

Wraparound Care Coordination for Part C Enrolled Children
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I. Introduction

A. Nature of the research problem

The specific aim of this study was to determine if well supported care coordination based on Wraparound principles and practices could improve outcomes for children and families. Wraparound services are designed to develop the family's ability to define and implement their own goals in partnership with professionals and community supports. Unlike standard care coordination Wraparound includes skill building and support designed to empower families, help them develop a positive vision of themselves and their future, as well as, help build support networks that allow them to be less dependent on public systems.

Although promising, the use of Wraparound services with families of very young children has not been investigated. This study was among the first to try to apply Wraparound services to a population of families with very young children.

B. Purpose, scope, and methods of the investigation

The purpose of this study was to deliver Wraparound Care Coordination to families who were receiving Part C services where the parents or children had complex needs. We hypothesized that children who received Wraparound would have better developmental outcomes and that their parents would report reductions in family problems and stress, as well as improved supports and mental health.

II. Review of the Literature

Wraparound was developed to address the needs of children and adolescents in the United States with serious emotional and behavioral disorders and their families. The goal of Wraparound services has traditionally been to avoid residential placement of these youngsters by serving them in their communities (Winters & Metz, 2009). Wraparound has often been described as a planning process that results in a comprehensive set of community services and natural supports that are individualized for a child and family to address the family's needs. The Wraparound planning process is child- and family-centered, builds on child and family strengths, is community-based (using a balance of formal and informal supports), is culturally relevant, flexible, and coordinated across agencies; it is outcome driven, and provides services as long as required regardless of progress at any point (VanDenBerg & Grealish, 1996).

Winters and Metz (2009) report on an emerging consensus that Wraparound includes ten essential elements:

1. Efforts are based in the community.
2. Wraparound must be a team-driven process involving the family, child, natural supports, agencies, and community services working together to develop, implement, and evaluate the individualized plan.
3. Families must be full and active partners at every level of the Wraparound process.

4. Services and supports must be individualized, built on strengths, and meet the needs of children and families across life domains to promote success, safety, and permanence in home and community.
5. The process must be culturally competent, building on unique values, preferences, and strengths of children and families, and their communities.
6. Wraparound child and family teams must have flexible approaches and adequate flexible funding.
7. Wraparound plans must include a balance of formal services and informal community and family supports.
8. There must be an unconditional commitment to serve children and their families.
9. The plans should be developed and implemented based on an interagency, community-based, collaborative process.
10. Outcomes must be determined and measured for the individual child, for the program, and for the system.

A recent meta-analysis of the effectiveness of Wraparound for children with emotional and behavioral disorders found that findings reported in published studies of Wraparound are generally positive. However there are not yet sufficient data to permit definitive judgments to be made about Wraparound's efficacy (Suter & Bruns, 2009).

III. Study Design and Methods

A. Study design

The study design made use of random assignment of cases to intervention and standard services conditions.

B. Population studied

The children and in this study were enrolled in Part C early intervention and were from families who required higher levels of care coordination and support than Part C could provide to them. All children and families were enrolled in Part C services through Developmental Pathways, a private non-profit community agency that serves people with developmental delays and disabilities in Arapahoe and Douglas Counties and the city of Aurora.

C. Sample selection

Inclusion criteria

Enrollment was limited to families with children under 33 months of age who were enrolled in Part C services through Developmental Pathways. To be enrolled families had to be judged by their service coordinator as requiring intensive supports and care coordination due to one or more of the following: parental inability to cope with child's needs; parental disability, mental health condition or substance abuse problem; lack of natural or social supports needed to meet child or other family members' needs; lack of resources needed to meet child's and family's needs or inability to make use of existing supports.

Exclusion criteria

Families were excluded from participation in the study in the case of: children in temporary foster care (children in foster-adopt were eligible); non-English speaking families.

Assignment to Treatment Conditions

Minimization procedures were used to assign subjects to conditions based on child age, household income, caregiver education, race and ethnicity, severity of child's delay, child welfare involvement and family composition. Assignment to intervention and standard services groups was done at a ratio of 1.25 to 1. The minimization method for assigning subjects achieves balance on prognostic factors by keeping a running total of how many subjects have been assigned to each condition (Pocock, 1979).

D. Instruments used

The Perceived Stress Scale (PSS). The PSS used here is a 10-item instrument (Cohen & Williamson, 1988). The total PSS score was used in the analyses reported in this report.

The Caregiver Strain Questionnaire (CGSQ). The CGSQ is a 21-item instrument that was developed for use with families of children and adolescents with emotional and behavioral disorders (Brannan & Heflinger, 1997). The CGSQ includes items that address both objective and subjective strain, in several areas of caregiver strain. One item that asks about children having difficulties with educational and judicial authorities has been dropped as irrelevant to our population of children. The total CGSQ score was used in the analyses reported in this report.

Family Empowerment Scale (FES). The FES was designed to measure the empowerment of a parent or caregiver of a disabled child (Koren, DeChillo & Friesen, 1992). We have noted a tendency for subjects to ceiling on the FES at the initial data collection point. As a result only 10 items which demonstrated the greatest variability were retained.

The Rand Short Form-36 (SF-36) health survey is a questionnaire that is used to assess patient health across eight dimensions (McHorney et al, 1994). Only mental health related items were used in this study – those from the Vitality (VT), Social Functioning (SF), Role-Emotional (RE), and Mental Health (MH) scales. The analyses reported here were for the total of these four scales.

Natural supports. This measure contains seven items from a measure of family resources (Peterson, 1984) that assess availability of support to caregivers from family and friends.

Family problems. A measure of the problems that families of children with disabilities face was developed for this study. The measure is composed of 14 items that assess difficulties encountered by families receiving Part C early intervention services.

The Preschool Language Scale, Fourth Edition (PLS-4) is a norm-referenced instrument designed for use with children age birth through 6 years, 11 months (Zimmerman, Steiner & Pond, 2002). The PLS-4 is an individually administered test used to identify children with language disorder or delay. The PLS-4 consists of two core subscales, the Auditory Comprehension subscale (AC) and Expressive Communication subscale (EC). The total score was used to assess language for this study.

E. Statistical techniques employed

Descriptive statistics and chi-square and t tests of differences were used to demonstrate equivalence of the intervention and comparison groups. Linear mixed model repeated measures analyses, SAS PROC MIXED, were used to examine changes in the outcomes over time.

IV. Detailed Findings

Data analysis was conducted for 81 of the families in this study who had two or more data points – 45 (56%) in Wraparound and 36 (44%) in the Comparison group. No differences between the two groups on demographic variables reached statistical significance (Tables 1 & 2).

Table 1. Age of children in study population

	Wraparound	Comparison	t (df)
Child age (months):	19.3	18.9	.191 (79)

Table 2. Demographic characteristics of study population

Characteristic	Percent of Children		χ^2 (df)
	Wraparound	Comparison	
Child sex:			
Male	64.4%	63.9%	.003(1)
Race:			
African-American	18.2%	25.0%	
White	63.6%	61.1%	
Other	18.2%	13.9%	.678(2)
Hispanic ethnicity			
Yes	25.0%	30.6%	
No	75.0%	69.4%	.307(1)
Family Income:			
\$10,000 or less	28.6%	35.3%	
\$10,001 to \$25,000	23.8%	32.4%	
\$25,001 to \$50,000	28.6%	14.7%	
\$50,001 or more	19.0%	17.6%	2.40(3)
Mother's Education			
Less than completion of high school	17.8%	14.3%	
HS graduate or GED	22.2%	22.9%	
Some college	46.7%	48.6%	
College graduate or more	13.3%	14.3%	.179(3)
Marital Status			
Married	46.7%	47.2%	
Separated, Divorced, Widowed	20.0%	13.9%	
Never married	33.3%	38.9%	.606(2)

The major parent outcomes assessed for this study were perceived supports, family problems, parent mental health status, parent stress with regard to general personal stress and stress related to caregiving, and parent empowerment. The child outcome was language development. Repeated measures analysis of the study's outcomes revealed no statistically significant differences between the groups. The results of analyses of overall differences across the two conditions and the four data collection points are presented in Table 3.

Table 3. Repeated measures analyses of outcome measures

Variable	Mean T1 (SD)	Mean T2 (SD)	Mean T3 (SD)	Mean T4 (SD)	df	F
Caregiver Strain	42.7 (16.5)	41.2 (16.8)	41.1 (15.7)	38.6 (15.0)	4/154	0.35
Perceived Stress	27.7 (7.4)	28.2 (7.8)	28.8 (8.0)	26.4 (6.8)	4/160	1.36
Empowerment	42.6 (4.7)	43.2 (4.9)	42.8 (4.9)	43.4 (4.8)	4/157	0.55
Mental Health	766.6 (309.8)	785.2 (291.3)	743.1 (315.0)	794.3 (277.5)	4/156	0.85
Supports	16.6 (4.5)	16.9 (4.4)	17.0 (4.0)	16.5 (4.2)	4/158	1.30
Family problems	28.1 (9.3)	25.8 (7.5)	25.8 (8.4)	24.9 (7.6)	4/155	0.20
Child Language	84.4 (20.3)	80.6 (20.7)	78.3 (20.7)	77.3 (23.3)	4/159	0.82

Parent testimonials

Despite the absence of statistically significant findings several families, who participated in the Wraparound process had very positive things to say about this intervention. For example one mother said, “It’s looking like what I want it to look like.” There is agreement that the family is “pulling together.” She notes that her anxiety is much less and that she is “more the mom I want to be.”

Another mother told her team she had learned the following from her experience with Wraparound: 1) Real help is there -people are on my side, 2) How to ask for help and how to use supports, 3) How to open up and ask for what I need, 4) Persistence – how to pick yourself up and go on.

V. Discussion and Interpretation of Findings

Although parents valued Wraparound this study produced no evidence that Wraparound was associated with better outcomes than standard services alone.

Explanation of study limitations

Enrollment of families into the study was very difficult. Despite statements of support from service coordinators at Developmental Pathways, the majority of service coordinators did not refer families to the study. The lack of referrals can be attributed to several factors. Most service coordinators were uncomfortable with the randomized design. At times the service coordinators became discouraged when families they referred were assigned to the standard services conditions. Service coordinators also reported difficulty identifying families who were appropriate to the study as the families who were appropriate for Wraparound are a small segment of the total population of Part C families served at Developmental Pathways.

In particular we had hoped to enroll families involved with child welfare as a result of suspected or substantiated child maltreatment into this study. Although Arapahoe County child welfare was interested in increasing their referrals of infants and toddlers to this study through Part C they had great difficulty doing so. Because most of the very young children they substantiated were placed in out of home care with foster families who lived outside of the Developmental Pathways catchment area. Moreover families who were investigated, but whose children were not removed, tended to be very difficult to engage because of their reluctance to allow professionals into their homes.

The lack of enthusiasm of some Developmental Pathways' service coordinators coupled with low rates of referrals impacted the training and morale of the Wraparound facilitators who were employed by Developmental Pathways. Although the project provided training and highly skilled coaching in Wraparound these Wraparound facilitators received their day-to-day supervision from Developmental Pathways managers who were not expert in Wraparound and consequently tended to encourage the use of service coordination strategies with families where the study called for the use of Wraparound procedures.

C. Comparison with findings of other studies

There are few controlled trials with Wraparound for children of any age, and no comparable studies with children under 3 years of age.

There is a developing consensus in the Wraparound literature regarding the conditions under which Wraparound services can be successfully developed. There is some reason to believe that these conditions were not fully met in this study.

The low rate of Part C enrollment by families involved in child welfare is consistent with reports of underidentification and underenrollment of children who are in child welfare programs in early intervention (Horwitz, Owens, & Simms, 2000; Robinson & Rosenberg, 2004; Stahmer et al 2005; Rosenberg, Smith & Levinson, 2007).

E. Policy implications

While evidence is growing to support the use of Wraparound with youth who have serious emotional disturbances, studies supporting the effectiveness of Wraparound in addressing the needs of very young children and their families are lacking. Wraparound remains an interesting, but as yet unproven approach to helping families with very young children. Policy should support continued efforts to examine the efficacy of Wraparound based interventions, particularly with populations of children whose families are at high risk for providing their children inadequate care.

A problem faced by this study was the small number of infants and toddlers involved with child welfare who enter Part C services. The task of increasing referrals from child welfare to Part C has been difficult to address. Child welfare professionals need better information about Part C services, particularly how to refer families to the Part C system. Problems of parental acceptance of Part C referrals and services also will have to be addressed. Efforts to increase referrals from child welfare to Part C need to be accompanied by planning to ensure the capacity of the Part C system to provide child evaluations and recommended Part C services.

Even when children are determined to be eligible and families have completed the IFSP process substantial numbers of high-risk families may drop out of Part C services after treatment has begun (Rosenberg, Robinson & Fryer, 2002). Families reported for abuse or neglect may not be highly motivated to participate in early intervention (Spiker & Silver, 1999). Parents who have maltreated their children are often dealing with multiple stressful events (Cadzow, Armstrong & Fraser, 1999). They may also be less effective in their day-to-day caretaking than other parents (Barnett, 1997). As a consequence these parents often have considerable difficulty learning to support their children's development and need different, perhaps more basic, services from Part C. As a consequence, policy should encourage Part C to make use of the interventions required to improve these parents' caregiving

skills. Therefore Part C providers will need training so that they can work successfully with families referred by child welfare agencies.

F. Suggestions for further research

This study focused on one population of parents and children. It was Studies with parents and young children in other service systems are needed. For example, Dr. Kay Teel, who became this studies lead Wraparound facilitator after the intervention was internalized within UCD, has received funding from ACF to conduct a trial of Wraparound with pregnant women who are in substance abuse treatment. Although enrolling subjects for only a couple months it is our impression that the substance abuse treatment facilities and the women who are referred to the study are much more enthusiastic about Wraparound and much easier to engage than were the families and staff who were involved in Part C early intervention.

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VI. List of products

Peer reviewed articles

Rosenberg S. & Smith E. (2008). Rates of Part C eligibility for young children investigated by child welfare. *Topics in Early Childhood Special Education*, *28*, 68-74.

Rosenberg S., Zhang D. & Robinson, C. (2008). Prevalence of developmental delays and participation in early intervention services for young children. *Pediatrics*, *121*, e1503–e1509.

Conference presentation

Rosenberg S. Prevalence of Developmental Delays and Participation in Early Intervention Services for Young Children. 14th Annual Maternal Child Health Epidemiology Conference, December 2008.

In preparation

Rosenberg SA , Ellison MC, Robinson CC, Lazar R. (in preparation). An estimate of the percentage of Part C eligible infants and toddlers: Evidence of a crisis.