

MHSIP and YSS-F

Factor Analyses 2007

A Report from the Colorado Department of Human Services



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Introduction

In 2007, the Data and Evaluation section of the Colorado Division of Mental Health (DMH) completed factor analyses on the Mental Health Statistics Improvement Program (MHSIP) Consumer Survey as well as the Youth Services Survey for Families (YSS-F). DMH administers these surveys to assess perceptions of public mental health services provided in community mental health centers in Colorado.

The ongoing development of the MHSIP and YSS-F at the national level involves work groups that include consumers and families with a seminal aim of such groups being the promotion of consumer-oriented services through data. DMH has a vested interest in promoting these values in Colorado and is committed to the inclusion of consumer and family participation at multiple levels of mental health services. The utilization of the MHSIP and YSS-F surveys within Colorado is one way of meeting this ongoing goal.

Survey history and domain structure

The MHSIP and YSS-F surveys were developed at a national level in part to promulgate data standards that allow for valid results that better inform policy and decisions. The MHSIP survey was developed prior to the YSS-F. The YSS-F was modeled after the MHSIP in an effort to evaluate and include the caregivers' perspectives of public mental health services received by their children. There is a version of the YSS-F that assesses the views of youth receiving services (YSS), however this version has not been adopted in Colorado.

The MHSIP consumer survey was created by the SAMSHA-supported MHSIP advisory group and consisted of multiple stakeholders including consumers, family members, researchers, and agency representatives. Initially the focus of the group was on the consumer perception and experience of Access, Quality/Appropriateness, and Outcomes as they related to the MHSIP report card. The consumer survey assessing these domains was intended to be the subjective complement to the objective measures within the MHSIP report card (Ganju, 1999).

The MHSIP consumer survey initially consisted of 40 items to assess the three domains and included several items that assessed general satisfaction. In 1996, multiple states began mental health performance measurement systems with the consumer survey playing an integral role in these endeavors. As a result, survey items were refined and the survey was piloted. A subset of states joined together to work toward standardization (Ganju, 1999). The 40-item MHSIP survey underwent exploratory factor analyses with a multi-state sample of 1400 responses (Wackwitz, 2000). The analyses revealed that 21 items comprised 4 domains including General Satisfaction, Access, Appropriateness, and Outcomes (Wackwitz, 2000). These domains and the items that comprise them remain the core of the current MHSIP consumer survey (see Table 1 for a description of the domains and items). In a recent study from the South Carolina Division of Mental Health, factor analyses were calculated for state specific MHSIP consumer survey data and three of four domains (excluding satisfaction) were evidenced by the analysis, providing support for the domain structure of the MHSIP (Jerrell, 2006).

Table 1

MHSIP Domains and Domain Items

MHSIP Domain	Domain Items	MHSIP Item Number
Access	The location of services was convenient.	4
	Staff were willing to see me as often as necessary.	5
	Staff returned my calls within 24 hours.	6
	Services were available at times that were good for me.	7
Quality/ Appropriateness	Staff here believe I can grow, change, and recover.	10
	I felt free to complain.	12
	Staff told me what side effects to watch for.	15
	Staff respected my wishes about who is, and is not able to be given information about my treatment.	16
	Staff were sensitive to my cultural/ethnic background.	18
	Staff helped me obtain information so that I could take charge of managing my illness.	19
Consumer Perception of Outcomes	I deal more effectively with daily problems.	21
	I am better able to control my life.	22
	I am better able to deal with crisis.	23
	I am getting along better with my family.	24
	I do better in social situations.	25
	I do better in school and/or work.	26
	My symptoms are not bothering me as much.	28
General Satisfaction	I like the services that I received here.	1
	If I had other choices, I would still get services from this agency.	2
	I would recommend this agency to a friend or family member.	3

The YSS-F survey was developed and piloted by the 16-State Indicator Project Children's Survey Indicator Work Group (Brunk, 2001; Brunk, Innes, & Koch, 2003). The survey has five core domains including Access, Participation in Treatment, Cultural Sensitivity, Appropriateness, and Outcome that are composed of 21 items (see Table 2).

Table 2

YSS-F Domains and Domain Items

Domain	Items	YSS-F Item Number
Access	The location of services was convenient for us	8
	Services were available at times that were convenient for us	9
Participation in Treatment	I helped to choose my child's services	2
	I helped to choose my child's treatment goals	3
	I participated in my child's treatment	6
Cultural Sensitivity	Staff treated me with respect	12
	Staff respected my family's religious/spiritual beliefs	13
	Staff spoke with me in a way that I understood	14
	Staff were sensitive to my cultural/ethnic background	15
Appropriateness	Overall, I am satisfied with the services my child received	1
	The people helping my child stuck with us no matter what	4
	I felt my child had someone to talk to when he/she was troubled	5
	The services my child and/or family received were right for us	7
	My family got the help we wanted for my child	10
	My family got as much help as we needed for my child	11
Outcome	My child is better at handling daily life	16
	My child gets along better with family members	17
	My child gets along better with friends and other people	18
	My child is doing better in school and/or work	19
	My child is better able to cope when things go wrong	20
	I am satisfied with our family life	21

In an effort to validate the importance of the MHSIP and YSS-F surveys within Colorado, the Data and Evaluation section of DMH chose to complete factor analyses on both surveys with Colorado data. The aim of the factor analyses was to determine if the aforementioned domain structures were found in analyses of Colorado data.

Methods

Subjects and administration:

For this study, the sample consisted of the most recent two years of data from consumers and families who completed surveys. For the MHSIP, this included fiscal year 2005-2006 and fiscal year 2006-2007 data for a combined sample size of 3,995. The individuals included in this sample were served in

the community mental health system in the fiscal year of interest. They were randomly sampled from their respective years and were asked to complete the consumer survey, which was administered through the mail.

The YSS-F sample consisted of the fiscal year 2004-2005 and fiscal year 2005-2006. At the time of the analysis, data were not available for fiscal year 2006-2007 due to the ongoing administration of the survey for that fiscal year. The combined sample size was 1,556 caregivers of youth receiving community mental health services in the fiscal years of interest. The sampling and administration reflects that of the MHSIP, as described above.

Analysis:

Factor analyses of the MHSIP and YSS-F data were conducted using exploratory principal components analysis with a varimax rotation. This method of rotation allows for factors that are uncorrelated and which load highly on a smaller number of factors, making interpretation easier (Stevens, 2002).

Results

A factor analysis of the combined Colorado 2006 and 2007 MHSIP data was conducted using exploratory principal components analysis with a varimax rotation. In Table 3, the factor loadings of the combined MHSIP data are presented. For the combined sample (n = 3995) factor loadings above .162 are statistically significant (Stevens, 2002). Additionally, the results indicate that the four factors explain approximately 73% of the variance for the total set of variables. These data support the domain structure of the MHSIP and support the factor analyses and structural modeling completed in 2000 on the 21-item MHSIP data (Wackwitz, 2000). The domain items that compose the Participation/Treatment Planning domain were not included in this analysis as the construction of this domain, which is used in the current iteration of the MHSIP consumer survey, was based on a theoretical rather than an empirical basis to reflect the trend toward consumer-driven services. Additionally, this domain was not included in the core 21-item structure of the instrument and was not included in previous factor analyses.

A factor analysis of the combined Colorado 2005 and 2006 YSS-F data was conducted using exploratory principal components analysis with a varimax rotation. In Table 4, the factor loadings of the combined Colorado YSS-F data are presented. For the combined sample (n = 1556) factor loadings above .162 are statistically significant (Stevens, 2002). Additionally, the results indicate that the five factors explain approximately 79% of the variance for the total set of variables.

Table 3

Factor Analysis of the MHSIP Adult Consumer Survey

Items by domain	Factor loading			Variance explained (%)
	Satisfaction	Access	Quality Outcome	
General Satisfaction				15.5
1. I like the services that I received here.	.700			
2. If I had other choices, I would still get services from this agency.	.799			
3. I would recommend this agency to a friend or family member.	.766			
Access				8.7
4. The location of services was convenient.		.849		
5. Staff were willing to see me as often as necessary.	.451	.491	.444	
6. Staff returned my calls within 24 hours.		.479	.451	
7. Services were available at times that were good for me.	.478	.448	.454	
Quality/Appropriateness				21.7
10. Staff here believe I can grow, change, and recover.			.572	
12. I felt free to complain			.601	
15. Staff told me what side effects to watch for.			.738	
16. Staff respected my wishes about who is, and is not able to be given information about my treatment.			.784	
18. Staff were sensitive to my cultural/ethnic background.			.782	
19. Staff helped me obtain information so that I could take charge of managing my illness.			.692	
Consumer Perception of Outcomes				26.7
21. I deal more effectively with daily problems.				.772
22. I am better able to control my life.				.835
23. I am better able to deal with crisis.				.832
24. I am getting along better with my family				.718
25. I do better in social situations.				.839
26. I do better in school and/or work.				.797
28. My symptoms are not bothering me as much.				.781

Note. Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

Table 4

Factor Analysis of the YSS-F Survey

Items by domain	Factor loading				Variance explained %
	Appropriateness	Outcome	Cultural	Participation	
Appropriateness					20.8
1. Overall, I am satisfied with the services my child received	.711	.409			
4. The people helping my child stuck with us no matter what	.716				
5. I felt my child had someone to talk to when he/she was troubled	.700				
7. The services my child and/or family received were right for us	.714				
10. My family got the help we wanted for my child	.737	.457			
11. My family got as much help as we needed for my child	.706	.461			
Outcome					24.9
16. My child is better at handling life		.803			
17. My child gets along better with family members		.837			
18. My child gets along better with friends and other people		.834			
19. My child is doing better in school		.765			
20. My child is better able to cope when things go wrong		.839			
21. I am satisfied with our family life.		.787			
Cultural Sensitivity					16.9
12. Staff treated me with respect			.700		
13. Staff respected my family's religious/spiritual beliefs			.811		
14. Staff spoke with me in a way I understood			.779		
15. Staff were sensitive to my cultural/ethnic background			.822		
Participation					9.2
2. I helped to choose my child's services				.827	
3. I helped to choose my child's treatment goals	.405			.667	
6. I participated in my child's treatment	.412			.485	
Access					6.9
8. The location of services was convenient for us					.866
9. Services were available at times that were convenient for us	.447				.599

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

Discussion

The results of the factor analyses using Colorado data support the survey structure for both the MHSIP and YSS-F surveys. The variance accounted for by the MHSIP and YSS-F domains (73% and 79% respectively) is adequate and the large sample sizes used for the factor analyses support the reliability of the domains and the items that comprise them (Stevens, 2002). These results confirm the domain structure found in previous research on the MHSIP (Jerrell, 2006; Wackwitz, 2000) and support the domain structure of the YSS-F (Brunk, 2001; Brunk, Innes, & Koch, 2003).

Given the findings the continued utilization of both surveys is warranted and empirically supported. Theoretically, the consumer and family-driven nature of both surveys supports ongoing use of the surveys as well. Together the theoretical and empirical underpinnings of the MHSIP and YSS-F surveys argue for the applicability of these surveys for the state of Colorado. It is also important to note that the MHSIP and YSS-F have been incorporated into multiple levels of DMH operations including the federal block grant, the Data Infrastructure Grant, and performance incentives. The results of the factor analyses validate the continued incorporation of the surveys into DMH operations.

DMH has a vested interest in promoting consumer and family-driven services in Colorado as the state moves toward a recovery-oriented system and sees consumer and family surveys as integral to this process. It appears that the MHSIP and YSS-F surveys are appropriate surveys for this purpose. Both surveys also provide an excellent opportunity for DMH to partner on both national and state-wide levels to shape future services.

References:

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