

# Fatherhood Roles and Drug Use among Young American Indian Men

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**Background:** High rates of substance abuse among young American Indian (AI) fathers pose multigenerational challenges for AI families and communities. **Objective:** The objective of this study was to describe substance use patterns among young AI fathers and examine the intersection of substance use with men's fatherhood roles and responsibilities. **Methods:** As part of a home-visiting intervention trial for AI teen mothers and their children, in 2010 we conducted a descriptive study of fatherhood and substance use on three southwestern reservations. Substance use and parenting data were collected from  $n = 87$  male partners of adolescent mothers using audio computer-assisted self-interviews. **Results:** Male partners were on average 22.9 years old, primarily living with their children (93%), unmarried (87%), and unemployed (70%). Lifetime substance use was high: 80% reported alcohol; 78% marijuana; 34% methamphetamines; 31% crack/cocaine; and 16% reported drinking binge in the past 6 months. Substance use was associated with history of alcohol abuse among participants' fathers (but not mothers); participants' poor relationships with their own fathers; unemployment status; and low involvement in child care. **Conclusion:** Drug and alcohol abuse may be obstructing ideal fatherhood roles among multiple generations of AI males. **Scientific Significance:** Targeting drug prevention among young AI men during early fatherhood may provide special opportunity to reduce substance use and improve parenting. Intergenerational approaches may hold special promise.

**Keywords:** American Indian, fatherhood, substance use, drug use

## INTRODUCTION

As new social and cultural paradigms for fathers' roles have emerged over the past half century, research has

shown that certain roles – such as provider, educator, protector, moral guide – and fathers' degree of involvement in childrearing are associated with a spectrum of child emotional and behavioral outcomes (1,2). A significant influence on paternal practices is a man's use of alcohol and other drugs. Fathers' substance use has been associated with criminal records, interpersonal problems, and unemployment among fathers; poor cognitive, behavioral, and emotional outcomes for children; and marital stress and partner abuse (3–5).

While it is well documented that American Indian (AI) men have disproportionately high substance abuse rates (6,7), little is known about how fatherhood experiences intersect with substance use among AI communities. A subgroup of special concern is fathers involved in teen-formed families. In AI communities, the rate of adolescent childbearing is almost twice as high as the general US population (8). Further, the risks of young childrearing are amplified in reservation settings, where environmental challenges include elevated rates of poverty, school dropout, and unemployment (8).

Historical factors also affect AI men's fatherhood roles and substance use risk. Since European colonization, alcohol was used by the dominant society to acquire land and resources from Indian people (9). The destructive forces of the "introduced evil" (10) and later prohibition of alcohol have been associated with cultural loss and trauma, discrimination, and stereotyping (11), all of which have put AI families at risk for the multiple health and social consequences of unresolved grief (12). Furthermore, federal policies such as the federal relocation act and the development of boarding schools separated AI males from ideal fatherhood mentors. Fathers' physical and psychological absence from native families has been linked to loss of fatherhood roles, changes in family structure from previous generations, and substance abuse (13).

This study presented the descriptive findings from a sample of AI men identified as father figures of children born to adolescent AI mothers enrolled in a parenting

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intervention study. Associations between self-reported quantitative data regarding sociodemographic characteristics, fatherhood roles and experiences, and substance abuse are examined. This study is aimed at informing strategies for father-focused interventions to promote positive family development and renewed intergenerational well-being in AI communities.

## METHODS

### Participants and Study Procedures

Participants were recruited from April to October 2010 in four reservation communities and three distinct tribal nations in the southwestern United States. The population of the participating communities ranges from 8000 to 15,000.

This was a descriptive study including quantitative data collection. Fathers were recruited from an ongoing randomized controlled trial evaluating the impact of a home-visiting parenting intervention for AI teen-formed families. Participating mothers were asked to identify the most significant “father figure” to her baby (e.g., baby’s biological father or mother’s current male partner). Eligibility for fathers was restricted to ages 18–30 to inform intervention development for teen-formed families and for fathers most at risk for drug use (14). Informed consent was first conducted with the mothers to obtain permission to contact the father, and then was separately conducted with the father. A total of  $n = 87$  males were enrolled and completed audio computer-assisted self-interview (ACASI) surveys on fatherhood roles and substance use behaviors.

The study was coordinated and directed by the Johns Hopkins Center for American Indian Health. Data were collected by male AI staff members from the participating communities. Study approvals were received from all relevant participating Tribal IRBs and from the Johns Hopkins University IRB. The participating Tribal Health Boards and Councils also approved this article.

### Measures

The ACASI survey included questions about sociodemographic characteristics, fatherhood roles and experiences, participant’s relationship with his own father, personal substance use history, and family history of alcohol abuse. Sociodemographic questions were created by the study team. Fatherhood questions were adapted from the Fatherhood Involvement Scale (15) and were divided into two domains: an 11-item child care involvement scale and a 27-item child play involvement scale. Both scales were dichotomized into “high” versus “low” involvement. Parenting stress was measured using the Parenting Stress Index – Short Form (16). Participants were classified as experiencing clinically significant levels of parenting stress if their scores were above the 90th percentile cutoff per instrument scoring instructions. Substance use questions were adapted from the National Survey on Drug Use and Health (17) and the Montana Meth Project Attitudes and Use Survey (18).

### Data Management and Analysis

Data generated via ACASI techniques are automatically entered as collected. Upon completion of each survey, data were transferred to the coordinating office via a secure network system and imported into Stata 10.0 (StataCorp, College Station, TX, USA) for rigorous inspection, cleaning, coding, and analysis. Descriptive statistical analyses were conducted on quantitative ACASI data to summarize participant characteristics. Correlates of substance use were examined using  $\chi^2$ -tests for associations with sociodemographic characteristics, fatherhood roles, and background family factors. The ACASI questionnaire format required a response to a question prior to moving forward to the following question, helping to minimize missing data. Participants were, however, allowed to refuse to respond to a question if they chose to. Since levels of missing data were minimal ( $\sim 2\%$  for any particular variable), observations with missing data for particular variables were dropped from  $\chi^2$ -test analyses, and no further techniques were utilized to handle missing data. Relative risks (RR) for fathers’ involvement in child care and child play duties were calculated using modified Poisson regression with robust variance estimation. Given the exploratory nature of the analyses, associations with  $p < .1$  significance level were considered to be important.

## RESULTS

### Descriptive Characteristics

#### *Sociodemographic Characteristics*

Fathers ( $n = 87$ ) were on average 22.9 years old at the time of the survey and 19.8 years old when the index child was born. Mothers were slightly younger, with an average age of 18.5 years old when the child was born. The children were on average 33.2 months old at the time of the survey. Most (87%) of the fathers were unmarried, less than half (48%) completed high school, and most (70%) were unemployed. Most (64%) reported that they were in a relationship with the mother for  $>1$  year prior to the pregnancy (Table 1).

#### *Fatherhood Roles and Experiences*

Most (76%) participants were the biological father of the index child and were currently living with the child (93%). The majority (69%) were present at the child’s birth. About half (52%) reported high levels of involvement in child care duties and one-third (34%) reported high levels of involvement in child play. When asked to rank their priorities in raising a child, the two most frequently reported responses were being a good role model (41%) and educating the child (21%). Almost one-third (31%) of participants experienced clinically significant levels of parenting stress.

#### *Relationship with Own Father*

Just over half (53%) of fathers reported that their own biological father was a part of their life as a child. Thirty-eight percent reported seeing their biological father daily

TABLE 1. Summary of descriptive characteristics of AI fathers of young children ( $n = 87$ ).

Sociodemographic characteristics	Total $N = 87$
Age of participants at the time of interview	
Mean (SD)	22.9 (2.8) years
Range	18–30 years
Age of participants at the time of birth of index child	
Mean (SD)	19.8 (2.6) years
Range	14–26 years
Age of female participants (mothers) at the time of birth of index child	
Mean (SD)	18.5 (1.2) years
Range	15–20 years
Age of index children	
Mean (SD)	33.2 (6.3) months
Range	21–45 months
Currently unmarried	76 (87%)
Completed high school diploma/GED	42 (48%)
Currently unemployed	61 (70%)
Length of relationship prior to the pregnancy	
<6 months	13 (15%)
6–12 months	9 (10%)
>12 months	56 (64%)
Unspecified	9 (10%)
Fatherhood roles and experiences	
Biological father of index child	66 (76%)
Currently living with child (whole sample)	81 (93%)
Biological fathers of index child	61 (75%)
Not biological fathers of index child	20 (25%)
Was present at the birth of child	60 (69%)
High level of involvement in child care duties	44 (52%)
High level of involvement in child play	29 (34%)
Highest priorities in raising child:	
Being a good role model for child	36 (41%)
Educating child	18 (21%)
Being able to buy what the child wants	7 (8%)
Protecting the child	7 (8%)
Spending time with child	5 (6%)
Teaching child about culture	5 (6%)
Nurturing child	3 (3%)
Other	6 (7%)
Have clinically significant levels of parenting stress (>90th percentile on Parenting Stress Index – Short Form)	27 (31%)
Relationship with own father	
Participant's biological father was part of his life as child	46 (53%)
Frequency of contact with biological father when child	
Every day or almost daily	33 (38%)
1–2 times per week	6 (7%)
Few times per month	12 (14%)
Few times per year	16 (18%)
Never	17 (20%)
Participant identified no father figure growing up	18 (21%)
Participant described that his father/father figure showed interest in the things he did growing up (among those with father figure):	
Almost always/sometimes	57 (83%)
Rarely/almost never	10 (14%)
Lifetime substance use	
Alcohol, any	70 (80%)
Alcohol, episode of binge drinking	29 (33%)
Cigarettes	61 (70%)
Marijuana	68 (78%)
Methamphetamines	30 (34%)
Crack/cocaine	27 (31%)
Any illicit drugs	70 (80%)
Never used any alcohol or drugs	7 (8%)

TABLE 1. (Continued).

Sociodemographic characteristics	Total N = 87
Current substance use (past 30 days, unless stated otherwise)	
Alcohol, any	38 (44%)
Alcohol, episode of binge drinking (past 6 months)	14 (16%)
Cigarettes	45 (52%)
Marijuana	31 (36%)
Methamphetamines	1 (1%)
Crack/cocaine	4 (5%)
No alcohol or drugs used in the past 30 days	38 (44%)
Age at first substance use, mean (SD)	
Alcohol, any	15.2 (3.0) years
Alcohol, first episode of drunkenness	16.4 (2.8) years
Cigarettes	14.0 (3.1) years
Marijuana	13.8 (2.5) years
Methamphetamines	17.9 (2.7) years
Crack/cocaine	16.6 (2.7) years
Family history of alcohol use	
Biological mother ever had serious drinking problem	23 (26%)
Biological father ever had serious drinking problem	37 (43%)

Note: GED, general equivalency diploma.

during childhood; 20% never saw their father; and 21% identified no father figure growing up. Among those with identified father figures, most (83%) reported that their own father or father figure showed interest in their activities when they were growing up.

#### Substance Use

The majority of participants (92%) reported having tried alcohol and/or drugs in their lifetimes, with 80% trying alcohol, 70% cigarettes, 78% marijuana, 34% methamphetamines, and 31% crack/cocaine. Over half (56%) reported using alcohol and/or drugs in the past 30 days, with 44% using alcohol, 52% cigarettes, 36% marijuana, 1% methamphetamines, and 5% crack/cocaine. One-third (33%) reported at least one binge drinking episode in their lifetimes, during which they stayed drunk for at least 2 days, and 16% reported such an episode in the previous 6 months.

Participants reported the youngest age of first use of marijuana (13.8 years), and the oldest age of first use of methamphetamine (17.9 years). Approximately one-quarter (26%) reported that their mother had a serious drinking problem and 43% reported that their father had a serious drinking problem.

#### Associations between Descriptive Characteristics and Substance Use

Older participants were more likely to report binge drinking in their lifetimes (57% vs. 26%,  $p < .01$ ). Lifetime marijuana use was lower among men who had completed high school (71% vs. 89%,  $p < .05$ ) and among men who had been in a relationship for at least 1 year prior to the index pregnancy (74% vs. 90%,  $p < .1$ ). Lower substance use was consistently reported among men who were currently employed versus unemployed.

Lifetime and past month use of illicit drugs, including marijuana and methamphetamine, were significantly lower among men who had been present at their child's birth (e.g., 25% of men present had ever used methamphetamine vs. 56% of men who were not present;  $p < .01$ ). Participants' involvement in child care and child play was significantly associated with lifetime use of alcohol and drugs (e.g., 73% of men who were highly involved in child care had ever used alcohol vs. 90% of men who were not highly involved;  $p < .05$ ). Lifetime and past month alcohol use were both significantly lower among men who reported being a role model to their child was their highest parenting priority, as compared to other priorities [71% vs. 88% for lifetime use ( $p < .05$ ) and 34% vs. 58% for past month use ( $p < .05$ )].

Few consistent patterns were seen among associations between men's relationships with their own fathers and their drug use. However, both lifetime and past month use of marijuana were lower among men who described their fathers as regularly showing interest in the things they did during childhood, as compared to men who reported their fathers rarely showed such an interest [77% vs. 95% for lifetime use ( $p < .1$ ) and 29% vs. 65% for past month use ( $p < .01$ )].

History of alcohol abuse among participants' fathers (but not mothers) was strongly associated with lifetime and past month use of both alcohol and drugs. Over half (54%) of participants whose fathers had a serious drinking problem had experienced a binge drinking episode versus 18% whose fathers never had a serious drinking problem ( $p < .005$ ). Similarly, the proportion of men who had used marijuana in the past month was almost 2 times higher among men whose fathers had a drinking problem versus those that had not (49% vs. 26%,  $p < .05$ ) (Table 2).

TABLE 2. Associations between participants' characteristics and substance use behaviors, with  $\chi^2$ -test results.

Sociodemographic characteristics	Lifetime		Lifetime binge		Lifetime marijuana use		Lifetime methamphetamine use		Past month alcohol use n (%)		Past month marijuana use		p-Value
	alcohol use n (%)	p-Value	drinking episode	p-Value	marijuana use	p-Value	methamphetamine use	p-Value	alcohol use n (%)	p-Value	marijuana use	p-Value	
Age group													
18–24 years old	52 (80%)	.559	17 (26%)	.008**	53 (83%)	.258	23 (35%)	.899	31 (51%)	.287	26 (39%)	.194	
25+ years old	18 (86%)		12 (57%)		15 (71%)		7 (33%)		7 (37%)		5 (24%)		
Marital status													
Currently unmarried	62 (83%)	.429	24 (32%)	.362	61 (81%)	.400	26 (34%)	.888	34 (49%)	.426	29 (38%)	.196	
Currently married	8 (73%)		5 (45%)		7 (70%)		4 (36%)		4 (36%)		2 (18%)		
Educational status													
Have not completed high school diploma/GED	36 (80%)	.728	14 (31%)	.649	39 (89%)	.039*	18 (40%)	.262	20 (50%)	.654	19 (42%)	.184	
Completed high school diploma/GED	34 (83%)		15 (36%)		29 (71%)		12 (29%)		18 (45%)		12 (29%)		
Employment status													
Currently unemployed	52 (87%)	.056*****	24 (39%)	.068*****	51 (86%)	.025*	27 (44%)	.003***	28 (51%)	.365	26 (43%)	.037*	
Currently employed	18 (69%)		5 (19%)		17 (65%)		3 (12%)		10 (40%)		5 (19%)		
Relationship status													
In relationship <1 year prior to the pregnancy	23 (77%)	.409	9 (29%)	.527	27 (90%)	.089*****	13 (42%)	.277	14 (48%)	.917	10 (32%)	.625	
In relationship for $\geq 1$ year prior to the pregnancy	47 (84%)		20 (36%)		41 (74%)		17 (30%)		24 (47%)		21 (38%)		
Fatherhood roles and experiences													
Biological father of index child													
No	17 (81%)	.952	8 (38%)	.595	18 (86%)	.451	10 (48%)	.146	10 (53%)	.608	9 (43%)	.427	
Yes	53 (81%)		21 (32%)		50 (78%)		20 (30%)		28 (46%)		22 (33%)		
Currently living with child													
No	4 (80%)	.934	0 (0%)	NA	4 (80%)	.999	2 (33%)	.951	1 (25%)	.355	1 (17%)	.315	
Yes	66 (81%)		29 (36%)		64 (80%)		28 (35%)		37 (49%)		30 (37%)		
Was present at the birth of child													
No	22 (81%)	.989	11 (41%)	.326	26 (96%)	.010*	15 (56%)	.006**	15 (60%)	.131	14 (52%)	.251	
Yes	48 (81%)		18 (30%)		42 (74%)		15 (25%)		23 (42%)		17 (28%)		
Level of involvement in child care duties													
Low	36 (90%)	.044*	17 (41%)	.107	35 (88%)	.082*****	19 (46%)	.022*	21 (55%)	.116	17 (41%)	.910	
High	32 (73%)		11 (25%)		31 (72%)		10 (23%)		15 (38%)		13 (30%)		
Level of involvement in child play													
Low	44 (80%)	.760	21 (38%)	.214	47 (85%)	.060*****	23 (41%)	.060*****	24 (46%)	.999	20 (36%)	.999	
High	24 (83%)		7 (24%)		19 (68%)		6 (21%)		12 (46%)		10 (34%)		

TABLE 2. (Continued).

Sociodemographic characteristics	Lifetime alcohol use <i>n</i> (%)		Lifetime binge drinking episode		Lifetime marijuana use		Lifetime methamphetamine use		Past month alcohol use <i>n</i> (%)		Past month marijuana use	
	<i>n</i>	<i>p</i> -Value	<i>n</i>	<i>p</i> -Value	<i>n</i>	<i>p</i> -Value	<i>n</i>	<i>p</i> -Value	<i>n</i>	<i>p</i> -Value	<i>n</i>	<i>p</i> -Value
Prioritizes being role model for child												
No	45 (88%)	.049*	18 (35%)	.644	41 (82%)	.582	19 (37%)	.517	26 (58%)	.037*	20 (39%)	.406
Yes	25 (71%)		11 (31%)		27 (77%)		11 (31%)		12 (34%)		11 (31%)	
Clinically significant parenting stress levels												
No	41 (8.4%)	.723	14 (27.5%)	.383	38 (76.0%)	.636	14 (27.5%)	.839	20 (41.7%)	.316	12 (23.5%)	.113
Yes	20 (76.9%)		10 (37.0%)		21 (80.8%)		8 (29.6%)		13 (54.2%)		11 (40.7%)	
Relationship with own father												
Biological father was part of life as child												
No	32 (78%)	.447	13 (32%)	.761	33 (83%)	.587	14 (35%)	.950	16 (43%)	.479	19 (46%)	.049*
Yes	38 (84%)		16 (35%)		35 (78%)		16 (35%)		22 (51%)		12 (26%)	.181
Had contact with biological father at least weekly												
No	37 (84%)	.586	16 (36%)	.831	35 (81%)	.618	17 (38%)	.500	18 (45%)	.749	19 (42%)	.746
Yes	31 (79%)		13 (33%)		30 (77%)		12 (31%)		18 (49%)		11 (28%)	
Participant identified any father figure growing up												
No	14 (78%)	.657	3 (17%)	.092****	15 (88%)	.343	7 (39%)	.659	7 (41%)	.556	7 (39%)	.004****
Yes	56 (82%)		26 (37%)		53 (78%)		23 (33%)		31 (49%)		24 (35%)	
Participant described that his father/father figure showed interest in the things he did growing up:												
Rarely/almost never	15 (75%)	.293	6 (30%)	.564	19 (95%)	.069****	9 (45%)	.300	10 (50%)	.946	13 (65%)	
Almost always/sometimes	52 (85%)		23 (37%)		46 (77%)		20 (32%)		28 (49%)		18 (29%)	
Family history of alcohol use												
Biological mother ever had serious drinking problem												
No	49 (78%)	.154	21 (33%)	.864	49 (78%)	.386	21 (33%)	.585	28 (47%)	.796	20 (31%)	.155
Yes	21 (91%)		8 (35%)		19 (86%)		9 (39%)		10 (50%)		11 (48%)	.029*
Biological father ever had serious drinking problem												
No	34 (69%)	.001***	9 (18%)	.001***	35 (71%)	.021*	12 (24%)	.017*	18 (39%)	.081****	13 (26%)	
Yes	36 (97%)		20 (54%)		33 (92%)		18 (49%)		20 (59%)		18 (49%)	

Note: GED, general equivalency diploma.  
\**p* < .05, \*\**p* < .01, \*\*\**p* < .005, \*\*\*\**p* < .1.

### Regression Findings

In calculating the RR of fatherhood involvement, we found that none of the sociodemographic or “relationship with own father” variables were significant predictors of men’s involvement in either child care or child play duties. Lifetime (but not current) use of several substances significantly predicted lower fatherhood involvement in child care (RR = .63,  $p < .05$  for alcohol; RR = .67,  $p < .05$  for marijuana; RR = .57,  $p < .05$  for methamphetamine) or child play (RR = .54,  $p < .05$  for marijuana; RR = .50,  $p < .1$  for methamphetamine).

### DISCUSSION

The young AI men in this sample faced a large number of sociodemographic and substance use risks while also exhibiting potential resiliency factors that deserve further exploration. The education and employment status of fathers were low, increasing the economic hardship for young men and their families. While few of the young men in this sample were married, over half had been in a relationship with their partners for >1 year prior to the pregnancy and nearly all lived with the child. However, men reported limited involvement in child care and child play and nearly one-third reported high parenting stress.

Substance use rates were high among the men in this study, compromising their capacity to provide for their families (3) and placing both their children and partners at risk for poor emotional and behavioral outcomes (3–5). As in other samples (3), men who were educated and/or employed reported less substance use. Men in this sample who reported more involvement in childrearing and being present at their child’s birth reported less substance use. Regression findings confirmed that the use of substances predicted lower fatherhood involvement in child care or child play. While being a good role model was the most frequently reported priority in being a good father, men who reported more substance use were less likely to endorse this priority.

The men in this sample reported high rates of father absence during their own childhood and nearly half reported alcohol abuse among their own fathers. Low interest in their lives and alcohol abuse among their own fathers were both associated with participants’ substance use. There was a gendered effect with this association; alcohol abuse among participants’ mothers was not associated with participants’ own substance use. These findings highlight the need for more positive male role models and father figures for young AI men in order to break the cycle of intergenerational substance abuse and fatherhood absence. The historical context within which these conditions developed must be acknowledged and opportunities for healing historical unresolved grief must be incorporated (9–13).

The study had limitations. (1) The relatively small sample was selective in that recruitment occurred through mothers enrolled in an ongoing study, and eligibility was predicated on the mother agreeing to the father’s participation. To minimize potential selection bias, the father did

not need to be currently living with or in good accord with the mother. (2) All measures were self-reports prone to response bias. However, self-reporting of drug use and other sensitive behaviors is more reliable when ACASI technologies are used (19–23). (3) The self-report measures used in this study (15–18) were not previously adapted and tested for use within these specific cultures. Minor wording changes were made by local study staff prior to initiating this study, but further adaptation may be needed to ensure cultural relevance, reliability, and validity within this population.

Despite these limitations, this study provides important insight into a much neglected population. Unlike most studies on adolescent parenthood that limit samples to teenage fathers, this study represents a broader age range (18–30 years old) of fathers who had a child with an adolescent woman. In addition, rather than relying on female partners’ reports, this study provides a unique fathers’ point of view that is scarce in the literature (24,25). Longitudinal research on larger, unbiased samples of men is needed to further understand the roles and impact that young fathers have on their families, as well as the impact of fatherhood on the life course of young men. Tribal-specific associations with cultural identity and traditional ways of parenting also deserve exploration, as they may reveal protective forces in shaping AI fatherhood roles.

Native communities have already recognized the loss of the historical male influence in family life and the need for culturally relevant fatherhood interventions (10). The findings of this study offer guidance for intervention content. Programs targeting multigenerational substance use are likely to be well received, as evidenced by participants’ awareness and openness to discussing the impact of substance use on their families. Programs should also target educational achievement, job skills, and employment opportunities. Given the relatively long-term relationships of the participants and their partners in this study, it may be beneficial to engage mothers and other family members in interventions. Fathers’ limited involvement in childrearing and elevated parenting stress suggest that interventions should promote active involvement with children and healthy coping strategies for parents. Interventions should also capitalize on some of the unique inherent strengths in AI communities. For example, the high value placed on family networks and parent involvement seems particularly relevant to supporting fathers in AI families.

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### Declaration of Interest

John T. Walkup declares the following: Dr. John Walkup received free medication and placebo from Lilly, Pfizer, and Abbott for NIMH-funded studies. He is a consultant for Shire Pharmaceuticals. He is a paid investigator on grants funded by Pfizer. He receives honoraria and expenses for continuing education presentations from the joint Tourette Syndrome Association and Center for Disease Control outreach program. He receives royalties from Guilford Press and Oxford Press for books on Tourette syndrome. He receives grant funding from the Tourette Syndrome Association. He serves on the advisory board of the Tourette Syndrome Association, Trichotillomania Learning Center, and the Anxiety Disorder Association of America without pay but with travel expenses covered.

The other authors report no conflicts of interest. The authors alone are responsible for the content and writing of the paper.

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