

# Parents' Discipline of Young Children: Results From the National Survey of Early Childhood Health

Michael Regalado, MD\*†§||; Harvinder Sareen, MPH‡||; Moira Inkelas, PhD‡||;  
Lawrence S. Wissow, MD, MPH¶||; and Neal Halfon, MD, MPH‡§||#

**ABSTRACT.** *Objective.* To examine the use and predictors of different discipline practices by parents of very young children using data from the 2000 National Survey of Early Childhood Health (NSECH).

*Methods.* NSECH is a nationally representative telephone survey of 2068 parents of young children between the ages of 4 and 35 months conducted by the National Center for Health Statistics. The survey includes questions about parents' use of 5 discipline practices: yelling, spanking, time out, toy removal, and explanations.  $\chi^2$  analyses and logistic multivariate regression were used to examine associations between discipline practices and child, parent, and demographic factors.

*Results.* Among young children aged 19 to 35 months, frequent parental use of discipline strategies ranged from 26% (spanking) to 65% (taking away toy or treat), 67% (yelling), 70% (using time out), and 90% (providing explanations). In multivariate analyses, child age predicts reports of more frequent spanking and yelling, and child developmental risk is associated with increased reports of yelling. Parent frustration predicts frequent use of every discipline practice, including a greater inclination to use aversive practices. Lower parental emotional well-being is associated with reports of frequent yelling and spanking. Black ethnicity and maternal age predict more frequent spanking, and Spanish-speaking parents reported less frequent use of time out and taking away a toy.

*Conclusion.* Child age and developmental risk and parents' ethnicity, emotions, and mental health are closely associated with discipline practices in the first 3 years of life. These factors are important for pediatricians to recognize in providing anticipatory guidance about discipline. *Pediatrics* 2004;113:1952–1958; *infant, child, parenting, discipline, corporal punishment, anticipatory guidance.*

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ABBREVIATIONS. AAP, American Academy of Pediatrics; NSECH, National Survey of Early Childhood Health; PEDS, Parents' Evaluation of Developmental Status; MHI-5, Mental Health Index-5; CI, confidence interval; OR, odds ratio.

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From the \*Cedars-Sinai Medical Center, Los Angeles, California; †UCLA Center for Healthier Children, Families, and Communities, Los Angeles, California; §UCLA School of Medicine, Los Angeles, California; ||UCLA School of Public Health, Los Angeles, California; ¶Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland; and #UCLA School of Public Policy, Los Angeles, California.

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Reprint requests to (M.R.) Cedars-Sinai Medical Center, 8700 Beverly Blvd, MOT 1165W, Los Angeles, CA 90048. E-mail: michael.regalado@cshs.org. PEDIATRICS (ISSN 0031 4005). Copyright © 2004 by the American Academy of Pediatrics.

Health supervision guidelines recommend that pediatricians provide advice and information about child rearing and discipline to parents at routine health supervision visits. Indeed, parents regard advice about child development highly,<sup>1</sup> and most pediatricians report providing it at well-child visits.<sup>2</sup> Guidance about discipline is a key area of pediatric advice. In 1998, the American Academy of Pediatrics (AAP) Committee on Psychosocial Aspects of Child and Family<sup>3</sup> published a statement describing the characteristics of effective discipline that included a conceptual framework composed of 3 elements: 1) a learning environment characterized by positive, supportive parent-child relationships; 2) proactive teaching and strengthening desired behaviors, eg, the use of positive reinforcement; and 3) reactive practices, eg, extinction (time out, removal of privileges) and punishment (eg, verbal reprimands) for decreasing or eliminating undesired behaviors.

This conceptual framework emphasizes the importance of parenting style (the social and emotional context for effective teaching) and specific parenting practices or behaviors in guiding children toward socialization goals.<sup>4</sup> A major focus of discipline counseling has been advising parents about their choices for discipline practices. For example, recognizing the risks inherent in the use of corporal punishment, the 1998 AAP statement recommends that pediatricians advise parents to adopt discipline practices other than spanking.<sup>3</sup> Because corporal punishment is so widely accepted and practiced, pediatric counseling efforts would necessarily be directed toward guiding parents to change their beliefs and behavior. If this type of counseling is to be effective, then it is important to understand factors related to parents' use of different discipline practices.

Although there are many approaches that parents may use to discipline their children, much of the research in this area has focused on the use of corporal punishment. These studies have identified several child, parent, and demographic influences associated with parents' use of corporal punishment. Child factors include age, gender, and temperament. Data from national and clinical surveys suggest that corporal punishment is used most with preschool-age children and least with children older than 5 years.<sup>5,6</sup> Analyzing data from the Commonwealth Survey of Parents With Young Children, Wissow<sup>7</sup> found that 40% of parents of children <3 years re-

ported that they yell at their child and 40% reported that they have spanked their child, including 16% who yell and 11% who have spanked their infants under 1 year of age. Similarly, with data from the National Survey of Families and Households, Day et al<sup>5</sup> found that spanking peaks between 2 and 3 years of age and that parents' personal resources (age, education, and mental health) and child characteristics (age and temperament) were the strongest predictors of spanking. Some studies have identified an association between child gender and corporal punishment, with boys spanked more often than girls,<sup>5,8-10</sup> whereas others have found no differences between boys and girls.<sup>6</sup> The same inconsistency of findings holds for the relationship between child temperament or behavior and discipline with some studies suggesting that difficult temperament is associated with greater use of spanking,<sup>5</sup> whereas others found no independent relationship.<sup>11</sup>

Other child factors have received less attention. For example, it has been suggested that a child's health has important effects on their socialization,<sup>12</sup> and 1 mechanism for this may be through an influence on parent's choice of discipline practices. Likewise, discipline practices by parents who have concerns about their child's development or behavior have not received attention. The nature and timing of parents' concerns about development and behavior are associated with different probabilities of having a developmental disability.<sup>13</sup> Examining the relationship between parents' concerns about development and their discipline practices may shed light on how atypical development influences parent behaviors and socialization practices.

Parent characteristics as well have been cited as important influences on discipline behaviors. Young parents are more inclined to use corporal punishment.<sup>5,7,8,10,14</sup> In 2 national studies, parents' depressive symptoms have been associated with the use of harsh punishment.<sup>7,9</sup> Other family and demographic factors that have been related to parents' use of harsh discipline include larger family size,<sup>15</sup> marital status,<sup>16,17</sup> and low socioeconomic status.<sup>8,14,18</sup> However, studies of ethnic influences have been inconclusive. Compared with white parents, some studies have found that black or Hispanic American parents use corporal punishment more often.<sup>5,8,10,18</sup> Other studies have found less spanking by Hispanic Americans and Asian Americans<sup>7,15</sup> or no ethnic differences.<sup>19</sup>

The current study builds on this literature with an analysis of data from the National Survey of Early Childhood Health (NSECH). This national data set improves on most previous studies given its national scope, comprehensive content, and large sample of black and Hispanic children. The NSECH includes questions about parents' use of discipline practices with children from 4 to 35 months of age. The survey allows an analysis of how discipline practices vary during the first 3 years of life and of factors associated with their use. Our specific research questions were 1) how often do parents of very young children use different discipline practices; and 2) how are individual child, parent, and demographic factors

associated with the use of different discipline practices? To answer these questions, we examined the frequency and correlates of different discipline practices using multivariate analyses to identify significant predictors of each. Special attention was directed toward examining the association of child health and developmental risk with parents' discipline practices.

## METHODS

### Sample

The 2000 NSECH, conducted by the National Center for Health Statistics, used a stratified random-digit-dial sampling design to achieve a nationally representative sample of children between the ages of 4 and 35 months. Black and Hispanic subjects were oversampled to permit precise estimates for these subgroups. Child-level sampling weights were developed to adjust for nonresponse, oversampling, and the survey sampling design. Thirty-minute structured telephone interviews were conducted in English or Spanish between February 16, 2000, and July 16, 2000, with parents of a child in the target age group. Eighty-seven percent of the respondents were mothers of the sampled child. The remaining were fathers (11%), grandparents (2%), or other guardians (<1%). The Council of American Survey Research Organizations response rate for the survey was 65.6%. Data were weighted to represent US children between the ages of 4 and 35 months. Stata (Stata Corp, College Station, TX) was used for data analysis and to account for the complex survey design. A more complete description of the NSECH is presented elsewhere in this volume.<sup>20</sup>

### Measures

For examining the frequency of different discipline practices, parents were asked how often they currently use aversive (spanking and yelling) and nonaversive (time out, taking away a toy, and explanations) practices in the following manner: "Parents vary a lot in how they discipline, and children also vary in their response to being disciplined. I am going to read a list of methods of discipline that parents might use with children [child]'s age. For each, please tell me if you use that method often, sometimes, rarely, or never with [child]." Parents with children 19 months or older were asked to report on use of all discipline practices, whereas parents with children from 4 to 18 months of age were asked about yelling and spanking only.

Several covariates are assessed. The Parents' Evaluation of Developmental Status (PEDS), a clinical screening tool recently adapted for telephone interview administration, is used to assess risk of developmental delay. It consists of 10 questions that elicit concerns about speech and language, motor development, behavior, social skills, self-help skills, school skills, sensory problems (vision or hearing), and global cognitive function.<sup>21</sup> Using parents' responses to the specific probes, children were categorized as being at high, moderate, low, or no developmental risk on the basis of the profile of their developmental and behavioral concerns and according to validated scoring.<sup>22-23</sup> The Mental Health Index-5 (MHI-5) is used as a measure of the parent's emotional well-being. The MHI-5 is a 5-item version derived from the 38-item MHI used in the Medical Outcome Study, and consists of the following questions: How much of the time during the last month have you 1) been a very nervous person, 2) felt calm and peaceful, 3) felt down-hearted and blue, 4) felt so down in the dumps that nothing can cheer you up, and 5) been a happy person?<sup>24</sup> Items 1, 4, and 5 use a 6-point Likert scale ranging from 0 for "all of the time" to 100 for "none of the time." Items 2 and 5 have reversed scoring so that the mean score (range: 0-100) represents overall emotional well-being. Parent frustration was measured by the following questions: In a typical day, how often would you say you feel frustrated or aggravated with your child's behavior? Would you say always, sometimes, rarely, or never? Parents were also asked to rate their child's health: In general, how would you describe [child]'s health? Would you say [his/her] health is excellent, very good, good, fair, or poor?

### Data Analysis

Frequencies were determined for each discipline practice.  $\chi^2$  analyses were conducted with discipline practices dichotomized

as frequent (often/sometimes) versus infrequent (rarely/never) to examine variations in parents' use of discipline according to selected child, parent, and demographic characteristics. These included child age (4–9 months; 10–18 months, 19–35 months), child developmental risk (any vs none), child health status (excellent/very good vs good/fair/poor), frustration with parenting (frequent [always or sometimes] vs infrequent [rarely or never]), parent's race/ethnicity (white non-Hispanic, black non-Hispanic, Hispanic English speaking [Hispanic parent who completed the interview in English], Hispanic Spanish speaking [Hispanic parent who completed the interview in Spanish]), annual household income ( $\leq$ \$17 500, \$17 501–\$35 000, \$35 001–\$60 000,  $>$ \$60 000), maternal education ( $<$ high school vs  $\geq$ high school), and maternal marital status (married vs not married). Logistic multivariate regression was used to examine the association between the use of each discipline practice (frequent vs infrequent) and child, parent, and demographic factors. Findings from bivariate analyses guided the development of the multivariate models. Confidence intervals (CIs) for variables with  $>1$  degree of freedom (having  $>2$  categories) were adjusted for multiple comparisons using the Bonferroni correction method.

## RESULTS

### Univariate and Bivariate Analyses

#### *Discipline Practices and Child Age*

Table 1 shows reported frequencies for aversive discipline practices for children aged 4 to 35 months and for nonaversive practices for children aged 19 to 35 months. The use of yelling and spanking increases with child age. Thirty-two percent of parents reported ever yelling at infants 4 to 9 months of age, while  $\sim$ 13% yell frequently. Approximately 47% of parents with children between 10 and 18 months and 67% of parents with children between 19 and 35 months reported yelling frequently. Six percent of parents reported that they ever spank their infants between the ages of 4 and 9 months, with the rate increasing to 29% of parents with children between

**TABLE 1.** Parent Reported Discipline Practices by Child Age (N = 2068)

Frequency of discipline strategies	Child Age		
	4–9 Months (N = 132; %)	10–18 Months (N = 674; %)	19–35 Months (N = 962; %)
Yelling			
Often	3	7	17
Sometimes	10	40	50
Rarely	19	29	24
Never	68	24	9
Spanking			
Often	0	1	2
Sometimes	2	10	24
Rarely	4	18	38
Never	94	71	35
Toy removal			
Often	—	—	23
Sometimes	—	—	42
Rarely	—	—	16
Never	—	—	18
Time out			
Often	—	—	33
Sometimes	—	—	37
Rarely	—	—	15
Never	—	—	15
Explaining			
Often	—	—	67
Sometimes	—	—	23
Rarely	—	—	7
Never	—	—	4

10 and 18 months and 64% of parents of 19- to 35-month-old children. Eleven percent of parents with 10- to 18-month-old children and 26% of parents with 19- to 35-month-old children reported frequent spanking. For parents of children between 19 and 35 months of age, frequent use of discipline practices ranges from 70% for time out to 65% for taking away a toy and 90% for providing explanations.

#### *Discipline Practices and Demographic Factors*

Parent ethnicity is associated with the use of spanking, toy removal, and time out but not with yelling or explanations (Table 2). Fewer adolescent parents reported yelling and use of explanations (both  $P < .05$ ), with no difference in spanking their children ( $P = .05$ ) compared with older parents. Married parents reported less spanking and were more likely to provide explanations (both  $P < .05$ ). More parents with education beyond high school reported frequent toy removal ( $P < .05$ ). Household income is associated with use of spanking, explanations, and toy removal. Maternal employment status is not related to discipline use.

#### *Discipline Practices and Parent Factors*

Parents' frustration is associated with greater use of every discipline practice (Table 2). Furthermore, frustration seems to be associated with a greater inclination to use aversive discipline. For example, almost 3 times as many parents who reported being frequently frustrated also spanked frequently compared with parents who reported infrequent frustration ( $P < .05$ ). Likewise, almost twice the number of parents with frustration reported yelling frequently compared with parents without frustration ( $P < .05$ ). Similarly, lower parent emotional well-being is associated with more frequent use of both aversive discipline practices (Table 3).

#### *Discipline Practices and Child Factors*

Frequent spanking is not associated with child health status ( $P > .05$ ; Table 2), but fewer parents of children in excellent or very good health reported frequent use of taking away a toy ( $P < .05$ ). More parents whose concerns about development and behavior indicating any developmental risk for the child reported frequent use of both yelling and spanking ( $P < .05$ ). Child gender is not associated with any discipline practice.

Because parents' reports of feeling frustrated are associated with all discipline practices and an inclination to use aversive discipline behaviors, we examined how frustration varies by demographic, parent, and child factors (Table 4). Overall, 39% of parents reported frequently feeling frustrated with their child's behavior. The only demographic factor associated with parent frustration is maternal employment, ie, fewer mothers who are employed reported frequent frustration with parenting. Greater child age, developmental risk, and poorer child health status are also associated with frustration. Lower parent emotional well-being is associated with greater frustration.

**TABLE 2.** Reported Discipline Practices by Child, Parent, and Demographic Factors

	Discipline Strategies*				
	Yell (%)	Spank (%)	Toy Removal† (%)	Time Out† (%)	Explain† (%)
Demographic factors					
Maternal race/ethnicity					
White	53	16‡	72‡	74‡	90
Black	54	31	65	70	89
Hispanic, English	49	8	68	63	89
Hispanic, Spanish	49	21	21	41	87
Other	58	11	74	73	86
Maternal age, y					
≤19	39‡	27	72	75	75‡
≥20	52	17	66	70	91
Maternal marital status					
Married	52	16‡	67	71	92‡
Other	50	22	64	69	85
Maternal employment					
Employed	52	19	64	68	89
Not employed	50	16	68	73	92
Maternal education					
<High school	45	20	53‡	65	85
≥High school	52	17	69	72	91
Household income					
<\$17 500	50	22‡	62‡	67	84‡
\$17 501–\$35 000	52	22	66	72	93
\$35 001–\$60 000	53	16	64	70	95
>\$60 000	52	11	79	79	94
Parent factors					
Frustration					
Always/sometimes	72‡	29‡	71‡	75‡	93‡
Rarely/never	37	10	61	65	87
Child factors					
Age, mo					
4–9	13‡	2‡	—	—	—
10–18	47	11	—	—	—
19–35	67	27	66	70	90
Health status					
Excellent/very good	51	17	68‡	71	91
Good/fair/poor	51	23	53	66	85
Developmental risk					
Any risk	57‡	20‡	67	71	90
None	38	13	64	68	90
Gender					
Male	52	18	65	73	91
Female	51	17	66	67	88

Table shows percentage of parents reporting use of each discipline practice.

\* Percentage reporting frequent (always or sometimes) versus infrequent (rarely/never) use of each discipline practice.

† Only parents of 19- to 35-month-old children were asked about these discipline strategies.

‡  $P < .05$  ( $\chi^2$  or analysis of variance tests).

**TABLE 3.** Discipline Practices by Parent Emotional Well-being (MHI-5)

	Discipline Strategies									
	Yell		Spank		Toy Removal*		Time Out*		Explain*	
	Frequent	Not Frequent	Frequent	Not Frequent	Frequent	Not Frequent	Frequent	Not Frequent	Frequent	Not Frequent
Emotional well-being, mean	75.2*	80.0	73.5*	78.4	76.5	77.4	76.6	77.4	77.0	75.7

Frequent use is often or sometimes, whereas infrequent use is rarely or never, using the discipline strategy.

\* Only parents of 19- to 35-month-old children were asked about these discipline strategies.

### Multivariate Analyses

#### Discipline Practices 4 to 35 Months

Parent ethnicity and maternal age, parent frustration, parent emotional well-being, and child age and developmental risk emerge as independent predictors of discipline practices in multivariate regression (Table 5). Black parents are twice as likely to report

frequent spanking (odds ratio [OR]: 2.17; 95% CI: 1.22–3.84), and Spanish-speaking Hispanic parents are less likely to report the use of taking away a toy (OR: 0.10; 95% CI: 0.04–0.22) and time out (OR: 0.17; 95% CI: 0.08–0.38) compared with white parents. Adolescent parents are twice as likely as older parents to report the use of spanking (OR: 2.17; 95% CI:

**TABLE 4.** Parent Frustration by Child, Parent, and Demographic Factors

	Parent Frustration With Child's Behavior	
	Frequent (% [n])	Infrequent (% [n])
Maternal race/ethnicity		
White	38 (307)	62 (510)
Black	42 (169)	58 (271)
Hispanic, English	38 (130)	62 (201)
Hispanic, Spanish	47 (171)	53 (226)
Other	41 (29)	59 (43)
Maternal age, (y)		
≤19	41 (58)	59 (93)
≥20	40 (749)	60 (1157)
Maternal marital status		
Married	39 (511)	61 (800)
Other	42 (95)	58 (452)
Maternal employment*		
Employed	37 (426)	63 (726)
Not employed	44 (383)	56 (525)
Maternal education		
<High school	46 (184)	54 (259)
≥High school	38 (625)	62 (998)
Household income		
<\$17 500	46 (226)	54 (304)
\$17 501–\$35 000	39 (234)	61 (332)
\$35 001–\$60 000	36 (142)	64 (244)
>\$60 000	40 (127)	60 (237)
Emotional well-being, mean MHI-5*	72.0	81.3
Child Age, mo*		
4–9	18 (76)	82 (356)
10–18	33 (222)	67 (450)
19–35	51 (511)	49 (451)
Child health status*		
Excellent/very good	37 (609)	63 (1075)
Good/fair/poor	56 (200)	44 (182)
Child developmental risk*		
Any risk	47 (654)	53 (797)
None	25 (55)	75 (459)

Table shows percentage of parents reporting frequency of feeling frustrated.

\*  $P < .05$  ( $\chi^2$  or analysis of variance tests).

1.07–4.43). Parent frustration remains associated with use of all discipline practices (yelling: OR: 3.06; 95% CI: 2.24–4.17; spanking: OR: 2.33; 95% CI: 1.55–3.50; taking toy: OR: 1.88; 95% CI: 1.21–2.91; time out: OR: 1.83; 95% CI: 1.20–2.78; explanations: OR: 2.39; 95% CI: 1.21–4.73). Higher emotional well-being is associated with significantly lower odds for yelling and spanking (OR: 0.99; 95% CI: 0.98–1.00 for both). Child age is a strong predictor of aversive discipline. Odds increase with age for yelling (OR: 4.86; 95% CI: 2.93–8.16 for 10–18 months; and OR: 9.80; 95% CI: 5.94–16.22 for 19–35 months) and for spanking (OR: 4.36; 95% CI: 1.73–11.03 for 10–18 months; and OR: 12.33; 95% CI: 4.94–30.78 for 19–35 months). Having any developmental risk is associated with increased odds of yelling (OR: 1.39; 95% CI: 1.01–1.92).

## DISCUSSION

Several important findings emerged from this national, representative survey of parents with very young children. Overall, most parents reported using both aversive and nonaversive discipline practices on a regular basis by the child's third year. In general, there is a tendency to favor using nonaver-

sive practices over the use of corporal punishment. Yelling, however, is just as common as time out and taking away a toy in the third year. Spanking is reported by most parents in the third year.

## Demographic Factors and Discipline Practices

Our findings of relationships between demographic factors and discipline practices are consistent with previous national studies, particularly the findings of Wissow,<sup>7</sup> who used a similar method. The data reflect the importance of parent age and ethnic/racial factors in the variation of reported discipline practices. More adolescent parents relative to older parents and more black parents reported spanking, findings similar to previous national surveys.<sup>7,8</sup> The basis for the association with parent age is uncertain but may be attributable to teenage parents' inexperience. The latter finding has been explained in terms of spanking's adaptive significance to black socialization challenges.<sup>25</sup> Ethnic and racial differences, including acculturation, are possible factors in the relationship between Hispanic ethnicity and discipline practices. It is not surprising that Spanish-speaking Hispanic parents reported that they are less likely to use time out and taking away a toy given that these are largely American parenting practices. Maternal education, marital status, and income do not predict discipline practices in the multivariate model in contrast to other studies.<sup>8,10,14,16,17</sup> Nevertheless, the data reflect important demographic influences, particularly of race and ethnicity, that must be considered in helping parents with child-rearing challenges.

## Parent Emotions and Discipline Practices

Strong and consistent relationships were identified between parents' emotions, (frustration with parenting and emotional well-being) and discipline practices. These findings clearly show that frustration with child rearing increases during the first 3 years of life and that this increase is associated with a greater output of reactive discipline similar to findings reported by Wissow.<sup>7</sup> The data also suggest that frustration (an emotion reflecting anger) and emotional well-being reflect a propensity to react in a harsh manner by either yelling or spanking. The finding that maternal employment was associated with less frustration in multivariate analysis suggests that it may be providing respite from the demands of child rearing.

## Child Factors

Child age and developmental risk are directly related to discipline practices in the multivariate model. They are also associated with frustration, along with child health, suggesting that their influence on parents' discipline choices may occur in part through this emotional channel. These health-related factors add to the complexity in which child characteristics may influence socialization. They also underscore the important role that physicians can play in helping parents with discipline choices by addressing these health issues in the context of development and behavior.

**TABLE 5.** Adjusted ORs for Discipline Practices\*

	Yell		Spank		Toy Removal		Time Out		Explain	
	OR	95% CI†	OR	95% CI†	OR	95% CI†	OR	95% CI†	OR	95% CI†
Child age (vs 4–9 mo)										
10–18	4.86‡	(2.93–8.16)	4.36‡	(1.73–11.03)	—	—	—	—	—	—
19–35	9.80‡	(5.94–16.22)	12.33‡	(4.94–30.78)	—	—	—	—	—	—
Maternal race/ethnicity (vs white)										
Black	1.25	(0.77–2.03)	2.17‡	(1.22–3.84)	0.74	(0.35–1.53)	0.71	(0.36–1.38)	1.51	(0.48–4.75)
Hispanic, English	1.10	(0.63–1.91)	0.57	(0.29–1.15)	0.89	(0.42–1.87)	0.54	(0.27–1.11)	1.55	(0.41–5.85)
Hispanic, Spanish	1.04	(0.56–1.94)	1.36	(0.64–2.92)	0.10‡	(0.04–0.22)	0.17‡	(0.08–0.38)	1.13	(0.36–3.56)
Other	0.89	(0.35–2.26)	1.00	(0.34–2.95)	1.46	(0.37–5.75)	1.09	(0.31–3.80)	0.73	(0.10–5.42)
Maternal age (vs ≤19)										
≥20	0.70	(0.36–1.37)	2.17‡	(1.07–4.43)	1.38	(0.44–4.35)	1.17	(0.44–3.09)	0.41	(0.11–1.47)
Maternal marital status (vs other)										
Married	0.99	(0.68–1.45)	0.93	(0.59–1.45)	1.02	(0.62–1.65)	1.03	(0.66–1.62)	1.45	(0.73–2.86)
Maternal education (vs <high school)										
≥High school	1.45	(0.91–2.30)	1.13	(0.61–2.08)	1.20	(0.67–2.15)	0.82	(0.47–1.42)	1.18	(0.53–2.62)
Household income (vs ≤\$60 000)										
>\$60 000	0.81	(0.54–1.22)	1.00	(0.63–1.58)	1.16	(0.68–1.98)	1.01	(0.62–1.66)	0.54	(0.22–1.37)
Frustration (vs rarely/never)										
Always/sometimes	3.06‡	(2.24–4.17)	2.33‡	(1.55–3.50)	1.88‡	(1.21–2.91)	1.83‡	(1.20–2.78)	2.39‡	(1.21–4.73)
Child health status (vs other)										
Excellent/very good	1.25	(0.82–1.91)	0.90	(0.56–1.45)	1.58	(0.92–2.73)	1.11	(0.66–1.88)	1.92	(0.90–4.08)
Developmental risk (vs no risk)										
Some risk	1.39‡	(1.01–1.92)	0.96	(0.61–1.51)	1.36	(0.84–2.20)	1.25	(0.79–1.98)	1.04	(0.50–2.16)
Emotional well-being, mean	0.99‡	(0.98–1.00)	0.99‡	(0.98–1.00)	1.00	(0.99–1.02)	1.00	(0.99–1.02)	1.01	(0.99–1.03)

\* Dependent variable is frequent use of the discipline strategy (always/sometimes).

† Confidence intervals for variables with >1 degree of freedom (>2 categories) are adjusted for multiple comparisons by the Bonferroni method.

‡  $P < .05$ .

### Clinical Implications

The findings from this study have important implications for primary care practice. With increasing evidence of the harmful effects of aversive discipline,<sup>26,27</sup> discipline counseling takes on greater significance. Therefore, the findings by Olson et al (this volume) that more than half of parents with children between 10 and 35 months of age reported that they did not discuss discipline with their physician at a health visit in the past year suggests an important missed opportunity.<sup>28</sup> It is also of concern that parents reported spanking and yelling at their infants before 9 months, with one third of parents spanking their children before 18 months, a time when the risk of escalation to child abuse is considered to be particularly high.<sup>3</sup> Current health supervision guidelines do not address discipline until the 9-month visit, and the current AAP statement on discipline does not address modification of recommended timetables for counseling.<sup>3,29,30</sup> Our findings suggest that such modifications should be considered.

The findings from this study also underscore the importance of evaluating parents' emotions in the context of discipline counseling. Parents' emotions are a sensitive indicator of the health of the parent-child relationship,<sup>31</sup> and harsh, negative, and controlling parenting is associated with a wide range of negative developmental outcomes.<sup>32</sup> Because there is empirical support for the efficacy of early intervention in modifying discipline practices,<sup>9</sup> the appraisal of parents' emotions relevant to child rearing becomes an important consideration for routine clinical practice. Parents who indicate that they are struggling emotionally with the demands of child rearing may be helped by a variety of community supports

and services. The pediatrician can play an important role by identifying this need and facilitating access to these services. Other clinically important implications include the need for careful attention to communication and counseling techniques given the emotionally sensitive nature of this topic.<sup>33</sup> Finally, the consistency in which race influences discipline practices underscores the need for clinical models that elaborate these ethnic and cultural factors in counseling parents.

### Limitations

There are several limitations to this study. The survey sampled only reactive practices so that the broad picture of how parents use discipline, including proactive strategies, is not represented. The context within which discipline practices are used is an important factor and was not measured; neither could different parenting styles be determined from these data. Another limitation is that the method for eliciting parents' recall may underestimate rates reported. For example, there was no referent period established for parents, and studies that have used long referent periods (eg, the past year) have reported very high prevalence rates.<sup>26</sup> A clear definition of spanking was not provided to parents so that parents may have excluded extremes of corporal punishment. Also, severity of spanking cannot be determined beyond frequency. Therefore, inferences about the significance of the discipline practices surveyed are limited.

### CONCLUSIONS

In summary, the data from this study highlight the complex ways in which child, parent, and demo-

graphic factors influence parents' use of discipline in the first 3 years of life. Important findings include a significant percentage of parents' reporting the use of aversive discipline behaviors in young infants; relationships between parents' negative emotions and the use of aversive discipline practices; ethnic variation in the use of both aversive and nonaversive practices; and apparent influences of child age, health, and developmental risk factors. These findings have important implications for primary care counseling. They underscore the importance of addressing the needs of both parents and children at the health visit<sup>34</sup> as well as understanding the social and emotional dynamics of the parent-child relationship in effectively helping parents with child-rearing challenges.<sup>35</sup>

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