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Concordance Between Parent Reports of Children's Mental Health Services and Service Records: The Services Assessment for Children and Adolescents (SACA)

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The concordance between parent reports of children's mental health services and medical and administrative service records were assessed in a field test of the Services Assessment for Children and Adolescents (SACA) interview instrument. Service use reports from primary caregivers, usually mothers, for their child's emotional or behavioral problems were compared against inpatient, outpatient, and school records in St. Louis, one of the pilot sites for the Multi-Site Study of Service Use, Need, Outcomes and Costs in Child and Adolescent Populations (UNOCCAP). A global "any use" service variable, comprised of inpatient, outpatient, and school reports, yielded an overall service use concordance kappa of

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.76 between parent reports and records. Parent reports of inpatient hospitalization services using the SACA yielded the highest agreement with medical records, with kappa statistics of 1.00 for use of any inpatient hospital care and for medication use. Parent reports of specific inpatient services concurred with medical records more moderately, yielding kappas from .50 to .66. Reports of any outpatient mental health services yielded variable rates of agreement, with kappas ranging from .67 for any use of outpatient care, to .66 for medication use, to negligible kappas for specific treatments. Parent reports of school services were weakly related to records for most services, except for moderate agreement (.48) on placement in special classrooms for emotional or behavioral problems. Family burden or impact discriminated more powerfully than other variables between respondents who concurred with records and those who did not.

KEY WORDS: services; children; mental health; family impact.

While the distribution and prevalence of children's mental, emotional or behavioral disorders in U.S. communities can now be estimated with some precision (Costello et al., 1996; Costello, 1989; Friedman, Katz-Leavy, Manderscheid et al., 1996; Roberts, Attkisson, & Rosenblatt, 1998), information about the kinds of services used by these children has been largely absent. This gap has posed significant obstacles to the planning and development of national, state, and even local service programs. In the absence of information about the kinds of services that are needed or are used for child disorders, matching of treatment needs and services is accomplished, if at all, in almost complete ignorance.

In the past eight years, however, two studies have provided some data on the relationship between children's psychiatric disorders and services. In 1989, the Methods for the Epidemiology of Child and Adolescent Mental Disorders (MECA) study included interviews with parents and children about child psychiatric problems and mental health service use across an array of service-providing agencies in four sites—New Haven, Connecticut; Westchester, New York; Atlanta, Georgia; and Puerto Rico (Lahey et al., 1996). This study indicated that 16% of children who met criteria for a psychiatric diagnosis had used mental health specialty services in the past year (Leaf et al., 1996). Wide variability in use across the four sites was noted, with percentages ranging from 9% to 25%. One limitation of this study was that it did not assess the reliability of the measure of service use, nor the validity of service use reports.

A second major study to assess children's psychiatric disorders and service use is the Great Smoky Mountain Study (GSMS) in North Carolina. This study (Burns et al., 1995; Costello et al., 1996) has been following a sample of children randomly selected from the general population, whose initial age of enrollment was 9 to 13, to determine the prevalence of psychiatric disorders and use of a variety of mental health services. A service assessment interview instrument, The Child and Adolescent Service Assessment or CASA, has been previously examined for its psychometric properties (Ascher et al., 1996; Farmer et al., 1994; Horwitz et al., in press), and has been found to be reliable. Burns and colleagues (1995) reported that 16% of children in the GSMS sample received some form of mental health care from at least one service sector in the past three months. Of those children identified as seriously emotionally disturbed, only 40.3% had received any mental health care. The accuracy of service reports was partially validated through analysis of the correspondence between parent reports and inpatient and outpatient records (Ascher et al., 1996).

Issues of accuracy or concurrent validity in health services research have been beset by numerous complications, the most basic one being the absence of "gold standards" or objective referents against which to calibrate self-reports. A review of the health services literature on reporting accuracy revealed several factors associated with either over- or under-reporting.

First, there has been some indication that differences in correspondence between reports and records are a function of the number of visits. Roberts, Bergstrahl, Schmidt and Jacobsen (1996) compared data from self-reports and medical records for health care in a randomly selected cohort of 500 men; they found a significant bias toward under-reporting as the number of ambulatory physician visits in the previous years increased. Similarly, Weissman, Levin, Chasan-Taber et al. (1996) in a study of AIDS patients found that high utilizers of health services under-reported all types of services. Finally, Fendrich et al (1999) reported that accuracy improved as the number of clinic visits increased.

Second, differences may result from the level of specificity being elicited. Goldstein, Kviz, and Daum (1993) found that only 8% of specific immunization histories reported by caregivers of preschool children matched those found in clinic records. However, when information about the general status of their child's immune history was requested, parents' reports matched clinic records 65% of the time. Reasons for the discrepancies inhered in the level of general or specific information being requested of caregivers.

Third, there is also a literature suggesting that differences in correspondence occur as a function of type of disease. One study found that among a stratified sample of primary care users, more than half of the respondents with chronic diseases failed to report at least one disease and that the rate of under reporting varied by type of disease (Gross et al., 1996). Similarly, Hayes et al. (1990) found both over-reporting and under-reporting of health service utilization when reports were compared to records, and suggested that the lack of correspondence was a function of the type of health problem. Fendrich and colleagues comparing accuracy of lifetime reports of mental health service use to reports of orthopaedic services, found greater accuracy for mental health care (1999).

Fourth, several studies have found that accuracy of reporting depends upon length of recall period (Ascher et al., 1999; Fendrich et al., 1999). In general, these studies have suggested that self-reports of utilization with a recall period of under 4 months are necessary in order to provide valid data.

Finally motivational and cognitive factors have been identified as potential reasons for the distorted reports of mental health service use (Golding, Gongla, & Brownell, 1988). For example, respondents may be concerned about reporting their child's use of mental health care because of embarrassment or stigma associated with mental health needs. In addition, concern about possible removal of children from their homes may adversely affect a parent's willingness to disclose use of services (Friesen & Koroloff, 1990).

Few studies have assessed the accuracy with which parents are able to report on their child's mental health service use. Of those that have (Ascher et al., 1996; Breda, 1996; Fendrich et al., 1999), only Ascher and colleagues (1996) looked at a range of service settings (inpatient, outpatient, and school) and specific service types. Because the factors associated with the validity of mental health service use reports are likely to be more complex than those that explain other health care use, some discussion of these complexities is in order.

One of the most fundamental problems in the field of adult and child psychopathology has been the lack of consensus about how to establish the validity of psychiatric disorders. While no one would argue that such disorders do not exist, the standards by which they are identified are neither uniform nor uniformly agreed upon. In fact, some have argued that there can be *no* validity of psychiatric diagnoses at all until or unless biological markers of psychopathology are discovered (Kleinman & Goode, 1990). According to this view, diagnoses are nothing more than interpretations of interpretations. Assessing treatment needs and service use simultaneously, as is done in most psychiatric epidemiological studies, then, amounts to yoking together two problems of validity: the problem of the validity of disorders and the problem of the validity of service recall.

A second problem is the special challenge posed in assessing child mental health services via adult reports. Obtaining such information is complex for several reasons. First of all, parents do not participate directly in many of the services for their child, so may not know about them other than through hearsay. Second, to the extent that parents do learn about the services from their children, the reports may not be accurate because their children may not fully understand what services they received or why; the children may have understood what they received at one point in time, but may not remember well, perhaps because they do not have mnemonic categories as do adults for storing this information. Further, even if children do understand and remember services they have received, they may not have the language skills to describe what happened to them. Finally, because it is well documented that the primary predictor of service use for children is burden or impact on the family (Angold et al., in press), caregivers may experience enormous pressures when reporting services, and these pressures may either sharpen their recall of certain services or may impede such recall, because of the distress consequent to their attempts to obtain necessary treatments for their child's problems. Added to this is the issue of the sensitivity of questions associated with mental health conditions. Such questions may be perceived of as stigmatizing and may influence the reporting of services (Fendrich et al., 1999).

The purpose of the current study was to investigate the correspondence between parent reports of service use for emotional or behavioral problems of children and medical inpatient, outpatient, and school records, using a new measure of service use, the Services Assessment for Children and Adolescents (SACA). In preparation for a large household survey of children's psychiatric disorders and mental health service use, the SACA was developed by a multi-site team. A review of all other currently-used instruments revealed that none incorporated the range of information (e.g. service type, provider type, intensity, costs, barriers, satisfaction, and cultural appropriateness of services) that was deemed necessary to fully understand the complexities of mental health service use by children with psychiatric disorders. Thus, the SACA was constructed over a period of two years, with expert consultation from the developers of other prominent instruments, including the CASA and the Services for Children and Adolescents—Parent Report (SCA-PI) (Jensen et al., 1999).

An intensive field testing of the SACA was undertaken between 1996 and 1997 in St. Louis and Los Angeles, two sites for the Multisite Study of Service Use, Need, Outcomes, and Costs in Child and Adolescent Populations (UNOCCAP). This field testing was conducted to determine the reliability of the SACA (Horwitz et al., in press), the differences between parent and child responses (Stiffman et al., in press), and rates of false negative reporting of service utilization (Bean et al., in press). This paper addresses the accuracy of parent reports, operationally defined as the correspondence between parent reports of child mental health service use and inpatient medical records, outpatient medical records, and school administrative records. The study also identifies variables predictive of agreement between parent reports and these medical and administrative records.

METHODS

The development of the SACA and its psychometric properties are described elsewhere (Horwitz, et al., in press). The sample for the accuracy study was drawn from the St. Louis UNOCCAP site. Subjects were recruited from inpatient and outpatient clinics in a local hospital; an additional sample of children was drawn from elementary, middle and high schools. Thus the sample for analysis in this paper was comprised of both clinical and non-clinical samples. Clinical subjects were obtained from a list of patients aged 4 to 17 who had received services within the previous 12 months from the Washington University Child Psychiatry outpatient clinics or inpatient facility and whose primary or secondary diagnoses included non-psychotic disorders. The second sample was obtained from the St. Louis Public Schools. The school district provided lists of students from elementary, middle and high schools. Parents were sent recruitment letters outlining the goals of the study and response forms. From the responses received, study participants were selected to complete demographic quotas. In order to complete recruitment of equal numbers of Caucasian and African-American respondents, twenty-four parent/child pairs were added through nominations by other respondents. All interviewers were blinded as to the sample sources. Additional details of the recruitment are described elsewhere (Horwitz, et al., in press). In all, 150 parent/child pairs were enrolled in this study.

All contacts with service agencies occurred after completion of test and re-test interviews with the participants. For inpatient services, records of admission and discharge summaries were obtained for all subjects and were abstracted by trained research staff. Records of outpatient services were abstracted by research staff who searched the records for subjects enrolled in the study at the agency. Types of services, providers, and dates were obtained. School records were obtained through a mailing to school personnel who were asked to complete a brief questionnaire asking about participant's receipt of specific school-based services.

Agreement was measured with the kappa statistic. Discrimination between report/record agreements and disagreements for use of services was determined through chi square analyses.

RESULTS

Parent Sociodemographic and Psychosocial Characteristics

Ninety-one percent of the informants were female and 84% were the biological mother of the indexed child. Sixty-four percent were between 21 and 40 years of age. The respondents were almost equally African-American descent (48%) and Caucasian (51.3%). Approximately two thirds of the adult respondents had more than a high school education. Household incomes spanned the range from extreme poverty (less than $10,000 per year for 20% of the sample) to greater than $40,000 per year (37.3%). The majority of the respondents were married (57.3%) and another 25% were separated or divorced. The mean household size was 4 persons and approximately 79% of the respondents were employed.

By design, we obtained a history of family service use or family mental illness from a randomly selected sample. Forty-four percent of these indicated that a family member other than the index child had received mental health services at some point in the past, and 30.7% indicated a history of mental illness by a family member (again excluding the index child).

Impact of the child's mental health problems on the family were measured with a series of questions assessing the respondent's worry about the child and parental limitations in activities or in work because of child's mental health problems. Over half of the respondents (61.3%) reported that they worried about their child some of the time or a lot of the time because of his/her behavior problems; 32.9% reported that family activities were limited because of their child's behavior. Thirteen percent reported missing work because of their child's behavior. A composite index of overall impact on the family was constructed. Overall, 57.3% of respondents reported that the child's behavior problems impacted the family.

Table I. Adult Sociodemographic and Psychosocial Characteristics for WU Participants ($N = 150$)

Characteristic	*N*	(%)
Gender: Female	136	90.7%
Age (in years):		
21–30	21	14.0%
31–40	75	50.0%
41–65	54	36.0%
Ethnicity		
African-American	72	48.0%
Hispanic	1	0.7%
White	77	51.3%
Education		
Less than high school	13	8.7%
High school/GED	42	28.0%
Greater than high School	95	63.3%
Income Status: In poverty	38	25.3%
Household income:		
$10,000	30	20.0%
$10,001–$20,000	21	14.0%
$20,001–$40,000	43	28.7%
$40,001	56	37.3%
Marital status: Married		
Married	86	57.3%
Separated/divorced	39	26.0%
Widowed	1	0.7%
Never married	24	16.0%
Currently working: Yes	118	78.7%
Relationship to child:		
Biological mother	126	84.0%
Biological father	10	6.7%
Other	14	9.3%
Household size:[a]		
Mean (SD)	4.05 (1.39)	
Range		2–8
Household size:[a]		
2–3	55	37.4%
4 or more	92	62.6%
Self-assessed health:[b]		
Poor-fair	19	12.8%
Good-excellent	130	87.2%
History of mental health services:		
Respondent[a]	66	44.9%
Biological mother[c]	47	32.2%
Biological father[c]	28	19.2%
Caregiver 1[a]	11	7.5%
Caregiver 2[b]	5	3.4%
Any family member (excluding index child)[b]	66	44.3%
History of mental illness:		
Respondent[d]	32	21.6%
Biological mother[a]	20	13.6%
Biological father[d]	14	9.5%

(*Continued*)

Table I. (*Continued*)

Characteristic	*N*	(%)
Caregiver 1[a]	2	1.4%
Caregiver 2[b]	2	1.3%
Other children[e]	23	16.0%
Any family member (excluding index child):	46	30.7%
Worry about child due to behavior		
None or not much	58	38.7%
Some	36	24.0%
A lot	56	37.3%
Worry about child due to physical health		
None or not much	93	62.0%
Some	32	21.3%
A lot	25	16.7%
Activity limited due to child's behavior[b]		
None or not much	100	67.1%
Some	30	20.1%
A lot	19	12.8%
Activity limited due to child's physical health		
None or not much	121	80.7%
Some	20	13.3%
A lot	9	6.0%
Missed work due to child's behavior[b]		
None or not much or does not work	129	86.6%
Some	16	10.7%
A lot	4	2.7%
Missed work due to child's physical health[b]		
None or not much or does not work	137	91.9%
Some	10	6.7%
A lot	2	1.3%
Hassled by people because of child		
None or not much	115	76.7%
Some	24	16.0%
A lot	11	7.3%
Impact on family: Yes*	86	57.3%

[a] Missing 3 responses.
[b] Missing 1 response.
[c] Missing 4 responses.
[d] Missing 2 responses.
[e] Missing 6 responses.
*Composite variable: Sum of (ef1–ef7) greater than or equal to 2.

Child Sociodemographic and Psychosocial Characteristics

The child sample was approximately equally split between the two sexes, with 45.3% being female. Forty-seven percent of the sample were 10 years old and younger and 53% were between 11 and 17 years of age. As was true for the respondents, the sample was equally divided between African-Americans (47.3%) and Caucasians (49.3%). Approximately two thirds of the children had a physical

Table II. Child Sociodemographic and Psychosocial Characteristics for WU Participants ($N = 150$)

Characteristic	N	(%)
Gender: Female[a]	67	45.3%
Age (in years):[a]		
4–6	26	17.6%
7–8	20	13.5%
9–10	24	16.2%
11–12	20	13.5%
13–14	24	16.2%
15–17	34	23.0%
Ethnicity:[a]		
African-American	70	47.3%
White	73	49.3%
Biracial	5	3.4%
Adult assessment of child health:		
Poor-fair	10	6.7%
Good-excellent	140	93.3%
Repeat a grade: Yes[b]	19	14.4%
Physical health problem: Yes	94	62.7%
Learning disorder: Yes[c]	28	21.7%
CBCL[d]		
Mean (SD)	20.58 (13.35)	
Range		0–53

[a] Missing 2 responses.
[b] Missing 18 responses.
[c] Missing 21 responses.
[d] Missing 7 responses.

health problem in the past year and 21.7% were reported to have a learning disorder.

Service Use

Service use was assessed for the past 12 months. Four types were assessed: global service use for any service use, inpatient care, outpatient care, and school services. Within the latter three settings, parent reports of specific types of services were matched against service records. Inpatient care included child therapy, family therapy, medication therapy, and treatment planning. Outpatient care included child therapy, case management, family therapy, medication, and treatment planning. For the schools, the specific services included special classrooms, special help in the regular classroom, and receipt of counseling.

Any Service Use (Global Index)

Parent reports of *any* service use in either inpatient settings, outpatient settings or schools were matched against medical or administrative records at the specific

Table III. Accuracy of Adult Report of Service Use for Washington University SACA Participants

	(N)	Medical record	Adult report	Kappa (95% CI)
Any service ($N = 150$)	62/61	42.33%	40.67%	.76 (.661, .870)
Inpatient ($N = 150$):				
Any inpatient	4/4	2.67%	2.67%	1.00 (1.000, 1.000)
Child therapy	3/3	2.00%	2.00%	.66 (.218, 1.102)
Case management	0/2			
Family therapy	1/3	0.67%	2.00%	.50 (−.105, 1.095)
Medication	4/4	2.67%	2.67%	1.00 (1.000, 1.000)
Treatment plan	4/2	2/67%	1.33%	.66 (.221, 1.100)
Outpatient ($N = 147$):				
Any outpatient	58/55	39.46%	37.41%	.67 (.546, .793)
Child therapy	56/44	38.10%	29.93%	.52 (.375, .662)
Case management	2/18	1.36%	12.24%	.08 (−.091, .246)
Family therapy	8/39	5.44%	26.53%	.09 (−.047, .222)
Medication	37/45	25.17%	30.61%	.66 (.528, .798)
Treatment plan	54/33	36.73%	22.45%	.54 (.397, .678)
Schools ($N = 135$):				
Any school service	42/26	31.11%	19.26%	.31 (.133, .477)
Special classroom	20/7	14.81%	5.19%	.48 (.248, .708)
Special help	20/10	14.81%	7.41%	.19 (−.031, .403)
Counseling	17/17	12.59%	12.59%	.33 (.099, .555)

service site reported. Overall, the kappa between parent report and records was .76, indicating high agreement. (See previous discussion from Horowitz et al, under review, about rationale for interpreting agreement scores.)

Inpatient

There was perfect agreement between respondent reports and records for any inpatient service use (kappa = 1.00). It should be noted, however, that the sample size was very small. Similarly, there was perfect agreement between respondent reports of the use of medication and medical records of such use (kappa = 1.00). Moderate agreement was found for receiving child therapy (.66) and for treatment planning (.66). Receipt of family therapy within the inpatient setting yielded a kappa again in the moderate range of .50.

Outpatient

Reports of outpatient service use yielded moderate levels of agreement with medical records (kappa = .67). Medication use yielded similar levels of agreement, with a kappa of .66. Receipt of child therapy and of treatment planning were slightly lower (.52 and .54, respectively). There was very little agreement between respondent reports and records for the receipt of case management services (.08) and receipt of family therapy (.09).

Schools

Reports of receipt of any school services for behavioral or emotional problems corresponded weakly to school records, yielding a kappa of .31. Slightly higher levels of agreement were found for receipt of services within a special classroom (kappa = .48). Receipt of counseling and of special help in the regular classroom matched school records poorly, yielding kappas of .33 and .19, respectively.

Parent and Child Sociodemographic and Psychosocial Variables Associated with Agreement

Twenty-seven variables (18 related to parents' background and history and 9 related to children) were analyzed for their ability to discriminate between report/record agreements and report/record disagreements for use of any mental health services. Of these, only 5 were found to discriminate agreement from disagreement. These were sex of child, ethnicity of child, ethnicity of parent, household size, and family burden or impact. Specifically, there were higher rates of agreement between parent reports and service records for girls than boys ($X = 8.70$, $p. < 0.0003$), and for African-American children compared to Caucasian children ($X = 4.35$, $p. < 0.04$). There were higher rates of *disagreement* between reports and records if the adult respondents were Caucasian ($X = 4.85$, $p < 0.03$), if the household size was small ($X = 4.83$, $p < 0.03$), and if the overall impact on the family of caring for the child was high ($X = 7.49$, $p < 0.006$).

DISCUSSION

The results from this study demonstrate that parents are accurate reporters of their children's mental health service use, and that reasonable levels of agreement between parent reports and medical or administrative records can be obtained with the SACA interview. Despite the low sample size for inpatient use, the validity of the SACA for obtaining reports of impatient care and medication use in inpatient settings is clear: perfect concurrence between parent reports and service records was obtained. Parents can also be relied upon to give accurate reports of mental health service use across inpatient, outpatient or school settings. Outpatient services can be reported with moderate levels of agreement, but school service reports by parents correspond poorly with school records. Given that this was largely a clinical sample, composed of families for whom at least one third had either a history of mental health service use or mental illness, these levels of concordance are encouraging.

Wide variation was found, however, in the correspondence between reports of specific types of services in inpatient, outpatient, or school settings and the evidence

Table IV. Adult Sociodemographic and Psychosocial Characteristics of Adult Report/Services Agreement for Any Service Use for Washington University SACA Participants ($N = 150$)

Characteristic	Agreement ($N = 133$)	Disagreement ($N = 17$)	X^2 (p-value)
Gender: Female	122 (91.7%)	14 (82.4%)	1.566 ($p = 0.211$)
Age (in years):			
21–30	20 (15.0%)	1 (5.9%)	1.078 ($p = 0.583$)
31–40	66 (49.6%)	9 (52.9%)	
41–65	47 (35.3%)	7 (41.2%)	
Ethnicity: White	64 (48.1%)	13 (76.5%)	4.849 ($p = 0.028$)
Education:			
Less than high school	13 (9.8%)	0 (0.0%)	2.321 ($p = 0.313$)
High school/GED	38 (28.6%)	4 (23.5%)	
Greater than high school	82 (61.7%)	13 (76.5%)	
Income status: In poverty	36 (27.1%)	2 (11.8%)	1.866 ($p = 0.172$)
Household income:			
$10,000	28 (21.0%)	2 (11.8%)	1.787 ($p = 0.618$)
$10,001–$20,000	19 (14.3%)	2 (11.8%)	
$20,001–$40,000	36 (27.1%)	7 (41.2%)	
$40,001	50 (37.6%)	6 (35.3%)	
Marital status: Married	78 (58.7%)	8 (47.1%)	0.827 ($p = 0.363$)
Currently working: Yes	102 (76.7%)	16 (94.1%)	2.727 ($p = 0.099$)
Relationship to child: Biological mother	112 (84.2%)	14 (82.4%)	0.039 ($p = 0.844$)
Household size:[a]			
2–3 persons	45 (34.4%)	10 (62.5%)	4.825 ($p = 0.028$)
4 or more persons	86 (65.6%)	6 (37.5%)	
Self-assessed health: Good-excellent[b]	115 (87.1%)	15 (88.2%)	0.017 ($p = 0.897$)
History of mental health services:			
Respondent[c]	56 (42.8%)	10 (62.5%)	2.249 ($p = 0.134$)
Any family member (excl. index child)	56 (42.4%)	10 (58.8%)	1.641 ($p = 0.200$)
History of mental illness:			
Respondent	27 (20.6%)	5 (29.4%)	0.688 ($p < 0.407$)
Any family member (excl. index child)	40 (30.1%)	6 (35.3%)	0.193 ($p < 0.660$)
Worry about child due to behavior			
None or not much	54 (40.6%)	4 (23.5%)	2.389 ($p < 0.303$)
Some	32 (24.1%)	4 (23.5%)	
A lot	47 (35.3%)	9 (52.9%)	
Hassled by people because of child			
None or not much	102 (76.7%)	13 (76.5%)	0.728 ($p < 0.695$)
Some	22 (16.5%)	2 (11.8%)	
A lot	9 (6.8%)	2 (11.8%)	
Impact on family: Yes	71 (53.4%)	15 (88.2%)	7.485 ($p < 0.006$)

[a] Missing 3 responses.
[b] Missing 1 response.
[c] Missing 4 responses.

obtained from records reviews. In inpatient settings, medication use was reported with perfect accuracy (kappa = 1.00), whereas family therapy, child therapy, and treatment planning were reported with moderate levels of agreement (.50, .66, and .66 respectively). In outpatient settings, medication use was reported with moderate levels of accuracy (.66), as was child therapy (.52) and treatment planning (.54),

Table V. Child Sociodemographic and Psychosocial Characteristics of Adult Report/Services Agreement for Any Service Use for Washington University SACA Participants ($N = 150$)

Characteristic	Agreement ($N = 133$)	Disagreement ($N = 17$)	X^2 (p-value)
Gender: Female[a]	65 (49.6%)	2 (11.8%)	8.702 ($p = 0.003$)
Age (in years):			
4–6	23 (17.6%)	3 (17.7%)	10.302 ($p = 0.067$)
7–8	19 (14.5%)	1 (5.9%)	
9–10	23 (17.6%)	1 (5.9%)	
11–12	19 (14.5%)	1 (5.9%)	
13–14	17 (13.0%)	7 (41.2%)	
15–17	30 (22.9%)	4 (23.5%)	
Ethnicity: African-American[a]	66 (50.4%)	4 (23.5%)	4.353 ($p = 0.037$)
Ethnicity: White[a]	61 (46.6%)	12 (70.6%)	3.474 ($p = 0.062$)
Adult assessment of child health: Good	125 (94.0%)	15 (88.2%)	0.801 ($p = 0.371$)
Repeat a grade: Yes[b]	16 (13.7%)	3 (20.0%)	0.432 ($p = 0.511$)
Physical health problem: Yes	83 (62.4%)	11 (64.7%)	0.034 ($p = 0.854$)
Learning disorder: Yes[c]	25 (21.9%)	3 (20.0%)	0.029 ($p = 0.865$)
CBCL[d]			
Mean (SD)	20.66 (13.72)	19.94 (10.22)	$t = 0.204$ ($p = 0.839$)
Range	0–53	2–40	

[a] Missing 2 responses.
[b] Missing 18 responses.
[c] Missing 21 responses.
[d] Missing 7 responses.

whereas reports of case management or family therapy displayed no relationship to records. In school settings, only placement in a special classroom for help with emotional or behavior problems was reported with a moderate level of agreement to school records (.48), whereas parent reports of the use of other specific types of schools services (e.g., special help in a regular classroom or counseling) had almost no association with school records (.19, .33).

The reasons for these variations are likely to arise from a number of factors. As has been found in other studies (Ascher et al., 1996), the more restrictive the service, the more likely it is to be recalled. This may be true because inpatient care is itself so drastic a form of care and so disruptive to a family's normal routine that memory of the event is more likely to be recalled with accuracy. Similarly, the use of medication is likely to be a memorable and repeated action; medication use requires both on-going parental action and physician monitoring. Furthermore, medications are concrete and undeniable—a pill bottle exists. So recall may be increased by either the extremity of the service or its concreteness.

Discrepancies between parent reports and service records may also arise because of confusion surrounding the terminology employed by service providers to describe services and the experiences of family members. While the SACA was administered by trained interviewers, contained a glossary of terms, and was developed after incorporating suggestions from parents who participated in focus groups, nevertheless some of the discrepancies may have arisen because the questions were not clear. Beyond this, the presence or absence of a shared terminology between service-providing agencies and families may well contribute to the match (or mismatch) between parent reports and service records. A prime example of this may be case management—a service well known by service providers but largely unrecognized by families.

Finally, variations in accuracy across services may have arisen because there is variation in the *visibility* of services. School mental health services are largely invisible to children who receive them, and, perhaps, to their parents as well. This may occur, in part, because parents are not in school to observe their children receiving services, and in part because of the terminology used in schools to avoid stigmatizing children or services. School counseling may be called "guidance"; children with emotional or behavioral problems may be sent to a "resource" room to help them with their "learning" problems or "special needs"; therapies for severe psychiatric problems may be called "related services." The invisibility of school mental health services presents special problems for obtaining accurate reports of the receipt of such services when local terminology is not consistent with the SACA.

Other reasons for variations in the ability of parents to report accurately about their child's service use revolve around the problems inherent in second-hand reporting: parents obtain information about services in part from their own experience and involvement with service providers, but also in part from their children. Insofar as their children poorly understand the nature of the services they are receiving, their parents' ability to respond to detailed questions about types of services is compromised. Further, any second hand report is likely to be less accurate than first-hand (as can be corroborated by any police officer). In circumstances of strain, distress, or frustration, commonly faced by families whose children require mental health care, the accuracy of such reports may be further compromised.

Finally, of course, it should be recognized that variations may also be a consequence of inaccuracies or incompleteness in service records. It is not uncommon for such records to be incomplete with respect to details about services, and these absences in the records might well explain the differences between parent reports and documented services.

The variables that discriminated concordance or discordance between parents' reports and service records suggest that basic demographic variables of sex and ethnicity played a role in this discrimination. The sample of respondents for this study was comprised largely of women and biological mothers; most were employed. Close to half had had a family member receive mental health care at some point in their lives, and close to one third had a specific history of mental illness in their family. Among the children in the sample, almost two-thirds had had a physical health problem in the past year and about 1 out of 5 had learning problems. Thus this sample contained families and children with significant levels of need for mental health care.

In addition, significantly more agreement was found among respondents reporting services used by females as compared to males. There could be several reasons for this, although none can be determined with precision from the current dataset. The girls may have required fewer services, thus increasing the accuracy of reports by their parents. Conversely, because receipt of any mental health care is less common for girls than boys, its very uniqueness may have increased recall. Parents of girls may pay closer attention to the types of services their daughters receive or may be more engaged in seeking care for their daughters, whereas parents of boys may feel more burdened by their behavior problems and consequently less attentive. Alternatively, females may be more forthcoming with information about their service experiences compared to males and, thus, parents may be better informed about mental health services delivered to females. This gender difference was also found in the Fendrich et al. (1999) study.

Ethnicity also played a role in discriminating concordance from discordance. Those respondents whose reports agreed with records were African-American and the children of these respondents were also African American. It is not clear why these differences were found. It is possible that African-American parents pay closer attention to the varieties of mental health care provided to their children, perhaps owing to their historical estrangement from service agencies and the lack of service availability found in many communities with large numbers of African-American families. Clearly more attention to these issues is warranted.

The variable with the strongest discriminating function was impact on the family. Much higher rates of disparity between parent reports and records were obtained if the families' level of impact or burden was also high. There could be several explanations for this. Families who report higher levels of impact are likely to be undergoing more stress and consequently may be less able to remember the specific nature of the services being provided to their children. It is possible that there were greater levels of family disorganization among the families with the highest levels of burden, again making attention to or recall of services more problematic. Another explanation that could account for this finding is that these families may have been the high-end or deep-end service users. If so, the sheer quantity or intensity of services through which they were trying to negotiate could have led to more confusion *on the part of either the parents or the providers.* It is important to note that disparities between reports and records can be explained in one of two ways: they may be a consequence of inaccuracies in service agency records or they may arise from inaccuracies in parental recall. One should not assume that either is a gold standard.

This study has demonstrated that parents can report the use of mental health services by their children in ways that correspond closely to service records. Reports of inpatient services and receipt of medications concur completely with medical records. Outpatient services and medication use are reported with moderate levels of agreement to medical records. Receipt of specific types of services in both inpatient and outpatient settings, including child therapy, treatment planning, and (for inpatient care only) family therapy, are also reported with moderate levels of concordance to records. School service use is more problematic, and there is difficulty in obtaining accurate reports of school service use from parent reports. Given that the time frame for reporting in the SACA was one year and that the instrument was embedded in a much lengthier interview, strategies for shortening the time frame or reducing respondent burden need to be examined to increase the accuracy of mental health service reports.

As treatment planning by national, state, and local mental health administrators will depend increasingly on their ability to calibrate children's treatment needs against service availability and use, parent report instruments that assess mental health services will be an important tool in the armamentarium of psychiatric service agencies and treatment providers.

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