Epidemiologic Features of the Physical and Sexual Maltreatment of Children in the Carolinas

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ABSTRACT. *Context.* **Child maltreatment remains a significant public health and social problem in the United States. Incidence data rely on substantiated reports of maltreatment known to official social service agencies.**

Objective. **The objective of this study was to describe the epidemiologic features of child physical and sexual abuse, on the basis of maternal self-reports.**

Design, Setting, and Participants. **Computer-assisted, anonymous, cross-sectional, telephone surveys (N = 1435) were conducted with mothers of children 0 to 17 years of age in North and South Carolina. Mothers were asked about potentially abusive behaviors used by either themselves or their husbands or partners in the context of other disciplinary practices. They were also asked about their knowledge of any sexual victimization their children might have experienced.**

Main Outcome Measures. **The incidence of physical and sexual maltreatment determined through maternal reports.**

Results. **Use of harsh physical discipline, equivalent to physical abuse, occurred with an incidence of 4.3%. Shaking of very young children as a means of discipline occurred among 2.6% of children <2 years of age. Mothers reported more frequent physical discipline of their children, including shaking, for themselves than for fathers or father figures. Nearly 11 of 1000 children were reported by their mothers as having been sexually victimized within the past year. The incidence of physical abuse determined with maternal self-reports was 40 times greater than that of official child physical abuse reports, and the sexual abuse incidence was 15 times greater. For every 1 child who sustains a serious injury as a result of shaking, an estimated 150 children may be shaken and go undetected. There was no statistically significant difference in the overall rates of physical or sexual maltreatment between the 2 states.**

Conclusions. **Official statistics underestimate the burden of child maltreatment. Supplemental data obtained with alternative strategies can assist policymakers and planners in addressing needs and services within communities and states. These data support the need for continued interventions to prevent maltreatment.** *Pediatrics* **2005;115:e331–e337. URL: www.pediatrics.org/cgi/doi/10.1542/peds.2004-1033;** ***child maltreatment, child abuse, incidence, risk factors.***

ABBREVIATION. NCANDS, National Child Abuse and Neglect Data System.

Child maltreatment remains a significant medical, social, and public health problem in the United States.[1–4] In the past decade, 14 of every 1000 US children were substantiated as victims of physical abuse, sexual abuse, or neglect,[5] and it is widely acknowledged that the maltreatment cases substantiated by social service agencies represent merely a portion of the children experiencing abuse and neglect.[3] In 1995, a national poll administered by the Gallup Organization to 1000 families within the United States suggested that the rate reported by parents might be >10 times the rate determined from official reports.[6]

For individual states, national data may not accurately reflect the occurrence of or exposure to child maltreatment. In North and South Carolina, public laws and policies established to respond to and to facilitate reporting of child maltreatment have existed for >37 years. Both states have developed child protection systems, modified state laws, and seen the development and growth of nongovernmental organizations dedicated to preventing child maltreatment. On the basis of official maltreatment statistics, children in North Carolina appear to be at slightly higher risk than average children in the United States and at nearly 1.5 times the risk of children in South Carolina of being victimized.[5] The profile of substantiated maltreatment in North Carolina is also very different from that in South Carolina; 90% of substantiated maltreatment victims in North Carolina are victims of neglect, whereas South Carolina has a high percentage of children who are recorded as victims of physical abuse.[5] Such differences between states have not been well studied, and it is not clear whether these differences are related to reporting or whether they represent actual differences in children's experiences.

Reliance on official statistics is problematic in other ways. Because only a small proportion of cases are routinely reported, increased public awareness

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Accepted for publication Oct 4, 2004.
doi:10.1542/peds.2004-1033

The conclusions and opinions expressed in this article are those of the authors and do not necessarily represent the views of the Duke Endowment, its officers, or members of the board of directors.

No conflict of interest declared.

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might lead to an increase in the number of reports. If there were a true reduction in the occurrence of child maltreatment, then this paradoxical increase in the number of reports could easily mask a positive change. In addition, state and local statistics are likely to be more sensitive to changes in the systems, personnel, and policies of the child protective services division. Alternative approaches to understanding the burden of child maltreatment in a community are needed.

This study was undertaken to ascertain with an alternative strategy the incidence and types of maltreatment experienced by children in North and South Carolina. Mothers in the Carolinas were surveyed regarding their own and their partner's parenting behaviors used to discipline their children in the past year, as well as their knowledge of their children's sexual victimization. This approach relies on the work of Straus et al,[7] which demonstrated that parents are willing to report behaviors that they have used to discipline their children, even very harsh and socially disapproved behaviors toward children. One strength of this approach is that data are collected from people who are potentially participants in, or witnesses to, the maltreatment of children. It also provides an opportunity to measure maltreatment across states with the same instrument.

METHODS

Approach

An anonymous telephone survey on child rearing and child discipline was administered to probability samples of North and South Carolina mothers, ≥18 years of age, who were living with a child <18 years of age.

Sampling Design and Response Rates

Dual-frame samples of telephone numbers were purchased from GENESYS Sampling Systems (Fort Washington, PA). One frame source included all assignable telephone numbers, whereas the other consisted of listed telephone numbers with relevant household information. Coverage in these samples included all households with telephone-line access. Nearly one half (47%) of the interviews came from a random-digit-dialing sample of the first frame. The remainder came from a targeted sample of households known to have children <18 years of age. The latter approach was used to improve the hit rate of contacting households with children, thus decreasing survey costs. In the North Carolina statewide sample, 3785 numbers were used for calling; in the South Carolina statewide sample, 4477 numbers were used. A total of 712 interviews were completed in North Carolina. Of the remaining numbers, 2138 numbers were ineligible (eg, numbers no longer in service or business numbers), 538 were of unknown eligibility because the maximal number of call attempts resulted in no answer, and 397 were eligible but the subjects did not complete an interview, for various reasons (eg, refused, were unavailable for the length of the study, or had medical constraints). In South Carolina, 723 interviews were completed. Of the remaining numbers, 2473 numbers were ineligible, 797 were of unknown eligibility, and 484 were eligible but no interview was completed. A combined response rate of 52% was achieved by following the computational guidelines of the American Association for Public Opinion Research standard definitions, response rate 3.[8]

Data Collection

The survey was conducted from August to December 2002; Blaise, a computer-assisted telephone interview software package,[9] was used to administer the questionnaire and to manage the call attempts. At least 12 repeat calls were made at various times of the week (ie, weekend, weekday, and weekend periods), to broaden inclusion. Calls were made from 9:00 AM to 9:00 PM on Monday through Thursday, from 10:00 AM to 2:00 PM on Saturday, and from 3:00 PM to 9:00 PM on Sunday. To be considered eligible, a called number needed to reach a household located in the Carolinas that included a child <18 years of age. In addition, a mother or female guardian needed to be present. After establishment of eligibility, a referent child was selected and the corresponding mother or female guardian was interviewed. If the household included >1 eligible child, then 1 was randomly selected with a computer-generated algorithm. Mothers were asked to respond to a survey that included questions related to demographic characteristics, discipline tactics, and community support. In particular, each mother was asked about parenting practices that she or her husband or partner had engaged in to correct or punish the referent child's behavior in the past year. The interviews lasted ~25 minutes, and the data were entered directly into a computer by the interviewer. All interviewers completed general and project-specific training before conducting the surveys. For quality control purposes, all interviewers were monitored periodically, and written feedback was provided to them biweekly. After connection with an eligible participant, telephone numbers were purged from the interviewer system, which provided anonymity to the respondents. At the end of their interviews, all mothers were given telephone numbers to access local resources. This voluntary anonymous survey was approved by the University of North Carolina School of Medicine Committee on Research Involving Human Subjects before data collection.

Measures

A survey was designed to assess the rates of harsh physical discipline and to investigate correlates of potentially neglectful parenting behaviors. The sections of the survey covering parental disciplinary practices and knowledge of sexual victimization were assessed with the Parent-Child Conflict Tactics Scale.[10] The survey was translated into Spanish and administered in that language to families who spoke only Spanish, because Hispanic families now represent significant proportions of the population in some counties of both states. The survey was translated and back-translated through independent review. Seven mothers completed the survey in Spanish.

A harsh physical discipline index was created to indicate the incidence of parents' self-reported behaviors of shaking a child <2 years of age, beating, burning, kicking a child, or hitting a child with an object somewhere other than the buttocks in the year before the interview. For example, respondents were asked if they or their partners had "beat [the child], that is, hit over and over again with an object or fist." This is comparable to the measure of physical abuse used in the 1995 Gallup Poll.

Statistical Analyses

Sample weights were assigned to each subject. All estimates were based on weighted estimates with socioeconomic status and race/ethnicity, to be more representative of the population. Descriptive statistics were generated for the variables of interest, and univariate tests were performed for associations between the maltreatment variables and selected demographic variables. χ^2 tests were used to test for significant associations between categorical variables.

RESULTS

Demographic Features

The child and household characteristics of the study participants are presented in Table 1. The interview sample totaled 1435 children and households (712 in North Carolina and 723 in South Carolina). The mean child age was ~9 years in both states, with a fairly even distribution among all ages from 0 to 17 years. Boys and girls were equally represented among children in the sample. Most of the study participants were white (79%), with the next largest group being black (15%), compared with 73% white and 22% black in the general population. The vast majority of the respondents were the biological mothers of the referent children. More than 50% of

TABLE 1. Participant Characteristics for North and South Carolina (N = 1435)

Characteristics	Total (N = 1435)			North Carolina (N = 712), Crude %	South Carolina (N = 723), Crude %
	No.	Weighted %	Crude %		
Child age					
0–4 y	365	27	25	24	27
5–8 y	321	19	22	22	23
9–12 y	298	23	21	22	20
13–17 y	448	30	31	33	30
Mean (SD)	1435		8.9 (5.1)	9.1 (5.2)	8.8 (5.1)
Child gender					
Male	733	53	51	51	51
Relationship of child to respondent					
Biological	1352	93	95	95	96
Adopted/stepchild	51	4	4	4	3
Foster/other	19	3	1	1	1
Respondent's highest grade completed					
Less than high school	73	8	5	4	6
High school	376	34	26	26	27
Some college	416	29	29	31	28
College graduate or beyond	563	29	39	39	40
Racial/ethnic background					
White	1133	73	80	82	79
Black	216	22	15	13	17
Hispanic	19	2	1	2	1
Native American/Indian	14	1	1	1	1
Asian/Pacific Islander	8	1	1	1	1
Mixed	20	1	1.4	1.1	1.7
Other	5	0.7	0.4	0.6	0.1
Annual family income					
Less than $20 000	151	24	11	12	11
$20 001–$40 000	281	27	21	20	23
More than $40 000	888	48	67	69	66
Type of household					
Married, 2 parents	1182	71	83	83	83
Unmarried partners	34	5	2	3	2
Single parent	193	22	14	13	14
Others	16	2	1	1	1
Public assistance					
Medicaid	246	27	17	14	20
WIC	103	12	7	6	8

WIC indicates Supplemental Nutrition Program for Women, Infants, and Children.

the mothers interviewed had achieved some college-level education or beyond, and 83% were married. Nearly 70% of the mothers reported an annual household income of more than $40 000.

Routine Disciplinary Practices

With the use of the weighted data, frequencies of each disciplinary practice reported by the maternal respondents were recorded (Table 2). In the aggregated sample of North and South Carolina respondents, "taking away privileges" was the most frequent disciplinary practice for all ages, with an incidence of 847 cases per 1000 children. Removing privileges was followed by "time-out" or sending the child to his or her room (792 cases per 1000 children) and yelling (753 cases per 1000 children). Spanking, defined as hitting a child on the buttocks with one's hand, was the most frequent physical disciplinary practice, with an incidence of 451 cases per 1000 children. All other disciplinary practices occurred in <30% of the households.

The weighted incidence of parental disciplinary practices varied according to child age. Among the youngest children, those 0 to 4 years of age, time-out (819 cases per 1000 children) was the most common form of discipline, followed by removing privileges (611 cases per 1000 children), spanking (573 cases per 1000 children), and yelling (570 cases per 1000 children). For children 5 to 12 years of age, a different pattern was observed; removing privileges was the most prevalent, followed by time-out or sending the child to his or her room, yelling, and then spanking. Among adolescents 13 to 17 years of age, respondents reported removing privileges (866 cases per 1000 children) as the most frequent form of parental discipline, followed by yelling and sending the child to his or her own room. Adolescents were much less likely to be spanked (Table 3). Compared with the other age groups, children 5 to 8 years of age were more likely to be disciplined with time-out, spanking, spanking with an object, and threatening with the "boogieman" or some other frightening concept. Slapping the child's face, cursing, refusing to speak to the child, threatening to kick the child out of the house, and physically locking the child out of the house were reported more frequently for adolescents than for other age groups.

Parental disciplinary practices were examined according to child gender, perpetrator, and household income. Girls were more likely to be threatened with abandonment (45 cases per 1000 children, compared

TABLE 2. Weighted Incidence of Disciplinary Practices for Children <18 Years of Age in North and South Carolina in the Past Year ($N = 1435$)

Type of Discipline/Abuse	Incidence, Cases per 1000 Children			*P* Value
	Total ($N = 1435$)	North Carolina ($N = 712$)	South Carolina ($N = 723$)	
Taking away privileges	847	852	834	.52
Putting child in time-out/sent to room	792	776	832	.05
Yelling	753	766	720	.15
Spanking with hand	451	419	528	.002
Spanking with object	245	225	293	.03
Cursing	207	214	190	.40
Refusing to speak to child	124	127	117	.67
Threatening to kick child out	68	82	33	.004
Slapping face	61	67	47	.25
Pinching	59	48	84	.04
Calling names	42	36	57	.18
Hitting with object besides buttocks	34	28	51	.07
Threatening to abandon child	31	30	33	.82
Threatening child with boogieman	28	29	29	1.0
Shaking child <2 y*	26	4	79	<.001
Shaking child ≥2 y†	25	26	21	.60
Withholding food	4	3	9	.17
Putting hot pepper in child's mouth	3	1	8	.03
Locking child out	3	3	4	.54
Kicking child	3	4	2	.30
Beating child	3	4	0	.52
Burning child	2	2	0	.20
Threatening with knife or gun	0	0	0	
Harsh physical discipline‡	43	36	60	.11

* Sample size: total, $N = 116$; North Carolina, $N = 59$; South Carolina, $N = 57$.
† Sample size: total, $N = 1319$; North Carolina, $N = 653$; South Carolina, $N = 666$.
‡ Harsh physical discipline is a dichotomous variable that indicates whether a parent had used any of the following disciplinary practices in the past year: shaking a child <2 years of age, beating, burning, or kicking a child, or hitting a child with an object somewhere other than the buttocks.

TABLE 3. Weighted Incidence of Selected Physical Disciplinary Practices According to Child Age, Child Gender, Perpetrator, and Annual Household Income ($N = 1435$).

	Incidence, Cases per 1000 Children					
	Spanking With Hand	Spanking With Object	Slapping Face	Hitting With Object Besides Buttocks	Shaking Child <2 y*	Harsh Physical Discipline†
Rate	451	245	61	34	26	43
Age						
0–4 y	573‡	167‡	42	13		28
5–8 y	696‡	362‡	44	52		53
9–12 y	501‡	352‡	58	47		59
13–17 y	155‡	160‡	90	33		39
Gender						
Male	456	274	68	26	21	34
Female	446	212	53	44	33	53
Perpetrator						
Mother	439§	228§	50§	31§	17§	36§
Father	297	140	29	17	9	22
Income						
Less than $20 000	462	225	80	18	55	26
$20–$40 000	471	292	66	29	41	32
More than $40 000	445	224	55	41	6	55

* Sample size (children <2 years of age): $N = 116$.
† Harsh physical discipline is a dichotomous variable that indicates whether a parent had used any of the following disciplinary practices in the past year: shaking a child <2 years of age, beating, burning, or kicking a child, or hitting a child with an object somewhere other than the buttocks.
‡ $P < .0001$ for observed differences in spanking with the hand or with an object, according to age.
§ $P < .0001$.

with 18 cases per 1000 children for boys; $P = .02$). Boys were more likely than girls to be locked out of the home as discipline (6 cases per 1000 children, compared with 1 case per 1000 children for girls; $P = .03$). Analysis of disciplinary practices according to perpetrator showed that mothers reported themselves as the parent providing discipline more frequently to children, compared with their husbands or partners (Table 3). In contrast to the 1995 Gallup Poll data, household income was not significantly associated with the incidence of disciplinary practices.

Potentially Abusive Disciplinary Practices

The overall incidence of harsh physical discipline was 43 cases per 1000 children. A subset of parental behaviors used in the context of discipline for children were considered harsh physical discipline and potentially abusive because of the potential for significant injury or harm to the child. These behaviors included shaking a child <2 years of age, beating, burning, or kicking a child, or hitting a child with an object somewhere other than the buttocks. Being hit with an object somewhere on the body other than the buttocks accounted for the majority of harsh physical discipline. For children <2 years of age, shaking was most prevalent, with a rate of 26 cases per 1000 children (95% confidence interval: 0–60 cases per 1000 children). Individual forms of other harsh physical discipline, such as beating, burning, or kicking a child, were rare, with an incidence for each individual disciplinary practice of <5 cases per 1000 children.

Variation in harsh physical discipline according to age was noted only for spanking with an object somewhere other than the buttocks, which was more common for children 5 to 12 years of age than for young children or adolescents ($P < .0001$) (Table 3). Potentially abusive practices were also examined according to child gender. None showed differentiation according to child gender with the exception of burning, which was used more commonly for the discipline of boys than of girls (incidence of 2.6 cases per 1000 children, compared with 0.2 cases per 1000 children for girls; $P = .03$). Mothers reported more harsh disciplinary practices for themselves than for fathers or father-figures within the home, including shaking their young children nearly twice as often (Table 3). There was no significant difference in the level of harsh physical discipline according to household income.

Sexual Abuse

The survey contained 2 questions related to the problem of sexual abuse of children. Mothers were asked if their children had been forced to have sex with an adult or older child or if their children had been touched in a sexual way or made to touch an adult or older child in a sexual way. According to maternal report, no child had been forced to have sex with an adult or older child in the past year but 11 of 1000 children had been touched in a sexual way or made to touch an adult or an older child. More mothers reported that these events had occurred during their child's lifetime; 28 of 1000 children had been touched or made to touch someone, and 11 of 1000 children had been forced to have sex.

Girls were more likely than boys to be known victims of sexual maltreatment (29 cases per 1000 children, compared with 3 cases per 1000 children for boys; $P = .04$). The incidence of sexual victimization was higher among adolescents in our sample (23 cases per 1000 children), although this rate was not statistically significantly different. Numbers were not sufficiently large to allow stratification according to household income.

Comparison With National Data Sources

The estimated rates of child maltreatment for North and South Carolina were compared with the estimates from the National Child Abuse and Neglect Data System (NCANDS) for 2001[5] and the Gallup Poll data from 1995[6] (Table 4). NCANDS includes national and state-specific data and considers only substantiated cases of maltreatment in its tally. The survey data used here are comparable to the Gallup Poll data, which reflect rates of harsh discipline from the Parent-Child Conflict Tactics Scale and include only certain parenting behaviors (such as burning or kicking a child) judged by the original authors of the Parent-Child Conflict Tactics Scale to represent behaviors that would be reportable to authorities under the child abuse statues for most of the 50 states in the United States.

Child maltreatment incidence rates estimated from our telephone survey data were substantially higher than those estimated by the NCANDS. Mothers in our sample self-reported behaviors (including maltreatment by their husbands or partners) that constituted physical abuse at a rate >40 times higher than the official substantiated rate of physical abuse in either state. The estimate of sexual abuse, ie, 10.5 cases per 1000 children, was >15 times higher than the official state-level statistic.

DISCUSSION

The incidence of physical and sexual maltreatment of children in the Carolinas is significantly higher than official state statistics indicate. Asking mothers about parental practices used within the context of discipline suggests that, for every 1 child officially substantiated as a victim of physical abuse, ~40 children go undetected. Asking mothers about their

TABLE 4. Comparison of Child Maltreatment Rates

	National NCANDS	Gallup Poll*	North and South Carolina NCANDS†	North and South Carolina‡
Year	1995	1995	2001	2002
Population (*N*)	70 776 791	1000	2 973 688	1435
No. physically abused	166 232		2927	
Physical abuse rate, cases per 1000 children	3–4.5	49	1.0	43
No. sexually abused	87 480		1873	
Sexual abuse rate, cases per 1000 children	1.6–2.4	19	0.6	10.5

* Rate based on 1995 Gallup Poll data.[6]

† From National Center on Child Abuse and Neglect data.[5]

‡ This study used the harsh physical discipline measure instead of physical abuse; sexual abuse was defined as "touched in a sexual way or made to touch an adult or an older child."

knowledge of their children's sexual victimization suggests that, for every 1 child substantiated as a victim of sexual abuse, ≥15 have experienced sexual victimization in some form in the past year.

It is important to reemphasize that, for each of the child maltreatment categories, the measurement criteria differ between official NCANDS data and our study. The distinction we have drawn between harsh physical discipline and routine discipline is based on categories suggested by the Parent-Child Conflict Tactics Scale. Use of the harsh discipline scale from the Parent-Child Conflict Tactics Scale as a proxy for child maltreatment may be considered a conservative measure by some who consider any spanking potentially abusive, because of the frequency with which spanking escalates to abusive behavior on the part of some parents.[4,11,12] Our estimate is also conservative in that it does not include other parental behaviors that could be deemed potentially abusive, such as slapping the face of a child ≤2 years of age (74 cases per 1000 children) or locking out of the home a child who is ≤4 years of age (7 cases per 1000 children). In addition, with our definition of harsh discipline focusing on the parental behavior and not the consequences of that behavior, it is likely that other children were missed. Parents who pinch, slap, or spank their children with objects could leave bruises, which would be reportable as child physical abuse in many states. Nevertheless, harsh physical discipline, although more common than reported to social service agencies, remained confined to a minority of children in our study.

Interestingly, our study did not find a statistically significant difference in the rate of harsh physical discipline among household income categories (less than $20 000, $20 000–40 000, or more than $40 000 per year). There are several reasons why this might have occurred. Chance alone might explain our inability to find a relationship between income and the incidence of harsh punishment. There might be less variation in parental behavior at the cutoff points we chose to report. Alternatively, parents in higher socioeconomic strata might be more forthcoming about discipline used in their homes or parents in lower socioeconomic strata might be less forthcoming, because of the influences of social desirability, fear, or other factors. The possibility that middle-income families use disciplinary practices similar to those of lower-income families is somewhat harder to accept, as evidenced by other studies that demonstrated that children from higher-income families are less likely to be suspected as victims of physical maltreatment.[13]

A recent prospective North Carolina study, in which all children with severe abusive head trauma resulting from shaking were enumerated during a 2-year period, determined that the rate of abusive head trauma in the first 2 years of life was 17.0 cases per 100 000 live births.[14] The results from that study, combined with our data, suggest that, for every 1 child <2 years of age who sustains a serious or life-threatening injury, another 152 children may be shaken by their caregivers and sustain subclinical brain trauma that goes undetected.

With respect to sexual abuse, our study confirmed what others have found, namely, children are not all at equal risk for sexual abuse. Children who are older and female are at much higher risk.[15] In our samples, the numbers of children reported as experiencing sexual victimization in the course of the past year were small. However, even with small numbers, our estimate for sexual victimization was much higher than official reports. One explanation for the higher rates could be that our survey questions included sexual victimization of the child by any adult or older child, not just those in the care-giving role. Even so, it is very likely that our results also underestimate the incidence, because it is well established that sexual abuse often goes undiscovered even by mothers.

Differences between North Carolina and South Carolina were not as significant as official statistics suggest. For spanking, the rates for both states (42% and 53%, respectively) were near the national average obtained by the Gallup Poll in 1995. This represents a decrease from the 1976 family violence survey by Straus and Gelles,[7] which noted that 77% of American parents used spanking as discipline. Differences were noted for a few disciplinary practices (Table 2). The overall rates of harsh physical discipline were not statistically different, although 33% of substantiated cases of maltreatment in South Carolina were attributed to physical abuse in the most recent NCANDS report, compared with only 4% of cases in North Carolina.[5] This suggests that much of the difference in official reporting and substantiation rates must be attributed to differences in local systems and policies and not the overall experiences of children.

There are several limitations of this study. First, the sample consisted of families in North and South Carolina, which might limit generalizability. Other regions of the country might have a greater range of parenting behaviors regarding discipline. Our sample also consisted mostly of married or 2-parent households. Although the sample was statistically weighted to mirror the population of the corresponding states, this also might limit generalizability. In addition, our telephone survey did not, by definition, involve families without telephones or families, particularly lower-income families, who opted to retain nondirectory cellular telephone service instead of residential service. The survey was designed to obtain responses from the mothers of children; however, mothers might not be aware of the behaviors of their partners. The Gallup Poll report supports this finding, noting differences in parents' reports based on who responded to the questions. Similarly, mothers might not be aware of sexual victimization their children experienced from family members or others. Finally, because the responses were obtained through self-report, social desirability might have affected the answers. Social desirability may influence people to lie or to be less than forthcoming in admitting to behaviors, particularly behaviors thought to be less socially acceptable.[16] All of these limitations, however, would serve to underestimate the calculated rates of child maltreatment. It is likely

that the rates of maltreatment in the population are higher.

CONCLUSION

Official statistics represent a small proportion of maltreated children. Cases brought to the attention of social service authorities represent a skewed population, ie, cases in which children have suffered significant injury or the evidence of injury is clear. Supplemental data obtained through maternal reports can serve to clarify findings and inform states about the overall maltreatment of children within their borders. For example, remarkable rates of shaking of young children were disclosed by study respondents in the 2 states. Monitoring of the impact of prevention efforts may be facilitated with this survey approach, which provides a higher baseline incidence from which to evaluate changes and is less influenced by local policy and systems factors.

ACKNOWLEDGMENTS

This project was generously supported by the Duke Endowment (Charlotte, NC). A.D.T. is supported by National Institutes of Health grant 3 R01 HD039689-03S2.

William Kalsbeek, PhD, Department of Biostatistics, provided statistical and sampling consultation. Antoinette Laskey, MD, MPH, assisted with survey development. We also thank colleagues in the International Clinical Epidemiology Network who collaborated in the design and conduct of parallel surveys as part of the WorldSAFE project.

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