



Title: The Parent Support and Training Services: The PST Practice Protocol, Outcomes, and Fidelity Monitoring Procedures

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June 2010

***This project was supported through a contract with the
Kansas Department of Social and Rehabilitation Services,
Disability and Behavioral Health Services (SRS/DBHS)***

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ACKNOWLEDGEMENTS

The authors wish to thank and acknowledge all the parent support and training (PST) specialists who shared their practice expertise with us and the families who shared their life experiences with us. We are especially indebted to Pam McDiffett for helping coordinate research engagement efforts with the PST statewide network. We also wish to thank Virginia Standley, Gail Martin, Kaye Nelson, Holly Lee, Noelle Colgrove, Natasha Walker, Vicky Martinez, Kim Fasciano, Beth Engels, Debi Atkins-Mower, Sherri Luthe, Kathryn Ake, Autumn Showalter, Rose Mary Mohr, Marla Lira, Ric Dalke, and Matt Atteberry for their support and enthusiasm for the next phase of the PST study.

Special thanks to Erica Parkinson-Arnold for her diligent support in the editing process.

Thanks to the PST Services Study Team's Research Assistants—Megh Chakrabarti, Carolyn Bruner, Michele Griffith, and Amanda Unruh.

EXECUTIVE SUMMARY

Parent Support and Training (PST) is an intervention that provides peer support to parents of children with severe emotional disturbance (SED) being served in community mental health centers (CMHCs) in Kansas. This service, provided as part of an array of community-based services, offers the unique function of providing peer support and education to parents while also addressing power imbalances between and among providers and families. PST services help families build on their strengths and abilities to participate effectively in their children’s mental health services, reduce caregiver strain, and strengthen skills necessary to best meet the needs of their children. The essence of the PST intervention is derived from the strong helping alliance established between the caregiver and the PST provider, who is also a parent of a child with SED.

This report, building on Phases I and II of the research, details:

- The core components of the PST services model (PST Practice Protocol).
- The outcomes achieved when PST services are effectively provided in conjunction with an individualized array of community-based mental health services.
- Tools and procedures needed to support implementation of the PST Practice Protocol in CMHCs.

Core Components

Core components of the PST service were collected through qualitative interviews and a review of the literature. These components were then evaluated using the Concept Mapping methodology to establish stakeholder consensus regarding which components are essential to the practice of the PST intervention. These essential components make up the PST Practice Protocol which details the specific steps PST providers (PSTs) take when providing high quality PST services that contribute toward improved child and family outcomes.

While consensus was achieved on components of the protocol overall, there is one area of continued discrepancy between stakeholders. The caregiver voice—which includes parents receiving and providing PST service and parent advocates—supports the body of literature that posits that an important contributor to the effectiveness of PST providers comes from their experiences either parenting or working with children with SED or special needs.

While service providers and administrators also largely agreed that this peer component was important and frequently seen in practice, they rated these qualifications significantly lower in importance and frequency than caregivers did. This incongruence merits further evaluation of state and agency policies and practice regarding the essential components of PST qualifications.

Outcomes

Mixed methods were used to collect data on child and family outcomes. Measures used included the Working Alliance Inventory (WAI), Family Empowerment Scale (FES), the Behavioral and Emotional Rating Scale II (BERS-II), and the Caregiver Strain Questionnaire (CGSQ). Analysis of the completed data sets for baseline, three month, and six month collection intervals for 14 participants revealed:

- WAI scores start high and maintain at approximately the same level, which supports the hypothesis that a strong helping alliance is established in the initial interactions between the caregiver and PST.
- Statistically significant decrease in global strain, objective strain, and internal subjective strain on the CGSQ, supports the hypothesis that as a peer the PST is uniquely equipped to address caregiver strain.
- Statistically significant increase in family empowerment on family involvement and community/political investment subscales of the FES.
- Statistically significant increase in total strengths index, school functioning subscale, affective strengths subscale, and interpersonal strengths subscale on the BERS-II. These results were supported by data from qualitative interviews that attributed improved child and family outcomes to a combination of individualized interventions, including PST.

Service Utilization

Under the systems of care model, a particular intervention may, in fact, play a crucial role in the overall array of services offered. However, effects of that intervention must be analyzed in context of that array. Therefore, service utilization data were gathered for the purpose of analyzing the typical service constellation used by families receiving PST services, as well as to determine any patterns or changes in patterns of service use as a result of introducing the PST intervention. Analysis of these data revealed:

- A significant positive correlation between PST and case management, and a significant negative correlation between PST and individual therapy. These correlations suggest that when use of case management increases, PST use increases and individual therapy decreases.
- Correlations between these services support system of care principles and reflect caregiver reports of service use during 12-month reviews. Caregivers reported increased use of intensive services to meet family needs during periods of increased strain due to stressful life events.

Next Steps

- Facilitate implementation of PST Protocol at four pilot sites.
- Monitor fidelity of implementation at pilot sites.
- Continue assessing participant outcomes.
- Develop training materials.

Recommendations

Reevaluate the service definition for PST services as well as individual agency personnel policies, regarding qualifications of PSTs to ensure alignment between best practices as defined by the PST Practice Protocol and state and agency policy.

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Introduction & Purpose

Kansas provides fertile ground to assess the effectiveness of parent-to-parent support. The professional parent role has been established in the children's behavioral health system of care since the early 1990s. Parent-to-parent interventions, such as Parent Support and Training (PST), are growing rapidly across the nation. Despite rapid growth, there is a dearth of literature on the specific intervention protocols and contributions PST services make toward improved outcomes for families, teams, and community mental health centers (CMHCs). This report addresses these gaps in knowledge by examining how Kansas PST services impact relevant outcomes. Most broadly, the purpose of this research is to maximize Kansas PST stakeholders' expertise, including that of families. This purpose is achieved by using community-based participatory research values to achieve results that are relevant to all stakeholders engaged in the process (Davis-Groves et al., 2008).

Phase I of the research, completed in June 2007, utilized a mixed methods approach to describe effective PST practices and provided next steps to sustain the infrastructure of the service. Phase II of the research, completed in June 2008, built on the findings and detailed extensive collaboration with the PST statewide network to design and develop the PST services outcome evaluation.

This report, building on Phases I and II of the research, details:

- The core components of the PST services model (PST Practice Protocol).
- The outcomes achieved when PST services are effectively provided in conjunction with an individualized array of community-based mental health services.
- Tools and procedures needed to support implementation of the PST Practice Protocol in CMHCs.

A review of the literature indicates this approach to developing an evidence-based practice is not being done anywhere else in the nation. Thus, this work makes a significant contribution to the children's mental health field and spotlights Kansas's expertise and long-term commitment to supporting youth and their families.

1. Core Components of the PST Services Model in Community Mental Health Center Treatment

Well-defined core intervention components, an essential element of a service model, detail the basic recipe and ingredients for providers to implement the practice as intended so that the desired outcomes can be achieved (Mowbray, Holter, Teague, & Bybee, 2003). A protocol guides implementation of the core intervention components in a practice setting. Refinement of the core components of the PST services model and their application via the PST Practice Protocol occurred this year, culminating in a product ready for field testing within a CMHC setting. Steps taken to develop the components and protocol up to this point are described below.

1.1 Core Components

Development of the core components has been guided by a model created by KU researchers for developing an evidence-based practice (EBP) within a Community-Based System of Care (see Figure 1; Davis-Groves, Byrnes, & Corrigan, 2009). Initial steps involved identifying, reviewing, and refining the core components of the PST model. Qualitative research methods were used between April 2008 and September 2009 to gather knowledge from a convenience sample of stakeholders who had an established expertise in providing or receiving PST services. Participants reviewed the developing components and provided feedback as part of the process. Components of the Medicaid Home and Community-Based Services (HCBS) Serious Emotional Disturbance (SED) Waiver service definition for PST were included as well so that the service's primary funding source would be reflected in the model. A detailed description of methods used during this process was reported previously (Davis-Groves et al., 2009). See Table 1 for a summary of participant involvement by stakeholder role and type of contact (e.g., individual interview, focus group).

Once an initial draft of PST core components was established, the next step was to achieve consensus on the model's critical components among a broader array of stakeholders who represent the statewide children's mental health system. Researchers accomplished this task between October 2009 and March 2010 utilizing a concept mapping method. See Appendix B for a complete description of the method used, an analysis, and the findings of this step in PST model development.

Results of the stakeholder consensus process further informed refinement of the core components. A method for identifying essential components was established, patterned after a method used by Evans and Bond (2008) to identify critical ingredients of an evidence-based psychosocial rehabilitation service for adults with severe mental illness. One of the two surveys used in the PST model stakeholder consensus process was designed for this purpose. In this survey, participants were asked to rate how important each core component is to providing quality PST services, ranging from 1 (not at all important) to 5 (very important). Essential components were determined to be those with an overall mean rating of 4.0 (important) or higher. Two-thirds (65.3%) of the survey items ($n=49$) met the cut-off. Components with mean ratings below 4.0 ($n=17$) were reviewed to consider whether to include. A description regarding final disposition of the 17 components is provided in Appendix A: Core Components Transformation.

Figure 1

A Model for Developing an EBP Within a Community-Based System of Care

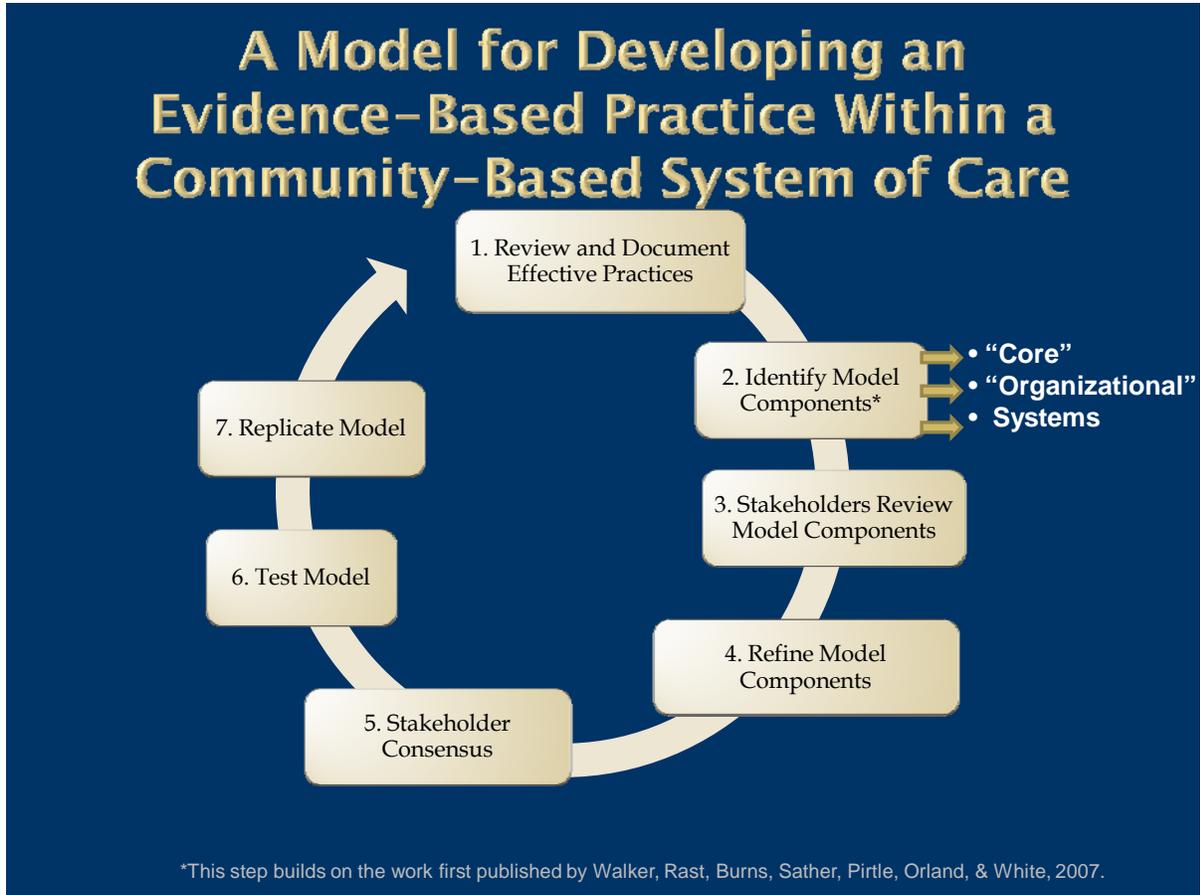


Table 1
PST Stakeholder Consensus Survey Roles

	Interviews (n=37)	Focus Groups (n=9)
Administrator/Director	3	2
Direct Services Staff Member	6	1
Family Member/Caregiver (Receiving Services)	11	0
PST Specialist (Family Member and Non-Family Member)	22	6
PST Supervisor	6	0

1.2 PST Practice Protocol

PST Practice Protocol preparation began last year (Davis-Groves et al., 2009, p. 18-19). This year the core components were refined from the research configuration used during the consensus process into a format suitable for a practice tool that would facilitate implementation of the PST model within a CMHC setting. With this need in mind, researchers reviewed the components selected during the consensus process. Additional changes were made to prepare the components for use in a practice tool. Appendix A: Core Components Transformation provides a detailed description of how the core components were transformed from the consensus phase to a final draft protocol ready for implementation and testing in a practice setting.

Concept mapping findings influenced the arrangement of the components within the protocol sections as well as the labeling of the sections. Participants who were involved in the sorting activity were asked to group the components into conceptually related clusters and to label the clusters. The three primary groupings and labels were incorporated into the final draft protocol.

Remaining preparation focused on developing the protocol as an implementation tool. The components were organized into three sections that follow the same chronological order in which PST services occur with families. Each section includes background information and implementation tips. The core components are represented as indicators and are accompanied by possible action steps. Caregiver quotes are included to illustrate how the component is experienced during service delivery. Finally, each indicator contains information describing the frequency at which it is implemented with families (e.g., once, with every caregiver contact, when needed according to the caregiver).

Refinement of the PST Practice Protocol is now complete (see attached PST Practice Protocol). Next steps will be to implement and test the protocol in a CMHC setting.

2. Outcomes

Outcomes document the effectiveness of an intervention effort. Because the PST interventions are implemented within the context of a CMHC and a treatment team, there are several outcome domains that must be assessed to truly understand intervention efforts. Previous research suggests that PST interventions impact families, teams, and services utilized (Davis-Groves, Barfield, McCave, & Corrigan, 2007). The outcomes domains and initial findings are described in sections 2.1 through 2.3. It is important to note that, although the PST providers and their CBS Teams have received the required training approved by SRS, no training has been conducted for implementing the PST Practice Protocol (see attached PST Practice Protocol) or for attending to specific organizational variables that support implementation.

2.1 Family

The PST Practices are driven by Family Support and Education (FSE) Theory. The FSE Theory begins with the solution-focused premise that families want to find effective ways to manage behaviors and challenges associated with parenting children with serious emotional disturbance (SED). FSE Theory suggests that the essence of the intervention lies in the mutual connections between PST providers and parents. These connections, which begin with initial interactions between PST providers and parents, create a foundation on which a helping alliance is built (Ireys, Devet, & Sakwa, 2002). With careful attention to the therapeutic value of self-disclosure, PST providers bring credibility to their work, reinforcing the value of the alliance for parents. Ultimately, parents gain hope when they understand how other parents improved their abilities to parent a child with an SED.

Ireys, Devet, and Sakwa (2002) described five key concepts in FSE Theory that occur in the context of parent-to-parent alliances: 1) social support, 2) ties in social networks, 3) reciprocity, 4) empowerment, and 5) social comparison. The first concept acknowledges the “effects of social support” (Ireys et al., 2002, p. 155). When people feel they are a part of a community or group, they feel valued and motivated to do well. The parent PST providers offer a specialized support to newly referred parents because the PST providers share the experience of raising a child with an SED. This expertise allows a *unique* relationship to develop, where newly referred parents may feel truly heard and understood.

The second concept illustrates a link between individuals and their communities. Ties in social networks are the connections from one person to another that provide valuable information about how the community operates and what it has to offer (Ireys et al., 2002, p. 155). These ties are especially important to parents of children with SED because they feel so isolated from the community. This isolation is the result of the stigma parents feel parenting a child with “socially undesirable behaviors” (Ireys et al., 2002, p. 161). PST providers help reduce this isolation by serving as a conduit between newly referred parents and community resources.

The third concept of FSE Theory, reciprocity, considers how individuals respond to being helped—whether an individual will take the opportunity to give something back for help received. Studies have shown that in the absence of reciprocity some offers for assistance and support are rejected. Reciprocity acknowledges that those being helped should have the opportunity to give back (Ireys et al., 2002, p. 156).

Along with the concept of giving back, empowerment implies that an individual wants to reciprocate help and will seek out support. This concept acknowledges that in a supportive relationship with a veteran PST parent, newly referred parents make and sustain behavioral changes. They also accept opportunities to effect system change on a broader scale, such as talking to legislators or taking on leadership roles in the services system (Ireys et al., 2002, p. 157).

Lastly, the supportive relationship parents have with PST providers may serve as a positive social comparison (Ireys et al., 2002, p. 156). This construct proposes that people feel better when they compare themselves favorably to others in similar situations. Social comparison, though valuable, could also have the opposite effect: individuals may feel worse because they do not measure up. To control

for this risk, PST providers must openly acknowledge similar experiences while recognizing that each individual develops his or her own way of coping. PST providers prudently share information with parents about ways other parents cope in similar situations, thus instilling hope while encouraging parents to develop a coping strategy that is uniquely theirs.

In summary, the impact of parent support interventions lies in the mutual connections that are established in the course of interactions between PST providers and parents. Early emphasis upon similar shared experiences creates a foundation on which a helping alliance can be built (Ireys et al., 2002). Over time, this alliance helps newly referred parents of children with SED to increase social ties and build community connections, to mitigate stigma and isolation, and to make positive behavioral and systems changes.

In order to document the effectiveness of PST services as usual, a mixed-methods approach (standardized surveys and individual interviews) was utilized with parents/caregivers to document family outcomes. Once full consent was obtained, parents completed the following surveys within 1 month of referral to PST services, then again at 3, 6, 9, and 12 months. The following measures were selected because they have sound psychometric properties and they assess key constructs articulated in FSE Theory:

- Working Alliance Inventory (WAI) (Horvath & Greenberg, 1986; Kokotovic & Tracey, 1990)
- Family Empowerment Scale (FES) (Koren, DeChillo, & Friesen, 1992)
- Behavioral and Emotional Rating Scale, 2nd Edition (BERS-II) (Epstein, 2004)

For a detailed explanation of the measures and the theory of change see *The Parent Support and Training (PST) Services Outcome Evaluation and the Construction of a PST Services Evidence-Based Practice Protocol* produced in June 2009 (Davis-Groves et al., 2009, p.46-51).

In addition, parents/caregivers were asked to complete the Caregiver Strain Questionnaire (CGSQ; Brannan, Heflinger, & Bickman, 1997) within 1 month of referral to PST services and at the 6- and 12-month intervals.

After the 12-month data collection interval with families, a summary of the data was prepared for a final interview. The purpose of the final interview was to share examinations with study participants and seek detailed feedback on how working alliances between PST providers and parents impact CMHC treatment. In addition, this review sought feedback on the FSE Theory from families' perspectives.

2.1.1 Data Collection

Tables 2 and 3 describe the progress on data collection with families for PST services as usual. Twenty nine caregivers have been recruited into the study across the three sites; seven parents have dropped out (see important notes in Table 3). As of June 30, 2010, 14 complete family data sets up to six months are available for analysis.

Table 2 *Total Numbers of Families That Have Completed Each Data Interval*

Baseline	3 Months	6 Months	9 Months	12 Months	12-Month Review
24	15	14	10	9	6

Table 3 *Details on Families Who Have Consented to and Enrolled in the PST Services Outcomes Evaluation*

ID	Start Date	Most Recent Data Collection Period	Complete Data Set	Important Notes
1001	4/7/2008	Baseline	n/a	Dropped out due to move.
1002	4/7/2008	12 months	Apr 09	Completed study and 12-month review.
1003	4/7/2008	12 months	Apr 09	Completed study and 12-month review.
1004	4/14/2008	Baseline	n/a	Caregiver withdrew from study. Youth was placed in SRS custody.
1005	8/29/2008	12 months	Oct 09	Completed study and 12-month review.
1006	9/12/2008	12 months	Dec 09	Completed study and 12-month review.
1007	9/24/2008	3 months	n/a	Dropped out due to move.
1008	9/24/2008	12 months	Dec 09	Completed study and 12-month review.
1009	10/20/2008	12 months	Dec 09	Completed study and 12-month review.
1010	11/19/2008	6 months	n/a	Dropped out due to son graduating program.
1011	1/28/2009	Baseline	n/a	Unable to connect with parent.
1012	1/28/2009	12 months	Jan 10	Needs 12-month review.
1013	7/24/2009	9 months	Aug 10	Needs 12-month data collection and 12-month review.
1014	3/26/2009	6 months	n/a	Dropped out due to move.
1015	4/14/2009	12 months	Apr 10	Needs 12-month review.
1016	5/5/2009	6 months	n/a	Dropped out, left services.
1017	4/16/2009	6 months	n/a	Dropped out due to move.
1018	4/17/2009	Baseline	n/a	Unable to connect with parent.
1019	5/19/2009	12 months	May 10	Needs 12-month review.
1020	2/21/2010	Baseline	Mar 10	Needs 3-month data collection.
1021	3/10/2010	Baseline	Apr 11	Needs 3-month data collection.
1022	3/19/2010	Baseline	Apr 11	Needs 3-month data collection.
1023	4/9/2010	Baseline	May 11	Needs 3-month data collection.
1024	3/17/2010	Baseline	Apr 11	Needs 3-month data collection.
1025	In process			Needs baseline collection.
1026	In process			Needs baseline collection.
1027	In process			Needs baseline collection.
1028	In process			Needs baseline collection.
1029	In process			Needs baseline collection.
1030	In process			Needs baseline collection.

2.1.2 Parent Support and Training Providers and Caregivers Working Alliances

The Working Alliance Inventory (WAI; Horvath & Greenberg, 1994) measures the quality of the working relationship between the recipient of services and the provider of services. The WAI is a 12-item instrument. Responses to items are on a 7-point Likert scale (1 = not at all true, 2 = a little true, 3 = slightly true, 4 = somewhat true, 5 = moderately true, 6 = considerably true, 7 = very true). The WAI consists of a total score and three subscales which assess perceived agreement on the tasks, goals, and the personal attachment (bond) between the PST provider and the parent. A score of 84 is the highest possible total score; a score of 28 is the highest possible subtotal on each subscale. Higher scores suggest stronger working alliances.

Tables 4–7 describe initial WAI findings for parents with data for all three time periods (n=13). Paired samples t-tests were conducted to assess for significant differences between means from baseline to three months, three months to six months, and baseline to six months. There are no significant differences between means for these three data collection intervals. These initial WAI findings support the researchers' hypothesis that the WAI findings would be relatively high and remain stable because the essence of the PST intervention rests in the strong helping alliances that are established in the initial interactions between PST providers and parents (Davis-Groves et al., 2007). In addition, previous working alliance research has found a "robust link between" the service recipients' perception of the working alliance early on and improved outcomes (Horvath & Greenberg, 1994, p. 116) in the therapeutic process. In other words, stronger working alliances predict better outcomes.

Despite initial strong alliances, changes (increases and decreases) are noticeable in the WAI scores for specific individual participants. For example participant #, 1003 total scores start high and decrease some over time. In order to understand these changes in the working alliance, findings are reviewed with caregivers. These discussions help develop theoretical intervention techniques for the PST Practice Protocol. Six final reviews have been completed. All six parents confirmed that the WAI questions address what is most important about their relationships with their PST providers. Three parents explained decreases in scores at certain intervals due to minimal regular contact with their PST providers during a particular time frame when they were experiencing stressors. One parent explained the gradual increase in working alliance scores as she "wasn't sure what was going on at first... I didn't know what she was here for." Finally, the other parent felt she got to know her PST better which was why the scores increased.

More 12-month caregiver reviews will illuminate what variables impact the initial interactions as well as detail the unique contributions the relationships between PST and parents bring to the intervention effort.

Table 4
WAI - Total Score N=13

Participant ID	Baseline	Three	Six
1002	78	83	84
1003	80	48	51
1005	51	51	59
1006	64	72	67
1008	71	72	70
1009	62	75	83
1010	84	84	78
1012	62	67	81
1013	75	81	84
1014	50	56	49
1015	80	80	78
1017	59	68	66
1019	84	84	83
Mean	69.23	72.75	74.23
Range	50-84	51-84	51-84

Table 5
WAI - Task N=13

Participant ID	Baseline	Three	Six
1002	25	27	28
1003	26	16	18
1005	17	15	20
1006	21	22	22
1008	27	21	27
1009	20	23	27
1010	28	28	28
1012	20	24	27
1013	27	28	28
1014	17	17	20
1015	26	26	26
1017	19	23	20
1019	28	28	27
Mean	23.15	23.5	25.15
Range	17-28	15-28	18-28

Table 6
WAI - Bond N=13

Participant ID	Baseline	Three	Six
1002	25	28	28
1003	27	16	16
1005	19	20	23
1006	21	25	23
1008	28	27	28
1009	21	26	28
1010	28	28	28
1012	20	18	26
1013	27	28	28
1014	17	19	20
1015	27	28	28
1017	21	25	25
1019	28	28	28
Mean	23.85	24.31	26.23
Range	17-28	16-28	16-28

Table 7
WAI - Goal N=13

Participant ID	Baseline	Three	Six
1002	28	28	28
1003	27	16	17
1005	15	16	16
1006	22	25	22
1008	16	24	15
1009	21	26	28
1010	28	28	22
1012	22	25	28
1013	21	25	28
1014	16	20	9
1015	27	26	24
1017	19	20	21
1019	28	28	28
Mean	22.23	24.25	22.85
Range	15-28	16-28	15-28

2.1.3 Caregiver Strain Questionnaire Scores

The Caregiver Strain Questionnaire (CGSQ; Brannan et al., 1997) measures the impact that caring for a child with emotional and behavioral problems has on a primary caregiver. The respondent caregiver was asked to report the degree to which their child’s problems caused them stress. The CGSQ includes 21 items that are rated on a 5-point Likert scale (1 = not at all, 2 = a little, 3 = somewhat, 4 = quite a bit, 5 = very much). Higher ratings indicate higher levels of strain. The CGSQ includes three subscales that measure objective caregiver strain, external subjective caregiver strain, and internal subjective caregiver strain. Tables 8–11 below detail the participant scores for baseline and six months. Paired samples t-tests were conducted to assess for significant differences between means from baseline to six months. Three of the four caregiver scales showed significant decreases in caregiver strain. There were significant differences between means scores on the global strain [$t(13) = 4.54, p < .01$], the objective strain [$t(13) = 4.97, p < .01$] and, the internal subjective strain [$t(13) = 3.86, p < .01$].

Table 8
Global Strain Scores N=14

Participant ID	Baseline	Six Months
1002	3.48	2.95
1003	3.86	3.05
1005	2.57	1.48
1006	4.45	3.62
1008	3.29	3.38
1009	2.67	2.43
1010	4.05	2.14
1012	4.05	2.86
1013	2.24	2.14
1014	4.05	2.67
1015	3.81	3.19
1016	4.48	3.62
1017	4.19	4.43
1019	3.9	3.14
Mean	3.65*	2.94*
Range	2.24-4.48	1.48-4.43

Table 9
Objective Strain Scores N=14

Participant ID	Baseline	Six Months
1002	3.27	2.91
1003	3.91	2.82
1005	2.45	1.27
1006	4.64	3.55
1008	2.91	2.91
1009	2.73	2.18
1010	4.09	1.55
1012	4	2
1013	2.18	1.73
1014	3.64	2.82
1015	3.82	3.09
1016	4.73	3.18
1017	4.18	4.18
1019	4.18	3.18
Mean	3.62*	2.67*
Range	2.18-4.73	1.27-4.18

*Mean difference is statistically significant at $p < .01$

Table 10
Internal Subjective Strain Scores N=14

Participant ID	Baseline	Six Months
1002	3.83	3.33
1003	4	3.33
1005	3.17	1.5
1006	4.83	4
1008	4.67	4.17
1009	3	3
1010	4.67	3
1012	4.67	3.83
1013	2.5	2.83
1014	4.33	2.83
1015	4.5	3.33
1016	4.83	4.5
1017	4.5	4.83
1019	4.5	4
Mean	4.14*	3.46*
Range	2.5-4.83	1.5-4.83

Table 11
External Subjective Strain Scores N=14

Participant ID	Baseline	Six Months
1002	3.5	2.5
1003	3.5	3
1005	2	2
1006	3.5	3.25
1008	2.25	3.5
1009	2	2.25
1010	3	2.5
1012	3.25	3.75
1013	2	2.25
1014	3.5	2
1015	2.75	3.25
1016	3.25	3.5
1017	3.75	4.5
1019	2.25	1.75
Mean	2.89	2.86
Range	2-3.75	1.75-4.50

*Mean difference is statistically significant at p<.01

When six caregivers reviewed their strain scores over 12 months, all parents discussed how a combination of services helped their families. Case management services, in particular, helped address needs the children had, and parent support services addressed needs the parents' had. One parent described the impact of the mutual connections she felt with their PST provider and illuminated how the PST intervention mitigates isolation she felt as the result of parenting a child with emotional or behavioral problems. The parent PST providers are uniquely equipped to address caregiver strain outcomes.

I just, like right away from the moment I met [the PST], I could tell she liked her job, she enjoyed what she did, and she cared about the people she worked with. I mean she just gave me that feeling. I instantly felt comfortable with her and I could talk to her about how I felt and what was going on with my family situation and my children and how frustrated I was. I wanted to rip my hair out, you know, and she understood. And she started telling me things that she'd gone through with her own kids. And I felt like, wow, she knows what I mean because she's been through it. Wow, it's cool to know I'm not alone. I'm working with someone that's been through this before, not just read it in a textbook.

2.1.4 Family Empowerment

The Family Empowerment Scale (FES; Koren, Dechillo, & Friesen, 1992) measures empowerment in families with children who have emotional disabilities. The FES is particularly useful in agencies with delivery models that feature client empowerment as a goal. The FES is a 34-item instrument based on a two-dimensional definition of empowerment: the level of reported personal empowerment and the way it is expressed. Items are rated on a 5-point Likert scale (1 = not true at all, 2 = mostly not true, 3 = somewhat true, 4 = mostly true, 5 = very true). Higher ratings indicate higher levels of empowerment. Subscales are constructed based on three levels in which empowerment can occur: community/political investment, service system, and family (the community/political investment subscale is collected only at baseline, six, and twelve months).

The family subscale assesses levels of empowerment in the immediate home and in day-to-day situations. The services subscale measures how much the parent feels empowered in dealing with the professionals and agencies that provide services to his or her child. The community/political investment subscale measures the parent's feelings of empowerment with government groups, policy makers, and the community. It pertains to advocacy of children in general, rather than the parent's individual child. Tables 12–14 summarize initial results with 14 family participants. Paired samples t-tests were conducted to assess for significant differences between means from baseline to six months on all three subscales. Two of the three scales showed significant increases in family empowerment. The mean scores from baseline to six months are statistically significant community/political investment [$t(13) = -3.23, p < .01$], and the family involvement [$t(13) = -2.79, p < .05$].

Table 12

Family Empowerment – Community/Political N= 14

Participant ID	Baseline	Six Months
1002	2.4	4
1003	1.4	4
1005	2.5	3.3
1006	3.1	3
1008	1.3	1.6
1009	2.3	4.1
1010	1.6	3.4
1012	2.8	2.1
1013	3.6	4.8
1014	4.1	4.9
1015	3.3	2.9
1016	4	4.9
1017	4.6	4.3
1019	2.2	3.8
Mean	2.80*	3.65*
Range	1.3-4.6	1.6-4.9

*Mean difference is statistically significant at $p < .01$

Table 13

Family Empowerment – Service System N=14

Participant ID	Baseline	Six Months
1002	4	4.92
1003	3.33	4.25
1005	3.42	3.75
1006	4.5	3.58
1008	4.33	2.67
1009	4.17	4.83
1010	4.42	4.42
1012	4.33	4.75
1013	4.25	4.92
1014	4.58	4.92
1015	4	4.42
1016	4.5	4.92
1017	5	4.92
1019	4.67	5
Mean	4.25	4.45
Range	3.33-5	2.67-5

Table 14

*Family Empowerment – Family Involvement
N=14*

Participant ID	Baseline	Six Months
1002	2.83	3.92
1003	2.92	4
1005	3.75	3.67
1006	3.5	3.5
1008	2.75	3.92
1009	3.92	4.92
1010	4.17	3.75
1012	3.5	3.25
1013	4.25	5
1014	4.58	4.75
1015	3.17	3.83
1016	3.58	4.42
1017	4.58	4.67
1019	3.83	3.67
Mean	3.67**	4.09**
Range	2.75-4.64	3.25-5

**Mean differences are statistically significant at $p < .05$

The six caregivers who completed 12-month reviews for FES scores gave examples of ways they have learned to improve their family situations. All parents confirmed that their PST provider is instrumental in noticing their efforts to improve their family situation. In addition, parents remarked on the unique

contributions of team members (case managers and medication managers) who had an influence on changing the course of the family situation for the better.

I just want to fix my kids and make their life the best it can be. I want them to have everything I didn't have, everything. And my PST has helped me a lot with that. You know, she's given me a lot of good pointers to help out with my child, and it is helping!

The PST has actually sat here and helped me with my child. She's seen her fits and stuff and she went in there and actually took care of it, you know. She's good at what she does. She's good with kids... I'm thankful for her and the case manager and everybody that's helped me with her, because they have. They've helped me with her a lot.

2.1.5 Behavioral Emotional Rating Scale II Scores

The Behavioral and Emotional Rating Scale: A Strength-Based Approach to Assessment – Second Edition (BERS-II; Epstein, 2004) is a standardized scale used to assess various behavioral and emotional strengths of children. The BERS-II consists of 52 Likert-type scale questions that assess the presence of strengths. Responses on the scale range from 0–3 and measure the degree to which a behavior is or is not present in the child (0 = not at all like, 1 = not much like, 2 = like, 3 = very much like). An overall strengths scale and five subscales can be summarized. The subscales include; school functioning, affective strengths, family involvement, interpersonal, and intrapersonal functioning. Tables 15–20 summarize the BERS-II total strengths scores and the subscale scores. Paired samples t-tests were conducted to assess for significant differences between means from baseline to six months. The mean scores from baseline to six months are statistically significant for 1) the total strengths index [$t(12) = -2.73, p < .05$], 2) the school functioning subscale [$t(12) = -3.66, p < .05$], 3) affective strengths subscale [$t(12) = -2.32, p < .05$] and, 4) the interpersonal strengths subscale [$t(12) = -2.75, p < .05$].

Table 15
BERS-II Total Strengths Scores N=13

Participant ID	Baseline	Six Months
1002	73	88
1005	126	138
1006	98	119
1008	93	90
1009	119	113
1010	105	112
1012	113	122
1013	109	128
1014	107	131
1015	93	100
1016	88	154
1017	130	120
1019	62	92
Mean	101*	116*
Range	(62-130)	(88-154)

*Mean difference is statistically significant at p<.05

Table 17
BERS-II Affective Strength N=13

Participant ID	Baseline	Six Months
1002	6	6
1005	16	16
1006	11	13
1008	10	10
1009	16	14
1010	7	11
1012	13	15
1013	12	17
1014	11	14
1015	10	11
1016	9	19
1017	17	16
1019	5	7
Mean	11*	13*
Range	(5-17)	(6-19)

*Mean Difference is Statistically Significant at p<.05

Table 16
BERS-II School Functioning N=13

Participant ID	Baseline	Six Months
1002	7	12
1005	11	12
1006	9	12
1008	5	8
1009	14	12
1010	8	14
1012	11	12
1013	9	13
1014	12	17
1015	3	10
1016	8	18
1017	12	10
1019	6	10
Mean	8.85*	12.31*
Range	(3-14)	(8-18)

Table 18
BERS-II Interpersonal N=13

Participant ID	Baseline	Six Months
1002	3	6
1005	12	16
1006	10	12
1008	7	7
1009	10	10
1010	15	12
1012	10	12
1013	10	14
1014	6	11
1015	7	9
1016	6	17
1017	10	9
1019	3	10
Average	8.38*	11.15*
Range	(3-14)	(6-17)

Table 19
BERS-II Family Involvement N=13

Participant ID	Baseline	Six Months
1002	6	9
1005	15	17
1006	9	14
1008	13	10
1009	12	13
1010	14	10
1012	12	10
1013	16	16
1014	14	15
1015	14	9
1016	10	17
1017	18	15
1019	4	8
Mean	12.08	12.54
Range	(4-18)	(8-17)

Table 20
BERS-II Intrapersonal N=13

Participant ID	Baseline	Six Months
1002	8	8
1005	15	17
1006	10	13
1008	10	8
1009	12	11
1010	10	12
1012	14	15
1013	10	11
1014	12	16
1015	11	11
1016	8	19
1017	15	15
1019	4	9
Average	10.69	12.69
Range	(4-15)	(8-19)

The six caregivers who completed the 12-month reviews all illustrated that their children’s outcomes were impacted by team interventions provided in the children’s natural environments. Initial qualitative findings were clear that the combination of individualized interventions contributes to improvement in child and family outcomes. For example, the parent support interventions address what parents are thinking or feeling about the challenges and help parents reflect and be open to learning new strategies to address the challenges they are facing. The face-to-face interventions provided by case managers to children help address needs in their school, community, or family situation where they experience the challenge. The group interventions (psychiatric rehabilitative groups) provide a safe peer group where youth can learn skills to address interpersonal challenges they face at school and with their peers. Individual therapy and medication management address challenges youth face in learning to manage their feelings or increase their affective strengths.

As more caregiver reviews are completed, themes regarding how specific services target children’s outcomes will be noted and summarized.

2.1.6 Limitations of the Family Outcomes Evaluation Findings

These findings are generated from small samples. However, given such a small sample, it is noteworthy that statistically significant improvement was shown on a number of measures. Though the findings show promise, a larger sample will generate more reliable findings that could confirm the emerging themes in the qualitative analysis of caregiver experiences. It should also be noted that the research design employed in this project did not include a randomly assigned control group which would be necessary to provide the most rigorous test of the model.

2.2 Team and Organizational Variables That Support Implementation of PST Services

The PST practices at the team level are driven by Individualized Service Planning (ISP) Theory. The ISP Theory has roots in the national system of care movement and the subsequent development of the Wraparound Model of service delivery (Stroul & Friedman, 1986; Burns & Walker, 2010). The ISP theory purports that a family¹ and a group of individuals (some professional and some not) come together to develop a “uniquely tailored” plan designed to build on the families’ strengths to address their stated needs and priorities (Walker & Burns, 2010, p. 8). Previous study indicates PST services were developed and are most effective within the context of an individualized team-based approach (Davis-Groves et al., 2007). Additionally, initial family outcome findings described in section 2.1 make it clear that the impact of the PST intervention is part of a larger community-based services (CBS) team intervention effort. Furthermore, the Kansas CBS Interactive Community Event Training Manual (Kids Training Team, 2007, p. 15) clearly spells out specific principles to guide successful implementation of CBS services:

Successful collaboration and teaming begins with a collective energy and a shared drive among team members. Highly effective teams have four key elements: 1) a compelling, shared goal or goals; 2) team members with unique competencies that will contribute to successful outcomes; 3) members that operate within a formal structure, with well-defined roles that facilitate collective/collaborative work; and 4) mutual respect, tolerance, and trust.

Therefore, team effectiveness is an important organizational variable to document during implementation of the PST Practice protocol.

The knowledge about team effectiveness and implementation of individualized community-based service planning with families provides a solid foundation to assess the “necessary conditions” at the team level for the PST Practice Protocol (Walker, Koroloff, & Schutte, 2003). Walker and colleagues (2003) conducted an extensive literature review and subsequent nation-wide study which describes five broad “necessary conditions for high quality implementation of individualized service plans at the team level” (p. 27). Table 21 summarizes the necessary broad conditions and sub-conditions of team effectiveness.

¹ *Family* refers to the youth who experience serious emotional or behavioral challenges and those individuals that have primary care-giving responsibilities.

Table 21

Necessary Conditions for High-Quality, Individualized Service Plans at the Team Level

1. Practice Model – ISP Team adheres to a practice model that promotes team cohesiveness and high-quality planning in a manner consistent with the value base of the practice model.
 - A. Team adheres to meeting structures, techniques, and procedures that support high-quality planning.
 - B. Team considers multiple alternatives before making decisions.
 - C. Team adheres to procedures, techniques and/or structures that work to counteract power imbalances between and among providers and families.
 - D. Team uses structures and techniques that lead all members to feel that their input is valued.
 - E. Team builds agreement around plans despite differing priorities and diverging mandates.
 - F. Team builds an appreciation of strengths.
 - G. Team planning reflects cultural competence.
2. Collaboration/Partnerships – Appropriate people prepared to make decisions and commitments, attend meetings, and participate collaboratively.
3. Capacity Building/Staffing – Team members perform their roles on the team.
4. Acquiring Services/Supports
 - A. Team is aware of the wide range of supports and their effectiveness.
 - B. Team identifies and develops family-specific natural supports.
 - C. Team designs tailor services based on families’ expressed needs.
5. Accountability – Team maintains documentation for continuous quality improvement and mutual accountability.

Though there is a solid foundation for assessing team effectiveness, there is a paucity of research which documents the unique contribution professional parent providers have toward more individualized service planning. Researchers posit that this could be due to the lack of clarity about the professional parents' role in this process (Walker, Koroloff & Schutte, 2003). Furthermore current available literature is also based on the typical professional parent infrastructure across the nation (endorsed by the Federation of Families for Children's Mental Health) in which the professional parent services are provided by family-run organizations (Ireys, Chernoff, Stein, DeVet, & Silver, 2001; Munson, Hussey, Stormann, & King, 2009). The Kansas PST provider infrastructure is organized differently. In Kansas, PST providers are paid employees of CMHCs. A major contribution of this project is that The PST Practice Protocol describes a practice model which clearly defines the PST providers' role in the context of an individualized community mental health treatment teams.

Previous research sheds light on the unique role PST provides play on treatment teams. The Kansas PST is presented with unique opportunities within a more traditional community mental health service delivery system to address power imbalances between and among providers and families. For example, PST providers on the teams are often viewed as consultants with specialized expertise to coach team members on understanding caregivers' perspectives, competencies, and unique family situations (Davis-Groves et al., 2007). The PST providers serve as a catalyst on treatment teams to ensure that CBS teams "adhere to procedures, techniques and/or structures that work to counteract power imbalances between providers and families" (Walker et al., 2003, p. 30). The PST providers can also help providers understand the general dynamic occurring in the team process which indicates that individuals with a "higher status" (more education) have more "influence" over decisions being made (Walker et al., 2003). The PST provider represents the family perspective in the agency and a reminder that, even when the family is not present, the work of the team is to build on family competencies and help address their stated needs and priorities (Davis-Groves et al., 2007). Furthermore, PST providers are uniquely equipped to help families feel safe to share their perspectives in the team process (either directly or indirectly) because they understand what it feels like to engage in a treatment process and can coach families on useful strategies (Davis-Groves et al., 2007).

In summary, a clearly defined model of PST practice that documents an effective ISP team process during implementation (i.e., the five conditions described in Table 21) will build foundational knowledge on the unique role professional parents have on ISP teams and within service delivery organizations. Thus, next steps in fiscal year 2011 include translating the necessary conditions described in Table 21 into a semi-structured questionnaire format. This questionnaire will be used to assess ISP practices when preparing to implement the PST Practice Protocol. This next section describes the team services utilization as well as cost incurred by Medicaid to achieve the family outcomes described in section 2.1.

2.3 Service Utilization

Data on service utilization for each family participating in the Outcomes Evaluation study were gathered to understand what frequency and amount of PST services were utilized as well as the array of community-based services utilized. Data were gathered on all Medicaid-billable services (see Table 22). Individual service utilization data were presented to family participants for review and feedback. Aggregate data were analyzed for PST service utilization themes in conjunction with other community-based services across all three sites and in each agency.

Thus far, four families have reviewed their child's service utilization data following 12 months of PST Study involvement. Data show the total number of minutes used each month per service beginning as early as 12 months prior to the start of PST services and following 12 months afterward. These themes emerged from the family review:

- Family recall of services received, frequencies, and patterns of utilization corresponded generally with the service utilization data.
- Families described significant events in their lives that occurred where changes in service use (e.g., increase, decrease) occurred. One parent attributed increases in service utilization to her PST provider educating her about the different services and how to work with the various service providers.

Under the systems of care model, a particular intervention may, in fact, play a crucial role in the overall array of services offered. However, effects of that intervention cannot be understood outside the context of the full service array (Holden, Friedman, & Santiago, 2001). Therefore, service utilization data were gathered for the purpose of analyzing the typical service constellation used by families receiving PST services, as well as to determine any patterns or changes in service use patterns as a result of introducing the PST intervention.

Data illustrating service utilization for each participant were collected for the 12 months before and after baseline data collection. Table 22 outlines average monthly utilization of each service offered to participants as part of the overall service array for the five months before and after the baseline data collection interval of this study. In addition to average monthly use, Table 22 also reports the average monthly cost to Medicaid, per participant, of each service for the time period represented.

Table 22

Average Monthly Service Use Five Months Before and After Baseline (in minutes) and Average Monthly Medicaid Cost Per User

Service	5 Mo. Prior n=9	4 Mo. Prior n=14	3 Mo. Prior n=16	2 Mo. Prior n=18	1 Mo. Prior n=19	Baseline n=19	1st Mo. n=19	2nd Mo. n=18	3rd Mo. n=17	4th Mo. n=14	5th Mo. n=14	Average Cost per User per Month
Parent Support	6.67	1.07	9.38	41.67	42.63	116.05	84.47	66.67	90.88	105	110.36	\$40.90
Case Management	258.33	105	135.94	152.5	231.32	309.47	361.58	290.56	272.65	418.93	340.71	\$556.22
Individual Therapy	57.78	46.43	43.75	40	49.47	46.58	46.32	43.33	17.65	11.43	11.43	\$45.18
Crisis CPST	9	30	7.06	0	0	0	0	0	0	0	0	\$3.80
Crisis Intervention	18	6	5.29	0	0	0	0	0	0	0	0	\$7.72
Respite Care	0	0	0	0	0	0	0	0	80	160	268	\$18.47
Targeted Case Management	48	19	25.59	19.74	30	47.25	36.75	13.42	8.33	26	19	\$19.24
Wraparound	4.5	1	12.35	26.05	35.25	39.75	30	15.79	10	24	37	\$28.57
Family Therapy	4.5	11.33	0.88	14.74	9	0	3	0	5.56	9.33	4	\$7.37
Medication Management	7.5	3	7.94	3.16	10.5	9.75	14.25	7.11	4.17	6	8	\$20.14
Case Conference	0	5	6.18	4.74	0	18.75	11.25	0	5	5.67	4	\$3.67
Group Therapy	27	12	14.12	28.42	48	15	21.75	47.37	33.33	0	0	\$9.99
Psychosocial Group	151.5	206	423.53	511.58	461.25	564	735	963.16	794.17	330	407	\$294.17
Intake/Evaluation	24	17.53	7.06	20.53	16.5	10.5	0	0	0	0	0	\$17.48
Attendant Care	21	11	7.06	3.16	3	1.5	6	3.16	0	0	0	\$2.03
Parent Support Group	0	0	0	0	0.75	4.5	4.5	8.68	9.17	11	7	\$0.83
Psychosocial Rehab-Individual	4.5	13	41.47	26.84	5.25	0	0	0	0	0	0	\$7.52
Psychological Testing	18	6.47	0	0	0	0	0	0	0	0	0	\$2.82
TOTAL COST PER USER PER MONTH												\$1,086.12

Figure 2

Average Monthly Utilization of Services (in minutes) for Parent Support, Case Management, and Individual Therapy Services

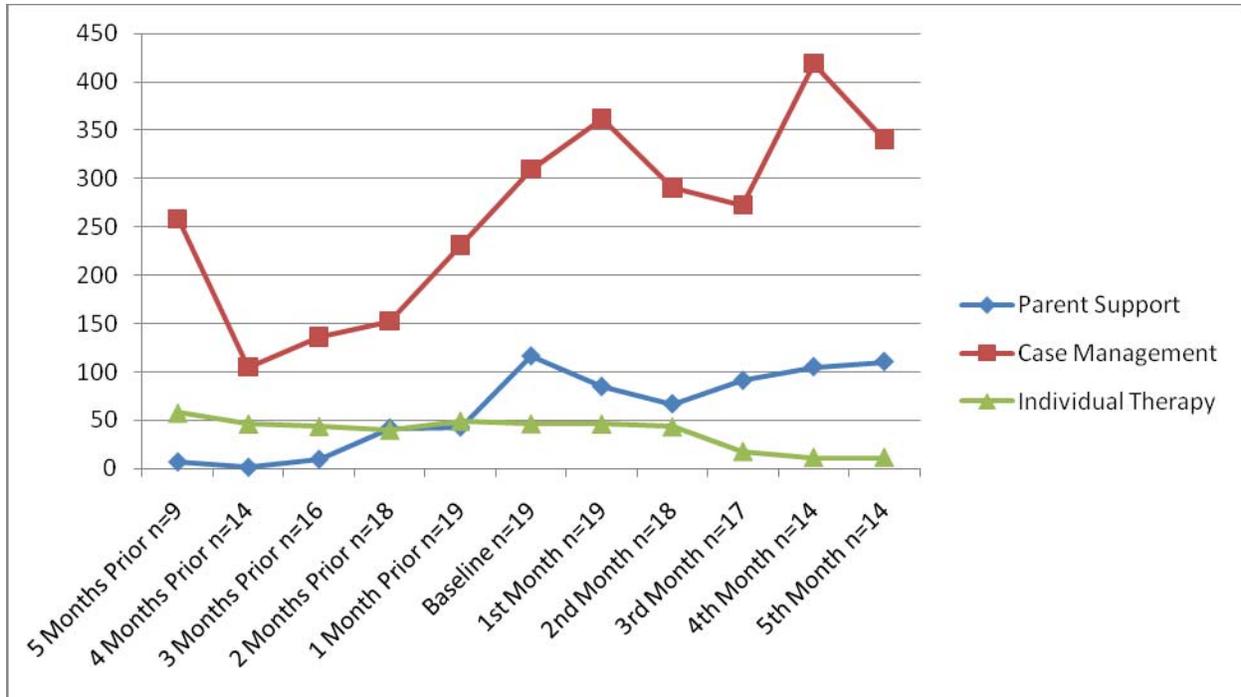


Figure 2 illustrates the average monthly utilization of PST, Case Management, and Individual Therapy services provided over this same period. Correlation coefficients were computed among these three services. The results of the correlation analyses presented in Table 23 show that the correlation between PST and case management services is significant at the .01 level. Additionally, the correlation between PST and individual therapy is negatively correlated at the .05 level. Both correlation coefficients represent a large effect size. In general, these results suggest that when utilization of PST service is high, utilization of case management tends to increase as well, and use of individual therapy tends to decrease.

These findings are consistent with the family view of services reported by caregivers in the 12-month review upon completion of the study. During these 12-month reviews, caregivers reported significant and stressful life events coinciding with spikes in service use. If increased case management services are required due to decreased functioning level of the child during stressful events, it is reasonable and likely, according to this strong correlation, that PST services also increase. This increase in PST services may be needed to address increased caregiver strain as a result of the event, as well as to increase caregiver ability to support the child's functioning while under increased strain. Additionally, the decrease in use of individual therapy services may be attributable to the increased use of the other, more intensive services, which more adequately meet the family's immediate needs under times of increased strain. These variations reflect the community-based system of care principle of providing flexible, multimodal, and integrative treatment that is individualized to most appropriately and

efficiently meet the particular needs of the family (Pumariega, Nace, England, Diamond, Fallon, Hanson, et al., 1997).

Table 23

Correlations Among Utilization of PST, Case Management, and Individual Therapy Five Months Before and After Baseline (N=11)

	Parent Support	Case Management	Individual Therapy
Parent Support		.818**	-.643*
Case Management			-.487
Individual Therapy			

*p<.05

**p<.01

2.3.1 Next Steps: Understanding Cost and Implementation Supports Needed for the PST Practice Protocol

Throughout this report, and in previous study reports, it is made clear that the PST practices are part of integrated CBS interventions. The participatory nature of the model development effort uncovered considerations for implementing fidelity monitoring procedures. On several occasions, Kansas CBS program directors raised the concern that reimbursement rates for PST services barely cover the cost of providing PST services and that fidelity implementation procedures will increase the costs of providing PST services. Kansas program administrators’ perspectives are validated in the literature on implementation of psychiatric rehabilitation service models. Initial expenses include costs associated with training and staff time spent in start-up activities, such as supervision, hiring, purchasing new equipment, and securing adequate work space. In addition, organizations lose revenue that staff would otherwise generate if they were providing services instead of participating in start-up activities (Bond et al., 2001; Brunette et al., 2008). As one program leader summed it up, “Every time I’ve got a clinician sitting in a meeting... it’s costing me money” (Brunette et al., 2008, p. 994).

The literature identifies various strategies that can be carried out at both organizational and system levels to further address cost issues. For example, organizations can plan for a temporary reduction in revenue due to staff involvement in start-up activities (Brunette et al., 2001), while maximizing use of existing funding mechanisms that may align with the service or any of its components (Fixsen et al., 2005; Rapp et al., 2005). Efforts to streamline non-revenue generating activities related to implementation (e.g., training, outcomes data collection, fidelity monitoring) help organizations defray their costs (Torrey et al., 2001). Finally, existing reimbursement policies can be reviewed by system-level policy makers and can be revised as needed to align with the implementation of a new service (Gold et al., 2006; Hoagwood et al., 2001; Torrey et al., 2001).

Thus, assessing costs and billable sustainability for PST services in the context of CBS is an important next step. Figures on the average Medicaid billable services per month provide a baseline measure of billable sustainability. Table 22 summarizes the average monthly billable cost to Medicaid, per participant, of each service for the time period represented. The highest average reimbursable service per month was case management (\$556.22), followed by psychosocial rehabilitation groups (\$294.17), individual therapy (\$45.18), and Parent Support (\$40.90), with an average overall cost of \$1,086.12 per month.

Next steps in fiscal year 2011 include further documenting the costs agencies incur implementing the PST Practice Protocol and applying strategies derived from the literature review to address costs. In addition, service data will be collected at all implementation sites and average billable costs will be analyzed to assess how implementation of a more structured PST service model impacts reimbursable services. Finally, the current Kansas reimbursement rates, policies, and service definitions will be examined to understand if the current system infrastructure is set up to sustain implementation of the PST Practice Protocol.

3. Fidelity Monitoring to the Core Components of PST Services

Fidelity monitoring is important because it strengthens the link between an intervention and its outcomes by documenting that the essential core components are being implemented as intended (“fidelity”). Application of an intervention within real-world mental health service settings means greater likelihood of departure from the practice model as written (“drift”) for a variety of reasons, intentional and otherwise (Mowbray et al., 2003; Phillips et al., 2001). Fidelity measurement is a useful tool that guides providers, supervisors, and administrators as they navigate through the inevitable distractions and barriers that accompany community-based service delivery.

Several evidence-based practices with corresponding fidelity monitoring procedures are currently implemented in Kansas CMHCs for adults living with a serious and persistent mental illness. None exist yet for community-based children’s mental health services (e.g., case management, wraparound, attendant care, psychosocial group).

3.1 The Process

3.1.1 Who Will Conduct the Reviews?

University staff at the KU School of Social Welfare will perform the review in conjunction with a family representative and an experienced PST provider who have been trained to conduct a review. At least three persons will comprise each fidelity review team. A family representative will be recruited by circulating a flyer to families who have completed the PST study outcomes evaluation. The flyer will include time estimates, compensation amounts, and contact information so that family members may contact KU staff for more information if they are interested in participating. A PST review team member will be recruited in collaboration with the [insert Pam’s role] considering the following criteria. He or she must have: 1) at least five years experience providing PST services on a CMHC services team, 2) received supervisor’s recommendation and support to participate, 3) an interest in research or research

experience, 4) an ability to travel to four sites in Kansas at least once, 5) good writing skills 6) a child with SED/special needs who has received PST services, and 7) not been employed at one of the four implementation sites.

KU staff will provide the initial training to the family representative and PST provider to conduct fidelity reviews. Training materials for fidelity reviews will be developed and all fidelity team member participants' experiences will be closely documented in order to replicate these innovative procedures in future fidelity reviews.

3.1.2 What Is the Procedure/Method?

Four sites will be recruited for participation in the implementation of the PST Practice Protocol. A fidelity implementation flyer will be developed and sent to SRS for comment and approval prior to circulation at the potential implementation sites. The flyer will detail what KU staff will do and what is expected of CMHC sites. Potential implementation sites will be chosen, in collaboration with SRS, based on their willingness to participate, how well they represent Kansas CMHC services provision, and whether they employ PST providers who have experience as parents of children with SED or special needs. A list of potential agencies will be generated to be approached individually by KU staff to determine interest in participation.

KU staff will conduct an initial onsite observation of the Community-Based Services Program. Observations will include PST practice, supervision, team practice, and interviews to gain an understanding of the organizational structure.

KU staff will provide an initial training² approved by SRS (developed in conjunction with KHS and state-level CMHC services training advisory groups, such as the Unified Training Advisory Group, Children's Services Training Advisory Group). KU staff will also provide ongoing consultation and technical assistance to participating CMHCs to promote high fidelity to PST practice. The initial training will occur at the four implementation sites. The implementation sites will be asked to select a team of community-based providers to participate in this training. At minimum, the teams will include the CBS Directors, a PST provider, case managers, therapists, and any supervisors with whom the teams will work closely when a new referral comes in. The training will include these components: 1) an orientation to the PST Practice Protocol and how to use it, 2) an overview of the organizational variables that support implementation of the PST practice protocol, 3) an ISP team assessment survey/questionnaire, and 4) a focus group on the strengths and needs for implementation of the PST Practice Protocol at each site.

Based on the results of the ISP team assessment survey and the focus groups, an individualized implementation plan will be prepared. Staff who participated in the focus groups will have an

²Orientation to the PST Practice Protocol will be provided in lieu of training for PSTs who have already completed initial PST Training (online module plus ICE Live Event training) provided by the Wichita State University Training and Technology Team.

opportunity to review the implementation plans and provide feedback. Implementation plans will be utilized to support the development of the ISP team effectiveness protocol and subsequent training materials.

The fidelity team will begin monitoring implementation with each participating CMHC team once new referrals are assigned to the trained teams. At minimum, two referrals per trained team (8 totals) will be generated.

Data for fidelity reviews will be collected through the following methods:

- 1) Interviews with service recipients by phone to assess adherence to PST Practice Protocol and gather family outcomes (BERS-II, Family Empowerment, Caregiver Strain, and WAI).
- 2) Gather and summarize service data to assess effective utilization of PST services in conjunction with other CBS services.
- 3) Interviews with PST providers and all team members by phone.

The fidelity team will prepare a fidelity report which will include the sites' fidelity implementation plan and 6 months of implementation review of the PST Practice Protocol. Feedback on the report will be provided by SRS DBHS and incorporated into the report. One six-month review of the PST Practice Protocol will be completed with the four sites by the end of FY 2011.

The fidelity team will meet with CMHC staff by phone to review findings and recommendations for improving fidelity. KU staff will provide semi-annual progress reports to SRS DBHS with updates on implementation process.

3.2 The Tools

Four tools have been developed to support the fidelity review process. All were designed to facilitate a mixed-methods approach to fidelity monitoring that can be accomplished efficiently, economically, and with minimal demands on staff at the implementation sites.

3.2.1 Master Tracking Form

This form identifies all possible sources—PST provider, referral provider, team member, family member, treatment records—from which data will be gathered for each of the core components (indicators) of the PST Practice Protocol. Sources are identified for each core component as either essential or optional.

3.2.2 Individual Tracking Form

Data will be gathered for the fidelity review from a minimum of four sources, the PST and referral provider implementing each of the core components (indicators) of the PST Practice Protocol, a team member working with the caregiver who has observed PST services being provided to the family or discussed those services with the PST provider, and the caregiver receiving the service. This individual

tracking form serves as a central repository of scores and summarized information gathered from all sources. The form will be completed for each family participating in the outcomes evaluation across the four sites where the protocol is being implemented and tested.

3.2.3 Participant Checklists

Each fidelity review participant will be asked to rate the frequency at which each core component (indicator) is implemented for a participating family. Some components are expected to occur once, others more frequently. For one-time components, participants will be asked to report the occurrence in *yes/no* format. A 5-point Likert scale rating, ranging from 1 (never) to 5 (always), will be used to rate the frequency of occurrence of components anticipated to happen at every family contact. Some components will occur contingent on family need. First, raters will be asked to indicate in *yes/no* format whether the component was needed. If the response is *yes*, the rater will then be asked to rate how often it was needed.

Checklists will be able to be completed in one of three ways—online, by phone, or on a hard copy that is then mailed to the fidelity review team. The rating for each component will be entered on the Master Tracking Form.

3.2.4 Participant Interviews

Once participant checklists have been completed, researchers will interview the participant by phone or in person to gather additional feedback related to implementation of the core components. A basic interview guide will facilitate the conversation. Participants will receive the interview guide prior to the interview so they can prepare for it. As findings emerge in the interview process, the interview guide will be changed to reflect emerging themes and additional information to be gathered in subsequent interviews that will support the fidelity review process and inform future revisions of the PST Practice Protocol.

4. Summary & Next Steps

This research contributes significant knowledge to the Kansas Community Mental Health System and provides a template for the development of other research-based models of children’s rehabilitative services. The PST Practice Protocol represents the first research-based model of a children’s psychiatric rehabilitative service model in Kansas. The PST Practice Protocol merges Kansas’ stakeholder expertise with current peer-reviewed literature on evidence-based interventions for children with serious emotional and behavioral disorders. Specifically the PST Practice protocol details the specific steps PSTs take when providing high quality PST services that contribute toward improved child and family outcomes.

Furthermore, the outcomes evaluation of PST services is beginning to illustrate that after six months of receiving PST services in conjunction with (case management, psycho-social rehabilitation group, therapy) individualized CBS, there are significant decreases in caregiver strain and children’s behaviors and significant increases in family empowerment, and children’s strengths. Caregivers are reporting and

service utilization data is showing that families are receiving individualized services that coincide with immediate needs they have to receive support and address challenges children experience in their natural environments.

4.1 Facilitate Implementation

In Fiscal Year 2011, the KU Research Team will facilitate implementation of the PST practice protocol and begin testing its use and application in the community mental health context. A PAR approach will continue to be utilized to incorporate feedback. In addition, current literature on Family Support and Education evidence-based practice will be reviewed and incorporated into the implementation efforts.

4.2 Monitor Fidelity & Continue to Assess Outcomes

As described above, fidelity monitoring to the Core Components of the PST Practice Protocol will begin. Feedback from implementation sites and SRS-DBHS will help refine fidelity procedures and the development solid implementation plans. In addition, implementation plans will provide an analysis of existing reimbursement rates and policies that support implementation of the PST Practice Protocol as well as generate next steps for changes to state policies and reimbursement rates.

4.3 Develop Training Materials

The KU Research Team will engage in discussions with state level advisory groups to develop training materials and procedures to support implementation of the PST Practice Protocol & technical assistance procedures into the state training infrastructure.

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Appendix A: Core Components Transformation

Core components of the PST practice model were developed across three phases during which they transformed from a first draft PST Practice Protocol to a product ready for implementation and testing in a practice setting (see attached PST Practice Protocol). The components are displayed here as they appeared during each of the three stages and are arranged as organized in the final draft PST Practice Protocol.

- The left column contains the initial draft of core components developed from knowledge gathered via qualitative research methods from selected expert stakeholders (Davis-Groves et al., 2009, pp. 57-59).
- The middle column presents the components after they were re-configured into 49 discrete statements for use in an activity to establish consensus on the model’s essential components within a broad array of children’s mental health system stakeholders (see Appendix B). Twelve statements are included that were added for variance to enhance statistical analysis during the consensus process. Each of the 49 statements is identified by its number on the consensus survey and is followed by the average importance rating for the statement.
- The right column shows the middle column statements after they were revised for application as indicators in the PST Practice Protocol, a tool that guides implementation of the core components in a practice setting. Explanation for changes made between the original component list and consensus phase and final changes made between the consensus phase and protocol refinement are described here.

Referral Process/Understanding Needs of Families

Original Component	Concept Mapping Statement (Importance Rating Avg.)	Practice Protocol Indicator
CMHC treatment provider considers a referral by talking with the family about what their needs are and considering how the PST service can support those needs.	9. The provider talks to the family about their needs before making a referral. (4.52) 28. The provider considers how PST service can help support the family’s needs when thinking about making a referral. (4.52)	Indicator #1 Indicator #2
CMHC treatment provider considering a referral introduces the PST service to families in a way that supports a successful connection.	1. The provider adequately describes the service and how it can help the family before making a referral. (4.66)	Indicator #3
Family agrees to being referred for the PST service.	17. The family agrees to be referred to the PST	Indicator #4

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	service. (4.34)	
CMHC treatment provider notifies PST that (s)he is referring a family for PST services.	35. The provider refers the family to PST service. (4.25)	Indicator #5
<i>Added during consensus process for variance to enhance statistical analysis. Source was a stakeholder who participated in qualitative research phase.</i>	48. The provider chooses a PST who will be a good match for the family's needs. (4.24)	Indicator #6 ¹
PST obtains information from person making referral and other sources (e.g., staff working with family, records) as needed that supports successful initial PST connection with a family, including: <ul style="list-style-type: none"> • What the family's needs are • Best way to contact the family • Ways to bridge connection for the family between PST and other CMHC staff already working with the family 	13. The PST prepares for the first meeting with the family by reading the child's chart. (3.75) 41. The PST prepares for the first meeting with the family by talking to other providers who are working with the family. (3.87)	MODIFIED² Indicator #7: The PST prepares for the first meeting with the family. Statements 13 & 41 (from 2 nd column) are incorporated as possible action steps for Indicator #7.
PST contacts families to initiate PST service within a few days of receiving referral and information that supports a successful connection.	33. The PST quickly makes contact with the family to schedule the first appointment. (4.37)	Indicator #8

Initial Engagement & Immediate Priorities

Original Component	Concept Mapping Statement (Importance Rating Avg.)	Practice Protocol
PST emphasizes relationship building for successful connection with families during first contacts.	43. The PST spends the first appointment getting to know the family. (4.65)	Indicator #9
PST explores with families what their needs are.	6. The PST asks and talks to the family about their	Indicator #10

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	needs. (4.74)	
PST describes how PST service can help address needs identified by families.	30. The PST asks the family how Parent Support Services can help. (4.48)	Indicator #11
PST emphasizes family comfort during first contacts.	8. The PST and family meet at a location that is comfortable for the family. (4.32) 18. The PST and family meet at a time that is convenient for the family. (4.52)	MODIFIED ² Indicator #12: The PST and family meet in a way that is comfortable for the family. Statements 8 & 18 (from 2 nd column) are incorporated as possible action steps for Indicator #12.
PST paces interventions in order to avoid overwhelming families.	12. The PST begins new interventions only when the family is ready for them. (4.03)	Indicator #13
PST actively listens to families so they feel they are “being heard.”	15. The PST listens to the family in a way that helps the family feel like they are “being heard.” (4.85)	Indicator #14
PST takes great care to not be judgmental of families in any way.	26. The family does not feel judged by the PST. (4.79)	Indicator #15
(For PSTs who are parents or relatives of children with SED/special needs) PST may share his/her personal story as a parent/relative of a child with SED/special needs in a way that helps build a relationship and instill hope.	16. Parents who are also parents of children with SED/special needs may share personal information with the family in a way that helps the family trust the PST. (3.81) 31. PSTs who are also parents of children with SED/special needs may share personal information with the family in a way that helps the family feel hopeful. (3.76)	Indicator #16 ³ Statement 31 (from 2 nd column) incorporated as a possible action step for Indicator #25. ^{2,3}
PST describes how he/she works with families in a	47. The PST describes his/her role to the family,	Indicator #17

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professional role compared to being a friend.	and how it is different from a friendship. (4.66)	
PST describes to families how the PST works within a collaborative team approach to treatment services in which the family is engaged.	46. The PST describes to the family how they work with the other providers on the family's treatment team (case manager, therapist, etc.). (4.44)	Indicator #18
PST works with treatment team members to ensure a collaborative approach between the services he/she provides to families and other services the family receives.	19. The PST and the other members of the family's treatment team work together to provide the right services to help the family. (4.73)	Indicator #19

PST Interventions

Original Component	Concept Mapping Statement (Importance Rating Avg.)	Practice Protocol
PST supports families to identify goals important to them that they want to work on.	38. The PST supports the family in choosing their own goals. (4.48)	Indicator #20
<p>PST provides support that encourages engagement and active participation of the family in the treatment process.</p> <ul style="list-style-type: none"> Emotional support: PST is present for the family, listens, and provides an outlet. Informational support: PST shares information, strategies and resources. Peer support: PST shares his/her personal story as a parent/relative of a child with 	<p>21. The PST encourages the family to participate in their child's treatment. (4.81)</p> <p>32. The PST is available to the family at all times. (2.85)</p> <p>23. The PST listens to the family's concerns. (4.82)</p> <p>25. The PST gives the family information, resources, and strategies. (4.71)</p> <p>31. PSTs who are also parents of children with SED/special needs may share personal information</p>	<p>Indicator #21</p> <p>MODIFIED² Indicator #22: The PST is available to the family as needed.</p> <p>Indicator #23</p> <p>Indicator #24</p> <p>Statement 31 (from 2nd column) incorporated as a possible action step for Indicator #25.^{2,3}</p>

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<p>SED/special needs in a way that helps instill hope and imparts the wisdom that comes from the lived experience.</p> <ul style="list-style-type: none"> • Instilling hope 	<p>with the family in a way that helps the family feel hopeful. (3.76)</p> <p>40. The PST helps the family feel hopeful. (4.66)</p>	<p>Indicator #25</p>
<p>PST provides training that encourages engagement and active participation of the family in the treatment process.</p> <ul style="list-style-type: none"> • Behavioral/Parenting Skills Training • Practical Crisis Coaching • Coping Skills Training • Training on a child’s medication or diagnoses. • Interpreting choice offered by service providers. 	<p>34. The PST educates the family on ways they can be actively involved in their child’s treatment. (4.65)</p> <p>11. The PST educates the family on parenting skills. (4.31)</p> <p>7. The PST educates the family about how to use behavior management skills. (4.40)</p> <p>5. The PST educates the family on skills to handle a crisis. (4.58)</p> <p>45. The PST educates the family on coping skills. (4.48)</p> <p>36. The PST gives the family information about the child’s medication or diagnoses. (3.69)</p> <p>3. The PST helps the family understand choices or services given by other providers. (4.58)</p>	<p>Statement 31 (in 2nd column) incorporated as an action step for Indicator #21²</p> <p>Indicator #26</p> <p>Indicator #27</p> <p>Indicator #29</p> <p>Indicator #28</p> <p>Indicator #30⁴</p> <p>Indicator #31</p>

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<ul style="list-style-type: none"> • Training on policies, procedures and regulations that impact a child with SED living in the community. <ul style="list-style-type: none"> ○ School ○ Working with mental health treatment providers and systems ○ Requirements of the waiver process 	<p>(none—this portion of the component is incorporated into each separate concept mapping statement listed below)</p> <p>2. The PST helps the family work with the school to help their child succeed. (4.60)</p> <p>27. The PST helps the family work with other mental health providers to meet their needs. (4.69)</p> <p>42. The PST helps the family understand the SED waiver process. (4.56)</p>	<p>Indicator #32</p> <p>Indicator #33</p> <p>Indicator #34</p>
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Other

Original Component	Concept Mapping Statement (Importance Rating Avg.)	Practice Protocol
<i>Added during consensus process for variance to enhance statistical analysis. Source was Kansas Health Solutions PST Provider Qualifications.</i>	4. The PST has a child with SED. (3.52)	Not used in protocol ⁵
<i>Added during consensus process for variance to enhance statistical analysis. Source was Family Centered System of Care RFP.</i>	10. Providers of PST services are employees of Community Mental Health Centers (CMHCs). (3.61)	Not used in protocol ⁵
<i>Added during consensus process for variance to enhance statistical analysis. Source was PST provider demographics reported in Davis-Groves et</i>	14. The PST has a child with special needs. (3.24)	Not used in protocol ⁵

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<i>al. (2007).</i>		
<i>Added during consensus process for variance to enhance statistical analysis. Source was a stakeholder who participated in qualitative research phase.</i>	20. The PST does not discuss the family with other mental health center staff before meeting with the family for the first time. (2.48)	Not used in protocol ⁵
<i>Added during consensus process for variance to enhance statistical analysis. Source was a stakeholder who participated in qualitative research phase.</i>	22. The PST is available to the family only during office hours. (2.70)	Not used in protocol ⁵
<i>Added during consensus process for variance to enhance statistical analysis. Source was a stakeholder who participated in qualitative research phase.</i>	24. The PST does not read the child's chart before meeting with the family the first time. (2.15)	Not used in protocol ⁵
<i>Added during consensus process for variance to enhance statistical analysis. Source was Family Centered System of Care RFP.</i>	29. Providers of PST services are volunteers instead of paid employees. (1.63)	Not used in protocol ⁵
<i>Added during consensus process for variance to enhance statistical analysis. Source was Kansas Health Solutions PST Provider Qualifications.</i>	37. PSTs who do not have a child with SED have worked with children with SED for at least 2 years or are qualified by his/her education. (3.81)	Not used in protocol ⁵
<i>Added during consensus process for variance to enhance statistical analysis. Source was Family Centered System of Care RFP.</i>	39. PST services are provided by parent-run organizations that CMHCs contract with. (2.42)	Not used in protocol ⁵
<i>Added during consensus process for variance to enhance statistical analysis. Source was PST provider demographics reported in Davis-Groves et al. (2007).</i>	44. The PST is a parent. (3.63)	Not used in protocol ⁵
<i>Added during consensus process for variance to enhance statistical analysis. Source was PST provider demographics reported in Davis-Groves et al. (2007).</i>	49. The PST is a family member of a child with SED/special needs. (3.27)	Not used in protocol ⁵

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Footnotes

¹This statement was added during the consensus process for purpose of increasing variance to enhance statistical analysis. It is based on a practice that occurs whenever possible. It was not included in the original core component list because the majority of Kansas CMHCs do not have the necessary resources to employ more than one PST provider to serve the same community. The statement was included in the PST Practice Protocol as an indicator because it met criteria for inclusion (see p. 2). This is the only statement added during the consensus phase to increase variance that achieved a rating of 4.0 or higher.

²The original core component (left column) was written broadly so it could be individualized to promote a good fit for families, PSTs and CMHCs when implemented. However, during the consensus process it was necessary to modify some of the original core components so that each presented only one idea to be rated. This modification altered the components (middle column), changing them from having a broad application to instead having only one way that each could be demonstrated. Some of these altered components achieved an importance rating of 4.0 or higher; others did not. Researchers opted to return to the original, broadly written component for inclusion in the PST Practice Protocol (right column) with the altered components serving as possible action steps under the component. Efficacy of the original core components will continue to be evaluated during the PST Practice Protocol implementation phase.

³While the statement did not achieve an average importance rating of 4.0 or higher during the consensus phase, it was retained as a PST Practice Protocol indicator in order to guide the process of self-disclosure, an important function related to the theory of change that drives the PST practice model (see Section 2.1, p. 5). The indicator provides parameters around which self-disclosure occurs, an important support for a PST who is a parent or relative of children with SED or special needs and the treatment teams with whom they collaborate.

⁴This indicator is a part of the Medicaid Home and Community Based (HCBS) SED Waiver service definition for the PST service. Even though it did not achieve an average importance rating of 4.0 or higher, it was retained as a PST Practice Protocol indicator so that all elements of the primary funding source are reflected in the model.

⁵These statements were added during the consensus process for purpose of increasing variance to enhance statistical analysis. None achieved an average importance rating of 4.0 or higher and have not been included in the PST Practice Protocol. Those statements related to PST qualification options and types of relationship between PSTs and CMHCs will be examined during the PST Practice Protocol implementation phase when organizational and systems variables related to implementation are evaluated.

Appendix B: Achieving Stakeholder Consensus: Concept Mapping

Description of the Methodology

Obtaining stakeholder consensus on the core components of the PST protocol was identified as an essential step for establishing the protocol as a service model (Davis-Groves, Byrnes, & Corrigan, 2009). Input was sought from multiple stakeholder groups which yielded the core components of PST practice (see attached PST Practice Protocol). Concept mapping³, a mixed method participatory action evaluation approach, was used to explore the varying degree of importance of components as indicated by stakeholders, frequency of use across Kansas Community Mental Health Centers, and the groupings of the components into conceptually related clusters. Elements in the protocol were transformed from broadly written components into 37 distinct statements each representing only one idea. In addition, 12 statements were added for variance to assure that raters were reading and responding to each statement separately. Four sources informed the variance statements: qualitative data from which the initial core components were derived, PST provider qualifications designated by the agency that oversees Kansas Medicaid-funded mental health services, the Family Centered System of Care RFP, and a previous exploratory descriptive study of PST services (David-Groves et al., 2007). This set of 49 statements became the data set used for this portion of the project. Table 1 below summarizes the set of statements. Numbers in the far left column are the actual numbers of the statements as they appeared on the rating surveys and note cards.

Table 1.

Core Components of a PST Program - Statements By Cluster with Average Ratings of Importance

Cluster 1: Understanding the Families Needs

1	The provider adequately describes the service and how it can help the family before making a referral.	4.66
28	The provider considers how PST service can help support the family's needs when thinking about making a referral.	4.52
9	The provider talks to the family about their needs before making a referral.	4.52
17	The family agrees to be referred to the PST service.	4.34
35	The provider refers the family to PST service.	4.25
48	The provider chooses a PST who will be a good match for the family's needs.	4.24
41	The PST prepares for the first meeting with the family by talking to other providers who are working with the family.	3.87
13	The PST prepares for the first meeting with the family by reading the child's chart.	3.75
32	The PST is available to the family at all times.	2.85
22	The PST is available to the family only during office hours.	2.70
20	The PST does not discuss the family with the other mental health center staff before meeting with the family the first time.	2.48
24	The PST does not read the child's chart before meeting with the family the first time.	2.15
		Average: 3.69

³ This particular concept mapping approach refers to a method developed by Dr. William Trochim of Cornell University. Kane and Trochim (2007) provide a detailed account of the steps involved in the concept mapping process.

Appendix B: Achieving Stakeholder Consensus: Concept Mapping

Table 1. Continued

Cluster 2: Qualifications/Characteristics of a PST

37	PSTs who do not have a child with SED have worked with children with SED for at least 2 years or are qualified by his/her education.	3.81
16	PSTs who are also parents of children with SED/special needs may share personal information with the family in a way that helps the family trust the PST.	3.81
31	PSTs who are also parents of children with SED/special needs may share personal information with the family in a way that helps the family feel hopeful.	3.76
44	The PST is a parent.	3.63
4	The PST has a child with SED.	3.52
49	The PST is a family member of a child with SED/special needs.	3.27
14	The PST has a child with special needs.	3.24
		Average: 3.58

Cluster 3: Original FCSC Policy

10	Providers of PST services are employees of Community Mental Health Centers (CMHCs).	3.61
39	PST services are provided by parent-run organizations that CMHCs contract with.	2.42
29	Providers of PST services are volunteers instead of paid employees.	1.63
		Average: 2.55

Cluster 4: Effective Interventions

25	The PST gives the family information, resources, and strategies.	4.71
34	The PST educates the family on ways they can be actively involved in their child's treatment.	4.65
2	The PST helps the family work with the school to help their child succeed.	4.60
5	The PST educates the family on skills to handle a crisis.	4.58
3	The PST helps the family understand choices or services given by other providers.	4.58
42	The PST helps the family understand the SED waiver process.	4.56
45	The PST educates the family on coping skills.	4.48
7	The PST educates the family about how to use behavior management skills.	4.40
11	The PST educates the family on parenting skills.	4.31
36	The PST gives the family information about the child's medication or diagnoses.	3.69
		Average: 4.46

Cluster 5: Immediate Priorities

15	The PST listens to the family in a way that helps the family feel like they are "being heard."	4.85
23	The PST listens to the family's concerns.	4.82
21	The PST encourages the family to participate in their child's treatment.	4.81
26	The family does not feel judged by the PST.	4.79
27	The PST helps the family work with other mental health providers to meet their needs.	4.69
40	The PST helps the family feel hopeful.	4.66
46	The PST describes to the family how they work with the other providers on the family's treatment team (case manager, therapist, etc.).	4.44
		Average: 4.72

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Table 1. Continued

Cluster 6: Initial Engagement

6	The PST asks and talks to the family about their needs.	4.74
19	The PST and the other members of the family's treatment team work together to provide the right services to help the family.	4.73
47	The PST describes his/her role to the family and how it is different from a friendship.	4.66
43	The PST spends the first appointment getting to know the family.	4.65
18	The PST and family meet at a time that is convenient for the family.	4.52
38	The PST supports the family in choosing their own goals.	4.48
30	The PST asks the family how Parent Support Services can help.	4.48
33	The PST quickly makes contact with the family to schedule the first appointment.	4.37
8	The PST and family meet at location that is comfortable for the family.	4.32
12	The PST begins new interventions only when the family is ready for them.	4.03

Average: 4.50

Sorting and Rating the Data

The sorting and rating process are 2 separate activities and participants had the choice of completing one or both.

Sorting - Participants were given a set of 49 computer generated-cards containing the statements listed in Table 1. They were asked to sort each statement into piles that made conceptual sense to them and then label each pile with a word or phrase that best describes the concepts in the pile of statements.

Rating - Participants were given survey forms containing each of the 49 statements and asked to rate each in the areas of importance and frequency of demonstration. Two 5 point Likert scales were developed and participants rated each statement on (1) the importance of each statement as a component of providing quality Parent Support and Training Services (5=*Very Important* to 1= *Not at all important*) and (2) How frequent the statement was demonstrated in Parent Support and Training Services (5=*Very Frequent* to 1= *Not at all Frequent*). Participants had the option of completing hard copies of the rating surveys or completing the forms online. After collecting data from a small sample of participants at two PST sites, the research team met with several key stakeholders to obtain feedback on the process, to consider modifications to the approach, and to review preliminary analyses. The discussions resulted in minor changes to several statements in the data set to improve clarity. No changes were made that affected the core components of the PST protocol.

Information about the sample

The rating sample consists of 53 female, and eight male participants, as well as one respondent who did not report gender (N = 62). Participants were recruited from across geographical areas of the state as well as across stakeholder roles in an effort to increase external validity of the PST model and ensure that family, administrative, and service provider stakeholders were adequately represented in achieving consensus of the model's core components. Of these 62 participants, 21 completed the sorting process. With concept mapping, all participants do not have to participate in every aspect of the process. The

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number of participants who sorted (21) and rated (62) statements surpassed the minimum number of participants needed for multivariate analyses conducted with this data.

Family / consumer voice is represented by the three distinct roles of family advocate, family member / caregiver, and PST specialists who are family members of an SED child. Service provider voice includes direct service staff members, PST specialists who are not family members of an SED child, and PST supervisors. Administrative stakeholders are represented by state administrators, funder / policy-makers, and agency administrator / directors (see Table2).

Although attempts were made to recruit a representative sample from all geographic areas of the state, the eastern part of the state, particularly the southeast region, is more heavily represented in the sample than the western regions (see Table 3). However, independent samples *t*-tests using the Bonferroni method to control for error, confirm that despite the overrepresentation of the southeast region in the sample, responses to all survey items from participants in the southeast region are not significantly different at the .05 level from the responses of participants from the other three regions of the state. Therefore, although representation is not equal across regions, findings are not significantly impacted by this inconsistency.

The racial / ethnic makeup of the sample is predominantly white. However, this is consistent with the racial / ethnic makeup of the state as a whole (see Table 3). One limitation of the study sample is the underrepresentation of the Latino/a group. While this group makes up almost 9% of the population in the state of Kansas, they only represent 3.23% of the study sample. A large proportion of the Latino/a population in Kansas are concentrated in the southwest region of the state (U.S. Census Bureau, 2008). Therefore, it is likely that the under-sampling of the Latino/a population in the study sample is a result of the under-sampling of the western regions of the state.

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Table 2

Participants by Stakeholder Role

	N	Percentage
Family / Consumer		
Family Advocate	1	1.61%
Family Member / Caregiver Receiving Services	7	11.29%
PST Specialist / Family Member	11	17.74%
	19	30.64%
Service Provider		
Direct Service Staff Member	8	12.90%
PST Specialist / Non-family Member	4	6.45%
PST Supervisor	8	12.90%
	20	32.25%
Administrative		
State Administrator	8	12.90%
Funder / Policy-Maker	1	1.61%
Agency Administrator / Director	13	30.97%
	22	45.48%
Other		
No Response	1	1.61%
	1	1.61%
TOTAL	62	100%

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Table 3
Participants by Geographical Area

	N	Percentage
Northwest	2	3.23%
Northeast	13	20.97%
Southwest	8	12.90%
Southeast	38	61.29%
No Response	1	1.61%

Table 4
Race / Ethnicity of Sample Population Compared to Population of Kansas

	N	% of Sample	% of Kansas Population
African American	4	6.45%	5.65%
Asian / Pacific Islander	1	1.61%	2.21%
Latino/a	2	3.23%	8.83%
Multiracial	1	1.61%	2.64%
White	53	85.48%	85.74%
No response	1	1.61%	NA

Kansas Population source: U.S. Census Bureau, 2006-2008 American Community Survey

Recruitment Strategies (Sampling Methods)

A broad array of stakeholders was recruited through convenience and snowball sampling techniques across all geographical areas of the state as well as across all key stakeholder roles in an effort to increase external validity of the PST model and ensure that family, administrative, and service provider stakeholders were adequately represented in achieving consensus of the model's core components. Stakeholders with an established expertise in providing and receiving PST services were invited either in-person or via email to participate in the survey through the following groups:

- PST Study Outcomes Evaluation participants, including providers at sites participating in the study and family members who had recently completed the study
- PST Statewide Network
- CMHC Executive Directors
- CMHC Community-Based Children's Directors

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- Children’s Subcommittee of the Kansas Governor’s Mental Health Services Planning Council

Participants were invited to fill out a paper copy of the survey or to complete it through a secure online survey site managed by the University of Kansas School of Social Welfare between October 2009 and March 2010. All stakeholders except family members were also asked to distribute paper copy surveys and/or recruitment fliers containing the link to the online survey to targeted stakeholder representatives whom they knew. Self-addressed stamped envelopes were distributed along with paper copy surveys.

Approximately one and one-half months after recruitment began, researchers determined through preliminary review that two stakeholder groups had comparatively low participation rates—families receiving PST services and participants from the Northwest quadrant of the state. Additional recruitment efforts were made to increase participation by the two groups: (1) PST providers were asked to distribute hard copy surveys to families who had received or were receiving PST services, and (2) administrators and family advocates in Northwest Kansas were contacted by phone and email to encourage participation. Recruitment efforts did not significantly improve response rates for either group.

Analysis

Participants’ sorts and ratings data were entered into a database and concept maps were produced providing graphic representations of the conceptual ideas produced by the participants and the relationship of the ideas to each other. The Concept Systems software, based on the similarity matrix resulting from the sorting task, uses multidimensional scaling analysis (MDS) to create a map of points that represent the set of 49 statements. Hierarchical cluster analysis is conducted to group individual statements on the map into clusters of statements that reflect similar concepts. The end result is a cluster map that shows how the multidimensional scaling points were grouped.

Using the MDS results as the basis for hierarchical cluster analysis, statements plotted on the X-Y map are grouped into conceptual clusters based on similarity of ideas. Wards method of agglomeration is employed for this analysis. The process begins with each statement representing its own cluster. Using an algorithm, two clusters are combined at each stage of the analysis until all statements end up in one cluster. Guided by the purpose of the research, the analyst is left to determine the number of clusters that provide the best “solution” for the study based on bridging indices and the conceptual fit of the statements within each cluster. Cluster solutions from 13 to 5 were examined before concluding that the 6 cluster solution provided the best fit for the data.

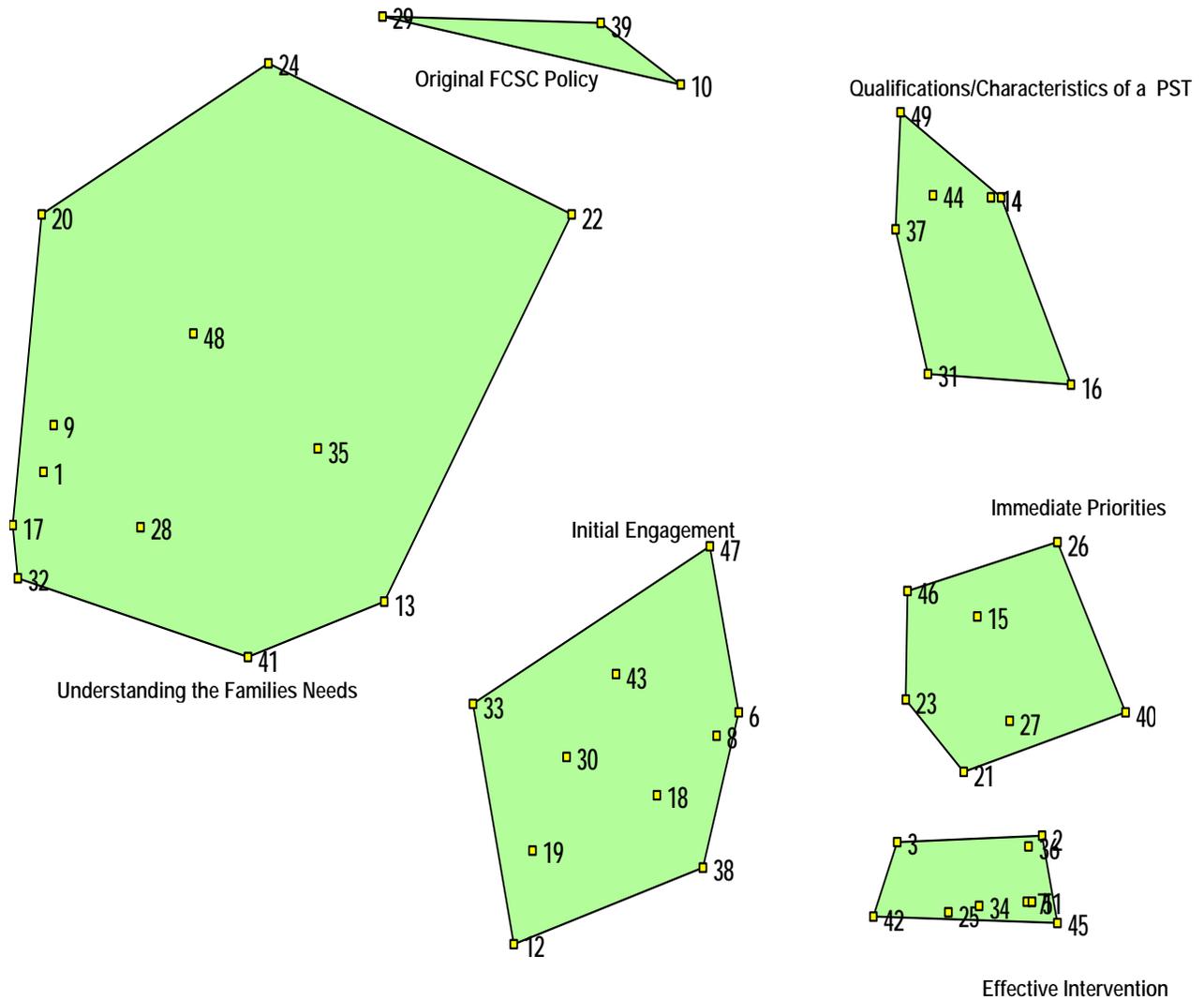
Findings

Conceptual Groupings

A 6-cluster map, as shown in Figure 1 below, was produced to understand how respondents grouped the core components of the PST protocol into conceptually related clusters. The numbered points represent the numbered statements in Table 4. The placement of the points in relation to one another on the map shows how often respondents sorted ideas together. Points that are closer together reflect statements that were more frequently sorted together and are conceptually similar while conceptually different ideas were less frequently sorted together and are placed farther apart. Broader shaped clusters usually represent broader concepts while compact or narrow clusters represent more narrowly focused concepts.

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Figure 1. Point Cluster Map



The research team met to discuss findings and there was consensus within the team about the 6 cluster solution, however, changes were made to the cluster labels. Mathematically generated by the computer program, the group felt that the initial labels were an inadequate representation of concepts contained in the clusters. Using contextual information and data gathered from participants, the research team generated new labels for each of the 6 clusters. The following cluster labels were identified: Immediate Priorities; Initial Engagement; Effective Interventions; Understanding the Families

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Needs; Qualifications/Characteristics of a PST; and Original FCSC Policy. A summary of the concepts contained in each cluster is provided in the next section.

Immediate Priorities (avg. rating of importance, 4.72)

Themes in this cluster focus on the PST's ability to listen and support the child and family; encourage the family's active involvement in the child's treatment; and help the family work with other mental health service providers. Key statements in this cluster include: *The PST listens to the family in a way that helps the family feel like they are "being heard"; the PST helps the family work with other mental health providers to meet their needs; "The family does not feel judged by the PST"; and the PST encourages the family to participate in their child's treatment.* As identified in the importance cluster report (see Table 4), average ratings for this cluster make this cluster the most important of the six clusters. The relative importance of this cluster and the individual statements contained within this cluster are consistent with the widespread value generally placed on system of care principles which are reflected in these statements (Hoagwood, Green, Kelleher, Schoenwald, Rolls-Reutz, Landsverk, Glisson, & Mayberg, 2007; Munson, Hussey, Stormann, & King, 2009). These statements also share a common goal of supporting family empowerment which has been linked to higher retention and effective service use, as well as parent knowledge and self-efficacy, all of which are important priorities for service providers (Hoagwood, 2005).

Initial Engagement (avg. rating of importance, 4.50)

Ideas in this cluster reflect high ratings on the importance scale and place priority on actions useful in engaging a new family in the process. For example, the PST should quickly establish the first contact and arrange a meeting time and place convenient for the family. This cluster communicates the importance of obtaining an understanding of the family's needs and goals and helping the family understand the PST's professional role in helping the family as well as the PST's role on the treatment team. Two highly rated statements in this cluster include: *The PST asks and talks to the family about their needs* and *The PST describes his/her role to the family and how it is different from a friendship.* The concepts that make up the Initial Engagement cluster are particularly important under the family-driven paradigm. Communicating with the family to understand how their needs can best be met, and considering and accommodating factors such as the family's schedule in initial service planning is imperative (Osher & Osher, 2002). Additionally, a primary reason families refuse PST service is a lack of adequate information or understanding of how this service may be helpful (Davis, Scheer, Gavazzi, & Uppal, 2010). The pervasiveness of this issue accounts for the importance stakeholders assigned to the statements included in this cluster.

Effective Intervention (avg. rating of importance, 4.46)

Statements in this cluster suggest that the PST actively educate and inform the family on concrete ways to support the child and be involved in the child's treatment. Statements that capture this core theme include: *The PST gives the family information about the child's medication or diagnoses; The PST helps the family understand the SED waiver process; "The PST helps the family work with the school to help their child succeed"; and the PST gives the family information, resources, and strategies.* In a survey of directors of family advocacy, support and education organizations, Hoagwood et al. (2007) reported that 97 percent of directors (N=226) surveyed rated educating other families as an important role for PST in mental health service delivery. This role was rated as important by more directors than any other role

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which is reflected by the importance rating assigned to the statements included in this cluster, which are frequently educational in nature.

Understanding the Family's Needs (avg. rating of importance, 3.69)

Average ratings in this cluster reflect a moderate level of importance and promote the family unit as the central focus. Conceptual ways of supporting the family appear to be evenly split into two areas: activities that the provider agency should perform and activities that the PST should perform. The highest rated statements in this cluster and those most often sorted together focus on the provider agency and include: *The provider adequately describes the service and how it can help the family before making a referral; The provider talks to the family about their needs before making a referral; and The provider chooses a PST who will be a good match for the family's needs.* Statements related to the PST primarily focus on preparation for work with the family and availability to the family. In a review of existing programs, Davis et al. (2010) identified a need for agencies to define a consistent referral process. In order to best meet family needs they identified key components of the process which should include eligibility criteria that also identify appropriate family conditions for referral, comprehensive family assessment, and specific needs to be met through the use of PST services (Davis et al., 2010). Statements included in this cluster, rated as moderately important, address this identified need.

Qualifications/Characteristics of a PST (avg. rating of importance, 3.58)

The statements in this cluster are also seen as moderately important and convey respondents' belief that a PST should have either personal or professional experience working with a child with SED/special needs or the appropriate educational training and credentials. Statements include: *PSTs who do not have a child with SED have worked with children with SED for at least 2 years or are qualified by his/her education; PSTs who are parents of children with SED/special needs may share personal information that helps the family trust the PST; and PSTs who are also parents of children with SED/special needs may share personal information with the family in a way that helps the family feel hopeful.* Previous studies (Davis et al., 2010; Ireys, Chernoff, Stein, DeVet, & Silver, 2001; Munson, Hussey, Stormann, & King, 2009) acknowledge the unique value of the peer aspect of PST. Some advocates perceive the shared experience of parenting a child with SED as the key to PST service (Munson et al., 2009). Others also recognize the peer aspect of sharing typical parenting challenges. These challenges may be experienced by parents or grandparents of children without an SED diagnosis, or other people with experience working with children with SED, in addition to those parenting a child with SED (Davis, et al., 2010). However, the literature is consistent in acknowledging that peer support is a unique aspect of PST service that contributes to positive outcomes such as reduced parental anxiety (Ireys et al., 2001). The emphasis in the literature on this unique aspect of PST service is supported by the importance rating assigned to these statements by all stakeholders.

Original FCSC Policy (avg. rating of importance, 2.55)

The label on this cluster refers to policies in the Family Centered System of Care (FCSC) request for proposal that expanded Parent Support and Training services within the CMHC system in Kansas. All of these statements in this cluster were added for variance to assure raters were responding to each statement separately. In addition, statements in this cluster represent what PST services are and are not in Kansas. For example, component 10, providers of PST services are employees of Community Mental Health Centers (CMHCs), is the current practice in the Kansas CMHC system. We would expect a higher importance (average importance is 3.61) on this particular component. The other two

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components 39, PST services are provided by parent-run organizations that CMHCs contract with (average importance is 2.42) and 29, Providers of PST services are volunteers instead of paid employees (average importance is 1.63) are options presented within the FCSC RFP. In addition these statements represent ways this particular service has developed and is provided in other states (Davis et al., 2010; Hoagwood et al., 2007). Taken all together, the low importance ratings for components 39 and 29 bring down the average importance rating of this cluster.

Importance and Frequency Ratings

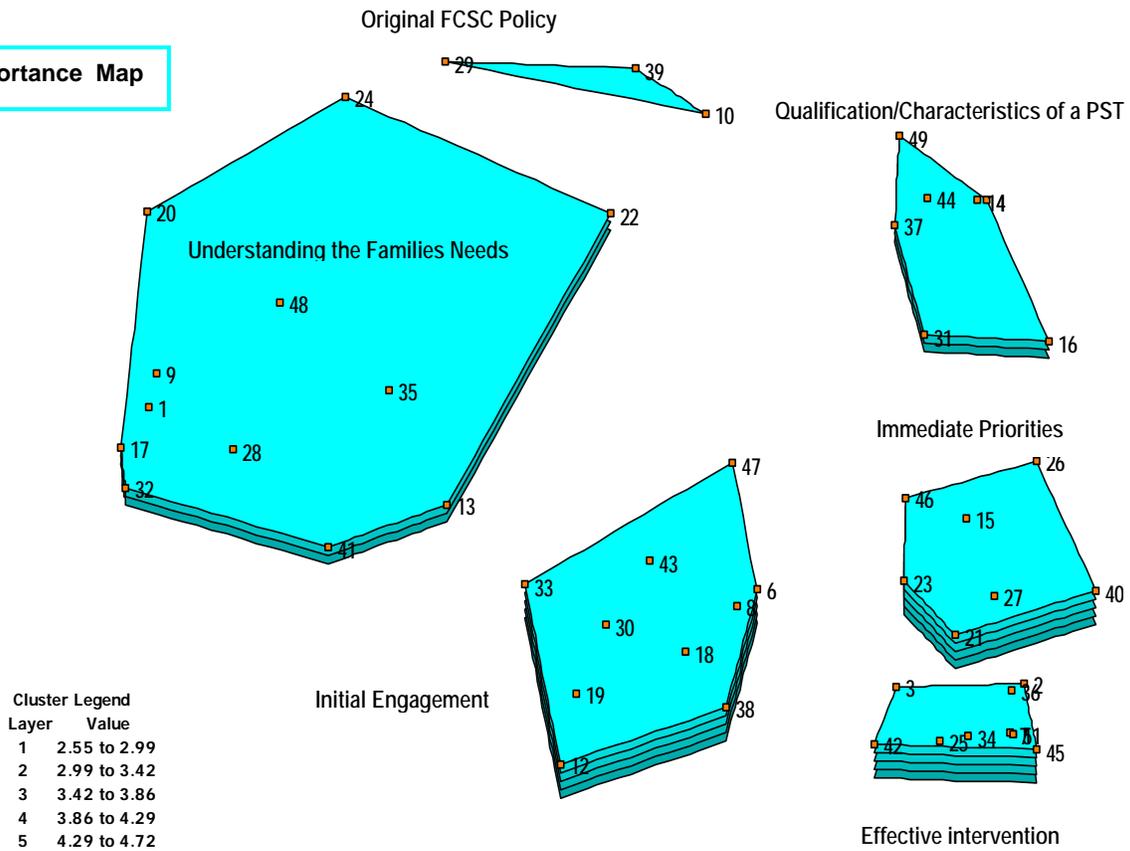
Rating data enhance conceptual understanding of the maps generated by placing value on the statements. Participants were asked to rate each statement on “importance” and “frequency of demonstration” using a scale from 1 (not at all important, not at all frequent) to 5 (very important, very frequent). Figure 2 shows a cluster rating map reflecting the average rating values on importance for each cluster of statements. Figure 3 shows a cluster rating map reflecting the average rating values on frequency for each cluster of statements. The maps are placed on the same page for easier comparison. The cluster legend (bottom left on the map) provides a ratings range for each cluster. The layers are a visual reflection of the value participants placed on the conceptual clusters. The more layers in a cluster the higher the average ratings for the clusters in that map.

As noted in the legend of the importance map, the ratings range from 2.55 (not very important) to 4.72 (very important). The ratings data indicate that, with 5 layers each, *Immediate Priorities* (4.72), *Initial Engagement* (4.50) and *Effective Interventions* (4.46), in rank order, are the most important clusters. *Understanding the Families Needs* (3.69) and *Qualifications/Characteristics of a PST* (3.58) are seen as somewhat important with 3 layers. The cluster, *Original FCSC policy* (2.55), has 1 layer and is identified as containing concepts that are somewhat unimportant to key stakeholders.

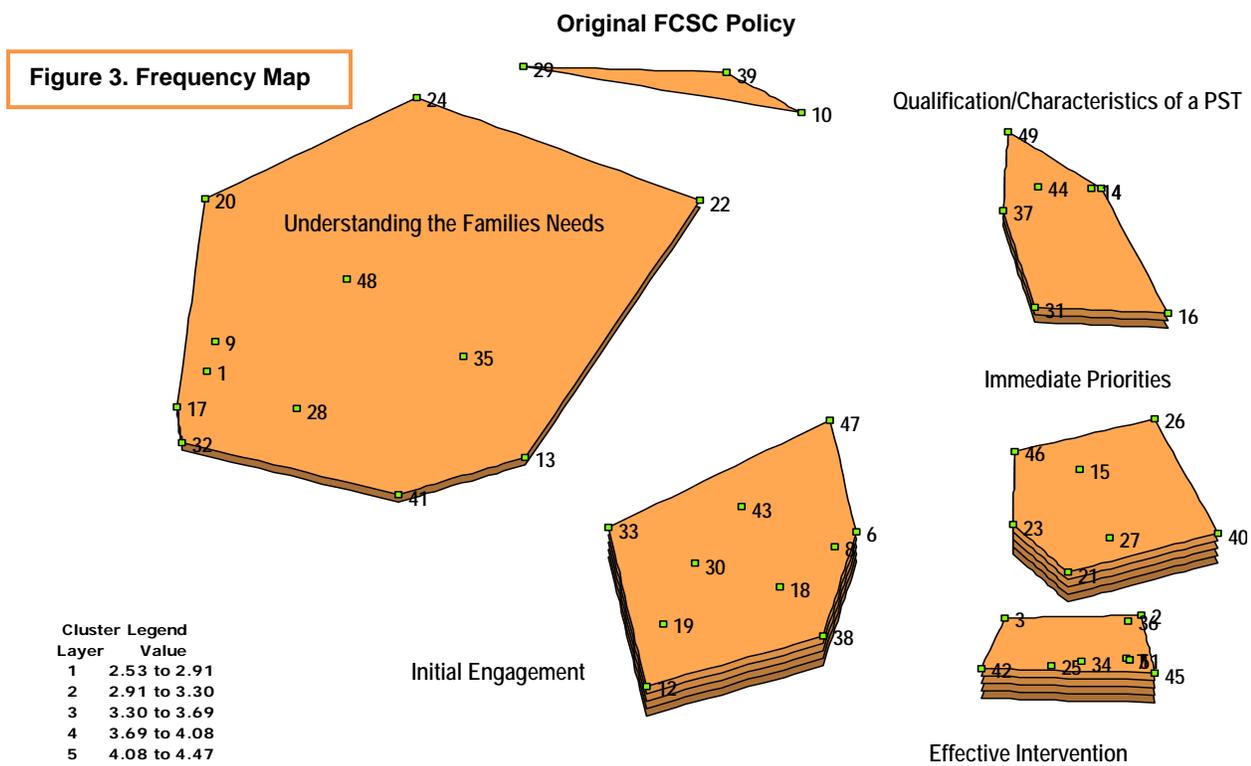
The frequency rating map examines how often sites demonstrated the core elements and have ratings that range from 2.53 to 4.47. With the exception of one cluster, the average rating for each of the clusters on the frequency map is very similar to the average ratings for clusters on the importance map. In general, this indicates equivalence between the importance of the core concepts and frequency of demonstration. The cluster, ***Understanding the Families Needs***, reflects slightly lower average ratings on the frequency map (3.27 and 2 layers) than on the importance map (3.69 and 3 layers). The take away message from a comparison of the two maps is that the most important core components are also the components that are most frequently demonstrated.

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Figure 2. Importance Map



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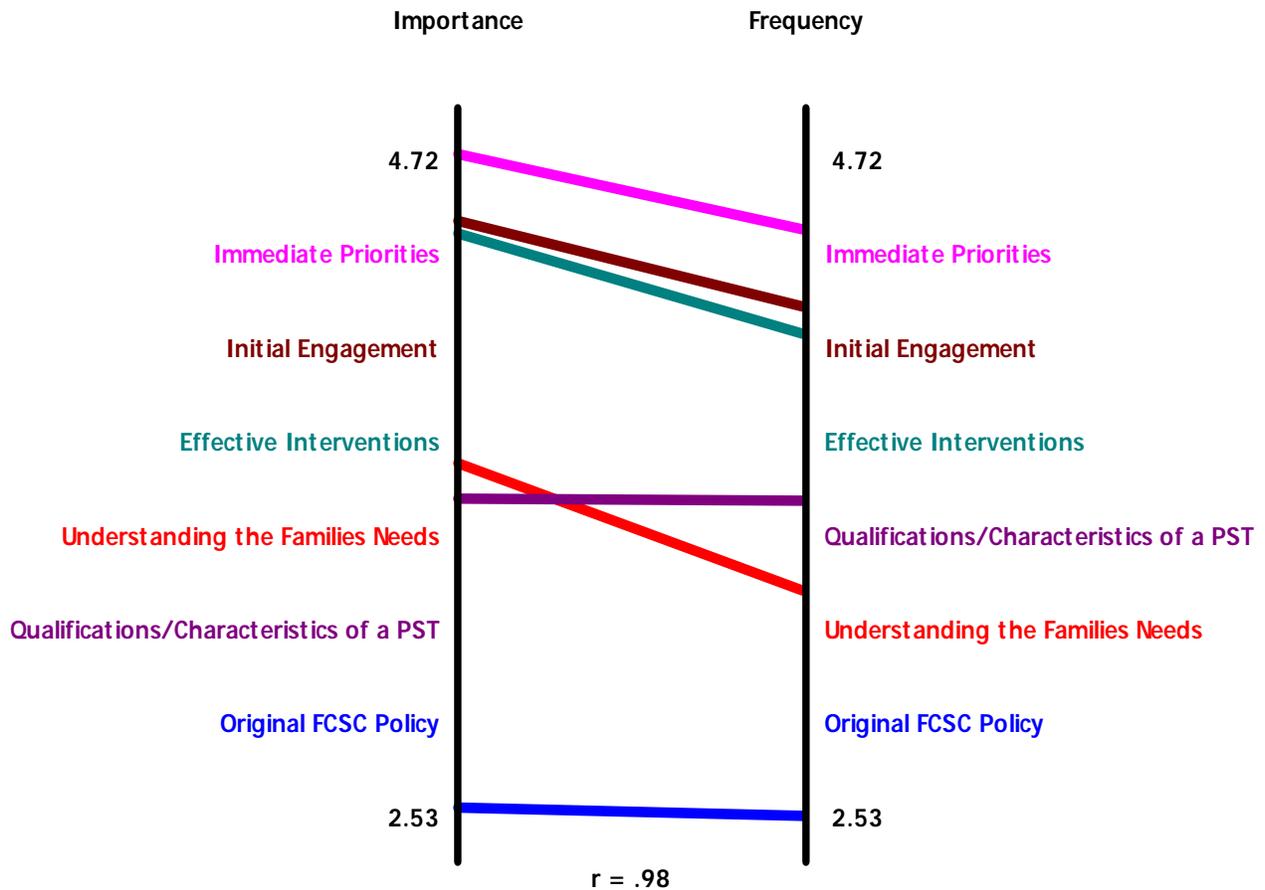


Pattern Matches

Figure 4 is called a pattern match or a ladder graph and is another visual way to examine the data. A pattern match presents pair-wise comparisons of clusters ratings across criteria, in this case *Importance* and *Frequency of Demonstration*. Labels on each axis are the same labels as the cluster maps in the previous figures. With a pattern match, two measures, aggregated at the cluster level, are compared to see if there is consensus or a disconnect between stakeholders' perspectives. The more horizontal the lines are between the two measures (the more it looks like a ladder) the better the consensus on that particular cluster. A correlational value, known as the Pearson product-moment correlation (r value), is displayed at the bottom of the graph and is the best way to interpret the graph. The r values can range from 0.0 indicating no agreement to 1.0 indicating perfect agreement. An r value of .6 or better generally indicates strong agreement. The value $r = .98$, shown at the bottom of this graph, indicates a very high level of consistency in stakeholders' ratings of importance and frequency of demonstration.

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Figure 4. Pattern Match 1
Administrative Group, Family Voice Group, Service Provider Group



Like the cluster maps, the figure 4 pattern match indicates that the frequency ratings for the cluster *Understanding Families Needs* are slightly lower than the importance ratings. This means that in general respondents perceive statements in this cluster to be important but some statements are less frequently demonstrated than others. However, the high r value is an indication that the difference between the ratings is insignificant.

Multi-group Pattern Matches

The following figures are pattern matches reflecting importance and frequency ratings for 3 groups:

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- **Family Voice Group** (combines the family advocates, family member/caregivers, and PST specialist/family members) n = 19
- **Service Provider Group** (combines the direct service staff members, PST specialist/non-family members, and the PST supervisors) n= 20
- **Administrative Group** (combines the administrator/directors, funder/policy makers, and state administrators) n=22

High *r* values on figures 5, 6, & 7 indicate strong agreement among and between all 3 groups on ratings of importance.

Figure 5. Pattern Match 2

Importance Ratings – Administrative Group & Family Voice Group

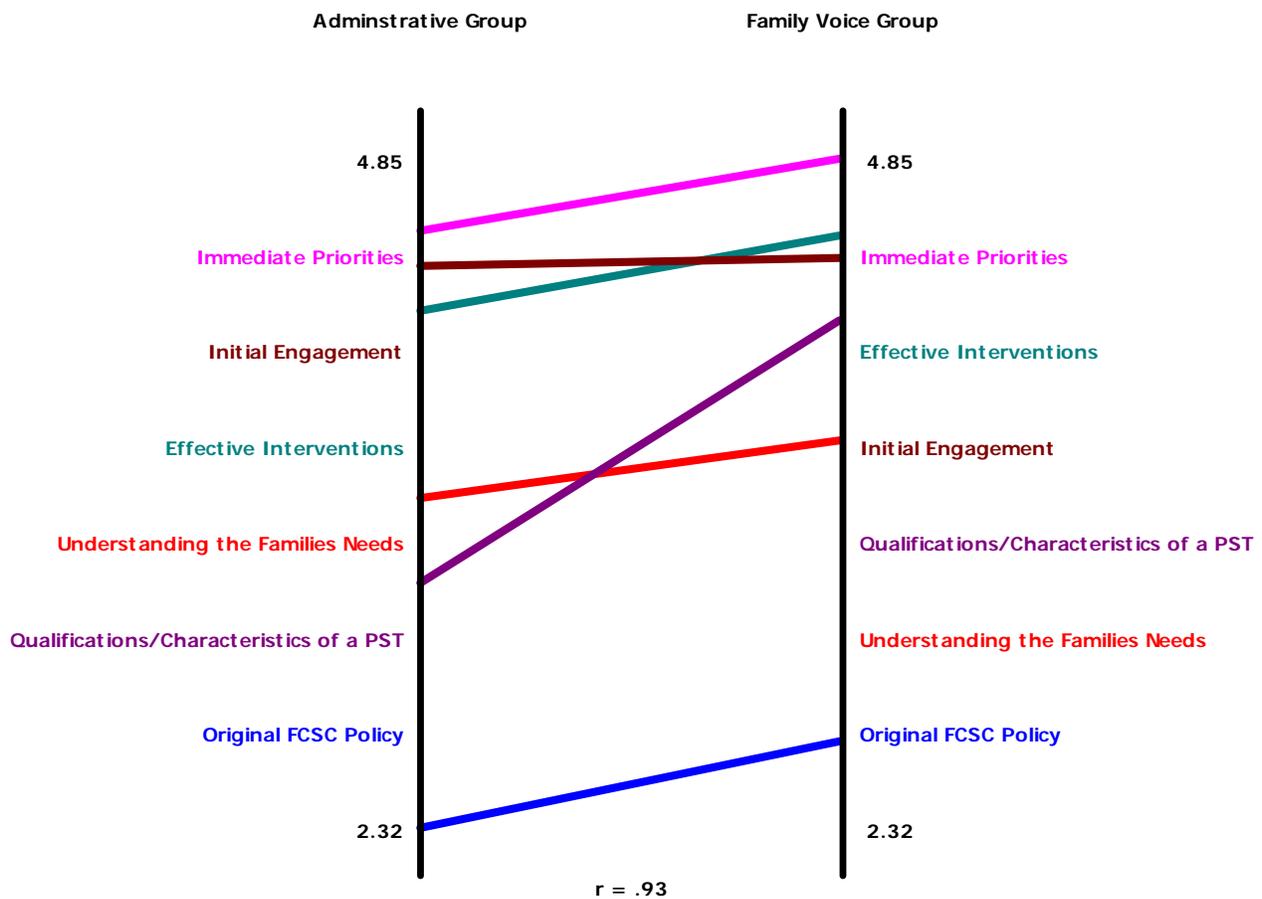


Figure 6. Pattern Match 3

Importance Rating – Service Providers Group & Family Voice Group

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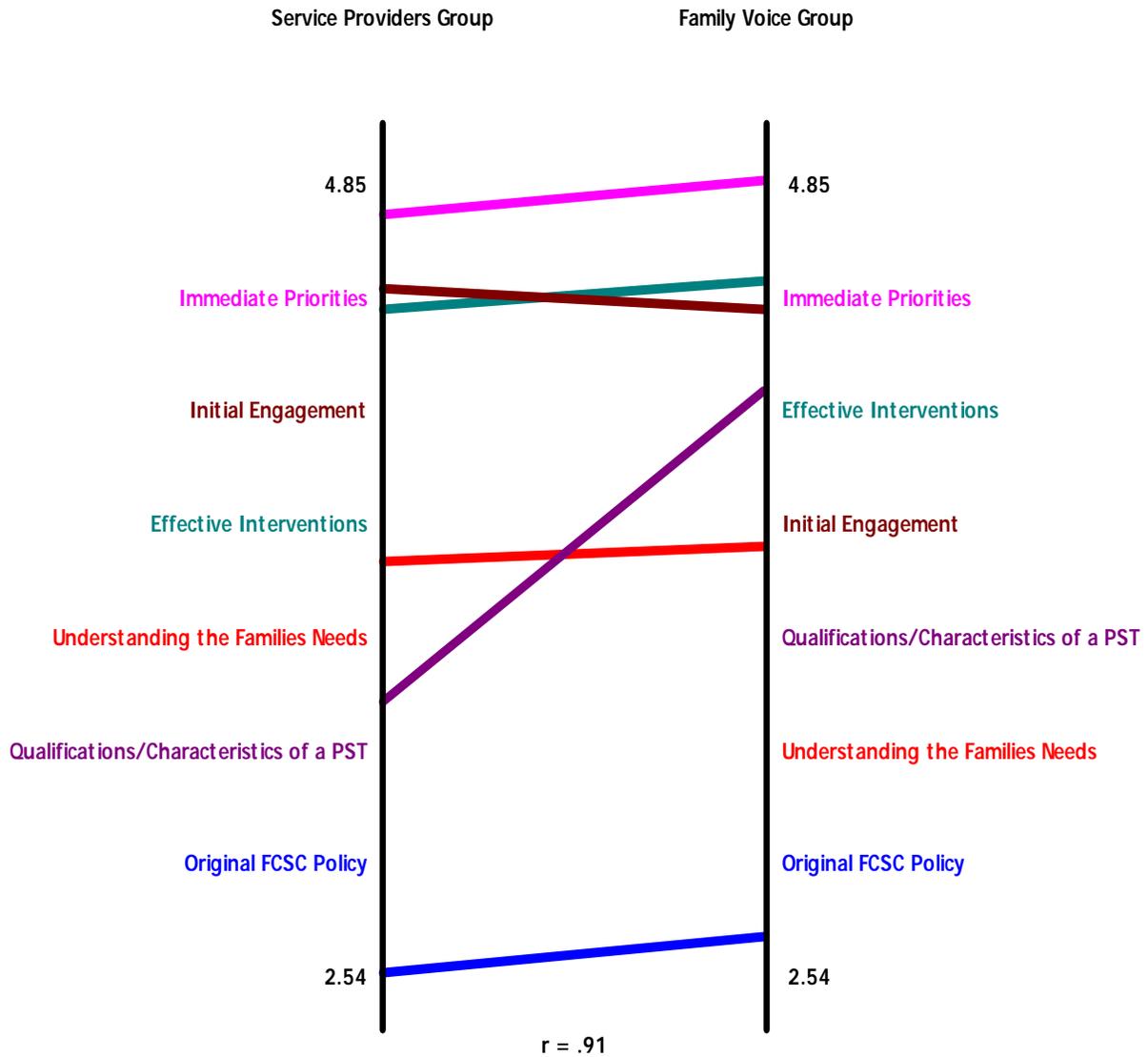
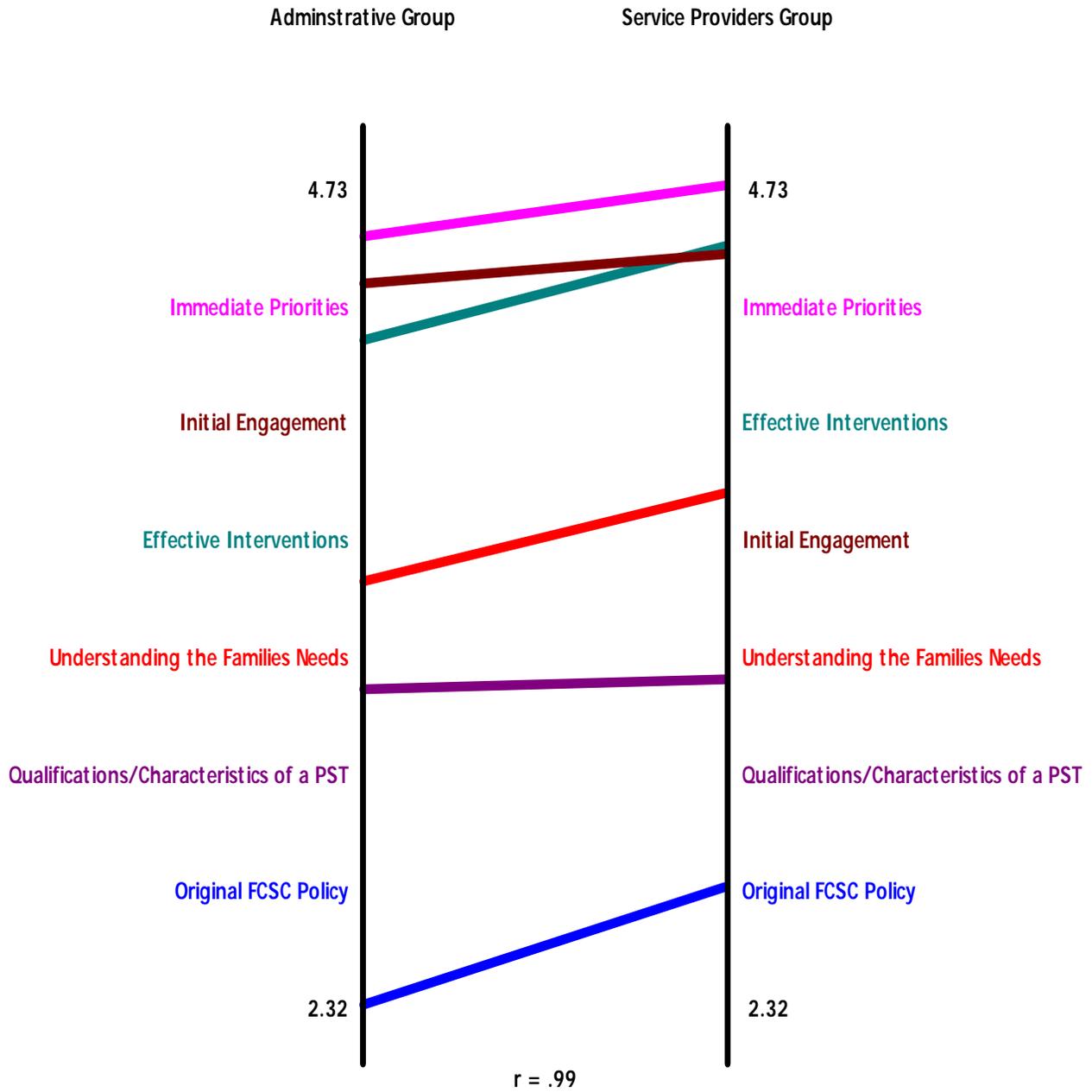


Figure 7. Pattern Match 4
Importance Rating – Administrative Group & Service Providers Group

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High r values on figures 8, 9, & 10 indicate strong agreement among and between all 3 groups on frequency ratings.

Figure 8. Pattern Match 5
Frequency Rating – Administrative Group & Family Voice Group

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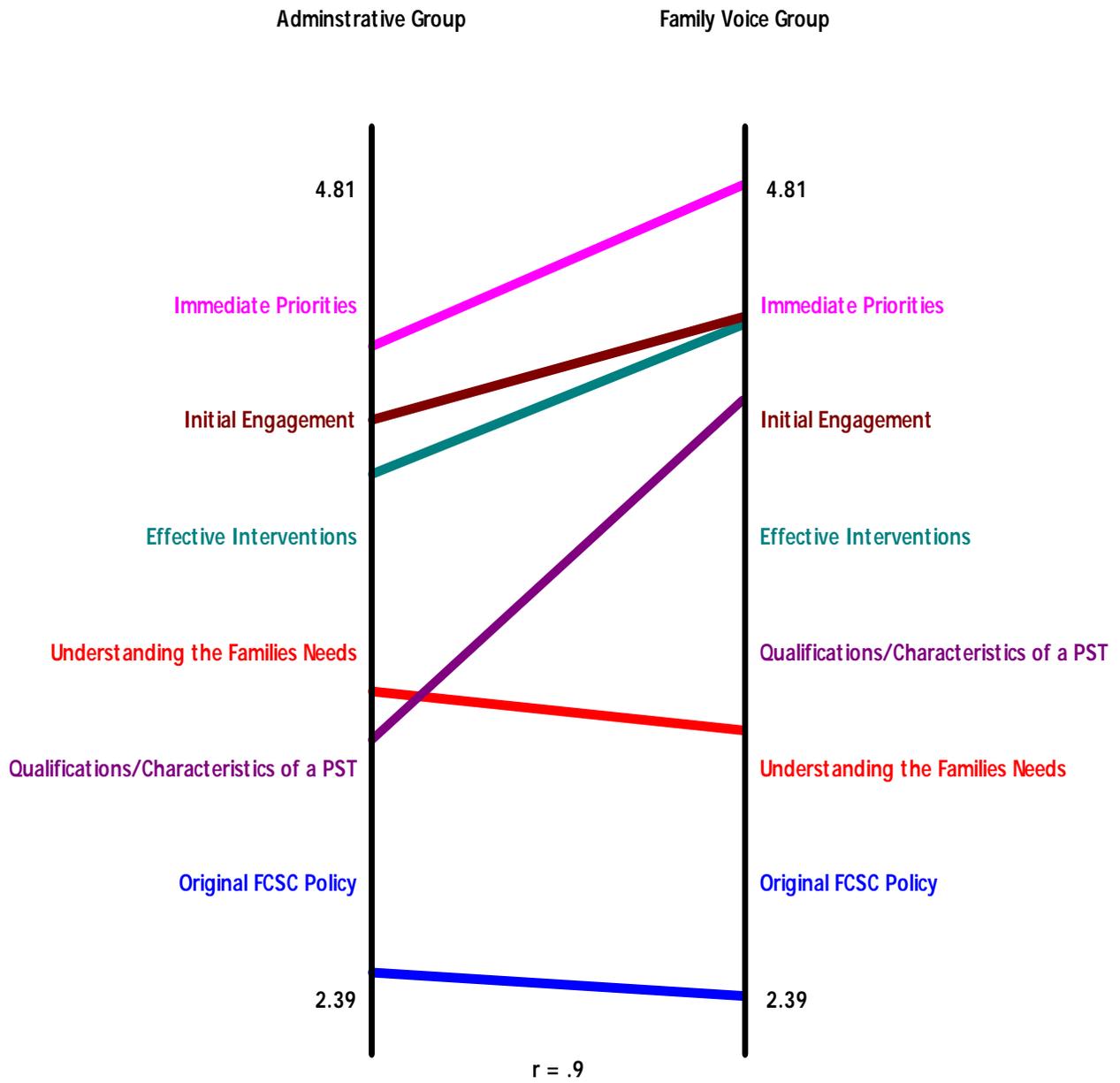


Figure 9. Pattern Match 6
Frequency Rating – Service Providers Group & Family Voice Group

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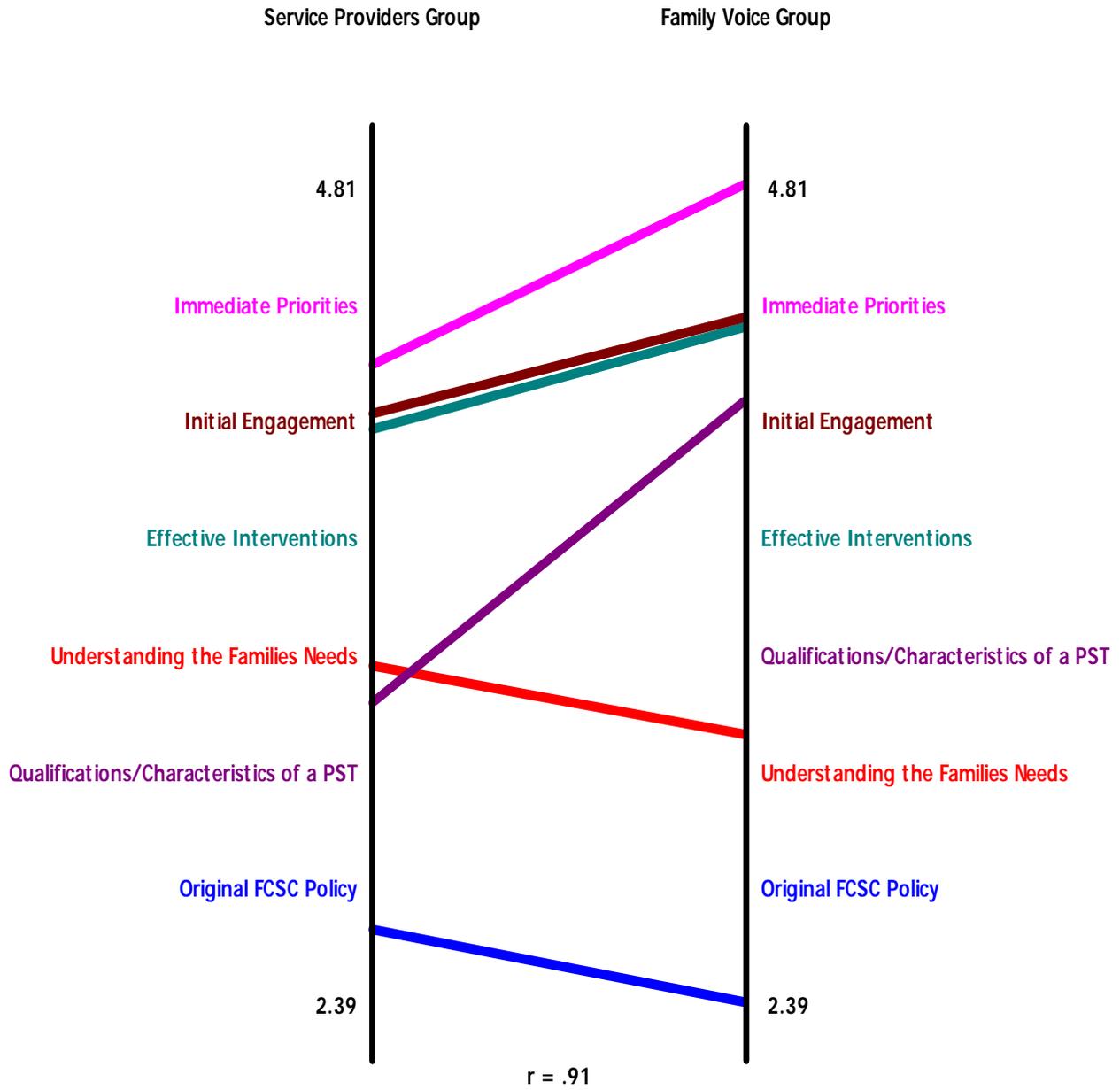
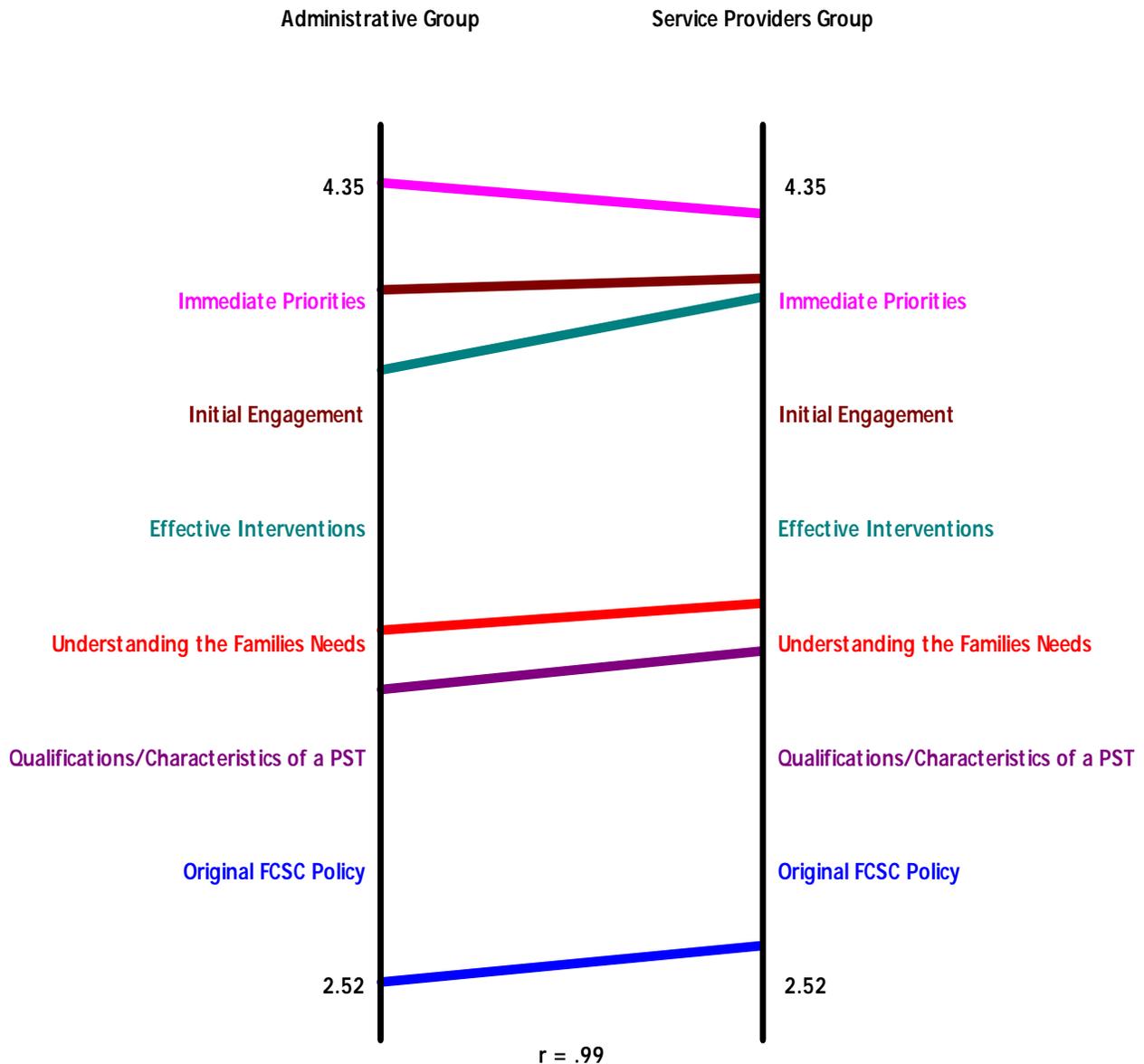


Figure 10. Pattern Match 7
 Frequency Rating – Administrative Group & Service Providers Group

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The strongest level of agreement, across ratings, is consistent between the administrative group and the service provider group. However, the true take away message, supported by the correlation values, is that all 3 groups agree on the importance of the core components and perceive the most important core components as being the components of PST practice also frequently demonstrated.

Although there is strong overall agreement between all three groups on ratings of importance and frequency, thus establishing consensus, one exception to this overall consensus is within the *Qualifications/Characteristics of a PST* cluster. Examination of the ladder graph reveals an apparent discrepancy of perception of importance and frequency between the parent voice group and the service provider and administrator voice groups. Tables 5 and 6 summarize the Mean importance and frequency

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ratings on each component within the *Qualifications/Characteristics of PST* cluster between the family, service provider, and administrator groups. Independent samples *t*-tests of this cluster and the statements included in this cluster confirm statistically significant differences between stakeholder groups for the *Qualifications/Characteristics of a PST* cluster as well as the for the individual statements within the cluster pertaining to PSTs' provider status as parents. Although all groups rate all components as relatively high in importance and frequency, the stakeholders included in the family voice group rate statements in this cluster and the overall cluster higher than the other two stakeholder groups. There is no statistically significant difference between service providers and administrators perceptions of importance or frequency for this cluster or the statements included in the cluster. The differences in importance ratings between these groups are important to understand because the statements in the "qualification" cluster define the peer aspect of the PST services model. The peer aspect, as noted above, is consistently supported in the literature and in previous PST research as the essence of effective PST services.

Table 5

Mean Importance Ratings By Stakeholder Group for *Qualifications/Characteristics of a PST* cluster and Individual Statements

	Family Voice	Service Provider Voice	Administrator Voice
#4 The PST has a child with SED	4.21	3.20	3.18
#14 The PST has a child with special needs	4.26	2.70	2.82
#37 PSTs who do not have a child with SED have worked with children with SED for at least 2 years or are qualified by his/her education	3.74	3.90	3.77
#44 The PST is a parent	4.37	3.25	3.32
#49 The PST is a family member of a child with SED/special needs	3.89	3.20	2.77
<i>Qualifications/Characteristics of a PST</i> cluster	4.21	3.30	3.23

1.00-1.99 Not at all Important, 2.00-2.99 A little important, 3.00-3.99 Somewhat Important, 4.00-4.99 Important, 5.00 Very Important

Table 6

Mean Frequency Ratings By Stakeholder Group for *Qualifications/Characteristics of a PST* cluster and Individual Statements

	Family Voice	Service	Administrator
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Appendix B: Achieving Stakeholder Consensus: Concept Mapping

		Provider Voice	Voice	
#4	The PST has a child with SED	4.21	3.30	2.89
#14	The PST has a child with special needs	4.05	3.10	3.00
#37	PSTs who do not have a child with SED have worked with children with SED for at least 2 years or are qualified by his/her education	3.26	3.45	3.47
#44	The PST is a parent	4.42	3.75	3.68
#49	The PST is a family member of a child with SED/special needs	3.89	2.70	3.21
	<i>Qualifications/Characteristics of a PST cluster</i>	4.22	3.31	3.23

1.00-1.99 Not at all Frequent, 2.00-2.99 A little frequent, 3.00-3.99 Somewhat Frequent, 4.00-4.99 Frequent, 5.00 Very Frequent

Summary of Findings & Recommendations for Establishing Consensus on the Core Components for PST Practice

The concept mapping findings suggest that there is general agreement among stakeholders within Kansas about the core components of PST practice. Furthermore in the CMHCs represented in this study, the most important components are implemented frequently. These findings support previous research that Kansas provides a solid foundation to document the effective components of the PST services model, as the model has been established in the community mental health services system for over a decade (Davis-Groves, Barfield, McCave, and Corrigan 2007). However, despite general agreement, there is discrepancy between stakeholders as to the importance and frequency of statements in the *Qualifications/Characteristics of a PST cluster*. The family voice perspective, as determined through concept mapping methodology, supports the contention consistently presented in the literature that the key to effective PST services is that these services be provided by a peer defined as parent or family member who has provided care for a child with SED or special needs. This finding indicates a need to reevaluate the service definition for this service, as well as individual agency personnel policies, to ensure alignment between best practices as defined by the PST Practice Protocol, and state and agency policy.

Appendix B: Achieving Stakeholder Consensus: Concept Mapping

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