

# The Community Supports for Wraparound Inventory: An Assessment of the Implementation Context for Wraparound

Janet S. Walker & Becca Sanders

## Abstract

*The wraparound process has emerged as perhaps the most frequently implemented comprehensive approach for planning and providing individualized, community-based care for children and adolescents with serious mental health conditions. Providing comprehensive care through the wraparound process necessarily requires a high level of collaboration across organization and agency boundaries. This need for significant inter-agency or “system-level” collaboration creates a complex implementation environment for wraparound. It is therefore not surprising that creating and sustaining a hospitable implementation environment has proven to be extremely challenging. For the people who are responsible for managing the inter-organizational collaboration, it is not easy to evaluate the adequacy of local system-level support for wraparound and to see exactly what kinds of supports are lacking or where system-development efforts should focus. Furthermore, as system-development strategies are put into practice, it can be difficult to assess whether or not meaningful progress is occurring. The Community Supports for Wraparound Inventory (CSWI) was developed to respond to the need for an assessment of the extent to which a community has developed system-level capacity to implement wraparound. This article reports on a study that evaluated the reliability and validity of the CSWI for use in communities implementing wraparound. Findings indicate that the CSWI shows promise as a reliable, valid and useful tool.*

## Introduction

In 2003, the final report of the President’s New Freedom Commission described a vision for a transformed mental health system. At the core of this vision was the idea that every adult and child with a serious mental health condition would have a comprehensive, individualized, consumer- or family-driven plan of care that would coordinate effective, community-based care while promoting recovery and resilience. A growing consensus on this vision of mental health care for people with serious conditions is apparent in a series of recent policy statements (e.g., Altschuler et al. 2009; Gagnon and Richards 2008; Institute of Medicine 2006) and federal funding initiatives (Fraker and Rangarajan 2009; U.S. Department of Health and Human Services 2007, 2009), and is increasingly supported by research showing the benefits of care that is comprehensive, individualized, consumer- and/or family-driven, and community based (e.g., Bruns et al., in press; Daleiden et al. 2006; Haber et

al. 2009; Sieler et al. 2009).

The wraparound process has emerged as perhaps the most frequently implemented comprehensive approach for planning and providing individualized, community-based care for children and adolescents with serious mental health conditions (Walker et al. 2008). A recent survey of state mental health directors found wraparound projects in 88% of states and territories, with over half of all states reporting some type of statewide wraparound initiative. Overall, survey results yielded an estimate of at least 98,000 youth enrolled in over 800 wraparound initiatives in the United States (Bruns et al. 2008). By comparison, other treatments for use with the same population such as Functional Family Therapy (FFT), Multisystemic Therapy (MST), and Multidimensional Treatment Foster Care (MTFC) serve only about 30,000, 19,000, and 1,200 young people, respectively (Evidence-Based Associates 2008). Wraparound is also the most widely imple-

mented comprehensive service delivery process in communities that have received grants under the federal Comprehensive Community Mental Health Services for Children and Their Families Program, which has provided funding to more than 150 grantee communities nationally (U.S. Department of Health and Human Services 2007).

Wraparound is a structured, team-based planning process that is used to provide comprehensive, community-based care for children and youth with complex mental health and related challenges (Walker and Bruns 2006b; Walker et al. 2008). Often, these young people and their families receive services from multiple different child- and family-serving agencies (e.g. mental health, special education, juvenile justice, developmental disabilities and child welfare), and coordinated planning is crucial for achieving coherence and continuity of care. The wraparound team is charged with creating a single plan of care—the wraparound plan—which serves to clarify and coordinate the various providers' and agencies' interactions with the child and family.

The values associated with wraparound require that the planning process be driven by the needs and perspectives of the child and family. Additionally, the values require that the wraparound process is strengths based and culturally competent, and that it includes a focus on building social and community support and for the child and family. A wraparound team brings together people who have a stake in seeing a struggling child and family succeed. Typically, the team comprises the family members themselves (including the identified child or youth, if he or she can participate), as well as providers of services and supports, and members of the family's social support network. Wraparound requires that these stakeholders collaborate to build a single plan of care. Team members work together to identify a unique set of services and supports that respond to the family's unique needs and goals, and they continue to work as a team, collaboratively monitoring the plan and its impact, and revising the plan as necessary. The team continues its work until members reach a consensus that a formal wraparound process is no longer needed.

Providing comprehensive care through the

wraparound process necessarily requires a high level of collaboration across organization and agency boundaries (Clark and Clarke 1996; Farmer et al. 2004; Malekoff 2000; McGinty et al. 2001; Walker and Koroloff 2007; Walker et al. 2003, 2010). At the most basic level, agencies and organizations need to collaborate to provide many of the “core organizational components” that are essential to implementation success and sustainability (Fixsen et al. 2005). For example, agencies and organizations must work together to develop and provide access to the services and supports that are included in wraparound plans, ensure that personnel are trained for their roles on wraparound teams, allow staff the time and flexibility that is required to carry out team-assigned tasks, and monitor the quality of wraparound provided and the outcomes for children and families. Typically, providing this necessary level of system support requires that collaborating agencies and organizations make many changes that involve the reallocation of resources and the creation of new policies. Further, because wraparound is a collaborative effort that is not “owned” by a single agency, communities usually find it necessary to create some kind of collaborative-level body or governance structure through which stakeholders act collectively to carry out key functions, such as strategic planning, risk management, and oversight. Finally, these various organizations, both individually and collectively, must manage the larger policy and funding environment so that it presents a hospitable implementation context for wraparound. The agencies and organizations are thus continually engaged in managing what Fixsen et al. (2005) call the “external influence factors... the shifting ecology of community, state, and federal social, economic, cultural, political, and policy environments that variously and simultaneously enable and impede implementation and program operation efforts” (p. 58).

It is important to note that system of care (Hodges et al. 2010; Stroul and Blau 2008; Stroul and Friedman 1986; U.S. Department of Health and Human Services 2007) and system support for wraparound are not necessarily the same thing. A system of care is a “spectrum of effective, commu-

nity-based services,” organized into a coordinated network (Stroul and Blau 2010). Alternatively, it has been described as a network of structures, processes and relationships (Hodges et al. 2010) that provides access to a comprehensive array of needed services and supports. In contrast, system support for wrap-around is defined as the specific system level structures, policies and activities that need to be in place for wrap-around to succeed. It is likely that a well developed system of care represents a hospitable implementation context for wrap-around; however, wrap-around can also do well in a context in which a system of care is not being attempted (Walker and Koroloff 2007; Walker et al. 2003).

The need for significant inter-agency or “system-level” collaboration creates a complex implementation environment for wrap-around. It is therefore not surprising that building and sustaining a hospitable implementation environment has proven to be extremely challenging (Burchard et al. 2002; Farmer 2000; Stroul and Manteuffel 2007; Walker and Schutte 2005). For the people who are responsible for managing the inter-organizational collaboration, it is not easy to evaluate the adequacy of local system-level support for wrap-around and to see exactly what kinds of supports are lacking or where system-development efforts should focus. Furthermore, as system-development strategies are put into practice, it can be difficult to assess whether or not meaningful progress is occurring.

*The Community Supports for Wrap-around Inventory* (CSWI) was developed to respond to the need for a reliable and valid assessment of the system-level implementation context for wrap-around. In order to be useful to stakeholders, such an assessment should be easy to implement. As a result, the CSWI was created as a web-based survey to be completed by local stakeholders who are involved in, and knowledgeable about, implementation efforts.

### ***Development of the CSWI***

The CSWI has its origins in qualitative research on the implementation context for wrap-around undertaken by our research team. The information gathered during this research led the investigators to propose a series of “necessary conditions” that

must be in place at the organization and system levels in order for wrap-around implementation to be successful and sustainable (Walker and Koroloff 2007; Walker et al. 2003, 2010). The research was conducted using an approach called “backward mapping” (Dunst et al. 1993; Elmore 1979/1980; Friedman 2003). Backward mapping is a strategy for policy and implementation analysis that begins with a description of desired behavior at the “lowest” level of intervention, where “public servants touch the public.” In this case, the desired behavior is that wrap-around teams create comprehensive, individualized plans to meet child and family needs. Backward mapping analysis then proceeds to identify the policies, resources, and supports that are needed from “higher” levels if the desired behavior—i.e., high quality wrap-around planning—is to occur. What makes a backward mapping strategy particularly useful for studying wrap-around implementation is that wrap-around itself is essentially a backward mapping process. At the service level, individual wrap-around teams are required to go through a process of creative problem solving, formulating an individualized response to needs of a particular child and family. The content of the plan then becomes a uniquely designed intervention at the “lowest” level. The team then has to answer the question: What resources and support are needed from “higher” levels to make plan implementation succeed?

In accordance with the backward mapping approach, this initial research on wrap-around implementation began with interviews of wrap-around facilitators and family partners identified as highly expert. In addition to describing the attributes of effective practice, these practice experts were asked to identify organizational and system-level supports and barriers. Subsequently, interviews were conducted with managers and administrators at “higher” levels in organizations and systems. These interviewees were encouraged to look “upward” and describe supports and barriers they encountered from higher levels within their own agency or system, and/or at the level of the larger policy and funding context. Analysis of the interview data led the investigators to posit a series of implementation

themes, and to list one or more “necessary conditions” within each theme.

Based on this qualitative research the investigators developed a self-assessment for communities to use to gauge the extent to which the necessary conditions were in place to support wraparound implementation (Walker et al. 2003). Communities were asked to rate whether each of the necessary conditions was not at all, partially, or fully in place. However, communities using the self-assessment found it difficult to provide these ratings, primarily because the necessary conditions were expressed in fairly abstract terms. For example, in the “capacity building/staffing” theme, respondents were asked to assess whether or not their community’s wrap-around staff was provided with “working conditions that enable high quality work and reduce burnout.” However, respondents were not provided with any information about what such work conditions would be. The investigators thus set out to revise the assessment so that the necessary conditions were expressed in terms of one or more items that were much more specific and concrete.

Revision of the assessment was undertaken as a collaborative activity coordinated by the investigators, who worked with the membership of the National Wraparound Initiative (NWI, Walker and Bruns 2006a; Walker et al. 2008, in press), a group of diverse stakeholders with high levels of expertise and experience with wraparound. A core group of ten stakeholders, relying on their own experience and the detailed findings from the “necessary conditions” research, worked together to generate a pool of items at a more concrete level. The core group also added to the pool a number of items that reflected implementation supports not covered by the original list of necessary conditions. The core group reviewed the items, moved some between themes, and allocated some of the items to an entirely new theme.

The investigators then solicited both structured and semi-structured written feedback from a group of ten further NWI members, selected specifically for their expertise in wraparound implementation. Members were asked to rate each item in terms of how essential it was that that particular feature be

in place in order for wraparound implementation to be successful. They rated the adequacy of the wording of each item, and were provided with an opportunity to suggest alternate wording. Items were grouped into themes, and members were asked whether the items sufficiently “covered” the theme, and if not, what might be missing. Finally, members were asked whether there were any necessary implementation supports that were not covered by the existing items and themes. The core group used the feedback to create the final items on the initial version of the *Community Supports for Wraparound Inventory*. Each item described a “fully developed” feature of community support for wraparound. In addition, the group created a “least developed” description for each feature that described conditions that are typical in communities where there has been no collaboration to support wraparound. There were 40 items in the resulting CSWI, each with a “fully developed” and a “least developed” description.

The goal of the current study was to evaluate the reliability and validity of the CSWI, as well as to gather some initial indication of the feasibility and usefulness of the CSWI for use in communities implementing wraparound.

## Method

Seven wraparound programs from around the United States participated in the pilot test of the CSWI. The programs and their communities were selected to be diverse in terms of where they fell on a rural/urban spectrum. Two of the sites were multi-county rural wraparound programs. One site was a program located in a small city and serving the city as well as the surrounding rural area. One site was a county on the fringe of a large metropolitan area and included suburbs, small towns and bedroom communities, and rural areas. Finally, three sites were urban areas, one each located in the eastern, mid-western and western part of the country. Two of these urban communities had populations in which the largest ethnic/racial group was African-American. The other communities ranged from 63 to 94% Caucasian, and in all but one of these communities, African-Americans comprised the second

Table 1. Sample items from each theme of the *Community Supports for Wraparound Inventory*

<b>Item</b>	<b>Fully developed system support</b>	<b>Least developed system support</b>
Theme 1: Community partnership. Collective community ownership of and responsibility for wraparound is built through collaborations among key stakeholder groups. (7 items)		
Item 1.1 Community team	There is a formal collaborative structure (a “wraparound community board”) for joint planning and decision making through which community partners take collective responsibility for development and implementation of wraparound	The wraparound effort is not supported by any collaborative system-level decision-making entity to oversee wraparound implementation, bust barriers and solve system-level problems
Theme 2: Collaborative action. Stakeholders involved in the wraparound effort take concrete steps to translate the wraparound philosophy into concrete policies, practices and achievements. (8 items)		
Item 2.3 Proactive planning	The wraparound effort is guided by a plan for joint action that describes the goals of the wraparound effort, the strategies that will be used to achieve the goals, and the roles of specific stakeholders in carrying out the strategies	There is no plan for joint action that describes goals of the wraparound effort, strategies for achieving the goals, or roles of specific stakeholders
Theme 3: Fiscal Policies and Sustainability. The community has developed fiscal strategies to meet the needs of children participating in wraparound and methods to collect and use data on expenditures for wraparound-eligible children. (6 items)		
Item 3.3 Collective fiscal responsibility	Key decision-makers and relevant agencies assume collective fiscal responsibility for children and families participating in wraparound and do not attempt to shift costs to each other or to entities outside of the wraparound effort	Each agency has its own cost controls and agencies do not collaborate to reduce cost shifting, either to each other or to entities outside of the wraparound effort
Theme 4: Access to needed supports and services. The community has developed mechanisms for ensuring access to the wraparound process and the services and supports that teams need to fully implement their plans. (6 items)		
Item 4.2 Service/support availability	Wraparound teams can readily access (or receive necessary support to create) the services and supports required to fully implement their plans (including services such as respite, in-home services, family support, mentoring, individualized behavior support, etc., that are commonly requested by wraparound teams)	Services and supports needed to fully implement wraparound plans are not readily available or cannot be created in sufficient quantity
Theme 5: Human resource development and support. The community supports wraparound and partner agency staff to work in a manner that allows full implementation of the wraparound model. (6 items)		
Item 5.5 Supervision	People with primary roles for carrying out wraparound (e.g., wraparound facilitators, parent partners) receive regular individual and group supervision, and periodic “in vivo” (observation) supervision from supervisors who are knowledgeable about wraparound and proficient in the skills needed to carry out the wraparound process	People with primary roles for carrying out wraparound receive little or no regular individual, group, or observational supervision AND/OR supervisors are inexperienced with wraparound or unable to effectively teach needed skills
Theme 6: Accountability. The community has implemented mechanisms to monitor wraparound fidelity, service quality, and outcomes, and to assess the quality and development of the overall wraparound effort. (7 items)		
Item 6.1 Outcomes monitoring	There is centralized monitoring of relevant outcomes for children, youth, and families in wraparound. This information is used as the basis for funding, policy discussions and strategic planning	There is no tracking of relevant outcomes for children and youth in wraparound, or different agencies and systems involved maintain separate tracking systems

largest segment of the population. In the remaining community, Latinos formed the second largest segment of the population.

Communities were also selected so as to include a range of levels of wraparound implementation. One of the communities was among the best respected and longest sustained wraparound projects in the country, while two of the communities were at the very beginning stages of wraparound implementation. Among the others, three had competed successfully for funding from the federal “system of care” grants provided under the Comprehensive Community Mental Health Services for Children and Their Families Program (U.S. Department of Health and Human Services 2007). One of the communities at the beginning stages of development had been an unsuccessful applicant to the same program.

In each community, the collaborative body working to implement wraparound identified a local coordinator to work with the external research team. The local coordinator was responsible for informing the community about the CSWI, building enthusiasm for participation, and creating a list of potential respondents for the assessment. The coordinator was provided with a set of guidelines for identifying potential respondents. Members of various stakeholder groups who typically have knowledge about implementation were to be considered for inclusion on the list. Those typically considered include members of the project’s governance body (i.e., the group or groups that oversee and guide the collaboration); people directly employed by the project (e.g., facilitators of wraparound teams or care coordinators, supervisors, family partners, etc.); current or former recipients of services; staff and administrators from public and private agencies who are part of committee or other group providing oversight for the collaboration (e.g., child welfare, school systems, mental health provider agencies); and representatives of other community stakeholder groups who were actively involved in implementation and/or implementation oversight. The local coordinator completed a spreadsheet with each potential participant’s name, email address, phone number and role within the project. For each potential respondent on the list, the local coordina-

tor also indicated if the person was employed by the project and whether or not this person would be considered a “key respondent” (i.e., someone who had a high level of knowledge about program implementation).

The version of the CSWI used in the pilot study included 40 items grouped into six conceptual themes: *community partnership*, *collaborative activity*, *fiscal policies and sustainability*, *access to supports and services*, *human resource development and support*, and *accountability*. Each item offered two “anchor” descriptions, one for “least developed system support” (i.e., a description of what the situation would be in the absence of any wraparound-focused collaboration between relevant stakeholder groups) and one for “fully developed system support.” Respondents rated their community on a 0–4 scale where 0 corresponded to “least developed,” 2 to “midway,” and 4 to “fully developed.” Sample items from each theme in the CSWI are provided in Table 1.

The external researchers created an online version of the CSWI for each community in the study. After receiving the contact list, each potential participant was emailed an invitation to participate, along with information about the CSWI. Potential participants could choose to decline participation. If they did not decline, they were automatically sent reminders about the survey via email. Near the time set as the survey deadline, if a potential respondent had neither taken the CSWI nor declined to participate, he or she received one or more further reminders by telephone.

## Results

Only people who provided data for the CSWI were considered as having responded. Those who declined the survey, as well as those who neither took the CSWI nor declined, were considered non-responders. Across the seven sites, 279 participants completed the CSWI. The mean response rate across sites among nominated respondents with valid email addresses was 63.5%. Among those nominated as “key” respondents, the mean response rate was 80.1%. Site-by-site data on response rates is provided in Table 2. Respondents reported a mean

of 3.2 years' involvement with the wraparound effort that was being evaluated with the CSWI. Across sites, respondents were most likely to be employed by the wraparound program in some capacity, such as family partner (a peer provider role), 7.6%; facilitator or other wraparound service provider, 27.0%; or wraparound administrator 12.0%. About a fifth of the respondents described themselves as administrators for programs other than the wraparound program (21.1%), while smaller percentages were

direct service providers not employed by the wraparound project (14.0%), current or former service recipients (3.6%), or other roles (15.7%). Across all respondents, 81.4% identified themselves as White/Caucasian, 13.7% as Black/African-American, and 3.9% as Hispanic/Latino; however, these percentages varied considerably across the participating communities. Site-by-site data on respondents' tenure in the wraparound program, primary role, and race/ethnicity is provided in Table 3.

Table 2. Site-by-site response rates

Response rate	Site							Mean
	1	2	3	4	5	6	7	
Total	46.8	68.9	75	59.5	73.5	85.4	35.1	63.5
Employed	100	77.4	73.3	68.2	78.3	93.3	33.3	74.8
"Key"	84	66.7	91.7	76.4	95.2	87.9	58.5	80.1

Table 3. Site-by-site respondent information

	Site							Mean
	1	2	3	4	5	6	7	
Years with project	3.10	2.24	3.94	2.15	2.24	2.71	6.20	3.20
<b>Primary role (%)</b>								
Service recipient	13.8	0.0	0.0	3.4	8.2	0.0	0.0	3.6
Family partner/peer role	0.0	12.9	13.6	0.0	6.1	9.8	2.9	7.6
Facilitator or other wraparound provider	13.8	41.9	36.4	37.9	26.5	12.2	20.6	27.0
Other provider	17.2	12.9	9.1	13.8	4.1	22.0	19.1	14.0
Wraparound administrator	10.3	9.7	13.6	6.9	20.4	2.4	20.6	12.0
Other administrator	34.5	22.6	9.1	31.0	4.1	31.7	14.7	21.1
Other	10.3	0.0	18.2	6.9	30.6	22.0	22.1	15.7
<b>Race/ethnicity (%)</b>								
White	51.7	97.6	77.3	93.1	78.0	92.7	79.4	81.4
Black	48.3	2.4	13.6	3.4	12.0	0.0	16.2	13.7
Hispanic	0.0	0.0	9.1	3.4	6.0	7.3	1.5	3.9
Other	0.0	0.0	0.0	0.0	4.0	0.0	2.9	1.0

### **Exploratory Factor Analysis**

An exploratory factor analysis was conducted on the 40 items of the CSWI. Factors were extracted using principal axis factoring, an approach which is recommended for exploratory factor analysis, when the empirical objectives of the analysis are to find a smaller set of latent dimensions which underlie a set of indicators (Brown 2006; Fabrigar et al. 1999; Russell 2002). There are a variety of procedures and guidelines for deciding how many factors should be retained for interpretation in factor analysis, and often these different approaches do not yield the same result (Fabrigar et al. 1999; Henson and Roberts 2006). Parallel analysis (Horn 1965) has been recommended as a relatively accurate procedure for identifying factors to be retained (Brown 2006; Henson and Roberts 2006; Russell 2002; Velicer and Fava 1998), and that procedure was employed in the current study. Parallel analysis showed the difference between the eigenvalues from the data and the random data becoming negative after the fifth factor, thus suggesting that the first five factors contribute meaningfully to explaining the total variance.

A five-factor solution was obtained and then rotated using promax, an oblique method, since the factors were assumed to be correlated (Fabrigar et al. 1999). The five factors explained 73.3% of the variance. Extraction communalities averaged close to .7, and all but one of the items demonstrated moderate to high levels of communality (typically considered to be about .6 or greater, Costello and Osborne 2005; Russell 2002). The only exception was *youth voice*, with a communality of .460. Factor loadings from the pattern matrix are shown in Table 4. The first four factors each had between four and six items with very strong loadings (i.e., above .700) and only two items with significant crossloading (Costello and Osborne 2005). The first four factors corresponded very closely to the themes from the CSWI: all but two of the items from CSWI themes one and two loaded highest on factor 1; all but one of the items (item 4.3, *building natural and community supports*) from CSWI themes 3 and 4 loaded highest on factor 2, though another item (item 4.6, *crisis support*) had significant cross loading on fac-

tor 4; all the items CSWI theme 5 loaded highest on factor 4; and all the items from CSWI theme 6 loaded highest on factor 3. All of the items loaded on their respective factors above the minimum .32 described by Tabachnick and Fidell (2001) as desirable. The fifth factor was a much weaker factor, with only two items having the highest loadings on it. However, these two items—item 1.3 *family voice* and item 1.4 *youth voice*—are both conceptually linked and theoretically important in the context of wraparound. One other item also had a moderate loading on this factor, item 1.7, *community representativeness*, which assesses the extent to which the governance body reflects the broader community. The correlations between the factors ranged from about .50 to just under .65 [moderate to large, according to Cohen's (1988) guidelines for interpretation; yet not so large as to suggest a more parsimonious interpretation (Brown 2006)], suggesting that the CSWI items as a group may be considered to form a scale of which the other factors are distinct subscales.

### **Reliability**

The three items with highest crossloadings were removed from further analysis (items 1.6, 4.3 and 4.6). Cronbach's alpha was calculated for the remaining items on each of the subscales and for the CSWI as a whole, and the statistic showed very high reliability in each case: Subscale 1 (all remaining items from theme 1 *community partnership* and theme 2 *collaborative activity* except the two "voice" items),  $\alpha = .96$ ; subscale 2 (all remaining items from theme 3 *fiscal policies and sustainability* and theme 4 *access to needed supports and services*),  $\alpha = .95$ ; subscale 3 (all the items from theme 5 *human resource development and support*),  $\alpha = .94$ ; subscale 4 (all the items from theme 6 *accountability*),  $\alpha = .95$ ; subscale 6, "voice" items 1.3 and 1.4 alone,  $\alpha = .71$ ; and entire CSWI  $\alpha = .95$ . Since each of the participants within a given site was evaluating the same aspects of their system, inter-rater reliability was calculated for each site using the average measure intraclass correlation (ICC) for absolute agreement. Across the seven sites, the ICC averaged .78, and was statistically significant above the .05 level in each site.



Table 4. Item names and factor loadings

Variable	Factor				
	1	2	3	4	5
1.1 Community team	.641	.035	-.024	.107	.043
1.2 Empowered community team	.720	.085	-.181	.120	.090
1.3 Family voice	.167	-.107	.231	.030	.595
1.4 Youth voice	-.015	-.156	.227	-.199	.739
1.5 Agency support	.704	.066	-.077	.137	.059
1.6 Community stakeholders	.445	.096	-.192	.127	.364
1.7 Community representativeness	.561	-.141	-.176	.032	.490
2.1 Community principles and values	.865	-.093	.213	-.130	-.019
2.2 High-level leadership	.818	-.084	.130	.014	-.050
2.3 Proactive planning	.794	.058	.089	.016	-.073
2.4 Joint action steps	.811	.063	-.036	.043	.013
2.5 Partner agency staff preparation	.538	.372	.016	-.211	.144
2.6 Information sharing	.568	.201	.166	.013	-.081
2.7 Single plan	.489	.248	.075	.071	-.051
2.8 State interface	.400	.214	.109	.102	.007
3.1 Fiscal understanding	.210	.635	.147	-.264	.094
3.2 Removing fiscal barriers	.125	.828	.089	-.159	-.032
3.3 Collective fiscal responsibility	.219	.817	-.049	-.092	-.095
3.4 Fiscal monitoring	.087	.860	.082	-.013	-.155
3.5 Fiscal flexibility	-.113	.912	-.035	.206	-.176
3.6 Sustained funding	.172	.759	-.027	.086	-.226
4.1 Program access	-.153	.621	.129	.014	.194
4.2 Service/support availability	.039	.556	-.025	.299	.055
4.3 Building natural/community supports	-.081	.414	-.140	.485	.239
4.4 Choice	.062	.588	.011	.235	.049
4.5 Service/support quality	.108	.376	.022	.224	.172
4.6 Crisis response	.184	.333	.007	.330	.051
5.1 Wraparound job expectations	.126	-.019	.073	.820	-.111
5.2 Agency job expectations	.323	.083	.119	.503	-.163
5.3 Caseload sizes	.016	-.091	.134	.947	-.165
5.4 Professional development	-.040	.103	.157	.732	-.118
5.5 Supervision	.179	-.155	.074	.771	.002
5.6 Compensation for wraparound staff	-.183	.147	.184	.589	.131
6.1 Outcomes monitoring	.099	-.042	.859	.117	-.068
6.2 Range of outcomes	-.137	.031	.753	.136	.181
6.3 Wraparound quality	.001	-.088	.720	.227	.130
6.4 Plan fulfillment	.113	.156	.731	-.029	-.019
6.5 Grievance procedure	-.078	.201	.480	.154	.204
6.6 Satisfaction monitoring	.084	.085	.628	.008	.159
6.7 Addressing barriers	.114	.229	.393	.126	.093

### Community Scores

Out of a total possible score of 160 on the CSWI, the highest-scoring community scored 107.18. This corresponded to an average item score of 2.68. (The rating scale for the CSWI has anchors for each whole number rating, with 2.0 defined as “halfway there,” and 3.0 defined as “nearly there” for that item.) By contrast, the lowest-scoring community had a total score of 41.75, corresponding to an item average of 1.04. (The response scale defined 1.0 as “some progress.”) The mean total score across the seven communities was 75.66, corresponding to a mean item score of 1.89, or nearly “halfway there.” Item means by theme for each site, as well as means across all sites, are shown in Table 5.

### Validity

The process through which the CSWI was derived was intended to maximize face and construct validity. In a gross test of concurrent reliability, the community with the highest total score on the CSWI was the community selected for inclusion in the pilot study because it was considered a national model, while the two lowest-scoring communities were the two included because they were in the beginning stages of development.

Criterion validity of the CSWI was assessed by comparing constructs from the CSWI and similar constructs assessed via the System of Care Assess-

ment (SoCA, Brannan et al. 2002), which forms part of the national evaluation for communities funded under the federal “systems of care” grant program (U.S. Department of Health and Human Services 2007). Four of the communities that participated in the pilot test of the CSWI were current or recently graduated participants in the system of care grant program. The research team requested and received data collected during the SoCA site visit closest in time to the administration of the CSWI.

In system of care grantee communities, a SoCA site visit is conducted every 18 months to determine the community’s progress toward building an integrated system of care (Stroul and Friedman 1986) at the organizational and community levels. Assessment includes two overarching domains, service delivery and infrastructure, and each of these domains includes four “components.” For this study, only data about the SoCA infrastructure domain was used, since this domain is concerned with the same sort of system-level development that is assessed in the CSWI. The four components of the SoCA infrastructure domain are governance, management and operations, service array, and quality monitoring. Each community receives ratings for how well it is achieving eight system-of-care principles across each of the four components in the domain. Thus, the SoCA assessment framework in each domain can be thought of as a matrix

Table 5. Site-by-site mean item scores by theme

	Site							All
	1	2	3	4	5	6	7	
Subscale 1: Collaboration	1.44	1.46	1.87	2.17	2.16	2.04	2.76	2.11
Subscale 2: Funding and service array	0.68	1.23	1.21	2.14	2.17	1.75	2.68	1.88
Subscale 3: Human resources	1.02	1.86	1.84	2.13	2.00	2.32	2.86	2.01
Subscale 4: Accountability	0.69	1.84	1.47	1.89	2.15	2.72	2.78	1.94
Subscale 5: Family and youth voice	1.22	1.55	1.30	1.73	1.87	2.72	2.11	1.78
All items	1.02	1.54	1.60	2.08	2.13	2.20	2.68	1.88

with the four components as columns and the eight principles as rows. For each cell in the matrix, key indicators are assessed through record reviews, interviews and/or observations, and scores on the individual indicators are combined, yielding a score for that cell.

As noted before, wraparound and system of care are distinct from one another, and while wraparound is often implemented in communities that are also building systems of care, wraparound does not necessarily need a system of care as an implementation context. However, because there is significant overlap in the values and principles that drive system of care and wraparound, it is not surprising that there is some conceptual overlap between the constructs assessed for the SoCA and those assessed for the CSWI. The validation strategy described here relied on identifying these specific areas of overlap.

For this study, the research team identified constructs that mapped from CSWI items or groups of items to SoCA indicators or groups of indicators, and vice versa. The research team identified a total of ten such constructs. Scores for each of the four communities were translated into ranks on each of the ten constructs for each measure. Thus a community might be ranked second out of the four communities on the construct of *outcome monitoring* on the SoCA, and third out of four on the parallel construct from the CSWI. A  $4 \times 4$  contingency table was created with columns being a community's rank on the SoCA and the rows being its rank on the CSWI. Each cell of the table thus contained a count of the number of times the communities received that particular combination of ranks. The gamma coefficient of symmetrical association was calculated for this table, to assess the extent to which the two measures yielded similar ranks for the different communities across the constructs (Rousson 2007). The result,  $\gamma = .62$  ( $p < .005$ ), indicates a highly significant and moderately strong association.

## Discussion

The CSWI was developed to respond to a clearly expressed demand from wraparound stakeholders to know more about what support is needed from the implementation context (Walker and Bruns

2006b). Based on the findings presented here, the CSWI shows promise as a reliable and valid tool. What is more, the factor structure that emerged in the analysis corresponded in a fairly straightforward way to the six-theme structure that had been defined through previous qualitative research and expert review. Thus the main dimensions represented in the CSWI correspond well to stakeholders' own conceptual understanding of the important dimensions of wraparound implementation.

Though the initial findings presented here are promising, there are several important limitations to the study. First of all, the study procedures relied on a local coordinator to compile the list of potential CSWI respondents. Though guidelines for selecting potential participants were provided, there was no way to definitively assess how adequately the lists of participants compiled by the local coordinators actually reflected these guidelines and/or included individuals and stakeholder groups who figured importantly in local implementation. Second, though the demographic profiles of the participating communities varied somewhat, the demographic variation among communities implementing wraparound is far wider still, and it is so far unknown whether the CSWI will be appropriate across the spectrum of wraparound communities. Third, questions remain about how to handle the "voice" items from theme 1 *community partnership*. While these items load onto a single factor that can be considered statistically and conceptually distinct, the factor has too few items to be considered "strong" under common guidelines. Finally, it could also be argued that typical system members do not have sufficient expertise or objectivity to respond in a valid way to the CSWI items, and that outside experts would perhaps make better raters. This is the approach typically taken in site visit assessments such as the System of Care Assessment (SoCA), described earlier. However, when visiting experts make a site visit, their primary means of data gathering is via discussions with stakeholders. Thus, to some extent, their expertise can only be informed by local knowledge and perceptions. Additionally, the inter-rater agreement that is characteristic among respondents to the CSWI within sites suggests either that stakeholders are converging on an

accurate assessment of the various facets of implementation or that they are, as a group, systematically biased. The convergence of CSWI ratings with SoCA ratings lends weight to the former interpretation over the latter.

The CSWI was designed as a measure that would be feasible for communities to use, and that would produce data that would be relevant to community needs. Six of seven local coordinators from the communities participating in the CSWI completed an online satisfaction survey after they had received their final reports. Among the local coordinators, four gave the CSWI the top rating (“very much”) and the remainder the next highest rating (“a good deal”) on a 5-point scale when asked to rate the extent to which the CSWI was comprehensive and aligned with the wraparound model. All but one of the local coordinators responded in the top two categories from the same 5-point scale to questions asking about (a) how well they liked the structure and protocol of the CSWI; and (b) the extent to which the CSWI was feasible for their community to implement. All of the responding local coordinators used the top two categories to describe the extent to which the CSWI accurately captured the strengths and weaknesses in their wraparound programs. While this is a very small sample, the local coordinators’ responses were quite positive overall regarding the CSWI’s feasibility and usefulness.

In sum, this exploratory study suggests that the CSWI holds promise as an easy-to-implement assessment that yields reliable, valid and useful data about the extent to which a community has developed system-level support for wraparound; however, further research is needed to clearly establish the psychometric properties of the assessment.

## References

- Altschuler, D., Stangler, G., Berkley, K., & Burton, L. (2009). *Supporting youth in transition to adulthood: Lessons learned from child welfare and juvenile justice*. Washington, DC: Georgetown University Center for Juvenile Justice Reform.
- Brannan, A. M., Baughman, L. N., Reed, E. D., & Katz-Leavy, J. (2002). System-of-care assessment: Cross-site comparison of findings. *Children’s Services: Social Policy, Research & Practice*, 5, 37–56.
- Brown, T. A. (2006). *Confirmatory factor analysis for applied research*. New York: Guilford Press.
- Bruns, E. J., Sather, A., & Stambaugh, L. F. (2008). National trends in implementing wraparound: Results from the state wraparound survey, 2007. In E. J. Bruns & J. S. Walker (Eds.), *The resource guide to wraparound*. Portland, OR: Portland State University, National Wraparound Initiative.
- Bruns, E. J., Walker, J. S., Zable, M., Matarese, M., Estep, K., Harburger, D., et al. (in press). Intervening effectively in the lives of youth with complex behavioral health challenges and their families: The role of the wraparound process. *American Journal of Community Psychology*.
- Burchard, J. D., Bruns, E. J., & Burchard, S. N. (2002). The wraparound approach. In B. J. Burns & K. Hoagwood (Eds.), *Community treatment for youth: Evidence-based interventions for severe emotional and behavioral disorders* (pp. 69–90). New York: Oxford University Press.
- Clark, H. B., & Clarke, R. T. (1996). Research on the wraparound process and individualized services for children with multi-system needs. *Journal of Child and Family Studies*, 5, 1–5.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum.
- Costello, A. B., & Osborne, J. W. (2005). Best practices in exploratory factor analysis: Four recommendations for getting the most from your analysis. *Practical Assessment, Research & Evaluation*, 10. Retrieved from <http://pareonline.net/pdf/v10n7.pdf>.
- Daleiden, E. L., Chorpita, B. F., Donkervoet, C., Arensdorf, A. M., & Brogan, M. (2006). Getting better at getting them better: Health outcomes and evidence-based practice within a system of care. *Journal of the American Academy of Child & Adolescent Psychiatry*, 45, 749–756.
- Dunst, C. J., Trivette, C. M., Starnes, A. L., Hamby, D. W., & Gordon, N. J. (1993). *Building and evaluating family support initiatives*. Baltimore: Paul H. Brookes.
- Elmore, R. F. (1979/1980). Backward mapping: Implementation research and policy decisions. *Political Science Quarterly*, 94, 601–616.
- Evidence-Based Associates. (2008). *Evidence-based programs’ global footprint*. Retrieved from <http://www>.

- evidencebasedassociates.com/resources/fact\_sheets/global\_footprint\_0109.pdf.
- Fabrigar, L. R., Wegener, D. T., MacCallum, R. C., & Strahan, E. J. (1999). Evaluating the use of exploratory factor analysis in psychological research. *Psychological Methods*, 4(3), 272–299.
- Farmer, E. M. Z. (2000). Issues confronting effective services in systems of care. *Children and Youth Services Review*, 22, 627–650.
- Farmer, E. M. Z., Dorsey, S., & Mustillo, S. A. (2004). Intensive home and community interventions. *Child and Adolescent Psychiatric Clinics of North America*, 13(1), 857–884.
- Fixsen, D., Naoom, S. F., Balase, K. A., Friedman, R. M., & Wallace, F. (2005). *Implementation research: A synthesis of the literature*. Tampa, FL: University of South Florida, Louis de la Parte Florida Mental Health Institute, The National Implementation Research Network.
- Frakera, T., & Rangarajan, A. (2009). The Social Security Administration's Youth Transition Demonstration Projects. *Journal of Vocational Rehabilitation*, 30, 223–240.
- Friedman, R. M. (2003). A conceptual framework for developing and implementing effective policy in children's mental health. *Journal of Emotional and Behavioral Disorders*, 11, 11–18.
- Gagnon, J. C., & Richards, C. (2008). *Making the right turn: A guide about improving transition outcomes of youth involved in the juvenile corrections system*. Washington, DC: National Collaborative on Workforce and Disability for Youth, Institute for Educational Leadership.
- Haber, M. G., Karpur, A., Deschenes, N., & Clark, H. B. (2009). Predicting improvement of transitioning young people in the Partnerships for Youth Transition Initiative: Findings from a multi-site demonstration. *Journal of Behavioral Health Services and Research*, 35, 488–513.
- Henson, R. K., & Roberts, J. K. (2006). Use of exploratory factor analysis in published research. *Educational and Psychological Measurement*, 66, 393–416.
- Hodges, S., Ferreira, K., Israel, N., & Mazza, J. (2010). Systems of care, featherless bipeds, and the measure of all things. *Evaluation and Program Planning*, 33, 4–10.
- Horn, J. L. (1965). A rationale and test for the number of factors in factor analysis. *Psychometrika*, 30, 179–185.
- Institute of Medicine. (2006). *Improving the quality of health care for mental and substance-use conditions*. Washington, DC: The National Academies Press.
- Malekoff, A. (2000). Bureaucratic barriers to service delivery, administrative advocacy, and Mother Goose. *Families in Society: The Journal of Contemporary Human Services*, 81, 304–314.
- McGinty, K., McCammon, S. L., & Koeppen, V. P. (2001). The complexities of implementing the wrap-around approach to service provision: A view from the field. *Journal of Family Social Work*, 5, 95–110.
- New Freedom Commission on Mental Health. (2003). *Achieving the promise: Transforming mental health care in America: Final report (No. DHHS Pub. No. SMA-03-3832)*. Rockville, MD: New Freedom Commission on Mental Health.
- Rousson, V. (2007). The gamma coefficient reconsidered. *Statistics & Probability Letters*, 77, 1696–1704.
- Russell, D. W. (2002). In search of underlying dimensions: The use (and abuse) of factor analysis in Personality and Social Psychology Bulletin. *Personality and Social Psychology Bulletin*, 28, 1629–1646.
- Sieler, D., Orso, S., & Unruh, D. K. (2009). Creating options for youth and their families. In H. B. Clark & D. K. Unruh (Eds.), *Transition of youth and young adults with emotional or behavioral difficulties: An evidence-based handbook*. Baltimore, MD: Brookes Publishing.
- Stroul, B. A., & Blau, G. M. (Eds.). (2008). *The system of care handbook: Transforming mental health services for children, youth, and families*. Baltimore, MD: Brookes Publishing.
- Stroul, B. A., & Blau, G. M. (2010). Defining the system of care concept and philosophy: To update or not to update? *Evaluation and Program Planning*, 33, 59–62.
- Stroul, B. A., & Friedman, R. M. (1986). *A system of care for seriously emotionally disturbed children and youth*. Washington, DC: Georgetown University Child Development Center.
- Stroul, B. A., & Manteuffel, B. A. (2007). The sustainability of systems of care for children's mental health: Lessons learned. *Journal of Behavioral Health Services & Research*, 34(3), 237–259.

- Tabachnick, B. G., & Fidell, L. S. (2001). *Using multivariate statistics*. Boston: Allyn and Bacon.
- U.S. Department of Health and Human Services. (2007). *Cooperative agreements for Comprehensive Community Mental Health Services for Children and their Families Program (RFA) No. SM-08-004*. Rockville, MD: Substance Abuse and Mental Health Administration, Center for Mental Health Services.
- U.S. Department of Health and Human Services. (2009). *Cooperative agreements for state/community partnerships to integrate services and supports for youth and young adults 16–25 with serious mental health conditions and their families (RFA) No. SM-09-008*. Washington, DC: Substance Abuse and Mental Health Services Administration.
- Velicer, W. F., & Fava, J. L. (1998). Effects of variable and subject sampling on factor pattern recovery. *Psychological Methods*, 3, 231–251.
- Walker, J. S., & Bruns, E. J. (2006a). Building on practice-based evidence: Using expert perspectives to define the wraparound process. *Psychiatric Services*, 57, 1579–1585.
- Walker, J. S., & Bruns, E. J. (2006b). The wraparound process: Individualized, community-based care for children and adolescents with intensive needs. In J. Rosenberg & S. Rosenberg (Eds.), *Community mental health: Challenges for the 21st century*. New York: Routledge.
- Walker, J. S., Bruns, E. J., Conlan, L., & LaForce, C. (in press). The National Wraparound Initiative: A community of practice approach to building knowledge in the field of children’s mental health. *Best Practices in Mental Health*.
- Walker, J. S., Bruns, E. J., & Penn, M. (2008). Individualized services in systems of care: The wraparound process. In B. A. Stroul & G. M. Blau (Eds.), *The system of care handbook: Transforming mental health services for children, youth, and families*. Baltimore, MD: Brookes Publishing.
- Walker, J. S., & Koroloff, N. (2007). Grounded theory and backward mapping: Exploring the implementation context for wraparound. *Journal of Behavioral Health Services & Research*, 34, 443–458.
- Walker, J. S., Koroloff, N., & Bruns, E. J. (2010). Defining “necessary” services and supports: Why systems of care must take direction from service-level processes. *Evaluation and Program Planning*, 33, 49–52.
- Walker, J. S., Koroloff, N., & Schutte, K. (2003). *Implementing high-quality collaborative individualized service/support planning: Necessary conditions*. Portland, OR: Research and Training Center on Family Support and Children’s Mental Health.
- Walker, J. S., & Schutte, K. M. (2005). Quality and individualization in wraparound planning. *Journal of Child and Family Studies*, 14, 251–267.

This manuscript was published in the *Journal of Child and Family Studies*, 20, 747-757, in 2011. The original publication is available at [www.springerlink.com](http://www.springerlink.com).