



THE STRUCTURE OF SERVICE COORDINATION TEAMS AND PROGRAM OUTCOMES

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

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 ($O.R. = 0.97; p < .05$). Likewise, youth referred by juvenile justice were 20% less likely to have successful outcomes than youth referred by mental health ($O.R. = 0.20; p < .05$). Among

team structure clusters, youth in C1 were almost 5 times more likely to have successful outcomes than youth in the comparison category, C5 ($O.R. = 4.78; p < .05$; 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.

References

- Achenbach, T. M. (1991). *Manual for the Child Behavior Checklist/4-18 and 1991 Profile*. Burlington, VT: University of Vermont Department of Psychiatry.
- Hair, J. F., Jr., Anderson, R. E., Tatham, R. L., & Black, W. C. (1995). *Multivariate Data Analysis*. Englewood Cliffs, NJ: Prentice Hall.

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.

Variable	Cluster 1 (N = 83)		Cluster 2 (N = 54)		Cluster 3 (N = 70)		Cluster 4 (N = 32)		Cluster 5 (N = 60)		χ^2
	N	%	N	%	N	%	N	%	N	%	
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	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>t</i>
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**

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