1986). The purpose of this study was to examine the relationship between the (a) level of involvement of schools from which children are participating in the Dawn Project and (b) restrictiveness of educational placement over time for student participants.

Methods

Study Participants. This study includes data from 165 participants, ranging in age from 7 to 17 years, with a mean age of 13.07 at the time of enrollment. Males comprised 66.7% of the sample; half of the group was African-American (50.3%) and 45.5% were Caucasian. On average, youth in this sample were enrolled in the Dawn Project for 15.53 months. Youth in this sample had an average of 1.28 contacts per month with their service coordinator and had an average of 0.48 school representatives present at each team meeting.

School Involvement. To understand the level of school involvement on Dawn Project child and family teams, information from service coordinator notes was quantified for two specific variables: (1) number of school representatives at each child and family team meeting and (2) number of contacts between service coordinators and school representatives over time for each team. The school involvement factor was represented by the average number of service coordinator-school contacts per month and average number of school representatives per team meeting. These two aspects of school involvement were also combined to create a total school involvement variable by adding their values. To facilitate additional analyses, cases were then grouped into three groups based on level of school involvement (high, medium, and low). Educational placement at disenrollment was dichotomized into (1) placement in school and (2) placement out of school.

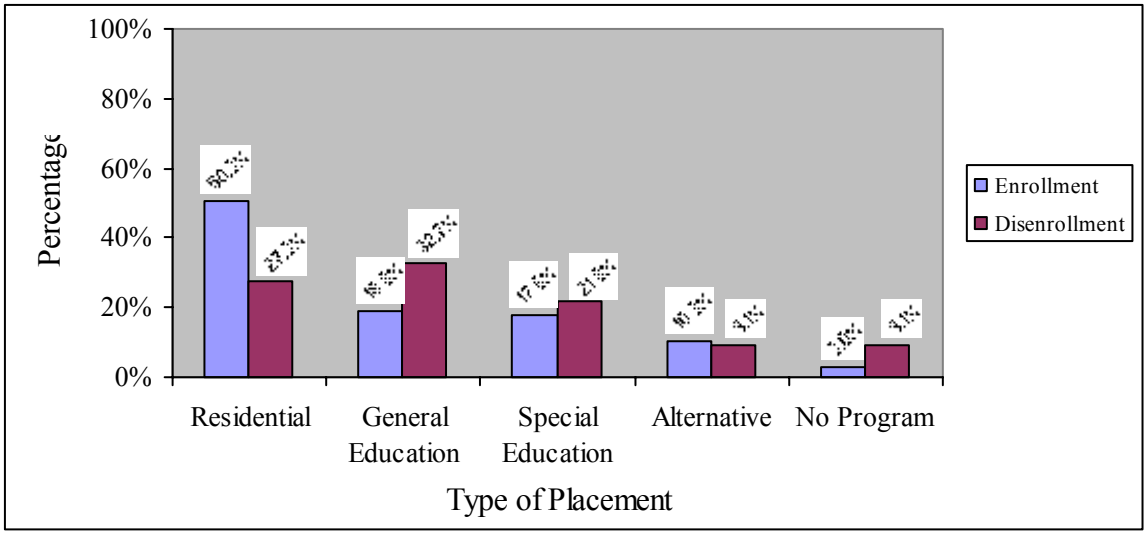
Analyses. Predictor variables were entered into regression analyses to test the hypothesis that they were associated with educational restrictiveness at disenrollment. Independent samples t-tests were used to compare means for various groups of cases. In order to qualitatively document the relationship between a child, family, school, and the system of care, four representative multiaxial life event timelines were also created (Epstein & Quinn, 1996) with accompanying case narratives that described specific events that occurred during Dawn Project involvement. Two timelines represented youth with high levels of school involvement and two timelines represented youth with low school involvement. Behavior, significant life events, and

services for each case, as well as changes in educational and placement restrictiveness during Dawn Project participation were documented on each timeline.

Results

Type of Placement. Figure 1 presents the placements of youth in this sample at both enrollment and disenrollment from the Dawn Project.

Figure 1. Youth placements at enrollment and disenrollment from the Dawn Project.



Predictors of Placement. The results of a regression analysis indicated that youth ethnicity, gender, age, and placement at enrollment were significant predictors of educational placement at disenrollment. However, the school involvement factors (i.e., school contact, school representatives at team meetings) were not significant predictors of educational placement at disenrollment (see Table 1).

Table 1. Regression analysis predicting educational placement at disenrollment (N = 165).

Variable	B	SE	β
Months in Dawn	0.00	0.02	-0.02
Ethnicity	0.43	0.21	0.15*
Age at enrollment	0.18	0.05	0.26**
Gender	-0.53	0.24	-0.18*
Placement at enrollment	0.22	0.09	0.19*
School reps. per team meeting	-0.08	0.21	-0.04
School contacts per month	-0.13	0.14	-0.10

Note: $R^2 = .156$***.
*$p < .05$. **$p < .01$. ***$p < .001$.

A series of independent samples t-tests were conducted to compare groups according to whether youth were placed in an out-of-school placement or in-school placement at disenrollment. Youth placed in in-school placements at disenrollment were younger, in a less restrictive placement at enrollment, and had more school representation at team meetings than youth in an out-of-school placement at disenrollment (see Table 2).

Table 2. Comparison of in-school and out-of-school placements at disenrollment by study variables (N = 165).

Variable	Outside of School		In School		*F*
	M	*SD*	*M*	*SD*	
Age	13.78	1.75	12.52	2.15	2.12**
Placement at enrollment	3.26	1.17	2.82	1.28	5.04*
School reps per team meeting	0.37	0.45	0.58	0.84	10.93*
School contacts per month	1.19	0.96	1.35	1.12	0.98
School involvement	1.56	1.30	1.92	1.81	4.20

*p < .05. **p < .01

Multiaxial Timelines. The two cases with high levels of school involvement differed from the low school involvement cases in that they were referred by the education system. Overall, when the two cases with high school involvement were compared to the two cases with low school involvement, the students with high involvement experienced more significant life events, received more school-based services, demonstrated more severe behavior problems, and experienced more changes in educational placement than students with low involvement.

Conclusions

The nature of children's behavior can impact school involvement and outcomes. Research has demonstrated that youth who exhibit externalizing behaviors can be particularly difficult to support in the classroom, while those who demonstrate internalizing behaviors at school may be perceived as not needing direct or immediate intervention. When we look at the four cases that were examined using the multi-axial life event timelines, we can see that the students with high levels of school involvement also demonstrated more severe externalizing behaviors, including explosiveness and violence toward others. They also received more services in school, such as a classroom aide. This is consistent with descriptions of youth with emotional and behavioral difficulties in the literature and may account for the higher levels of school involvement experienced by the two cases.

Trends in the data suggest that higher school involvement may be associated with placement in settings outside of school. Although it is only speculative at this point, the reason for this may be that schools are more involved in cases where the youth is experiencing the greatest difficulty functioning at school. Such youth may reach a point of peak school involvement before being placed in a different setting. In other words, the relationship between school involvement and educational placement may be curvilinear, with less restrictive educational placement occurring with moderate levels of school involvement. There are several possible reasons for the relationship between school involvement and educational placement. For

example, it may be that the nature of the school/educational involvement was negative or due to an increase in school difficulties.

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PREDICTING SUCCESS IN A SYSTEM OF CARE

Eric R. Wright, Ph.D., Harold E. Kooreman, M.A., & Jeffrey A. Anderson, Ph.D.

Introduction

While some research has suggested that service coordination is a generally effective approach to providing assistance to youth with serious emotional disorders and their families (e.g., Anderson et al., 2003), bringing together youth and families with such heterogeneous clinical needs and backgrounds presents numerous challenges to system of care functioning. The purpose of this report is to describe the influence of demographic, diagnostic, and clinical characteristics on the likelihood that youth enrolled in the Dawn Project are discharged having successfully met their treatment goals.

Methods

The data for this study come from the demographic and clinical information maintained in the Dawn Project's electronic charting system, The Clinical Manager (TCM). This analysis examined correlates of success by focusing on all young people who have been discharged from the Dawn Project since its inception in 1997 and who had complete baseline CAFAS data (n = 566). The data used in the analysis included demographic characteristics, the referral source, DSM-IV diagnosis information, and CAFAS scores. Using these data, evaluation personnel coded the demographic characteristics, the referral source, diagnoses, and the final program outcome disposition of participating youth.

Program Disposition. The outcome for each young person was obtained from TCM. The outcomes for the present analysis were grouped into four different categories: discharge due to meeting CFT treatment goals (MG); discharge at the request of a team member without team consensus (TM); discharge with team consensus that nothing further could be done (TC); and discharge for administrative reasons (e.g., young person ages out, runs away, moves out of the service area, etc; AR). For some analyses, the four categories were collapsed into two categories: discharge due to meeting CFT treatment goals and discharge for any other reason.

Analysis. Logistic regression and multinomial logistic regression analysis was used to examine whether any demographic, diagnostic, referral source or clinical functioning characteristics predicted final program disposition.

Results

In the initial analysis, logistic regression was used to determine whether any demographic or clinical variables predicted whether a young person's final disposition was due to having met his or her CFT goals or not. The results of the analysis indicated that two demographic and one clinical variable were associated with a young person's discharge disposition. Young people who

were Caucasian were more likely to leave the Dawn Project by meeting their treatment goals than were young people who were African-American or biracial. The total CAFAS score at enrollment also predicted outcome. Young people entering the Dawn Project with higher CAFAS scores were less likely to leave the Dawn Project by meeting CFT goals than were young people with lower enrollment CAFAS scores. Youth enrolled in the Dawn Project at younger ages were more likely to leave the Dawn Project by meeting their CFT goals than were older youth (see Table 2). The predicted probability of completing the Dawn Project by meeting team goals was computed for a range of ages. The results indicate that, controlling for all other variables, if a young person is enrolled in the Dawn Project at 7 years of age, they have an 83% chance of meeting their team goals. By the time a young person reaches 13 years of age, the age at which most young people enter the Dawn Project, the probability of leaving the Dawn Project by meeting CFT goals drops to 65%. If a young person is 17 years of age at enrollment, the probability of leaving the Dawn Project through meeting CFT goals drops to just below 50% (see Table 3).

Table 2. Logistic regression predicting final Dawn Project disposition.

	O.R.
Demographic Characteristics	
Race	0.67*
Gender	0.84
Age at Enrollment	0.85***
Referral Source[1]	
Child Welfare	1.19
Juvenile Justice	0.64
Education	0.57
Diagnostic Category	
Impulse-Related	2.49
Mood-Related	3.30
Enrollment CAFAS score	0.99***
$\chi 2 = 55.46$***	
Naglekerke $R^2 = .08$	

[1]Mental Health was the comparison category
*$p < .05$. ***$p < .001$.

Table 3. Predicted probability of completing team goals by age.

Age	Probability of Completing Team Goals
5	.87
7	.83
9	.78
11	.72
13	.65
15	.67
17	.49

Based on the results of the logistic regression, a multinomial logistic regression was completed in order to clarify the characteristics of the young people who left the Dawn Project for reasons other than meeting goals (see Table 4 for a demographic breakdown of disposition categories). For this analysis, the young people in the TM, TC, and AR groups were compared with the young people in the MG group. Additionally, the eight CAFAS subscale scores were used rather than the total score. When compared to young people in the MG group, young people in the TM group were more likely to have higher scores on the CAFAS Substance Abuse scale. Young people in the TC groups, when compared to those in the MG group, were more likely to be older when they were enrolled in the Dawn Project, have higher scores on the CAFAS Behavior Towards Others subscale, have higher scores on the CAFAS Substance Abuse subscale, and have lower scores on the CAFAS Self-Harm scale. Finally, when compared to young people in the MG group, those in the AR group were more likely to be African-American, more likely to be female, more likely to be older upon enrollment into the Dawn Project and more likely to have higher scores on the CAFAS Substance Abuse subscale (see table 5).

Table 4. Demographic composition of disposition categories

	Disposition Categories							
	Met Goals (*n* =360)		Team Member Closed (*n* = 70)		Team Consensus (*n* = 48)		Administrative Reason (n = 88)	
	N	*%*	*N*	*%*	*N*	*%*	*N*	*%*
Demographic characteristics								
African-American males	126	35.00	27	38.57	14	29.17	36	40.91
Caucasian males	121	33.61	25	35.71	17	35.42	15	17.01
African-American females	66	18.33	12	17.14	9	18.75	23	26.14
Caucasian females	47	13.06	6	8.57	8	16.67	14	15.91
Referral Source								
Child Welfare	181	50.28	21	30.00	14	29.17	33	37.50
Juvenile Justice	105	29.17	34	48.57	28	58.33	28	31.82
Education	54	15.00	14	20.00	4	8.33	22	25.00
Mental Health	20	5.56	1	1.43	2	4.17	5	5.68
Diagnostic category								
Impulse-Related	287	79.72	59	84.29	38	79.17	68	77.27
Mood-Related	68	18.89	9	12.86	7	14.58	18	20.45
Other	5	1.39	2	2.86	3	6.25	2	2.27
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Age at enrollment	12.66	2.56	13.21	1.79	13.83	1.69	13.57	2.40
CAFAS subscales								
School/Work	18.58	12.49	23.56	13.22	20.63	11.38	22.49	13.43
Home	18.33	11.71	21.29	10.78	21.49	11.48	21.19	11.14
Community	13.39	11.45	19.00	8.71	17.71	9.94	16.31	11.41
Behavior towards others	15.28	9.08	17.58	7.31	18.33	8.83	16.48	7.43
Moods/Emotions	13.78	9.27	14.00	8.06	14.38	8.48	13.86	8.36
Self-harm	3.58	7.63	4.14	8.60	1.46	4.61	2.72	6.38
Substance abuse	0.97	4.34	3.71	7.05	4.58	8.49	4.03	8.30
Thinking	3.36	6.72	3.71	6.63	2.71	6.10	3.75	7.00

Table 5. Multinomial logistic regression predicting disposition categories.

	Disposition Categories[1]		
	Team Member Closed	Team Consensus	Administrative Reason
	O.R.	*O.R.*	*O.R.*
Demographic Characteristics			
Race	1.33	0.87	2.18**
Gender	0.83	1.35	1.84*
Age at enrollment	1.09	1.26**	1.15*
Referral Source[2]			
Child Welfare	2.19	0.44	0.42
Juvenile Justice	3.72	1.43	0.48
Education	4.73	0.55	1.46
Diagnostic Categories[3]			
Impulse-related	0.53	0.24	0.48
Mood-related	0.32	0.16	0.39
CAFAS Subscales			
School/Work	1.01	0.99	1.01
Home	1.01	1.01	1.02
Community	1.03	0.99	1.01
Behavior Towards Others	1.00	1.05*	1.00
Moods/Emotions	0.99	1.00	0.98
Self-Harm	1.01	0.93*	0.97
Substance Abuse	1.07**	1.08***	1.08***
Thinking	1.01	0.98	1.01
$\chi 2$ = 124.19***			
Naglekerke R^2 = 0.11			

[1]Discharge by meeting team goals was the comparison category
[2]Mental Health was the comparison category
[3]Other disorders was the comparison category
*p < .05. **p < .01. ***p < .001.

Conclusions

Clear differences do exist between the young people who leave the Dawn Project by meeting their treatment goals and those who leave for other reasons. First and most important, younger children are more likely to successfully complete the CFTs' clinical goals. Indeed, the predicted probability of successful completion for a youth entering the Dawn Project at 7 years of age is 83%, but drops to 49% for a 17 year old, underlining the importance of early intervention. The second notable variable that stands out is substance abuse. Young people with substance abuse issues clearly have a harder time successfully meeting the goals developed by their CFT. Finally, having both substance abuse issues and higher levels of impulsive or dangerous behaviors that can harm others also negatively impacts a young person's probability of being able to meet their CFT goals. Together, these findings suggest that older children who engage in frequent substance abuse and delinquent behavior represent a group who are

particularly difficult to serve. While they are less likely to be successful in meeting their treatment goals, still nearly half of the older youth served are successful. It remains unclear how these rates of success compare with other programs that serve the same target population.

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RECIDIVISM AMONG DISENROLLED YOUTH[2]

Eric R. Wright, Ph.D., Harold E. Kooreman, M.A., Jeffrey A. Anderson, Ph.D.,
Lisa A. Russell, Ph.D., & Geoffrey Warner, Ph.D.

Introduction

The purpose of this report is to examine the likelihood that a youth who has been disenrolled from the Dawn Project will reenter the social and health service system after completing the project.

Methods

The data for these analyses were compiled by the Dawn Project staff and submitted to the evaluation team for coding and analysis. At the time of these analyses, a total of 145 clients had left the project since its inception (through January 26, 2000). The data consisted of qualitative descriptions of long-term outcomes that were subsequently matched, by our evaluation team, with other clinical and demographic data available through the Dawn Project's MIS system. This analysis focuses on the likelihood that a young person who completed Dawn (n = 100) would recidivate and return to the system either through the Department of Correction (DOC) or because a CHINS (Child in Need of Services) report was filed. The remaining 45 clients left prior to completing the project (i.e., they ran-away, got involved in the criminal justice system, or refused services). While some might view these individuals as having failed the Dawn Project, these young people also did not receive a complete intervention through Dawn Project and many factors extraneous to the project influenced their departure.

Results

Table 1 presents the demographic characteristics of all disenrolled Dawn Project clients (N = 145). The columns further differentiate among those who were disenrolled after and before completing the project. Minority male clients were significantly more likely than white male and female clients to have left the program prior to completing it. Premature disenrollment was also more likely to occur among clients who had been referred to Dawn Project by juvenile justice. Our results also indicate that clients who were older when they enrolled in Dawn Project were significantly more likely to drop out before finishing the project.

[2] This briefing was previously published as: Wright, E.R., Kooreman, H.E. Anderson, J.A., Russell, L.A., & Warner, G. (2000). Recidivism among youth who have been disenrolled from the Dawn Project. In E.R. Wright & J.A. Anderson (Eds.) *First Annual Dawn Project Study Evaluation Briefing.* Prepared for the Dawn Project Consortium, Choices, Inc. Indianapolis, Indiana.

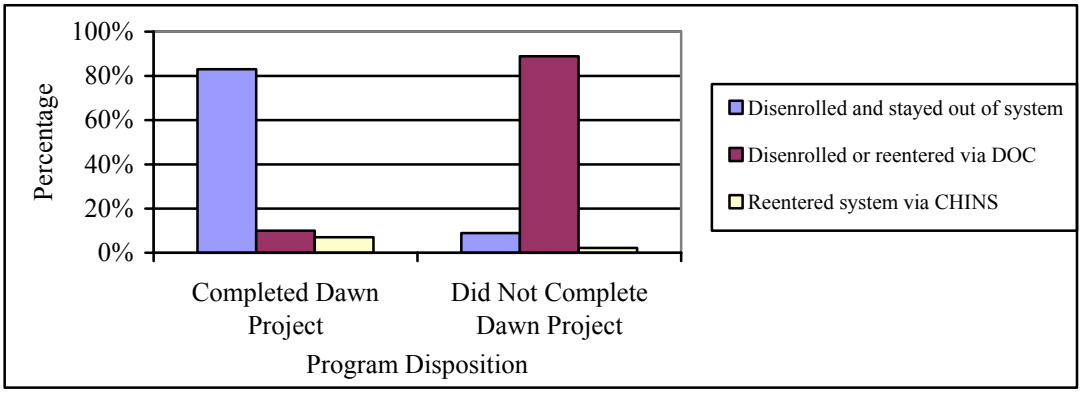
Table 1. Demographic characteristics and referral source of disenrolled clients by program completion status (N=145).

	Disenrolled Clients (n = 145)		Disenrolled Clients who Completed Dawn Project (n = 100)		Disenrolled Clients who Did not Complete Dawn Project (DOC or Runaway) (n = 45)		Completers vs. Non-Completers
	N	*%*	*N*	*%*	*N*	*%*	χ^2
Males	93	64.14	62	62.00	31	68.89	
Caucasian males	42	45.16	33	53.23	9	29.03	4.88*
Minority males	51	54.84	29	46.77	22	70.97	
Females	52	35.86	38	38.00	14	31.11	
Caucasian females	19	36.54	14	36.84	5	35.71	0.01
Minority females	33	63.46	24	63.16	9	64.29	
Referral Source							9.48***
Juvenile Justice	63	43.40	35	35.00	28	62.2	
Child Welfare	70	48.30	56	56.00	14	31.1	
Education	12	8.30	9	9.00	3	6.7	
	M	*SD*	*M*	*SD*	*M*	*SD*	*t*
Age at enrollment	13.23	2.11	12.9	2.4	13.9	1.2	2.80***

* $p < .05$. *** $p < .001$.

To understand the full effect of the project on the likelihood of returning to the system, we conducted a series of analyses. First, we compared those who completed the program with those who did not. Completing the program was associated with a significant drop in system-recidivism. Of the 100 completers, 83 (83%) were successful in staying out of the system after leaving the program. In contrast, of those who failed to complete the project (n = 45), only 4 (8.9%) managed to remain out of the system while 40 (88.9%) returned through the DOC and 1 (2.2%) because of a CHINS report. Thus, completing the project is associated with a statistically significant drop in the overall rates of recidivism.

Figure 1. Comparison of recidivism rates between youth who completed the Dawn Project and those who did not.



Because demographic and clinical differences could influence the likelihood of a client completing the project, we also used logistic regression analysis methods to examine the odds of a client returning to the system. This methodology allows us to compute the likelihood of recidivism while controlling statistically for clinical and demographic differences among the youth. For this analysis, we included a number of variables including age at enrollment, days since disenrollment, CAFAS enrollment scores, referral source, and Dawn Project staffs' risk factor assessments. The analyses indicated that none of these enrollment variables predicted the likelihood that a client would return to the system. Surprisingly, even having been referred to the project initially from the juvenile justice system did not predict recidivism after controlling for demographic and clinical differences. Indeed, there were only two statistically significant predictors of recidivism. A client who completed the program was approximately 78 times less like to recidivate than a young person who did not ($O.R. = 0.22$, $p < .01$). At the same time, being out of the Dawn Project longer was statistically associated with a lower likelihood of returning to the system ($O.R. = 1.00$, $p < .05$). This latter effect, however, should be interpreted with caution since only about half of the sample ($n = 74$) had been disenrolled for a period of six months or longer.

Conclusions

This preliminary analysis suggests that successful completion of the Dawn Project is associated with a significant reduction in the likelihood of returning to the system either through the DOC or because of a CHINS report. At the most general level, the results point to the importance of Dawn Project clients completing the full intervention. There are some limitations to our analysis. We did not compare patterns of recidivism to clients not enrolled in Dawn Project. Rather we compared Dawn Project completers and non-completers. It is possible that there are selection factors influencing who is referred to the Dawn Project.

CAREGIVER SATISFACTION WITH SERVICES

Eric R. Wright, Ph.D., Harold E. Kooreman, M.A., & Jeffrey A. Anderson, Ph.D.

Introduction

This brief report summarizes the level of satisfaction with services received among youth caregivers enrolled in the Dawn Project.

Methods

Interviewers ask youth and caregiver respondents eight questions related to their satisfaction with the Dawn Project. Questions require respondents to answer using a scale ranging from 'Very Satisfied' to 'Very Dissatisfied,' or simply to answer 'yes' or 'no'.

Data from each of these sets of questions were compiled and descriptively analyzed for this briefing. These results are based on 6-, 12-, 18-, and 24-month interviews that were conducted between May 2001 and June 2005. The caregiver and youth data are cross-sectional in nature; due to the evaluation protocol, the caregiver interviewed at each assessment point often varied and young people may not have completed an interview for each time period. Questions on satisfaction were not asked of caregivers or young people after their discharge from the Dawn Project.

Results

Caregiver Satisfaction. Caregiver ratings of satisfaction with Dawn Project services during the 24-month reporting period and the impact that these services had on their children were generally positive. Across all time periods, most respondents rated the services they had received as helpful (see Figure 1). At each evaluation interview, at least three-quarters of caregiver respondents said that overall, they were either satisfied or very satisfied with the services their child had received (see Figure 2). When asked how satisfied they had been with their child's progress over the last six months, at each time point, two thirds of caregiver respondents said they were at least satisfied with their child's progress (see Figure 3).

Most caregivers consistently rated the Dawn Project as being able to access culturally competent services. Eighty percent or more of respondents said they were at least satisfied with service providers' respect for their family's beliefs about mental health. Similarly, at each 6-month interview, most caregivers reported being satisfied or very satisfied with service providers' understanding of their family's traditions. Over each follow-up period, at least 75% of caregivers indicated being satisfied with the Dawn Project's ability to find services that acknowledged the positive aspects or strengths of their family's culture and traditions.

Figure 1. Caregiver report on whether services were helpful.

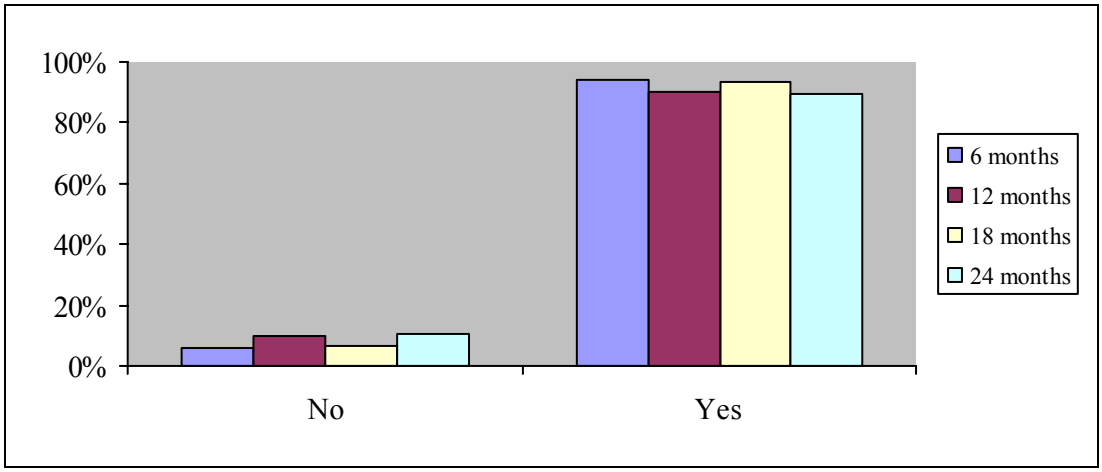


Figure 2. Overall caregiver satisfaction with services.

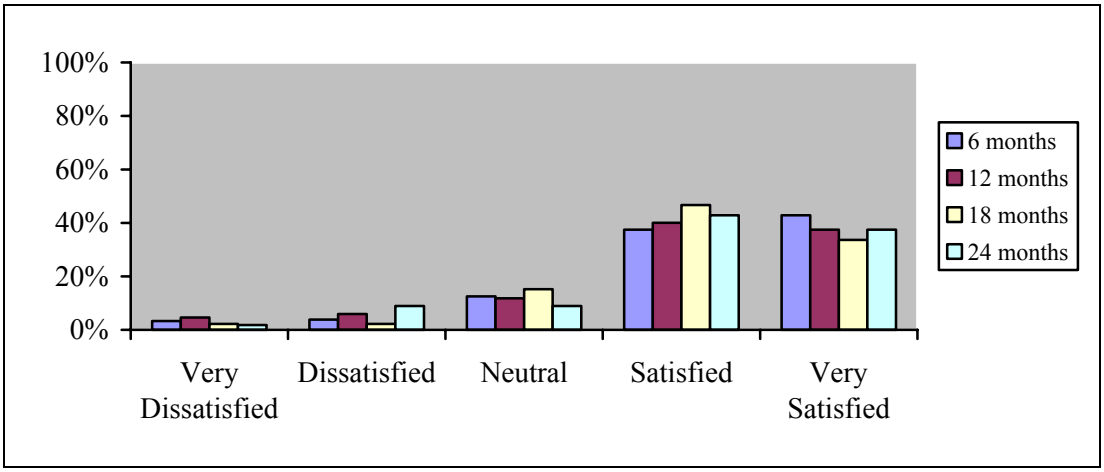
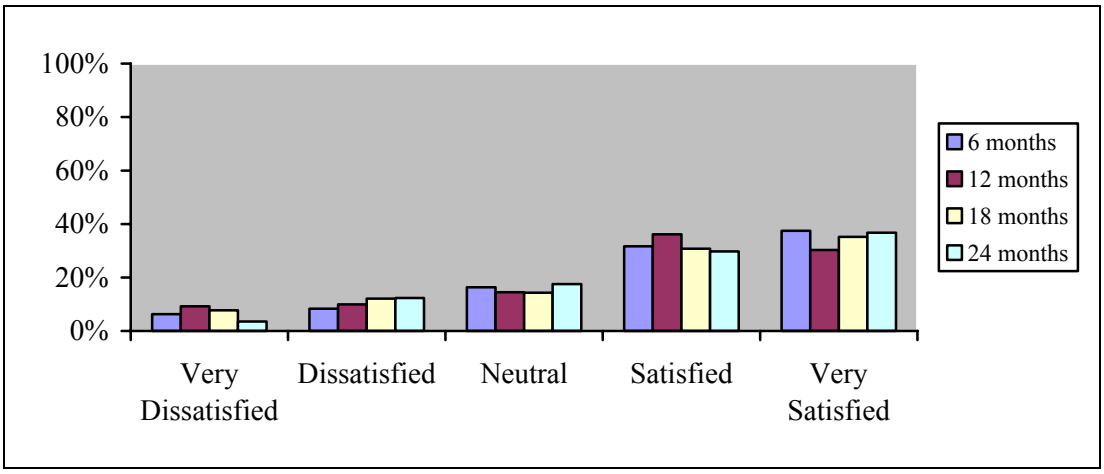


Figure 3. Overall caregiver satisfaction with child's progress.



Caregivers also reported a high level of involvement in the planning of services for their child. At the six-month interview, nearly 80% of caregivers were either satisfied or very satisfied with their involvement. During the additional follow up interviews, caregivers reported similar levels of satisfaction with their involvement in service planning. Caregiver ratings of meetings that had taken place during their first six months in the Dawn Project were also positive. Most caregivers indicated they were satisfied (33.5%) or very satisfied (48.2%) with the number of times they were asked to participate in meetings in which services for their child were discussed. During the additional three follow-up interviews, eighty-five percent or more of caregivers contacted continued to report being satisfied with their participation level during service planning meetings.

Youth Satisfaction. During each of the four follow-up visits, 85% or more of the young people interviewed reported that the services they had received from the Dawn Project in the prior six months had been helpful. Over the 6-, 12-, and 18-month assessments, at least two-thirds of youth respondents said they were satisfied or very satisfied with the services they had been receiving. Of the youth interviewed at 24 months, a somewhat smaller percentage (57.8%) reported being satisfied with the services they had received. Young people were generally positive in their self-ratings of improvement. When asked to consider their progress over the six months prior to the 6-, 12-, and 18-month interviews, at least three-quarters of young people indicated they at least felt satisfied with their progress. Of the youth who completed a 24-month interview, slightly fewer related that they were satisfied or very satisfied with their progress (63.6%).

As with their caregivers, the young people in the DPES rated the Dawn Project highly on cultural competence. During the first three follow-up interviews, over two-thirds of the young people contacted indicated satisfaction with service providers' respect for their family's beliefs about mental health. The percentage of young people satisfied with their service providers' level of respect at 24 months was somewhat smaller (58.1%). In all follow-up interviews, between 65.0% and 75.0% of young people interviewed said they were satisfied or very satisfied with their providers' abilities to find services that acknowledged the positive aspects or strengths of their family's culture and traditions.

Young people generally reported feeling involved in the service planning process. During the six-month interview, nearly 70% of respondents were either satisfied or very satisfied with their level of involvement in planning services. A similar level of satisfaction with involvement in service planning was reported at 12 and 18 months, with a somewhat smaller percentage of young people indicating satisfaction with their involvement by 24 months (57.8%). Over the 24-month evaluation period, 65% of the young people contacted stated they were satisfied or very satisfied with how often they were asked to participate in service planning meetings.

Conclusions

Two primary goals of the Dawn Project are to provide culturally competent services and to include caregivers and youth into the service planning process. Based on reports by both caregivers and youth, the Dawn Project appears to be succeeding in incorporating family members and young people into the team process. Additionally, young people have consistently

indicated that the Dawn Project is aware and respectful of cultural differences and works to obtain services in line with these differences. Overall, both caregivers and young people enrolled in the Dawn Project appear satisfied not only with the services they receive, but also with the impact these services are having on their family.

IMPACT OF THE DAWN PROJECT ON FAMILIES

Eric R. Wright, Ph.D. & Harold E. Kooreman, M.A.

Introduction

Families and family support are important influences in the development of children and youth. Young people with serious emotional or behavioral disorders are no exception. However, the behavior of these children and youth often poses serious challenges for their parents, other family members, or other legal caregivers. The purpose of this brief report is to describe changes over time in general family functioning, caregiver strain, and family resources.

Methods

As part of the national evaluation, caregiver respondents are asked to complete the general scale of the Family Assessment Device (FAD), the Caregiver Strain Questionnaire (CGSQ), and the Family Resource Scale (FRS) during each interview. Because the design of the national evaluation required that only the caregiver most knowledgeable about a child's behavior over the last six months be interviewed, responses on the three measures are not necessarily associated with the young person's biological family, but rather associated with the young person's family situation at the time of the interview. Family-related questionnaires were not asked of staff member respondents.

FAD. The FAD general scale is a set of 11 questions designed to measure interaction patterns in families that are both healthy and unhealthy. Some of the items included were: (healthy interactions) Individuals are accepted for what they are; we are able to make decisions about how to solve problems; we can express feelings to each other; (unhealthy) planning family activities is difficult because we misunderstand each other; we avoid discussing our fears and concerns; we don't get along well together. Caregivers respond to the statements using a rating scale of strongly disagree to strongly agree. The scores are totaled and the average is taken. Average FAD general scale scores can range from 1 to 4. In the original scoring format, lower scores are associated with more positive family functioning, while higher scores are associated with poorer functioning (Epstein, Baldwin & Bishop, 1983). For ease of interpretation, the scored data provided by the national evaluators, ORC Macro, is recoded so that low scores indicate poorer family functioning and higher scores better family functioning.

CGSQ. The CGSQ is a 21-item scale that assesses the impact on caregivers of caring for a child with emotional and behavioral problems. Caregivers respond to each item using a response set that ranges from not at all to very much a problem. Though the CGSQ yields four strain scores, only the Global Strain score is analyzed as it has been found to be the most reliable and valid measure of strain. Higher scores on the Global Strain score indicate higher levels of caregiver strain.

FRS. The FRS is a 30-item scale designed to assess the adequacy of a family's basic, financial, recreational, social, health, and other resources. Caregivers respond to each item using a scale ranging from 1 (not at all adequate) to 5 (almost always adequate). The FRS yields six subscale scores and one overall resource score. For this analysis, only the overall resource score was used. Higher overall resource scores indicate higher levels of overall resources.

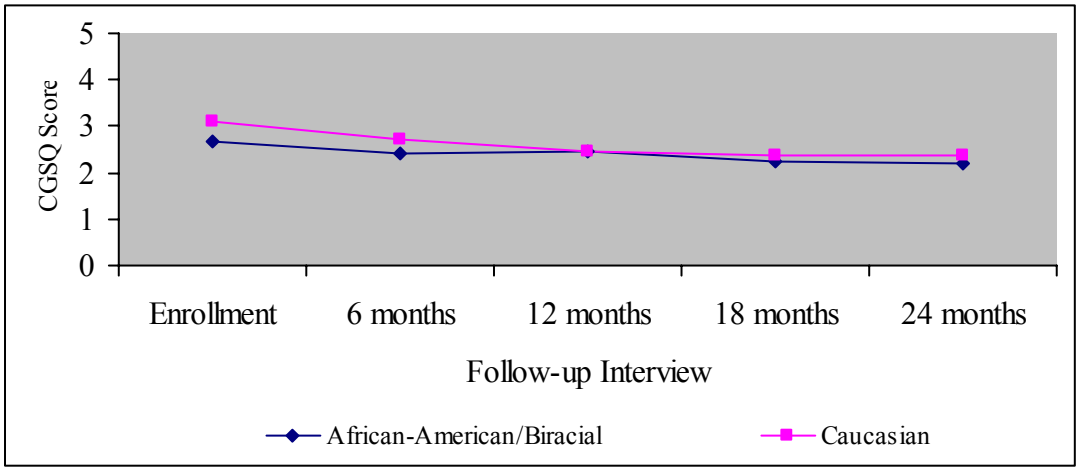
Analysis. Due to its ability to handle cases with missing data, longitudinal analyses of the three scales were conducted with HLM, allowing the use of all available caregiver data from enrollment to the 24-month follow-up period.

Results

FAD. When compared to caregivers of young people referred to the Dawn Project from mental health ($M = 2.87$; $SD = 0.52$), caregivers of young people referred by child welfare reported significantly better levels of family functioning at the time of enrollment into the DPES ($M = 3.14$; $SD = 0.49$). The longitudinal analysis of the FAD indicated that as a whole caregivers reported a slight, but statistically significant improvement in family functioning from enrollment to the 24-month follow up period, regardless of demographic of referral source characteristics.

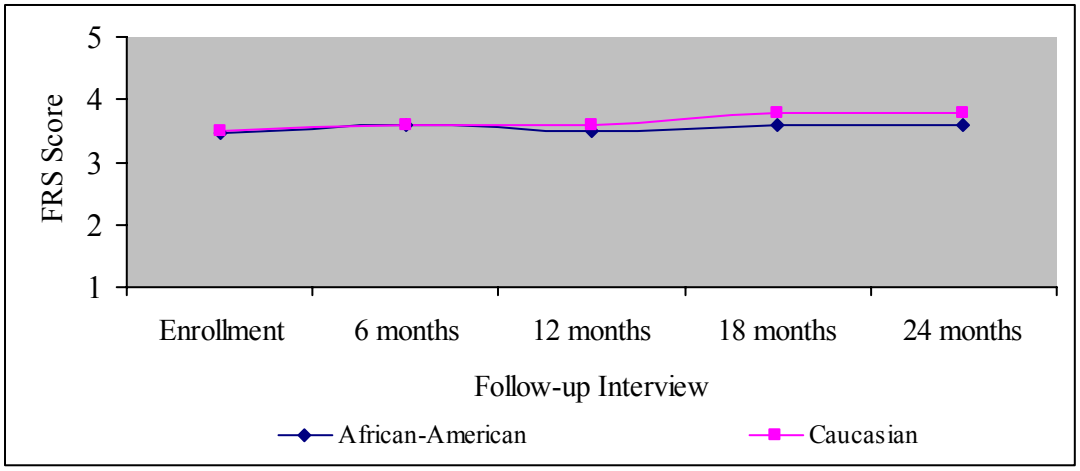
CGSQ. When compared to the caregivers of young people referred from mental health ($M = 3.44$; $SD = 0.91$), caregivers of young people from Child Welfare ($M = 2.46$; $SD = 0.91$), Juvenile Justice ($M = 3.07$; $SD = 1.01$), and Education ($M = 2.95$; $SD = .88$) all reported lower enrollment levels of overall caregiver strain. Caregivers of African-American or biracial young people reported significantly less strain at enrollment ($M = 2.69$; $SD = 0.93$) than did caregivers of Caucasian young people ($M = 3.12$; $SD = 1.03$). The longitudinal analysis of the CGSQ indicated that caregivers reported a statistically significant decrease in strain over the 24-month evaluation period. Additionally, caregivers of Caucasian young people reported a change in caregiver strain over time that dropped more sharply than did caregivers of African-American young people (see Figure 1).

Figure 1. CGSQ score over time by race.



FRS. When compared to families of young people referred from mental health (M = 3.30; SD = 0.63), families of young people referred from child welfare (M = 3.70; SD = 0.80) reported higher levels of overall resources at the time of enrollment into the DPES. The longitudinal analysis of the FRS indicated that over the 24-month evaluation period, caregivers reported a statistically significant increase in their overall resources. Finally, caregivers of Caucasian young people reported a change in overall resources that was higher than that reported by caregivers of African-American young people.

Figure 2. FRS score over time by race.



Impact of the Dawn Project on Caregiver Employment

Included within the satisfaction questionnaire are a series of questions that ask caregivers to rate the degree to which the Dawn Project has helped them improve their family's employment situation. These questions are asked of caregivers during the 6-, 12-, 18-, and 24-month interviews, unless the family has been discharged from the Dawn Project. As with the other caregiver-related measures, the data presented below are cross-sectional in nature as the caregivers interviewed for each youth could vary from interview to interview.

Of the caregivers interviewed at 6 months 63.3% indicated that either they or someone in their household was employed. The percentage of caregivers reporting that someone in the household worked outside the home increased slightly over the course of the evaluation (63.2%, 12 mo; 75.0%, 18 mo; 70.2%, 24 mo). During the first six months of their involvement with the Dawn Project, 65.7% of caregivers with an employed person in the household reported that the services their family had received helped to increase the employed person's ability to work at least a little bit. The percentage of caregivers reporting an increase in work ability remained approximately the same during the 12- and 18-month interviews, with a somewhat smaller percentage endorsing increased ability to work by 24 months (52.5%). Additionally, at each assessment period, between 37% and 43% of caregivers interviewed said the employed person in their household was able to earn at least a little more money because of the services their family was receiving. Receiving services was helpful to some caregivers in gaining additional job skills. Of the caregivers interviewed at 6 months, approximately 36% said services were at least a little

helpful by allowing the employed person to obtain more job-related skills. Over the evaluation period, the percentage of caregivers stating that services assisted the employed person in the household to gain additional job skills varied somewhat with a high of 47% at 18 months and a low of 27.5% at 24 months. At six months, 32.8% of caregivers felt the services their family had received helped at least a little in allowing the employed person to gain additional educational or vocational skills. Over time, the percentage of caregivers reporting that receiving services helped with gaining more educational or vocational skills changed very little. During the 6-month interview, 43.9% of caregivers indicated that because of services, the employed person in their household missed fewer days of work. At 12, 18, and 24 months, only slight differences were noted in the percentage of caregivers endorsing that the employed person in their household missed fewer days of work. At each six month assessment, over 60% of caregivers who reported missing fewer work days said they were able to work at least one additional day each week because of the services their child or family was receiving.

Conclusions

Caring for young people with severe emotional or behavioral disorders poses many challenges for caregivers and families. Because of the cross-sectional nature of the data, we are limited in the degree to which we can comment on these findings. However, the general trends suggesting that the supports the Dawn Project provides to caregivers appear to be helpful are encouraging. Indeed, based on our analyses, involvement in the Dawn Project appears to positively impact families by reducing caregiver strain, improving family interactions, and increasing their financial and other resources.

SERVICE UTILIZATION, EXPENDITURES, AND PROGRAM SUCCESS

Eric R. Wright, Ph.D., Harold E. Kooreman, M.A., & Jeffrey A. Anderson, Ph.D.

Introduction

A major challenge in the implementation of systems of care is creating mechanisms to pay for services that are provided across social services systems and by multiple agencies. Indeed, many have argued that the categorical funding structure in health and social services for youth and families is proving to be a major impediment to the integration of services. Because managed care often introduces pressures to reduce service expenditures and may negatively impact the quality and outcomes of care (Wholey & Burns 2000), we examined the relationship among patterns of service utilization, the expenditures of care, and the likelihood that youth and their families successfully met the clinical objectives that were established when they enrolled in the program.

Methods

Services and Expenditures Information. The information on the services received by each young person and the expenditure of those services was obtained from the Dawn Project's information management system, The Clinical Manager (TCM). The data reflect only those services that were paid for directly by the Dawn Project. Because the Dawn Project coordinates a large array of services, services were collapsed into eight categories: mental/behavioral health, physical health, crisis/respite, foster care placement, residential/community residential placement, mentoring services, discretionary funds, and service coordination (see Table 1). In order to aid analysis, a series of dummy variables was created to indicate whether a young person received each type of service. The comprehensiveness of a young person's service array was measured by summing the service indicator variables ($M = 4.75$, $SD = 1.58$). Finally, we computed the total amount spent on services for each youth. Because this variable was highly skewed, we also used the natural log of the actual expenditure in multivariate models.

Program Disposition. The outcome for each young person's enrollment was obtained from TCM. The outcomes for the present analysis were collapsed into two categories: discharged having met treatment goals (i.e., successful discharge from the program) and discharged for all other reasons (i.e., failure to make sufficient clinical progress, aging out).

Analysis. First, OLS regression was used to examine the impact of demographic characteristics, diagnosis, referral source, level of functioning at enrollment and services received on a young person's overall expenditures. Second, OLS regression was used to examine the impact of demographic characteristics, diagnosis, referral source, and level of functioning at enrollment on a young person's expenditures within each service category. Third, logistic regression was used to model the effect of individual-level, service, and expenditure factors on the likelihood of successfully completing the program. Fourth, a cluster analysis was conducted

on the service data to determine the most commonly used service patterns within the Dawn Project. Because CAFAS data were not available for all 788 young people, the OLS and logistic regressions were completed using the service data of those young people with CAFAS data at enrollment (n = 566).

Results

Analysis of Service Usage. In comparing service categories to one another, it was found that the most widely used service was the provision of discretionary funds. Nearly 98.0% of young people discharged from the Dawn Project had received discretionary dollars, which could be used to pay for nontraditional services. On average, each of the young people that received discretionary monies received approximately $2,605. Mental and behavioral health services were the second most commonly used services. Over 68.0% of young people discharged from the Dawn Project had received some form of mental health treatment with an average cost of $5,980 per young person. The third most frequently used service was mentoring. Approximately 62.0% of young people in the sample were provided with some type of mentoring. Mentoring services cost, on average, $11,927 per youth. Residential treatment services were used by just over 50.0% of the young people discharged from the Dawn Project. On average, $58,200 was spent for each youth who received residentially-based services. Less than 50.0% of the study sample received crisis/respite services, foster care services, or physical health services (see Table 1 for details).

Table 1. Descriptive statistics for service and expenditure variables.

Service Categories	Number who received service	Percent who received service	Amount spent on those who received service	
	N	*%*	*M*	*SD*
Mental/Behavioral health	542	68.78	$5,980	$8,232
Physical health	155	19.67	$274	$467
Crisis/respite	325	41.24	$5,199	$12,955
Foster care	269	34.14	$20,236	$21,563
Residential/Community residential	402	51.02	$58,200	$63,259
Mentoring	492	62.44	$11,927	$19,729
Discretionary funds	772	97.96	$2,605	$4,414

Cluster Analysis of Services. Hierarchical and K-means cluster analysis was completed on all available service data. The results of the cluster analysis indicated that a six, seven, or eight cluster solution would adequately describe the data. Based upon inspection of each solution, it was determined that the seven cluster solution was the best fit for the data. Table 2 provides the image and identity matrix for the seven cluster solution. Because service coordination is provided to all young people, the differences between the clusters are due to the use of the remaining service categories. As seen in Table 2, the groupings of services provided to young people range from low intensity service mix, such as providing only discretionary funds (Cluster 6), to a high intensity service mix such as Cluster 5, which includes all services except foster care.

Multinomial logistic regression was used to determine which variables predicted membership in each cluster. When compared to service cluster five, young people in service

cluster one were more likely to have a mood-related disorder. When compared to service cluster five, young people in service cluster two were more likely to be male and less likely to have been referred by child welfare, juvenile justice, or education rather than mental health. Young people in service cluster three were less likely to have been referred from child welfare, juvenile justice, or education rather than mental health. Young people in service cluster three were more likely to have a mood-related disorder when compared to those young people in service cluster five. When compared to young people in service cluster five, young people in service cluster four were younger at enrollment. Young people in cluster four were less likely than those in cluster five to have entered the Dawn Project through child welfare, juvenile justice, or education. Additionally, when compared to young people in cluster five, young people in service cluster four were more likely to have either an impulse-related disorder or a mood-related disorder. The young people placed in service cluster six, when compared with those in service cluster five were more likely to be African-American, less likely to have come from child welfare, juvenile justice, or education rather than mental health, and more likely to have a mood-related disorder. Finally, when compared to young people in cluster five, young people in cluster seven were more likely to be male, less likely to have been enrolled in the Dawn Project by child welfare, juvenile justice, or education, and more likely to have a mood-related disorder.

Table 2. Image and identity matrix for seven cluster solution.

	Cluster 1 (n = 105)	Cluster 2 (n = 144)	Cluster 3 (n = 99)	Cluster 4 (n = 100)	Cluster 5 (n = 120)	Cluster 6 (n = 139)	Cluster 7 (n = 81)
Mental/Behavioral health	1.00	.97	1.00	.95	.86	.00	.00
Physical health	.00	1.00	.00	.00	.00	.05	.05
Crisis/respite	.00	.64	.00	.84	1.00	.16	.09
Foster care	.30	.40	.04	.49	.70	.22	.16
Residential treatment	1.00	.65	.00	.00	1.00	.43	.28
Mentoring	.58	.85	.62	.78	.74	.00	1.00
Discretionary funds	1.00	1.00	.94	1.00	1.00	.95	.96

	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5	Cluster 6	Cluster 7
Mental/Behavioral health	1	1	1	1	1	0	0
Physical health	0	1	0	0	0	0	0
Crisis/respite	0	1	0	1	1	0	0
Foster care	0	0	0	0	1	0	0
Residential treatment	1	1	0	0	1	0	0
Mentoring	1	1	1	1	1	0	1
Discretionary funds	1	1	1	1	1	1	1
Expenditures per Cluster (in dollars)							
	59,893	81,051	16,431	40,008	118,040	24,219	27,728
SD	43,689	73,608	22,440	42,765	116,847	40,798	32,765

Service Expenditures. Four variables significantly predicted expenditures: length of enrollment, referral source, level of functioning at enrollment and service category received. Young people with longer lengths of stay in the Dawn Project had higher expenditures. When compared to young people referred from mental health, young people referred from education had higher expenditures. Young people with higher levels of impairment at enrollment had higher expenditures. Receiving mental or behavioral health services, foster care services,

residential treatment, mentoring services, or discretionary funds predicted higher expenditures (see Table 3).

Table 3. Predictors of expenditures in the Dawn Project.

Predictor	*b*	*t*
Race	-.08	-1.02
Gender	-.06	-0.62
Age at enrollment	.01	-0.35
Length of enrollment	.06	9.19***
Referral Source		
Child Welfare	.30	1.43
Juvenile Justice	.13	0.63
Education	.51	2.50*
Diagnostic Categories		
Impulse-Related disorders	-.06	-0.22
Mood-Related disorders	-.04	-0.14
Total CAFAS score at enrollment	.00	3.35***
Service Categories		
Mental/Behavioral health	.57	5.97***
Physical health	-.01	-0.10
Crisis/respite	.09	1.01
Foster care	.56	5.24***
Residential/Community residential	1.47	15.61***
Mentoring	.51	5.52***
Discretionary funds	1.78	6.09***

[1]Mental Health served as the comparison category
*$p \leq .05$. ***$p \leq .000$

When predicting expenditures within individual service categories, it was found that, with the exception of physical health, length of enrollment is predictive of increased expenditures. Additional demographic, referral source, or clinical characteristics predicted expenditures for physical health services, foster care services, residential treatment services, and mentoring services. When compared to young people referred from mental health, young people referred to the Dawn Project from juvenile justice or child welfare have lower physical health-related expenditures. In addition, younger children who receive foster care have higher expenditures than do older children who receive foster care. When compared to young people referred from mental health and who received foster care services, young people referred from child welfare, juvenile justice, or education who received foster care services had higher foster care-related expenditures. When compared to young people in the other diagnosis category who received foster care, young people who had a diagnosis in either the impulse-related category or mood-related category who received foster care had higher foster care-related expenditures. Being older at enrollment into the Dawn Project was predictive of higher residential treatment expenditures. When compared to young people from mental health, young people referred to the Dawn Project from either child welfare or juvenile justice had higher residential treatment expenditures. Young people who entered the Dawn Project with more significant levels of impairment had higher residential treatment-related expenditures. Finally, being male predicted

increased expenditures among the young people who received mentoring. A higher level of overall impairment in functioning at enrollment was also predictive of increased mentoring expenditures (see Table 4).

Outcome Analyses. In terms of outcomes, the majority of youth (63.6%) left the program having successfully achieved the CFT's treatment goals. Several variables predicted successful outcome. Young people who are younger at enrollment in the Dawn Project are more likely to leave the program having met their treatment goals. Youth who are Caucasian are more likely to leave the Dawn Project having met their CFT goals. When compared with mental health, young people entering the Dawn Project from child welfare are more likely to be discharged having met their treatment goals. Youth who have better functioning at enrollment are more likely to be discharged having met their CFT treatment goals. Crisis/respite services were associated with a lower likelihood of meeting treatment goals as well as receiving residential/community residential treatment. Additionally, the total expenditure of services is also statistically related to the likelihood of success in the program; however, the overall impact is small in terms of magnitude and varies slightly depending on whether we use the actual expenditures or the logged expenditures to estimate the effect of expenditures (see Table 5). In the model for actual expenditures, for example, the coefficient for total expenditures is negative but very small, suggesting that higher expenditures decrease slightly the likelihood of success associated with a lower likelihood of success. However, when we control for the extreme values at the high end of the distribution by using a logged transformation of expenditures, the coefficient for total expenditures in this model is significant but slightly positive. Because of the differences in the direction of the coefficients in these models, we tested for the possibility of a curvilinear effect of expenditures. These results suggest that overall there is a slight decrease in the probability of success for high expenditure youth (over $75,000). Regardless of expenditures, the probability of success never dropped below 60%. In short, the expenditures have only a minimal effect on the probability of success of individual youth this effect is limited to the high end of the distribution of expenditures.

A similar analysis of outcomes was completed substituting the individual service variables with the service cluster variables. Young people who were Caucasian were more likely to complete the Dawn Project by meeting their team's goals. Participants who were younger at the time of enrollment were more likely to leave the Dawn Project by meeting accomplishing their CFT goals. Young people with better levels of functioning at enrollment were more likely to be discharged from the Dawn Project after meeting their treatment goals. When compared to young people in cluster five, young people in cluster seven were more likely to leave the Dawn Project by completing their CFT goals. Finally, the same slight, but significant, curvilinear relationship was noted with the probability of leaving the Dawn Project by meeting team goals declining slightly as expenditures reach $75,000.

Table 4. Predictors of expenditures in the Dawn Project by service category

	Mental/ Behavioral Health		Physical Health		Crisis/Respite		Foster Care	
Predictor	*b*	t	*b*	t	*b*	t	*b*	t
Race	.12	0.82	-.26	-1.19	-.22	-1.08	.20	1.04
Gender	.07	0.42	-.17	-0.57	.25	1.03	-.02	-0.13
Age at enrollment	-.03	-0.98	.07	1.32	-.08	-1.77	-.11	-3.12**
Length of enrollment	.02	2.60**	.02	1.70	.05	4.34***	.06	5.81***
Referral Source[1]								
Child Welfare	.17	0.44	-1.28	-2.73**	.56	1.40	4.27	3.61***
Juvenile Justice	.07	0.17	-1.05	-2.34*	.71	1.74	4.13	3.48***
Education	.55	1.30	-.63	-1.30	.62	1.36	3.16	2.20*
Diagnostic Categories[2]								
Impulse-related	.96	1.47	-.48	-0.42	.45	0.51	3.50	2.93**
Mood-related	.73	1.08	-.84	-0.69	-.21	-0.23	3.72	3.09**
Total CAFAS at enrollment	.00	1.38	.00	1.30	-.00	-0.10	-.00	-0.55

	Residential		Mentoring		Discretionary Funds	
Predictor	*b*	*t*	*b*	*t*	*b*	*t*
Race	-.17	-1.38	.10	0.65	.09	0.78
Gender	-.01	-0.06	-.52	-2.62**	.02	0.18
Age at enrollment	.06	2.13*	-.01	-0.21	-.03	-1.53
Length of enrollment	.05	7.87***	.07	6.64***	.08	11.39***
Referral Source[1]						
Child Welfare	1.15	4.30***	-.71	-1.82	-.47	-1.68
Juvenile Justice	.85	3.12**	-.56	-1.43	-.16	-0.56
Education	--	--	.75	1.88	-.07	-0.24
Diagnostic Categories[2]						
Impulse-related disorders	.49	.45	-.38	-0.45	.08	0.17
Mood-related disorders	.37	.47	-.59	-0.68	.15	0.33
Total CAFAS at enrollment	.01	.001***	.01	4.28***	-.00	-0.01

[1]Mental Health served as the comparison category
[2]Other Disorders served as the comparison category
*$p \leq .05$. **$p \leq .01$. ***$p \leq .001$

Table 5. Predictors of successful completion of the Dawn Project.

	Raw Total Expenditure	Log Total Expenditure
Predictors	*O.R.*	*O.R.*
Race	0.61*	0.61*
Gender	0.91	0.92
Age at enrollment	0.87**	0.86***
Length of enrollment	1.11***	1.10***
Referral Source[1]		
Child Welfare	2.86*	2.85*
Juvenile Justice	1.19	1.21
Education	0.67	0.61
Diagnostic Categories[2]		
Impulse-related	2.33	2.43
Mood-related	2.64	2.71
CAFAS score at enrollment	0.99**	0.99**
Service Categories		
Mental/Behavioral health	0.86	0.75
Physical health	0.64	0.63
Crisis/respite	0.59*	0.57*
Foster care	0.68	0.62
Residential/Community residential	0.49**	0.36**
Mentoring	0.76	0.66
Discretionary funds	2.67	1.37
Total Expenditures	1.00*	3.66*
Sq. of Total Expenditures	1.00	0.93*
$\chi 2$ = 105.90***		
Nagelkerke R^2 = 0.14		

[1]Mental Health served as the comparison category
[2]Other Disorders served as the comparison category
*$p \leq .05$. **$p \leq .01$. ***$p \leq .001$.

Conclusions

In conclusion, our findings suggest that a managed care approach can be used effectively without compromising clinical care. As in most systems of care, residential care is the most expensive form of care, and, perhaps more importantly, it is associated with a somewhat lower probability of clinical success. However, within the Dawn Project, there is considerable heterogeneity in the array of services youth receive indicating that the needs of the individual youth are largely dictating what services are provided. In this regard, we believe that managed care is not an impediment to achieving the individualized treatment approach emphasized in the system of care philosophy (Stroul & Friedman, 1996).

Our finding that the level of expenditure is less important than the type of care in predicting success is especially intriguing. However, we believe this preliminary finding must be interpreted with caution given the complex nature of the data. Indeed, our analyses do not yield a clear picture as to the appropriate amount to spend on a youth to achieve a positive outcome. Rather, we believe our findings suggest that CFTs take great care in recommending services that are appropriate for a particular client's needs and, as a result, the money is more effectively tailored to the individual needs of the youth. More important, coupling the coordination of services and the authority to pay for services insures a more targeted delivery of service dollars focused where they are needed. In the coming months, as we continue to analyze these data, we hope to apply more sophisticated methodologies to better understand the link between expenditures and program outcomes. Nevertheless, we believe these preliminary data underline the potential value of combining principles of managed care with the system of care philosophy.

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THE STRUCTURE OF SERVICE COORDINATION TEAMS AND PROGRAM OUTCOMES

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Introduction

This report describes the team composition characteristics of a sample of youth in the Dawn Project and examines the impact of the makeup of these teams (i.e., the existence or absence of particular roles) on client outcomes.

Methods

Subjects in this analysis included young people who had been eligible to participate in the evaluation and who had been discharged from the Dawn Project. The final program disposition of each youth was identified as either (a) 'discharge due to having met initial treatment goals' or (b) 'all other discharge reasons.'

The participating members on each service coordination team were obtained from team meeting minutes available in the electronic chart. Research assistants read all available team meeting minutes for each young person and recorded the name, gender, role on the team, and agency affiliation of each unique person who attended any team meeting. This process identified fifteen (15) unique role categories: mother (including adoptive or step-mother), father (including adoptive or step-father), the youth, grandparent, other family member, non-kin community support, Dawn Project service coordinator, child welfare staff member, juvenile justice staff member, education staff member, community-based mental health provider, residential treatment provider, mentoring agency staff member, foster care agency staff member, and legal representative.

The severity of a young person's behavioral and emotional symptoms was assessed using the Total Problems Scale of the Child Behavior Checklist (CBCL; Achenbach, 1991).

Results

Cluster Analysis. The results of the hierarchical cluster analysis indicated that a four, five, or six cluster solution would be appropriate. Follow-up K-means cluster analyses (Hair, Anderson, Tatham, & Black, 1995) were performed specifying four, five, or six cluster solutions. After reviewing the results of each analysis, it was determined that the five cluster solution best described the available data. Table 1 lists the image and identity matrices for the five cluster solution. Table 2 describes the various demographic characteristics of young people in each of the five clusters. Figure 1 graphically describes the team makeup for each of the five clusters.

Cluster one (C1) can be described as the child welfare cluster as over 96% of the young people in this group were referred from this system. Cluster one had the highest rate (85.5%) of successful outcomes. Additionally, this cluster most frequently contained a legal representative and foster care agency personnel. Conversely, C1 teams were less likely to include a father or a juvenile justice representative than other clusters.

Cluster two (C2) can be characterized as the intensive needs juvenile justice cluster, with 63% of the youth referred by this system. More than half of the youth on the teams in C2 (57.4%) had successful outcomes. C2 teams had the most heterogeneous membership with fathers, other family members, a non-family support person, and representatives from juvenile justice, mental health, education, and residential treatment all being more likely to appear on teams in this cluster than any other. Mentors and educational personnel also were highly represented on these teams.

Cluster three (C3) was even more strongly associated with the juvenile justice system than C2, with 83% of the youth referred from this system. C3 teams also had the lowest rate (50%) of successful outcomes, despite primarily serving young people who require less intensive services than those in C2. The youth in this cluster were older, on average, than youth in any of the other clusters. Teams in this cluster were more likely than any other cluster to include the youth's mother (97.1%) and were the least likely to include grandparents, non-family supports, child welfare representatives, residential treatment representatives, foster care, or mentor staff.

Cluster four (C4) is the only cluster not clearly associated with a single referral source; about half of the youth were referred by juvenile justice and 41% were referred by child welfare. Successful outcomes were achieved by 59.4% of the teams in C4. A unique feature of this cluster was the low percentage of mothers (3%) and fathers (15.6%) participating on the treatment teams. These teams also were the least likely to include education representatives, mentors, and mental health team members. Conversely, these teams were highly likely to include grandparents and other non-parent family members.

Cluster five (C5) could be considered the education cluster, with more than half the youth referred from this system; additionally, a relatively high number of youth in this cluster were referred by mental health (23%). Over sixty percent (63.3%) of young people in C5 teams achieved successful outcomes. Youth in this cluster were the youngest and the most likely to be male (85%) of any cluster. These teams were the most likely to contain a mentor, and were also highly likely to include the youth (93.3%), mothers (93.3%), and fathers (40.0%). On the other hand, Juvenile Justice representation was least likely on C5 teams.

Logistic regression. We also examined the relationship between youth characteristics, team structures, and successful program outcomes (see Table 3). Demographic variables and diagnostic categories did not demonstrate any association with discharge outcome. However, youth with more severe problems upon admission to the program (as measured by the CBCL Total Problem score) were slightly less likely to be successful in meeting the CFT's treatment goals (OR=0.97; $p < .05$). Likewise, youth referred by juvenile justice were 20% less likely to have successful outcomes than youth referred by mental health (OR=0.20; $p < .05$). Among team

structure clusters, youth in C1 were almost 5 times more likely to have successful outcomes than youth in the comparison category, C5 (OR=4.78; $p < .05$; see Table 3).

Conclusions

Our results indicate that there are five common team structures in the Dawn Project that, to a great extent, correspond with the original agencies that referred the young people to the program. While the majority of youth served in the Dawn Project meet their pre-established treatment goals, the rates of success varied across the clusters. C1 was clearly the most successful. While C1 teams primarily represented children referred from child welfare, the measure for the team structure effect remained significant even after controlling for referral source. This would suggest that something about this team structure might be unique over and above representing the most common structure for youth referred by child welfare. At the same time, C1 also stands out from the other clusters as being in the middle in terms of both size and composition. We believe this is significant because C2 and C3 represent opposite extremes in terms of team size and complexity (i.e., larger, more complex and smaller, and less complex, respectively), while also having the lowest rates of successful discharge. Taken together, these preliminary analyses suggest that the relationship between team structure and program outcome may be curvilinear with teams of moderate size and complexity being those most likely to yield more consistently positive outcomes. While more research is needed to develop a comprehensive typology of teams, the findings from this study indicate that this process may be empirically feasible and potentially valuable for planning service coordination programs.

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Table 1. Image and identity matrices for five cluster solution.

	Mother	Father	Grand Parent	Other Family	Youth	Non-Kin Supports	Dawn Project Staff	Juvenile Justice Staff	Education Staff	Child Welfare Staff	Community-Based Mental Health Staff	Residential-Based Mental Health Staff	Mentoring Staff	Foster Care Staff	Legal Representatives
Child Welfare cluster	.70	.23	.19	.46	.82	.27	1.00	.20	.25	1.00	.78	.39	.28	.61	.51
Intensive Juvenile Justice cluster	.74	.52	.41	.80	.98	.52	1.00	1.00	.65	.24	.98	.59	.81	.46	.06
Standard Juvenile Justice cluster - Mother head of household	.97	.31	.03	.27	.91	.11	1.00	.94	.13	.06	.76	.33	.21	.11	.00
Standard Juvenile Justice cluster - Other family member head of household	.03	.16	.72	.69	.84	.13	1.00	.72	.09	.41	.66	.41	.06	.16	.16
Education cluster	.93	.40	.13	.27	.93	.25	1.00	.13	.95	.13	.92	.33	.82	.02	.02
Child Welfare cluster	1	0	0	0	1	0	1	0	0	1	1	0	0	1	1
Intensive Juvenile Justice	1	1	0	1	1	1	1	1	1	0	1	1	1	0	0
Standard Juvenile Justice cluster - Mother head of household	1	0	0	0	1	0	1	1	0	0	1	0	0	0	0
Standard Juvenile Justice Cluster - Other family member head of household	0	0	1	1	1	0	1	1	0	0	1	0	0	0	0
Education cluster	1	0	0	0	1	0	1	0	1	0	1	0	1	0	0

Table 2. Demographic makeup within clusters.

	Cluster 1 (N = 83)		Cluster 2 (N = 54)		Cluster 3 (N = 70)		Cluster 4 (N = 32)		Cluster 5 (N = 60)		
Variable	*N*	*%*	*N*	*%*	*N*	*%*	*N*	*%*	*N*	*%*	*χ2*
Outcome											24.17***
Met goals	71	85.54	31	57.41	35	50.00	19	59.38	38	63.33	
Did not meet goals	12	14.46	23	42.59	35	50.00	13	40.63	22	36.67	
Race											2.74
White	35	42.17	20	37.04	34	48.57	11	34.38	27	45.00	
Non-white	48	57.83	34	62.96	36	51.43	21	65.63	33	55.00	
Gender											11.36*
Male	51	61.45	38	70.37	51	72.86	19	59.38	51	85.00	
Female	32	38.55	16	29.63	19	27.14	13	40.63	9	15.00	
Referral Source											
Child Welfare	80	96.39	7	12.96	2	2.86	13	40.63	8	13.33	189.01***
Juvenile Justice	3	3.61	34	62.96	58	82.86	16	50.00	7	11.67	133.20***
Education	0	0.00	9	16.67	3	4.29	0	0.00	31	51.67	93.08***
Mental Health	0	0.00	4	7.41	7	10.00	3	9.38	14	23.33	22.64***
Team Members											
Mom	58	69.88	40	74.07	68	97.14	1	3.13	56	93.33	117.09***
Dad	19	22.89	28	51.85	22	31.43	5	15.63	24	40.00	18.35***
Youth	68	81.93	53	98.15	64	91.43	27	84.38	56	93.33	11.60*
Grandparent	16	19.28	22	40.74	2	2.86	23	71.88	8	13.33	70.93***
Other Family	38	45.78	43	79.63	19	27.14	22	68.75	16	26.67	50.28***
Dawn Staff	83	100.00	54	100.00	70	100.00	32	100.00	60	100.00	--
Nonkin Supports	22	26.51	28	51.85	8	11.43	4	12.50	15	25.00	29.73***
Juvenile Justice	17	20.48	54	100.00	66	94.29	23	71.88	8	13.33	174.32***
Education	21	25.30	35	64.81	9	12.86	3	9.38	57	95.00	128.78***
Child Welfare	83	100.00	13	24.07	4	5.71	13	40.63	8	13.33	181.56***
Mental Health	65	78.31	53	98.15	53	75.71	21	65.63	55	91.67	22.31***
Residential Tx	32	38.55	32	59.26	23	32.86	13	40.63	20	33.33	11.01*
Mentor Staff	23	27.71	44	81.48	15	21.43	2	6.25	49	81.67	106.99***
Foster Care Staff	51	61.45	25	46.30	8	11.43	5	15.63	1	1.67	83.33***
Legal Reps.	42	50.60	3	5.56	0	0.00	5	15.63	1	1.67	95.55***
Clinical Functioning											
CBCL	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*t*
Internalizing	61.58	12.57	64.19	10.70	64.58	11.60	62.55	13.34	66.42	11.46	1.26*
Externalizing	67.77	13.08	73.51	10.19	72.38	10.96	72.32	12.63	69.90	9.35	2.18
Age at enrollment	12.46	2.98	12.72	2.11	13.47	2.11	13.69	(2.14)	12.08	(3.16)	3.59**

*$p < .05$. **$p < .01$. ***$p < .001$.

THE PRESENCE OF KEY ROLES ON SERVICE COORDINATION TEAMS AND OUTCOMES

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Introduction

The purpose of this report is to describe the composition of service coordination teams (i.e., the roles of the individuals on the team) and the impact of service coordination team composition on final program disposition.

Methods

This analysis examined correlates of success by focusing on 230 young people for whom child and family team (CFT) meeting, program outcome, and clinical information were available. Using these data, evaluation personnel coded the demographic characteristics, referral source, final program disposition, and the CFT composition of participating youth. The final program disposition of each youth was identified as either (a) 'discharge due to having met initial treatment goals' or (b) 'all other discharge reasons.' The roles of participating members for each CFT were obtained by reviewing minutes for each meeting. Research assistants read all available CFT meeting minutes and recorded the name, gender, and role of each person attending the CFT meeting, as well as the agency affiliation of each unique person who attended each meeting. The severity of a young person's behavioral and emotional symptoms was assessed by using the Total Problems Scale of the Child Behavior Checklist (CBCL; Achenbach, 1991).

Analyses. Logistic regression analysis was used to examine whether demographic characteristics, severity of psychiatric problems, or team member presence, predicted successful or unsuccessful program disposition. Team member presence was defined in three different ways: (1) using dummy variables to indicate the presence or absence on the team of each role; (2) using the total number of individuals on the team who occupied each role; and (3) the natural log of the average participation on the team for each role.

Results

Presence or Absence of Roles. Logistic regression modeling suggested that successful program completion was predicted by having fewer behavioral symptoms at program entry (*O.R.* = 0.96, $p < .05$) and having CFT member participation in specific roles (see Table 1). More specifically, youth who had someone in the father role on the team were over twice as likely (*O.R.* = 2.26, $p < .05$) to have successful program completion. Similarly, youth were two times more likely (*O.R.* = 2.38, $p < .05$) to successfully complete the Dawn Project if they had educational or school staff members on their team. In contrast, youth whose team did *not* include mentors or juvenile justice representatives were three times more likely to have successful

program completion (*O.R.*= 0.35, $p < .05$; *O.R.* = 0.36, $p < .01$, respectively). Demographic variables were not significant predictors in this model. However, young people entering the Dawn Project from the educational system were almost two times more likely to have an unsuccessful program outcome than youth referred from mental health. Just over 19% of the variance in program outcome was predicted by this model.

Table 1. Logistic regression predicting outcome in the Dawn Project by role variables.

	Presence of Role on Team	Number of People who Held Role	Average Participation Rate of Role
	O.R.	*O.R.*	*O.R.*
Youth Demographics			
Race	1.35	1.04	1.34
Gender	1.04	1.13	1.05
Age at enrollment	0.93	0.86	0.93
Diagnostic Group[1]			
Disruptive Disorders	0.20	0.22	0.23
Mood/Anxiety Disorders	0.13	0.25	0.16
CBCL Total Problems	0.96*	0.96*	0.96*
Referral Source[2]			
Child Welfare	0.52	0.40	0.70
Juvenile Justice	0.27	0.24*	0.33
Education	0.19*	0.16*	0.20*
Team Member			
Mother	0.44	0.56	0.85
Father	2.26*	1.94	1.19
Grandparent	0.68	0.72	1.24
Other family	1.05	1.23	0.91
Youth	2.38	2.71	1.04
Non-kin supports	1.93	1.45	1.09
Juvenile Justice representatives	0.35*	0.79	0.76*
Education staff	2.38*	1.22*	1.29*
Child Welfare representatives	1.06	1.94	0.97
Community Mental Health providers	1.10	0.87	0.96
Residential Treatment staff	0.60	1.00	0.83*
Mentoring Services staff	0.36*	0.98	0.81*
Foster Care Service providers	1.37	0.96	1.17
Legal representatives	1.19	0.97	1.04

[1]Other diagnoses is the comparison category
[2]Mental Health is the comparison category
*$p \leq .05$.

Number of Individuals in Each Role. When the number of individuals in each role on the team was used as a predictor in the logistic regression model, program outcome was predicted by referral source, behavioral problems, and the presence of educational representatives on the CFT (see Table 1). Specifically, successful program outcomes were more likely to occur in cases

referred from juvenile justice (*O.R.* = 0.24, $p < .05$) or the educational system (*O.R.* = 0.16; $p < .05$) than cases referred from mental health. Additionally, successful program outcomes were predicted by having fewer behavioral symptoms at enrollment (*O.R.* = 0.96, $p < .05$) and having a higher number of educational representatives on the young person's CFT (*O.R.* = 1.22, $p < .05$).

Natural Log of Participation. The final model used the natural log of the average participation rate for each role. The natural log was used in this instance to correct for the skewed distribution in participation rates. When compared with young people referred to the Dawn Project from child welfare, young people enrolled in the Dawn Project through the educational system were two times less likely to achieve successful program outcomes (*O.R.* = .20, $p < .05$). As observed in the other regression models, young people with lower rates of psychological problems were more likely to achieve successful outcomes (*O.R.* = 0.96, $p < .05$). Finally, a successful program outcome was predicted by higher rates of participation from educational representatives (*O.R.* = 1.29, $p < .05$) and lower participation rates by representatives from juvenile justice, residential treatment, and mentoring services (*O.R.* = .76, $p < .05$; *O.R.* = .83, $p = .05$; *O.R.* = .81; $p < .05$, respectively).

Conclusions

In a model containing demographic characteristics, behavioral symptoms at enrollment, and CFT member roles, achieving a successful program outcome appears to be predicted primarily by the presence of father-type figures and the absence of Juvenile Justice and mentor staff. Youth who had fewer behavioral symptoms at program enrollment were slightly more likely to complete the program successfully. The precise nature and mechanism of the relationship between program outcome and the various team roles is unclear from this analysis and the available data. However, these results do indicate that interventions targeting the actual composition of CFTs may ultimately impact program success. Further study is warranted to better understand the specific contributions of various team members, the conditions under which each role is most effective at impacting successful program outcomes, and the impact of inter-role interactions on program outcome. Future investigations should account for variations in the level of participation for each team member (e.g., intensity and consistency over time) and control for the possibility that some team roles may not be applicable across youth in the sample (e.g., foster care staff could be team members only if youths are in the foster care system).

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IMPACT OF THE DAWN PROJECT ON THE MARION COUNTY CHILDREN'S SOCIAL SERVICES SYSTEM[3]

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Introduction

Conceptual and organizational reforms in service provision within systems of care have created additional complexities that make it difficult to understand the impact that approaches such as the Dawn Project are having on their communities. The purpose of this study is to understand how key stakeholders in the children's services arena in Marion County perceived the impact that the establishment of the Dawn Project had on the social services community over time.

Methods

Data for this study were collected primarily through semi-structured interviews with stakeholders, including system and agency leaders and parents who were involved in the children's social services system at the inception of the Dawn Project through the first five years of its existence (i.e., those best able to comment on changes to the children's social services arena). A grounded theory approach (Glaser & Strauss, 1967) was used to develop a cumulative understanding of stakeholder perceptions. Analytic induction and the constant comparison method (Krathwohl, 1998) were used in an iterative process that continued until all discrepancies were resolved and no additional information appeared to be forthcoming (Miles & Huberman, 1994).

Participants. The research team generated a list of names of potential interviewees from a document search of the Dawn Project. The most important criterion was knowledge and involvement in the children's social services arena at the inception of the Dawn Project through the time of the study. Through several iterations, this list was examined for completeness by the Dawn Project Consortium, and personnel from the Dawn Project and Choices, Inc. Potential interviewees were sent a letter of invitation. All but one of those invited were interviewed (this person provided a substitute). Ultimately, 20 informants participated in this study.

Interviews were coded independently using ATLAS.ti software (Scolari, 1997). Inter-rater reliability checks were conducted throughout the coding process, and ranged from .78 in early comparisons of individual transcripts to .94 in later comparisons. Coding differences were resolved through discussion. In addition, an outside reading of coded transcripts by an

[3] An expanded version of this report is forthcoming in: Anderson, J.A., Meyer, R.M., Sullivan, M.P., & Wright, E.R. (in press). Impact of a system of care on a community's children's social services system. *Journal of Child and Family Studies.*

experienced researcher provided a check of the coding scheme and an opportunity to fine-tune further coding.

Results

On the whole, the majority of the data could be characterized as being related to positive impact of the Dawn Project, with secondary foci on negative perceptions of impact, followed by a small, but noticeable theme we titled "ambivalent themes." Although representative quotes from the respondents are included throughout the following findings section, the reader is directed to the full report of this study, which includes much more detail.[1]

Positive Impact at the Community Level. Study findings that relate to positive community level impact fell into the following groups: increased collaboration and service coordination, importance of family involvement, loosening fiscal constraints, enhancing strengths approaches, and ecological responses. Although there is some overlap among these categories, this framework provides a way to understand how the Dawn Project has impacted the community.

Increased collaboration and service coordination. The clearest theme to emerge from the data was the increase in service coordination and collaboration that has occurred among and across providers and systems in Marion County. Primarily, according to respondents, there has been increased recognition among stakeholders that the children served by the Dawn Project tend to be involved in many different systems, thus making service coordination a useful approach. One respondent put it this way, "…more and more there is the understanding that these kids just touch so many different systems." In fact, the overall impact that the Dawn Project has had on collaboration in the children's social services arena in Marion County is difficult to overemphasize. In the words of another respondent, "this was one of the first collaborative projects that brought together people from so many different departments and systems."

Importance of family involvement. After collaboration and service coordination, the next clearest theme to emerge from the data was the importance of involving families at all levels of service delivery. By viewing the family as a resource in the treatment program, and asking families what they need rather than telling them what services they will receive, the Dawn Project is helping the community become aware of the importance of building on family strengths. An interrelated theme focused on the role the Dawn Project has had in the development of the Families Reaching for Rainbows advocacy group, a chapter of the Federation of Families that provides support to families through a network of parents and caregivers (see Families Reaching for Rainbows, 2005). Respondents reported that "Rainbows" has provided a safe setting for parents and caregivers to share their experiences, provide input to the various systems, and understand that they are not alone.

Loosening fiscal constraints. At the County level, respondents report that traditional power structures have been challenged because of the creation of the Dawn Project. Some of the financial barriers have been "loosened" and there is more talk about wraparound and the use of "flex" funds. This often involves nontraditional supports such as purchasing equipment so someone can take a child fishing. Many respondents also discussed how the use of costly

residential services has been reduced and in some cases, the nature of residential treatment is changing.

Enhancing strengths approaches. There is broad consensus that the Dawn Project has had an overall impact in the adoption, use, and proliferation of strengths-based approaches. There is a sense that this philosophy is not just recommended, but is also well modeled by Dawn Project personnel.

Ecological (holistic) responses. The perception also exists that the Dawn Project has pushed the systems to move beyond just treating children to also working with their environments. Likewise, respondents mentioned the importance of the multi-system treatment plans that are used to ensure that all of the domains of a child's life are addressed.

Challenges to Implementation. Of course, not all the findings were positive, and several negative themes also emerged from the study. Social service agencies are notoriously under-funded and it is expected that a certain level of resentment would exist toward a program that does not appear to be operating under the same constraints. The following sections on 'elitism' and 'resistance' provide some insight into that response. There also appears to be a real struggle between conventional and unconventional approaches to service provision in Marion County, which may be highlighted best in the section that follows on 'urban legends.'

Elitism. It was suggested that there is a degree of eliteness associated with the Dawn Project. While there are eligibility requirements for participation, some negative reaction emerged about Dawn's perceived ability to be exclusive in whom it serves; however, the preponderance of data in this area suggest this finding is more likely related to concerns about Dawn having more money than "typical" public agencies. Regardless of the underlying causes for perceptions of elitism, one respondent suggested that Dawn Project leaders need to spend time "sitting, talking, listening with the community providers."

Enabling parents. As previously noted, the greater involvement of the families is credited as one of the major positive impacts of the Dawn Project. However, the impression also emerged that in some cases, Dawn Project service coordinators do too much for parents and families rather than making sure families learn how to do things themselves. For some respondents, the concern was focused on the length of involvement Dawn had with families." As one respondent put it, "There's a difference between teaching people how to fish and fishing for them."

Urban legends. A series of 'urban legends' have developed about some of the unconventional methods adopted in some cases within the Dawn Project. "The perception was, you want a new house, you want new carpet, you want new something, just get into the Dawn Project. They'll buy you whatever you want -- that's exaggerated; that was not even true. " Still, whether such legends are accurate or not, their mere existence points to the large presence of the Dawn Project within the community as well the frustration felt by those who lack the freedom to act similarly or who disapprove of unconventional approaches.

Resistance. "It is important for us to be fair…I think there is resistance." We would be remiss in writing about system change if we did not consider resistance to that change and how it

is perceived. As one respondent put it, "There are some systems that are very resistant to [Dawn]." One component of the resistance to Dawn is the perception of a new organization "riding into town to save the day" and the perception emerged of Dawn as something of a "maverick" in the community. Additionally, there is some perception that some agencies may be actively providing obstacles to demonstrating the success of the Dawn Project: "It's pretty chilling when folks act in this way: 'I don't want this project to be successful so I cannot possibly allow data to be disclosed which shows that it might be saving money, too."

Ambivalent Themes. In some cases it is difficult to determine whether emergent themes from the study were based on reasonable expectations of one system of care within an entire community. For example, perceptions emerged that the Dawn Project is limited in what it does while children are in residential treatment facilities and that Dawn has not been successful in truly blending funding. However legitimate, these concerns suggest structural barriers in the larger social services system that cannot be resolved by a single agency. Blending funding, for example, would require changes in state statutes. Similarly, it was reported that Dawn has not changed the essential nature of the children's system, which continues to be a "failure-based system." Actually, the fact that Dawn does not focus on prevention was a common theme uncovered in the study. Although respondents also seemed to recognize that these issues went beyond the capability of the Dawn Project to change, still there was some expectation that such systemic change should be Dawn's goal.

Conclusions

The broad themes uncovered in this study indicate that the Dawn Project system of care has led to a variety of direct and indirect system-level changes in Marion County children's social services. Most important, findings demonstrate that the primary impact on the community is the emergence of the core system of care principles articulated by Stroul and Friedman (1986) almost 20 years ago, including coordination, strengths-based philosophy, family involvement at multiple levels, flexible funding, and community-based service provision. In fact, system-level coordination and family involvement were the strongest themes to emerge from this study.

Emergence of these core principals appears to be related to several factors, including the Dawn Project Consortium that regularly brings together system level administrators from the various child serving systems in Marion County and family members. Likewise, at the treatment level, Dawn Project service coordinators are trained to be persistent in connecting people from disparate systems and agencies and then maintaining lines of communication. In essence, a primary purpose of the Dawn Project is to encourage cross-system relationships and family involvement at multiple levels and it appears to be working. Thus, even while the additional meetings associated with a system of care may be viewed by some as a "necessary evil," the connections they engender appear to be effective in creating and sustaining cross system relationships and understandings.

Obviously, inferences drawn from this exploratory study must be made cautiously and several limitations are noted. First, this study did not necessarily examine the prior community milieu that allowed an initiative like the Dawn Project to take hold and flourish. Undoubtedly, local and national climate and policy shifts set the stage for Dawn as well as for many of the

changes attributed to Dawn. Second, we used purposeful sampling in this study and acknowledge the possibility that not all stakeholder perspectives were adequately represented in the process. However, respondents were invited to be interviewed because they were able to reflect on the children's social services system in the County before and after the establishment of Dawn. By checking and rechecking our respondent list before initiating the interview process and then asking respondents during interviews who else should be interviewed, we have additional evidence that our study sample was adequate. Still, we recognize the possibility in interview research that another group of respondents may have produced a different set of findings.

We conclude by noting that at first blush it may seem the task of creating a system of care model is primarily a technical one. Contracts must be written and procedures defined. Once this process is complete, we may believe that the hard work is finished; however, the more difficult work of building and sustaining relationships continues. Developing an effective system of care model is a slow and, at times, painstaking process. While structural agreements and arrangements may establish the contours of the organization, it is the actual day-to-day work of many individuals, including families, that brings the work to life (Sullivan, 2001).

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