

Determinants of Parental Discipline Practices: A National Sample From Primary Care Practices

Shari Barkin, MD, MSHS, Benjamin Scheindlin, MD,
Edward H. Ip, PhD, Irma Richardson, MHA, and Stacia Finch, MA

National guidelines urge pediatricians to address discipline as part of anticipatory guidance, yet pediatricians know little about what leads parents to use different discipline approaches. Parents seen in Pediatric Research in Office Settings practices participated in an office-based survey before the well-child visit for children 2 to 11 years old (N = 2134). Parents reported using the following discipline approaches frequently: time-outs

(42%), removal of privileges (41%), sent to bedroom (27%), yelling (13%), and spanking (9%). A third of parents believe their discipline approach to be ineffective. This directs the pediatric provider to help families develop effective discipline practices tailored to their context.

Keywords: discipline; parenting; child behavior

Discipline is an essential component of parenting, and national guidelines urge pediatricians to address this topic as part of anticipatory guidance.¹ Most parents want more information on child rearing concerns such as discipline, yet report that clinicians fail to discuss this with them.^{2,3} In one study, 75% of parents reported not discussing discipline, yet 41% of these parents desired information about it.³ In another, only 38% identified pediatricians as one of "the best ways to receive parenting information."⁴ Pediatricians know little about what leads parents to use different discipline approaches. Understanding parental influences on discipline practices could lead the pediatrician to address this topic more consistently and effectively.

Prior studies focused on physical punishment and young children.⁵⁻⁸ Parental experience with physical punishment in childhood has been associated with the current choice of discipline.^{6,7} More frequent use of corporal punishment coupled with yelling has been associated with younger maternal age, more than 1 child, greater parental perception of child behavior problems, and lower socioeconomic status.⁸

A child's age might influence discipline choice, yet most studies conducted examined only children younger than age 3.^{5,7} For example, one study demonstrated that spanking and yelling are associated with a child aged between 9 months and 3 years; however, reports are lacking on how parents apply discipline choices to older children.

Prior reports indicated that race and ethnicity could also be associated with disciplinary practices. Regalado⁵ reported that African American parents were twice as likely as white parents to spank frequently. Latino parents who completed the interview in Spanish were much less likely than white parents to remove a toy or use time-out, but Latino ethnicity was not a significant factor among those parents who completed the interview in English. Studies of racial and ethnic effects are limited by small sample size, focusing only on young children or reporting widely differing discipline techniques together.^{6,7}

From the Division of General Pediatrics & Adolescent Medicine, Department of Pediatrics (SB, IR), Division of Biostatistics, Department of Public Health Science (EHI), Wake Forest University School of Medicine, Winston-Salem, North Carolina; Burlington Pediatrics, Burlington, Massachusetts (BS); and Pediatric Research in Office Settings (PROS), Department of Research, American Academy of Pediatrics, Elk Grove Village, Illinois (SF).

Address correspondence to: Shari Barkin, MD, MSHS, Wake Forest University School of Medicine, Department of Pediatrics, Medical Center Blvd, Winston-Salem, NC 27157; e-mail: sbarkin@wfubmc.edu.

This study examines these questions for a national sample of pre-adolescents:

1. What is the reported incidence of four discipline types of time-out, yelling, removing privileges, and spanking?
2. How is perception of effectiveness associated with the discipline approach chosen? and
3. What factors are associated with each type of discipline surveyed?

The answers to these questions should aid pediatricians in their approach to discussing discipline with families.

Methods

This study was conducted by Pediatric Research in Office Settings (PROS), the practice-based research network of the American Academy of Pediatrics (AAP). Institutional Review Board approval was obtained from the Wake Forest University School of Medicine and the AAP. Parents seen in PROS practices participated in an office-based confidential survey before the visit for the well-child exams of children 2 to 11 years of age ($N = 2134$). Enrollment was limited to 1 child per family (oldest child presenting for the visit). The child's primary caregiver completed the survey and could choose between an English or Spanish version of the instrument. If they expressed interest, they were provided with an informed consent. Office personnel were trained to review the consent form and answer questions about the study. (See the "Acknowledgments" section for a list of participating practices.)

Survey Instrument

Parents/legal guardians completed questions including demographics (eg, age of child, number of children in the home, race/ethnicity of the child, parental home structure, maternal education), reported current discipline practices in the past month, parental assessment of effectiveness of discipline strategy used, primary decision-maker for discipline practices, and parental childhood experience with discipline practices. Questions about current discipline practices included:

In the past month . . .

- How often did you use time-outs or cool-down periods?

- How often have you yelled at this child?
- How often did you take away privileges (something this child enjoys)?
- How often did you spank this child?

Response categories varied on a 4-point scale from "never" to "always."

Perceived parental effectiveness was measured by asking, "When you discipline this child, how often does it work?" Response categories included always, often, sometimes, and never. Questions were also asked about the primary caregiver's own childhood experience with discipline: "What punishment was used MOST often when you were a child?" Response categories included time-outs, take away privileges (grounded), spanking on the bottom, sent to bedroom, yelling, other (respondent would specify). We also asked, "I use the same kind of discipline on my children my parents used on me," with response categories of yes or no.

Statistical Analysis

The major outcome of interest focused on 4 disciplinary methods that parents reported using in the past month: time-out, taking away privilege, spanking, and yelling. The original scale for each question ranged from 1 (never) to 4 (always). We dichotomized the parent response for each discipline method into 2 categories: 0 for never, and 1 for sometimes, often, or always. Because each disciplinary method was asked separately, parents might select more than 1 disciplinary method.

To assess the factors that influenced these 4 disciplinary practices, we examined a comprehensive list of variables based on prior literature⁶⁻¹¹ and their association with the disciplinary method that parents reported using in the past month. These variables included Spanish versus English survey, parents in the home, parental childhood discipline experience, and maternal education. In addition, clinical judgment suggests that there could be an association with the child's age and perceived effectiveness of discipline approach. We included these variables in 4 logistic regression models. Demographic variables such as ethnicity and child's gender were also included as control variables. Each disciplinary method had its own model. Although R^2 values for logistic regression are reported here, we must point out that their values should only be used as a reference. Low R^2 values are the norm in logistic regression, and many authors have cautioned against the

Table 1. Study Sample Characteristics

Sample Characteristics	N	Percentage
Ethnicity		
White	1358/2134	63.6
African American	225/2134	10.5
Latinos	231/2134	10.8
Multiracial	77/2134	3.6
Others	243/2134	11.4
Child's gender		
Female	1005/2132	47.1
Male	1127/2132	52.9
Maternal education		
<High School	160/2085	7.7
≥High School <College	1180/2085	56.6
≥College	745/2085	35.7
Age of child		
≤5	887/2128	41.7
>5	1241/2128	58.3
Number of adults in home		
One	306/2083	14.6
Two	1777/2083	85.4
Family income		
<\$40 000	722/1933	37.4
>\$40 000	1211/1933	62.6
Respondent		
Mother	1905/2129	89.5
Others	224/2129	10.5
Who makes decisions most of the time about discipline?		
Me ^a	858/2134	40.2
Mother ^a	(784/858)	(91.3)
Father ^a	(44/858)	(5.1)
Other caregiver ^a	(29/858)	(3.3)
Missing ^a	(1/858)	(0.0)
Other adults	27/2134	1.3
Me & other adult in the home	1151/2134	53.9
Missing	98/2134	4.6

Note: a. "Me" represents the person completing the survey, broken out into subcategories.

comparison of these values with their counterparts in linear regression.¹²

Results

Data included in this trial were collected by practitioners from 64 practices in 32 states, Puerto Rico, and Canada. More than three quarters of patients approached to participate in the study agreed to participate. Those that refused (23%) did not differ from those who responded regarding child's age,

Table 2. Use of Four Common Discipline Practices (N = 2134)

Discipline Technique	Reported Use in Past Month	Percentage ^a
Time-out	965	45.2
Removal of privilege	886	41.5
Spanking	181	8.5
Yelling	277	13.0

Note: a. Note that parents could report multiple strategies used in the past month, so that the percentage is greater than 100%.

gender, or primary language spoken. Table 1 shows the sample characteristics of this study group.

The current study population represents a cross-section of ethnicities, with more than 34% of the study population indicating a race/ethnicity other than white. Approximately 90% of respondents were mothers. Many mothers participated in decision-making about discipline in the household, but often in collaboration with other adults. Almost 15% of families came from a single-parent household. Participants were given the opportunity to complete the survey in English or Spanish, and 35% of Latinos completed the Spanish version.

The degree to which parents reported the 4 types of discipline assessed are presented in Table 2. Parents reported multiple approaches indicating that more than one discipline practice was used in the prior month. Time-out and privilege removal were reported most frequently. A minority used spanking and/or yelling.

More than a third of parents (38.4%) reported using the same discipline that was used when they were children, and slightly more than half (54.2%) reported *not* using the same techniques. The discipline most commonly experienced in childhood that parents reported was removal of privileges (31.4%), followed by yelling (21.5%), sent to bedroom (18.6%), and spanking (17.2%). The discipline reported used the least during childhood was time-outs (5.3%).

Almost a third of parents reported that they did not perceive their discipline strategy to be effective, with a 30.9% response to "never" or "sometimes." Less than half thought their discipline was "often" effective (45.3%), and 21.1% of parents reported their discipline was "always" effective.

Logistic regression analyses are presented in Table 3. African American parents were less likely to report the use of time-out and more likely to report the use of spanking than white parents. Latino parents

Table 3. Multivariate Logistic Regression: Determinants of Current Discipline practices (N = 1741)

	Model 1 Time-Out OR	Model 2 Removal of Privilege OR	Model 3 Spanking OR	Model 4 Yelling OR
Spanish version	0.50***	0.59**	0.98	0.96
African-American	0.81	1.28	1.83***	1.11
Hispanic	0.86	0.91	0.80**	0.78**
Child's age ≥ 6 yrs	0.74***	1.16*	0.74***	1.38***
Male	1.08	1.14*	1.04	1.07
2-Parent Household	0.95	0.90	0.96	1.06
"My discipline usually works."	0.88	0.88	0.93	0.65***
Parent experienced in childhood	1.31	1.16	1.23***	1.39***
Associate or college degree	0.95	0.95	0.84***	0.88
R ² value	4.8%	2.3%	8.0%	4.2%

Note: OR = odds ratio.

Due to missing values, the effective sample used in this multivariate analysis is 1741.

* $P < .05$; ** $P < .01$; *** $P < .001$.

Reference categories for categorical predictor variables are: English version; white (ethnicity); age ≤ 5 (age); female (gender); 1 adult at home (number of adults in household); discipline often and always works (discipline works); no experience of specific discipline in childhood (experienced discipline as child); not having an associate or college degree (parental education).

who completed the survey in Spanish were less likely than white parents to use time-out and removal of privileges. However, Latino parents who completed the survey in English were less likely than whites to use spanking and yelling.

The only gender distinction in discipline practices was that parents were more likely to remove a privilege from a boy than a girl. Parental assessment of disciplinary self-efficacy had an inverse association with yelling. Parental childhood experience was associated with the current use of spanking and yelling. Maternal educational attainment was inversely associated with spanking only. None of the models demonstrated a significant statistical association with the presence of more than 1 adult in the home.

Discussion

This study is, to our knowledge, the first to examine 4 common discipline approaches reported in a large sample of children across a wide preadolescent age spectrum. We found that no single technique was favored by a majority of respondents, suggesting a broad range of preferences and practices among parents. This study differs from others because we examined "current use in the past month" rather than "ever use."^{5,9} We believe this results in more accurate reports by asking parents to recall the past month rather than the child's lifetime.

Among all the determining factors examined, age was most notably associated with discipline technique reported. Parents were 25% less likely to use both time-out and spanking in the 6 to 11 age group than with children aged 2 to 5. They were more likely to remove a privilege from or yell at their school aged children. The strong influence of age on discipline technique in our study is consonant with that found in prior studies^{4,6} that focused on narrower age ranges.

Almost a third of this sample reported perceived ineffective discipline. However, perception of effectiveness was not associated with use of 3 of the 4 discipline approaches examined. Results indicated that those parents who yelled at their child perceived themselves as ineffective. Why did these families choose yelling if they did not think it was effective? Would not a family choose an approach that they believe to be efficacious? We think some of this paradox could be explained by how parents experienced discipline when they were children.

Having experienced yelling or spanking in childhood made parents more likely to use the same approach with their children, regardless of perceived effectiveness. Perhaps more aversive forms of discipline are innately more likely to be replicated in adulthood, given the possibility that discipline practices are a visceral response influenced by familiarity and past experience. The child abuse literature has documented that people who experienced various corporal punishments are more likely to use

those same techniques with their own children^{9,10} or to approve of those techniques.^{10,11,13,14}

Certain racial and ethnic differences emerged from our data. African American parents were more likely to report spanking, to a degree very similar to that shown in younger children by Regalado,⁵ and were less likely to use time-out (almost statistically significant with a $P < .06$). Latino parents were less likely to use any of the discipline techniques examined with this study. Those respondents who completed the Spanish version of the survey were less likely to report using "time-outs" and "take away privileges." Perhaps language use differences reflect differing degrees of acculturation.

The strengths of our study included a large sample with a national scope, wide preadolescent age range, relatively unselected population culled from families attending health maintenance visits in primary care providers' offices, and focus on common discipline techniques rather than solely corporal punishment. The study sample was racially and ethnically diverse, with more than one third of parents identifying themselves as nonwhite. As a consequence, our results should be generalizable to children in the United States who seek regular medical care.

Certain limitations were present, however. All variables were measured by parent report. Although corroboration and direct observation were not obtained, parent self-report has been used extensively in prior literature. Regional and cultural differences may exist that were not assessed. Educational level was a component of the model used for multivariate analysis, but parents who were not high school graduates comprised less than 8% of the study population, potentially limiting our findings' applicability to certain families at higher social risk.

We examined 4 discipline practices and did not include other potential approaches, such as praise for good behavior. Therefore, we can only comment on the 4 common discipline approaches of time-outs, removal of privileges, spanking, and yelling. Future studies should include a broader array of potential discipline techniques.

Conclusions

The age of the child has a strong influence on discipline practices. Parents who experienced spanking or yelling in childhood are more likely to use those techniques with their own children. Cultural influences reflected in race and ethnicity also have an

important association with current discipline practices. Many parents, however, view their disciplinary efforts as ineffective. This provides the pediatric provider with the opportunity to discuss discipline practices with families, entering into a dialogue of how to develop effective discipline practices tailored to the patient-family context.

Acknowledgments

This study was supported by a grant from the National Institute of Child Health and Human Development (NICHD) (HD 42260), the Agency for Healthcare Research and Quality (AHRQ), the Robert Wood Johnson Generalist Faculty Scholars Program (RWJGFS), and the American Academy of Pediatrics' Friends of Children Fund.

We especially appreciate the efforts of the PROS practices and practitioners. The pediatric practices or individual practitioners who enrolled participants in this study are listed here by AAP Chapter: *Alabama*: Pediatric Care Group (Montgomery); *Alaska*: Anchorage Pediatric Group, LLC (Anchorage), Joy Neyhart, MD (Juneau); *Arizona*: Orange Grove Pediatrics (Tucson); *California-1*: Palo Alto Medical Foundation (Palo Alto), Pediatric & Adolescent Medical Associates of the Pacific Coast, Inc (Salinas); *California-3*: East County Community Clinic - Lakeside (Lakeside), La Jolla Pediatrics (La Jolla); *Colorado*: Rocky Mountain Health Center (Denver); *Connecticut*: Pediatric Associates of Connecticut, PC (Waterbury), Jeff Cersonsky, MD, FAAP (Southbury); *Florida*: Atlantic Coast Pediatrics (Merritt Island); *Georgia*: Victor Lui, MD (Chamblee), Snapfinger Woods Pediatric Associates, PC (Decatur); *Indiana*: Georgetown Pediatrics (Indianapolis), Jeffersonville Pediatrics (Jeffersonville); *Kansas*: Ashley Clinic (Chanute); *Louisiana*: Carousel Pediatrics (Metairie), Shalom Clinic for Children (Natchitoches); *Maryland*: Steven E Caplan, MD (Baltimore); *Maine*: Maine Coast Pediatrics (Ellsworth); *Massachusetts*: Holyoke Pediatric Associates (Holyoke), Mary Lane Pediatric Associates (Ware); *Michigan*: Pediatric Health Care (Sterling Heights); *Minnesota*: Brainerd Medical Center, PA (Brainerd), Lakeview Clinic - Watertown Pediatrics (Watertown); *Missouri*: Children's Mercy Hospital Pediatric Care Center (Kansas City); *New Hampshire*: Foundation Pediatrics (Nashua); *New York-1*: Elmwood Pediatric Group (Rochester), Lewis Pediatrics (Rochester); *New York-3*: Pediatric Primary Care at Montefiore Medical Center (Bronx);

North Carolina: Aegis Family Health Center - Winston East Pediatrics (Winston-Salem), Guilford Child Health, Inc - High Point (High Point); *Ohio:* Oxford Pediatrics & Adolescents (Oxford); *Oklahoma:* Pediatric & Adolescent Care, LLP (Tulsa); *Ontario:* Richard J MacDonald, MD (Oakville, Ontario); *Pennsylvania:* Buckingham Pediatrics (Buckingham), Laurel Health Center—Blossburg (Blossburg), Pediatric Practices of Northeastern Pennsylvania (Honesdale), Pennridge Pediatric Associates (Sellersville); *Puerto Rico:* Ethel Lamela, MD (Isabela); *Quebec:* Clinique Infant-Medic (Dollard des Ormeaux); *South Carolina:* Palmetto Pediatrics & Adolescent Clinic, PA (Columbia); *Tennessee:* ETSU Physicians & Associates (Johnson City); *Texas:* The Pediatric Clinic (Greenville), Su Clinica Familiar (Harlingen), Winnsboro Pediatrics (Winnsboro); *Utah:* Utah Valley Pediatrics, LC (American Fork), Willow Creek Pediatrics—Draper (Draper); *Vermont:* Brattleboro Pediatrics (Brattleboro), Rebecca Collman, MD (Colchester), Springfield Pediatric Network (Springfield), University Pediatrics, UHC Campus (Burlington), University Pediatrics (Williston); *Washington:* Central Washington Family Medicine (Yakima); *West Virginia:* Grant Memorial Pediatrics (Petersburg); *Wisconsin:* Gundersen Clinic—Whitehall (Whitehall); *Wyoming:* Jackson Pediatrics (Jackson).

References

1. Stein MT, Perrin EL. Guidance for effective discipline. American Academy of Pediatrics. Committee on Psychosocial Aspects of Child and Family Health. *Pediatrics*. 1998;101:723-728.
2. Young K. Listening to parents: a national survey of parents with young children. *Arch Pediatr Adolesc Med*. 1998;152:255-262.
3. Schuster MA, Duan N, Regalado M, Klein DJ. Anticipatory guidance: what information do parents receive? What information do they want? *Arch Pediatr Adolesc Med*. 2000;154:1191-1198.
4. Ateah C. Disciplinary practices with children: parental sources of information, attitudes, and educational needs. *Issues Compr Pediatr Nurs*. 2003;26:89-101.
5. Regalado M. Parents' discipline of young children: results from the National Survey of Early Childhood Health. *Pediatrics*. 2004;113:1952-1958.
6. Horn I. Discipline in the African American community: the impact of socioeconomic status on beliefs and practices. *Pediatrics*. 2004;113:1236-1241.
7. Kelley M. Determinants of disciplinary practices in low-income black mothers. *Child Dev*. 1992;63:573-582.
8. Fox R. Maternal factors related to parenting practices, developmental expectations, and perceptions of child behavior problems. *J Genet Psychol*. 1995;156:431-441.
9. Murphy-Cowan T. Physical punishment and the parenting cycle: a survey of Northern Irish parents. *J Commun Appl Soc Psychol*. 1999;9:61-71.
10. Rodriguez C. Predictors of parents' physical disciplinary practices. *Child Abuse Negl*. 1999;23:651-657.
11. Bower M. Attitudes toward physical discipline as a function of disciplinary history and self-labeling as physically abused. *Child Abuse Negl*. 1996;20:689-699.
12. Hosmer D, Lemeshow S. *Applied Logistic Regression*. 2nd ed. New York: Wiley; 2000.
13. Buntain-Ricklefs J. Punishments: what predicts adult approval. *Child Abuse Negl*. 1994;18:945-955.
14. Barnett M. Factors affecting children's, adolescents', and young adults' perceptions of parental discipline. *J Genet Psychol*. 1996;157:411-424.