



PREDICTING SUCCESS IN A SYSTEM OF CARE

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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)	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
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
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
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
	<i>O.R.</i>	<i>O.R.</i>	<i>O.R.</i>
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 $R^2 = 0.11$

¹Discharge by meeting team goals was the comparison category

²Mental Health was the comparison category

³Other 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.

References

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