

# The Service Assessment for Children and Adolescents (SACA): Adult and Child Reports

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## ABSTRACT

**Objective:** To describe differences in parent-child responses to the Service Assessment for Children and Adolescents (SACA). **Method:** Studies were done at UCLA and Washington University based on service-using and community subjects drawn from community households or public school student lists, respectively. Results are presented for 145 adult-youth pairs in which the youth was 11 or older. **Results:** The SACA adult-youth correspondence for lifetime use of any services, inpatient services, outpatient services, and school services ranged from fair to excellent ( $\kappa = 0.43-0.86$ , with most at 0.61 or greater). Similarly, the SACA showed a good to excellent correspondence for services that had been used in the preceding year ( $\kappa = 0.45-0.77$ , with most greater than 0.50). The parent-youth correspondence for use of specific service settings in the above generic categories ranged from poor to excellent ( $\kappa = 0.25-0.83$ , with half at 0.50 or greater). **Conclusions:** The SACA has better adult-youth correspondence than any service use questionnaire with published data, indicating that both adult and youth reports are not needed for all research on mental health services. This is especially encouraging news for researchers working with high-risk youth populations, in which a parent figure is often not available. *J. Am. Acad. Child Adolesc. Psychiatry*, 2000, 39(8):1032-1039. **Key Words:** mental health services, service use, adolescent mental health.

Few data are available assessing agreement levels between reports of parents and youths concerning the use of mental health services. Only the Methods for Epidemiology of Child and Adolescent Mental Disorders (MECA) study has published data on such service use agreement. In that study, youths aged 9 through 12 years showed poor agreement with parents concerning mental health service use as measured by the Service Utilization and Risk Factors (SURF) ( $\kappa = 0.21$ ), while youths aged 13 through 17 showed somewhat higher, but still only fair, agreement with parents ( $\kappa = 0.45$ ) (Leaf et al., 1996). Agreement levels varied by youth diagnostic status, with agreement lower ( $\kappa = 0.38$ ) for youths meeting diagnos-

tic criteria (Leaf et al., 1996). Few other studies tap both parent and child report, and, unfortunately, publications on the Child and Adolescent Services Assessment (CASA) discuss only test-retest reliability (Ascher et al., 1996; Farmer et al., 1994).

To provide a basis for examining parent and youth agreement on service use, we turned to a closely allied literature, parent-child agreement on reports of behavioral and emotional problems. We expected that parent-child agreement on service use would follow the same pattern.

## Symptom Agreement

A number of studies have examined parent-child agreement concerning behavior problems or symptoms. Meta-analyses of 119 studies revealed that correlations between children and parents were among the lowest of cross-informant correlations and varied with child's age, type of symptoms, and clinical status (Sawyer et al., 1993). It is interesting that, unlike the higher agreement between parents and older children on service use (Leaf et al., 1996), parent-child correlations concerning behavioral problems were lower for adolescents than for 6- to 11-year olds (Achenbach et al., 1987). Adolescents evi-

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dently report things that their parents do not report, indicating that they are indispensable informants on their own problem behaviors (Sawyer et al., 1993). Contradictory findings exist on the patterns of parent-child disagreement. Some studies found rates of disagreement between children and parents may vary with the diagnostic status of the child. The majority, but not all, report more agreement for externalizing than internalizing problems in community samples and less agreement for externalizing problems in clinic samples, with parents of clinic youths reporting more externalizing problems than the clinic youths (Herjanic and Reich, 1982; Hodges et al., 1990; Kazdin et al., 1983a,b; Loeber et al., 1989; Mokros et al., 1987; Offord et al., 1986; Sawyer et al., 1992, 1993; Verhulst and van der Ende, 1992).

#### Disorder Criteria Agreement

Agreement between parents and youths on dichotomous scores concerning the existence of a psychiatric disorder appears lower ( $r = 0.16$ ) than parent-child agreement concerning behavior problems or symptoms, with extremely limited overlap between parent and child reports of disorder (Gutterman et al., 1987; Kashani et al., 1985; Shaffer et al., 1996; Young et al., 1987). The MECA study reported weak parent-child agreement on the Diagnostic Interview Schedule for Children, with agreement slightly better for externalizing than for internalizing problems (Rubio-Stipec et al., 1994). Some have suggested that any disagreement occurs because parents rate youths more deviantly than youths rate themselves (Kazdin et al., 1983b; Loeber et al., 1989; Thurber and Snow, 1990). Other studies suggest that parent-child differences are related to the parent's own mental health problem, child's gender, or family status (Jensen et al., 1988a,b).

#### The SACA

This report describes differences in parent-child responses to the Service Assessment for Children and Adolescents (SACA). The SACA assesses the types of mental health services children use, the treatments they receive within service settings, the reasons for service use, and the quality of services. The SACA was developed in response to a need for an instrument that would assess children's and adolescents' use of mental health services. A review of the service use literature demonstrated the importance of including parent and youth perspectives, of including lifetime and 1-year use, of disaggregating types of services from provider and setting, and of

assessing the duration, intensity, or content of services received. The SACA was constructed as a new instrument, modifying the CASA, with additions from the Service for Children and Adolescents Parent Interview (Arnold et al., 1997), the Referral Sequence and Problem Interview (Weisz, unpublished, 1996), and the SURF (Leaf et al., 1996). The instrument was constructed in modules by individual service setting, with questions taken from each of the 4 parent instruments.

On the basis of the available literature, we expected that parents and youths would have only moderate agreement on services used, with disagreements elucidating differences in both perceptions and information about services received (e.g., parents may not know about services received in the educational setting). Our results are intended to help guide researchers' choice of instruments and choice of reporter in studying mental health service use, as well as interpret differing reports.

## METHOD

### Design

The SACA Reliability and Accuracy studies were conducted at 2 sites: Washington University in St. Louis (WU) and the University of California at Los Angeles (UCLA). Internal review boards at each university reviewed and approved the procedures for obtaining parent consent and youth assent prior to the interview.

For the UCLA study, Ventura County Mental Health provided recruiters with a list of addresses of households with children aged 4 to 17 who had used services within the previous year, selected at random from their Management Information System. Of 470 service-using households approached, 159 were eligible and 94 (59%) agreed to participate. The recruiter attempted to recruit a non-service-using household matched for ethnicity, age, and neighborhood, according to a random approach schedule. Of 527 approaches, 108 were eligible and 51 (47%) agreed to participate. All lists were merged so interviewers remained blind to interviewees' service utilization status.

The WU study selected clinic and nonclinic samples. Clinic subjects were derived from a list of patients aged 4 to 17 who had received services within the previous year from the WU child and adolescent psychiatry outpatient clinics or inpatient treatment facility and whose diagnoses included nonpsychotic disorders (with mental retardation excluded). Two other lists were obtained: children from public school classes in the first, third, and fifth grades, middle school and high school; and children aged 4 and 5 from a local day-care facility. Parents were sent recruitment letters outlining the study's goals and design, along with response forms. Unfortunately, no records were kept of the number of letters sent. From responses received, subjects were selected to fill desired demographic quotas. To complete recruitment of equal numbers of white and African-American respondents, 24 parent-child pairs were added through nominations by other respondents. Families were not told how their names were selected for recruitment, and interviewers were blind to their source.

Two interviewer-training sessions were held, one in St. Louis and one in Los Angeles. Training was developed collaboratively and implemented by personnel at the 2 sites who were experienced in the devel-

opment and use of the instruments. To ensure complete independence of reports at time 1 and 2 interviews, 4 different interviewers conducted the interviews for each parent-child pair.

Analyses for this report were restricted to parent-child pairs in which the child was 11 or older, inasmuch as children younger than 11 had difficulty responding to items in the SACA and showed poor parent-child correspondence. The reported analyses were also restricted to the time 1 interview (time 2 data were analyzed and the pattern was parallel). The study populations in the 2 sites differed in their ethnic composition, the marital status of the respondents, and employment status and income, but were similar in respondents' gender, relationship to the index child, age, and education (Horwitz et al., in press). Note that there were no significant gender or race differences in parent-child agreement, and age differences were eliminated by using only reports from youths aged 11 or older (Table 1).

## Instruments

The SACA has both parent and child versions. The parent version is described by Horwitz et al. (in press). The versions are parallel, except that, to avoid asking the child about factual items likely to be known only or best by the parent, the child version does not include questions on costs, communication of treatment goals, treatment follow-up, location of care, or the types and dosages of medications. The SACA youth version begins with a module that gathers data on lifetime and past-year use of 25 service settings grouped in broad areas: residential, outpatient, and school. Eight of the settings assess residential services (hospital, drug or alcohol treatment unit, residential treatment center, group home, foster home, detention center/prison, emergency shelter, or other); 13 assess outpatient services (community mental health center or other outpatient mental health clinic, professional not already mentioned, partial hospitalization or day treatment, drug or alcohol clinic, family preservation worker, emergency room, pediatrician or family doctor, probation or juvenile corrections, priest/minister/rabbi, alternative healer/chiropractor, crisis hotline,

self-help group, respite care provider); and 4 assess schools (a special school, a special classroom, special help in the regular classroom, counseling or therapy in school). Following the initial module, individual modules for each setting ask more specific questions about use in the preceding year. The initial module can be used independently or in conjunction with the individual modules.

Previous work showed that for parents, both lifetime and previous 12 months test-retest reliability figures are excellent. The  $\kappa$  values ranged from 0.82 to 0.94 for lifetime use of specific services and 0.75 to 0.86 for past-year use of specific services (Horwitz et al., in press). Similarly, accuracy of parent reports, compared with service records, was 0.76 for any services, 1.0 for residential, 0.67 for outpatient, and 0.31 for school services (Hoagwood et al., in press). Children 11 years and older demonstrated better reliability than younger children. The  $\kappa$  values for lifetime use of services, as reported by older children, ranged from 0.64 to 0.96 and for past-year use, from 0.63 to 0.77. The results for younger children were lower, with  $\kappa$  values for lifetime use ranging from 0.41 to 0.64 and with past-year use at 0.64.

## Analyses

In addition to analyzing data concerning use of individual settings, we aggregated information on use of specific service settings to develop information about *any* residential, *any* outpatient, and *any* school settings, as well as specific types of residential or outpatient services such as specialty mental health.

Parent and child responses for each of the dichotomous SACA items were categorized as concordant or discrepant and were analyzed with the  $\kappa$  statistic, which assesses chance-corrected agreement (Bishop et al., 1975; Landis and Koch, 1977). They were then examined for direction of discrepancy using the McNemar test, which determines discrepancies in the specific proportions of child-only versus parent-only reports. The  $\kappa$  values equal 0 when agreement is what would be expected by chance, and 1 for perfect agreement. We use values suggested by Fleiss (1981): referring to  $\kappa$  values below 0.40 as poor, 0.40 to 0.74 as fair to good, and 0.75 or greater as excellent. The  $\kappa$  values are sensitive to small sample sizes and low base rates (skewed distribution of marginal probabilities) (Spitznagel and Helzer, 1985). Therefore, we interpret  $\kappa$  values only when at least 20 parents and children reported use of the service.

## RESULTS

### Any Service Use

Information on service use in each of 25 specific settings listed in the youth version was aggregated to produce figures for any service use in 2 time spans: lifetime and in the past year. Parents and children showed good agreement on whether or not any services had been used in the youth's lifetime, 85% for a  $\kappa$  of 0.57 (Table 2). An examination of use of the 3 major venues for services (residential, outpatient, and school) elucidated differences in agreement. Agreement was better for any residential services in a lifetime or for any outpatient services in a lifetime than for any school services in a lifetime. Agreement on mental health specialty residential or specialty outpatient services was excellent and good, respectively. Parents were more likely to report outpatient mental

**TABLE 1**

Sociodemographic Characteristics of Respondents ( $N = 145$ )

Characteristic	<i>n</i>	%
Age of parent respondent		
26–40 yr	68	46.9
40–47 yr	77	53.1
Age of child respondent		
11–12 yr	38	26.2
13–14 yr	46	31.7
15–18 yr	61	42.0
Parent gender		
Female	128	88.2
Child gender		
Female	65	44.8
Parent race/ethnicity		
Black, non-Hispanic	37	25.8
Hispanic	18	12.5
White, non-Hispanic	83	58.0
Other	5	3.4
Parent relationship		
Biological mother	118	81.3
Biological father	15	10.3
Other	11	7.5

**TABLE 2**  
Types of Service Settings Used Ever in Lifetime and in Past Year ( $N = 145$ )

	Lifetime Use			Past-Year Use		
	Reported Use: Parent/Youth	% Agreement	$\kappa$ (95% CI)	Reported Use: Parent/Youth	% Agreement	$\kappa$ (95% CI)
Any service	112/112	0.85	0.57 (0.41–0.73)	95/88	0.83	0.63 (0.50–0.76)
Any residential	40/40	0.94	0.86 (0.77–0.96)	18/22	0.94	0.77 (0.62–0.92)
Any outpatient	108/101	0.87	0.68 (0.54–0.81)	89/79	0.79	0.58 (0.45–0.71)
Any school	69/66	0.72	0.43 (0.29–0.58)	56/42	0.75	0.45 (0.30–0.60)
Any mental health specialty inpatient <sup>a</sup>	27/26	0.95	0.84 (0.72–0.96)	13/17	0.94	0.70 (0.51–0.90)
Any mental health specialty outpatient	100/88	0.78	0.52 (0.38–0.66) (McNemar $\chi^2 = 4.5, p < .03$ )	77/65	0.74	0.48 (0.34–0.62) (McNemar $\chi^2 = 3.8, p < .05$ )

Note: CI = confidence interval; NS = not significant.

<sup>a</sup> Specialty inpatient includes psychiatric hospital/unit, drug/alcohol treatment, and residential treatment.

health specialty treatment than were youths, but no other lifetime service use demonstrated any significant patterns.

Agreement on any service use in the past year paralleled that for lifetime agreement. Agreement on the overall category of any service in the past year was 83% or  $\kappa = 0.63$ . Within that aggregated category, the pattern of relative agreement levels was similar to the agreement for any lifetime use. Agreement on any residential services in the past year or any outpatient services in the past year was better than that for any school services in the past year. Agreement was also better for specialty mental health inpatient services in the past year than for specialty mental health outpatient services in the past year. (Note, however,

that the sample size is low enough to compromise the interpretability of the  $\kappa$ .) Parents were more likely than youths to report both school services in the past year and mental health specialty outpatient services in the past year.

#### Specific Types of Settings

The samples of 145 parent-child pairs yielded enough cases to examine agreement for only some of the 25 specific service settings. Agreements on lifetime use and on past-year use were parallel within types of settings.

*Specific Residential Settings.* Agreement levels on lifetime use of a psychiatric hospital or unit in a general hospital were excellent (Table 3). Unfortunately, no use

**TABLE 3**  
Specific Settings Used Ever in Lifetime and in Past Year ( $N = 145$ )

	Lifetime Use			Past-Year Use		
	Reported Use	%	$\kappa$ (95% CI)	Reported Use	%	$\kappa$ (95% CI)
Inpatient settings						
Psychiatric hospital or unit in general hospital	25/24	0.95	0.83 (0.71–0.95)	NA	—	—
Outpatient settings						
Community mental health center	74/39	0.62	0.25 (0.11–0.39) (McNemar $\chi^2 = 22.3, p < .001$ )	58/26	0.67	0.24 (0.10–0.39) (McNemar $\chi^2 = 21.3, p < .01$ )
Family preservation	26/31	0.84	0.50 (0.32–0.68)	NA	—	—
Psychologist, social worker, or marriage or family therapist	62/74	0.64	0.29 (0.13–0.44)	37/54	0.70	0.32 (0.17–0.48) (McNemar $\chi^2 = 6.7, p < .01$ )
Special classroom in regular school	53/47	0.79	0.35 (0.17–0.53) (McNemar $\chi^2 = 3.9, p = .05$ )	NA	—	—
Counseling in school	53/47	0.74	0.42 (0.27–0.58)	40/27	0.79	0.41 (0.24–0.58) (McNemar $\chi^2 = 5.4, p < .05$ )

Note: CI = confidence interval; NA = not applicable.

of a residential setting in the past year met the minimum sample size of 20.

*Specific Outpatient Settings.* Agreement rates on lifetime use of outpatient settings ranged from 62% to 84% (Table 3). Parent-child agreement was poor for community mental health settings and for use of a private therapist. In contrast, agreement on use of family preservation services in a lifetime was good. Parents were more likely than youths to report use of a community mental health center.

Agreement was poor for past-year use in both outpatient settings that met the sample size criteria (Table 3): use of a community mental health center and use of a private therapist. Parents were more likely to report use of a community mental health center, and youths were more likely to report use of a private therapist.

*Specific School Settings.* Agreement on lifetime use of the 2 school settings that met sample size criteria (a special classroom in a regular school or counseling in school) was poor to fair (Table 3). Parents were more likely to endorse a special classroom, but not counseling.

Agreement concerning past year's use of counseling in school was fair (Table 3). The parents were more likely than youths to report counseling in school.

#### Reasons for Use of Services

Parents and youths tended to agree on at least one of the reasons why they used services for behavioral or emotional problems. For settings where at least 16 individuals responded,  $\kappa$  values for reasons for using any outpatient service, any school service, and any mental health specialty outpatient service were good (0.72, 0.70, and 0.71, respectively). The  $\kappa$  values were also good for a community mental health center and for a private therapist ( $\kappa = 0.71$  and 0.59, respectively).

#### Experiences Within Specific Settings Used in the Past Year

Although the sample was consistently too small for statistical inferences, in 2 settings the sample size reached approximately 15. For a private therapist, 67% of parents and children agreed that therapy or counseling was given and 75% agreed that medication (type unspecified) was given. For community mental health centers, 78% agreed that therapy or counseling was given and 83% agreed that medication was given. There were no significant differences between parent and child reports on the number of different treatments for either setting (means of 2.9 and 2.8 and means of 3.8 and 3.2, respectively, by setting for parent and child).

#### Accuracy of Youth Reports

Only the St. Louis site reviewed service records to assess accuracy. Accuracy of youth reports (for those older than 11) was assessed by review of the previous year's service records from WU inpatient and outpatient psychiatric services and public school records in St. Louis (see Hoagwood et al., in press, for more details). Information was abstracted concerning specialty residential care, specialty outpatient care, and school services. Despite the small sample size for specialty residential care ( $n = 6$ ), there was excellent agreement (97%) between youth reports and records. Reports of any specialty outpatient service use yielded fair-to-good levels of agreement with records ( $n = 30$ , 73%,  $\kappa = 0.44$ ). Reports of receipt of any school services for behavioral or emotional problems corresponded weakly ( $n = 14$ , 69% agreement) to school records.

#### DISCUSSION

The analysis of adult and child reports of mental health services in the SACA shows that the SACA is a promising instrument for services research. The agreement between parents and children is higher than that reported for the only other service use instrument with such data for children (Leaf et al., 1996). Furthermore, it is as high or higher than that reported for either diagnostic status or behavior symptom checklists. The MECA reported that their highest  $\kappa$  for generic categories of service use was 0.45 (Leaf et al., 1996). In contrast, the SACA  $\kappa$  values for lifetime services range from a low of 0.43 to a high of 0.86. Similarly, the SACA shows a fair to excellent correspondence for generic categories of services that had been used in the past year, since the  $\kappa$  values range from 0.45 to 0.77, with most greater than 0.50.

The parent-youth correspondence for specific service settings in the SACA is also higher than that reported for other instruments. The  $\kappa$  values range from 0.25 to 0.83 (poor to excellent), with half at 0.50 or greater (good to excellent) for lifetime use. The percentage of correspondence for specific settings used in the previous year was less adequate, with  $\kappa$  values that range from 0.24 to 0.41. Parent-youth correspondence is lower for mental health services offered in the past year than for mental health services offered during a lifetime, which may be a consequence of the smaller sample size for the 12-month reports.

Rates of correspondence differed by type of setting. Correspondence is higher for residential settings, perhaps due to the salience to both parents and children of being

removed from the home overnight and the intensity of services. Agreement is lower for the specific types of outpatient or school settings used. Children might be confused about specific types of outpatient settings (such as distinguishing outpatient community mental health center or private therapist services) or may not be aware that such outpatient services are mental health services. It is noteworthy that similar numbers of parents and youths report receiving each generic type of service in a lifetime (any services, any residential, any outpatient, and any school). Many more parents report the use of the community mental health center than do youths, and more youths report use of a private therapist than do parents. This supports the speculation that youths may be recalling the names of service providers, rather than where they saw that person or the administrative title of such a place. For example, children would have no reason to know whether the therapist they saw was affiliated with an organization, because they seldom set up appointments or pay bills. Parent–youth differences concerning outpatient services may also be due to some interventions being directed at a parent's handling of the youth rather than at the youth.

It is interesting that parent–child correspondence is lowest for school services. This leads to 2 speculations: (1) parents may be unaware of services used in school, and (2) children may be unaware that special classes are designed for mental health problems when they are offered through a regular school. The latter is supported by the fact that more parents report such use than youths. However, parents are not unaware of youths using school counselors, as more parents than youths report that youths use school counselors. Perhaps parents see the contact with counselors as a service, whereas youths see it as “discipline,” or advice. Conversely, perhaps more services are promised to parents than are provided, and youths' reports more accurately reflect services received.

Parents and youths share similar understandings of the types of behavioral and emotional problems that led a youth to particular services or types of services. Similarly, they share perceptions concerning the provision or nonprovision of therapy or medication within treatment settings.

Youth reports also appear to be acceptably accurate in their agreement with service reports. Levels of record–SACA youth report agreement are highest for residential and lowest for school services, in the same pattern as SACA parent–SACA youth agreement.

There are some explanations for any high parent–child correspondence in the SACA and for any lack of corre-

spondence. The specific structured questions about each type of service appear to prompt good recall, and discrepancy may relate to perception. Studies of other instruments tapping parent and child reports show that each single individual's report is internally consistent and stable. Thus, each individual's report reflects the experiences, perceptions, and misperceptions of the respondent (Rubio-Stipec et al., 1994). Because different informants contribute different information, discrepancy is not equivalent to lack of interrater reliability, but relates to differing experiences, priorities, and perceptions (Verhulst and van der Ende, 1992).

#### Limitations

The most serious limitation of this pilot study concerns the sample size. Because the SACA asks questions about so many different settings, a large sample is required to analyze all specific settings and specific experiences within particular settings. Because the number of subjects using specific settings and specific treatments in most settings was so low, it is difficult to draw specific conclusions from those  $\kappa$  values. Similarly, one would need an even larger sample to examine the joint or interactive impact of gender, youth age, race, and mental health status on agreement about services in specific settings. Also, the samples were drawn only from 2 cities with large visible services. Rural samples might respond differently. Rates of agreement may also have been affected by higher proportion of service users than one would find in a random sample. Although report–record correspondence is discussed as a means of assessing accuracy, validity remains elusive, as there are no objective referents for calibrating self-reports (cf. Fendrich et al., 1999). Medical and school service records are notoriously incomplete, and all possible extant records were not reviewed.

#### Clinical Implications

Clinicians may be aided by understanding the areas in which parent and child reports differ, as their differences may explain youths' reactions to intervention. An interesting issue concerns how youths' understanding that they are being treated for a mental health problem affects their treatment cooperation or progress. Youths appear to be unaware that they are receiving some “mental health services” because the service is couched within another context (even labeled with terminology designed to blur the mental health emphasis). They may not know that special classrooms are directed toward their mental health

or that outpatient clinics are offering specialty mental health services. Misconceptions may raise dropout rates. Also, the stigma of receiving certain services, particularly in school, may lead to lower satisfaction or compliance.

### Research Implications

The SACA's ability to elicit answers with high correspondence between parent and youth report is important for service researchers. The modular format of the SACA, with an initial service overview section, makes it highly adaptable for differing research modalities. The findings of generally high parent-child correspondence indicate that it is not necessary to do both adult and youth service assessments in all research on mental health services. This is especially encouraging news for researchers working with high-risk youth populations, in which a parent figure who knows the history of the child is often not available.

The initial section of the SACA, which obtains information on the use of generic settings (without going into detailed modules), might be most appropriate to use alone in studies with smaller sample sizes. Furthermore, researchers might modify the specific modules for generic types of settings rather than for specific settings. That is, the modules for therapists and outpatient mental health could be aggregated into a module for any specialty mental health outpatient services parallel to the way we aggregated the data for Table 3 of this report.

The results indicate that researchers must decide upon the type of information that they desire and use the initial section, the modules, the parent or youth reports, or a combination to obtain the most relevant information. As each reporter presents a different perspective, it is impossible to give a blanket statement about which is better. Clearly, because reports for children younger than age 11 are less reliable, parents are the only appropriate reporters when the children are young. Parent reports are also more appropriate if the researcher wants to learn about those pieces of information likely to be known only to the parent, such as financing, marital therapy, or parent education. In contrast, the youth report is as adequate or better if the researcher wants to learn about residential services or a youth's understanding of the services he or she received. The costly options of obtaining both reports plus record reviews would yield the most complete picture of mental health service use. However, the SACA and the data presented in this report allow researchers to make cost-effective choices in mounting their research programs.

In conclusion, despite any limitations of this study, the SACA has better adult-youth correspondence than any questionnaire on service use with published data. Youth and parent reports each add new or different information, but each agrees well with the other. The utility of obtaining both parent and youth reports lies in the personal perspectives each give concerning the treatment received.

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#### Childhood Head Injuries: Accidental or Inflicted? Robert M. Reece, MD, Robert Sege, MD, PhD

**Objectives:** To determine the relative incidence of accidental and abusive causes of head injuries in children younger than 6.5 years, to identify the types of cranio-cerebral damage resulting from reported mechanisms of injury, and to assess the likelihood of injuries being accidental or inflicted. **Methods:** Retrospective review of medical records of 287 children with head injuries aged 1 week to 6.5 years admitted to a metropolitan children's hospital from January 1986 through December 1991. Those patients with diagnoses of skull fracture; concussion; subarachnoid hemorrhage (SAH); subgaleal, epidural, or subdural hematoma (SDH); parenchymal contusion or laceration; and closed head injury were included. Criteria were used for inclusion in categories of *definite abuse or accident*. **Results:** Accidents accounted for 81% of cases and definite abuse for 19%. The mean age of the accident group was 2.5 years and for the definite abuse group, 0.7 years. Major differences were seen in the incidence of the following: SDH, 10% in the accident group and 46% in the definite abuse group; SAH, 8% in accident group and 31% in the definite abuse; and retinal hemorrhages, 2% in the accident group and 33% in the definite abuse group. Associated cutaneous injuries consistent with inflicted injury were seen in 16% of the accident group and 50% of the definite abuse group. Twenty-three percent of those in the accident group were injured in motor vehicle crashes (MVCs), 58% by falls, 2% in play activities, and the rest had insufficient medical record information. In 56% of those in the definite abuse group, there was no history to account for the injuries and no history of MVC. In 17%, a fall was said to have been the mechanism of injury. In 24%, inflicted injury was admitted. Mortality rates were 13% in the definite abuse group and 2% in the accident group. Median hospital stay was 9.5 days for the definite abuse group and 3 days for the accident group. In falls less than 4 feet in the accident group, 8% had SDH, 2% had SAH, and none had retinal hemorrhages; among those in the definite abuse group reportedly falling less than 4 feet, 38% had SDH, 38% had SAH, and 25% had retinal hemorrhages. **Conclusions:** A substantial percentage of head injuries requiring hospitalization in children younger than 6.5 years are attributable to inflicted injury. Subdural hematoma, subarachnoid hemorrhage, retinal hemorrhages, and associated cutaneous, skeletal, and visceral injuries are significantly more common in inflicted head injury than in accidental injury. *Arch Pediatr Adolesc Med* 2000;154:11-15. Copyright 2000, American Medical Association.



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