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Are Adoptees at Increased Risk for Attempting Suicide?

William Feigelman, PhD

This study addresses the controversy of whether adopted adolescents are at risk for more mental health problems than the nonadopted and specifically evaluates differences in suicide ideation and depression. Same gender comparisons were made between 346 adopted adolescents and nearly 14,000 others living with biological parents, with nationally representative data from the National Longitudinal Study of Adolescent Health. Results showed few divergences in suicide ideation, attempts, and depression between adopted and nonadopted adolescents and young adults. Future studies employing this same dataset will need to pay closer attention to the high percentages of respondents adopted by blood relatives, which only became known with the collection of the Wave III Add Health data.

The question of whether adopted people are at greater risk for suicide or for attempting suicide has not generated much past research interest. Although many case study reports will be found showing evidence of suicidal thinking and actions among adoptees, until very recently there have been no systematic studies examining whether adopted people comprise a higher risk group for attempting or completing suicide compared to nonadopted persons. Interestingly, two new studies—drawing on the very same data source—emerged recently with conflicting conclusions on the suicidality of American adopted adolescents. In one, titled "Adoption [is] . . . A Risk Factor for Attempted Suicide," the authors concluded: "recognizing the adoptive status may help health care providers to identify youths who are at risk and to intervene before a suicide attempt occurs" (Slap, Goodman, & Huang, 2001). Yet the other report found no significant differences between the adopted and the nonadopted in attempting suicide (Feigelman, 2001).

The question of whether adoptees are at any greater risk for attempting suicide is by no means a trivial one. Usually, suicide attempts indicate the presence of a serious mental health impairment, necessitating immediate mental health counseling and treatment. For those who complete suicide, it is noted that the overwhelming majority had prior serious mental illnesses or substance abuse disorders beforehand (Goldsmith, Pellar, Kleinman, & Bunney, 2002). Although attempting suicide and completing suicide

William Feigelman is with the Department of Sociology at Nassau Community College in New York.

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Address correspondence to William Feigelman, PhD, Department of Sociology, Nassau Community College, 1 Education Ave., Garden City, NY 11530; E-mail: feigelw@acc.edu.

are different, suicide attempts are probably the strongest factor in predicting eventual suicide (Solomon, 2001). Any level of suicide attempt persistence would, by itself, suggest a severe mental health impairment. Thus, the attempted suicide debate quickly leads into the larger unresolved question of whether adoptees have more mental health problems than the nonadopted.

Correctly appraising adoptee mental health is especially important. Despite a lack of convincing evidence demonstrating their mental health problems, adoptees have endured a long history of being demonized and pathologized in the popular and social scientific press. Often they have been charged in popular writings as being genetically inferior, and predisposed to mental health problems and criminal conduct. The general public, in turn, is far more familiar with notorious, adoptee serial killers such as Joel Rivkin and David Berkowitz (the Son of Sam Killer) than with accomplished and conventionally successful adoptees, like former President Gerald Ford or Dave Thomas, late founder of the Wendy's Restaurant chain and philanthropist. Even in the social science literature there have been negative, pseudo-scientific conceptualizations about adoptees circulated, such as the "adopted child syndrome," depicting adoptees as sociopathically inclined (Smith, 2001).

Both the Slap et al. (2001) and Feigelman (2001) studies provide concise reviews on the conflicting conclusions about adoptee mental health. Slap et al. offer an especially cogent overview, stating that although a few studies find adoptees showing better adjustments than the nonadopted on some criteria, a somewhat larger number of studies find no differences between the adopted and the nonadopted; and the greatest number of past studies show adoptees less well adjusted than the nonadopted. One of the few things most analysts agree on is that adoptees are overrepresented among counseling patients (Miller, Fan, Grotevant, Christensen, Coyl, & van Dulmen, 2000), yet it is not clear what this may signify, given the dependence among adoption families to utilize social service resources to establish their families. The debate continues and is confounded with concern about whether adoptees previously studied actually represent the adopted in the population-at-large. Too often in the past, adoptee mental health research has relied on a variety of convenience samples. Clinic patients, agency client populations, and snowball samples have been dominant; only a few past research efforts have been derived from representative general population surveys.

The 1994 National Longitudinal Study of Adolescent Health (Add Health), with its greater than 20,000 respondents, represented a genuinely unique opportunity to study adoptee mental health with the benefit of a large, general population survey. Add Health also offered three distinct opportunities to study suicide attempts at three different intervals: at Wave I in 1994, when respondents were between 12 and 21 years of age; at Wave II in 1995, one year later; and at Wave III, approximately 6 years later in 2001, when respondents ranged in age from 18 to 28.

Add Health presents a very unclear pathway for studying adoptee mental health. In Wave I there were at least three different ways to determine a respondent's adoptive status: by how the self-respondent identified in filling out an in-school questionnaire which nearly 90,000 students completed; by parental at-home interview responses, furnished by over 15,000 mostly parent respondents; and by the over 20,000 adolescent at-home interviewees who provided a roster of their household. Each successive follow-up wave offered even additional ways to measure adoptive status: household rosters obtained from adolescent respondents (during at-home interviews) at Waves II and III, and Wave III also included a group of direct, self-identification questions about a respondent's adoptive status.

The authors of at least one study erred in their attempt to ascertain adoptee mental health because of the complexity of the Add Health data (Miller, Fan, Christensen, Grotevant & van Dulmen, 2000). The original study (Miller et al., 2000), based on nearly 90,000 in-school respondents, concluded that "adopted adolescents are at higher risk in all

of the domains examined, including school achievement and problems, substance use, psychological well-being, physical health, fighting and lying to parents" (p. 1458). Later, when the in-school respondent data was cross-checked against parental and home-interview responses, it was found that at least 25 percent of the high school children claiming to be adopted had actually misrepresented themselves. These researchers (Miller et al., 2000) also found these same respondents considered themselves more problem-prone. When these respondents were excised from the comparisons, analysis showed considerably fewer differences between the adopted and nonadopted respondents (Fan et al., in press). Thus Fan and colleagues were obliged to offer a retraction from their original conclusions owing to the exaggerated responses of these respondents (Fan, 2003).

The present inquiry attempts to deal with the confusing array of choices within the Add Health data to arrive at a more appropriate conclusion on whether adoptees are more prone to attempt suicide.

METHOD

The National Longitudinal Survey of Adolescent Health was conceived as a broad-based study of adolescent health. For this brief report readers are referred elsewhere for a fuller description of Add Health contents and methods: see Feigelman (2001) or the Add Health website (http://www.cpc.edu/addhealth). In this article only the necessary information for evaluating these Add Health-based findings will be presented.

The data for this study were derived from all three at-home data collection points, the Wave I at-home interviews with adolescents and their parents, collected between April and December of 1995 ($N = 20{,}745$); the Wave II interviews conducted approximately one year later at respondents' homes, ($N = 13{,}570$); and the Wave III data, based on 14,332 home-interviews with earlier respondents, collected in 2001 and 2002 and released in April 2003.

Each survey interview was conducted with automated computer-assisted interviewing technology for all psychologically sensitive questions. Adolescents listened to questions through ear phones and entered their responses directly into laptop computers, thereby minimizing interviewer or parental influences on responses. The specific questions on suicidality asked at each interview consisted of the following: "During the past 12 months have you ever seriously thought about committing suicide?" and "During the past 12 months how many times have you actually attempted suicide?"

Survey participation was consistently good at a rate of approximately 80 percent at each wave, including the Wave III hour-and-a-half-long home interviews (National Longitudinal Study of Adolescent Health, 2003). With its many aims to study a diversity of adolescent populations and problems, Add Health purposely oversampled various groups of research interest, such as twins, disabled children, and Black middle-class youth, among other subgroups. Included among these additional subgroups were adoptees living in families with other siblings that were biological offspring of parents. Nearly 10 percent of adopted Wave I respondents fell into this category. Because of this oversampling it is especially important to apply the Add Health weights if one wishes to have a nationally representative sample of U.S adopted and nonadopted youth. (Chantala & Tabor, 1999; Tourangeau & Shin, 1999). Thus, all analyses presented in this report are based upon the weighted data. When sample weights are applied, corrections are made for the under- and oversampling biases of selecting different groups unevenly within the designated clusters of the sample and for the oversampling of families with biological and adopted children.

STATA statistical software was used for the data analysis, specifically with the SVYTAB procedures for crosstabular analyses, SVYMEAN for mean comparisons, and SVYLOGIT for the logistic regression analysis (Stata Corp., 2001). Chi-square significance tests were used to gauge most of the

associations between adoption status and the dependent variables of interest.

From the original sample of 20,745 Wave I cases, only 18,924 cases were included in weighted analyses; Wave II weighted totals were 13,570; and the Wave III weighted total was 14,322. The unweighted total of adopted adolescents from Wave I was 560 youths, which was reduced to 514 cases when the weights were applied. Weighted totals of adoptees from Wave II dropped sharply to 171 cases. For Wave III there was a total of 387 adoptee respondents with survey weights, 372 of whom had given home interviews at Wave I and Wave III.

All these figures are based on a definition of adoptive status drawn from the Wave I adolescent home-interview roster reports. We consider this to be the best indicator of adoptive status possible, until the Wave III direct adoption status questions were asked. Evidence accumulated by Miller and colleagues (2001) is consistent with this interpretation. They found extremely high consistency between parental and adolescent at-home interview reports, noting considerably less consistency with in-school responses, where nearly 25 percent erroneously reported themselves as adopted, when parental and at-home interview responses suggested otherwise. Based on the weighted data employed here, results showed children's adoption status claims confirmed by parents in 95 percent of the cases, 1 percent were not matched or conflicted, and 4 percent were undetermined because a different family member had completed the parental interview. These findings suggest a high validity and reliability between parents and their adolescent children's Wave I at-home roster reports.

The most important improvement to ascertaining adoption status came with the collection of Wave III data. Three new, never-before-asked questions were administered to all home-interview respondents: (1) "Were you ever adopted?"; (2) "Were you ever adopted by a blood relative?"; and (3) "Were you adopted by a new spouse of one of your biological parents." With all three questions one may determine rates of nonrelative adoptions in the Add Health surveys. Most adoption research focuses on populations of nonrelative adoption families. Before the inclusion of these questions, however, one had to rely on respondents' understandings of adoption, conceptualizations we can now observe as mixed ones, where relative and nonrelative adoptions were commingled.

When responses to each of these three questions were cross tabulated against the Wave I adolescent-provided household roster data the following patterns were shown. (1) 95.4 percent of Rs respondents who reported themselves as adopted at Wave I reported the same at Wave III (with the weighted data the rate was slightly lower, at 93 percent). This suggests high accuracy utilizing Wave I rosters as an indicator of adoption status. (2) Among people reporting themselves adopted on Wave I rosters, 15 percent (25 percent with the weighted data) reported themselves as having been adopted by a blood relative, thus suggesting a sizable proportion of adoptees in the Add Health sample were adopted by blood relatives. It is possible that many of these cases arose with the death, incarceration, or serious illness of parent(s), and other relatives subsequently assumed parental functioning. Obviously, these cases are likely to be different from events of nonrelative adoptions, where genetic dissimilarity and lack of prior acquaintance usually prevail. (3) For those reporting themselves as adopted on Wave I rosters, only 3 percent (1 percent with the weighted data) reported being adopted by the spouse of a biological parent. These cases, apparently, were few in number in the Add Health sample.

In the analysis of adoptee and nonadoptee suicide attempts two alternative views of adoption status were employed: The Wave I household roster-based conception, which has been employed in much of the pre-existing adoption research with Add Health respondents; and the new and more refined definition of nonrelative adoptions, excluding adoptions by blood relatives and by partners of their biological parents. When weighted *N*s of nonrelative adoptees were counted for Wave III, there were a total of 346 adoption

cases and 13,962 nonadopted. All comparisons were made separately for males and females.

RESULTS

The first question explored were the disparate results between Slap et al. (2001), who observed higher suicide attempts among the Add Health adopted teens (compared to the nonadopted), and Feigelman (2001), who found no differences. There are several possible reasons that could explain this discrepancy. First, the Slap et al. group focused on a subset of adopted and non-adopted youth, namely those who met the following criteria: (1) adolescents who were living with adoptive or biological mothers at the time of the interview, (2) adolescents who had never been separated from their mothers for more than 6 months; (3) mothers who were in their first marriages at the time of the interview, and (4) adoptive mothers who had never been married to the adolescent's biological father. The Slap et al. report focused on only 214 respondents from the total of 560 adopted teens reported at Wave I home interviews. Feigelman, in contrast, focused on a larger subset of the total adoptee population, those living with both adoptive parents at Wave I (weighted) $N = 369$. The contrast populations also differed. Slap et al. focused on 6,363 children living with their biological mothers, who met similar above criteria. Feigelman focused on 9,676 children who lived in intact biological, parent-led families. It is altogether possible that these differing populations alone could explain the diverging results.

An additional possibility this research sought to rule out was whether the differences between the studies came from not applying the Add Health survey weights. The Slap et al. study did not apply the sample weights; the Feigelman study did. It is altogether possible that the Slap et al. results were built on sampling bias from employing the unweighted data, which overrepresented adoption families that included both biological and adopted children. If the present inquiry replicated their findings—when the sample weights were applied and omitted—that would suggest it was the uniqueness of their study population that explained the differences between Feigelman's results and theirs. If, in applying their distinct study criteria, statistical significances varied with and without the application of the sample weights, this would suggest that their results were derived from the application of a nonrepresentative national sample.

First, it must be acknowledged that the present inquiry could not exactly duplicate their sample. Even with the most complete cooperation of one of the co-authors, Elizabeth Goodman, with the passage of time between the present and when their data files were originally assembled it was not possible to repeat the exact sequencing of applying their distinct study criteria. However, the present results did come reasonably close. The results in Table 1, Part A, show that differences between the present study's replicated data and Slap et al.'s original data fell within one percentage point of one another, indicating an especially close approximation.

Table 1, Part B, shows side-by-side cross tabulations of adoption status and suicide attempts with the present replicated data using both unweighted and weighted data. As in the original published article, when weights are not applied, the cross tabulation is highly significant, with 8.1 percent of the adoptees attempting suicide in the last year, compared to only 2.9 percent among the nonadopted ($p < .0001$). When the sample weights are applied (with SVYTAB), suicide attempts drops to 6.2 percent and the nonadopted suicide rate elevates slightly to 3.4 percent. More importantly, statistical significances drop to below the .05 criteria to .15 ($p = .15$). It now appears that not applying the sample weights makes for all the differences in attaining statistical significance.

To further verify this conclusion the present inquiry included an additional side-by-side cross tabular test, comparing all adoptees in the Wave I sample with all nonadopted respondents with the weighted and

TABLE 1
Comparing Slap et al. (2001) & Feigelman's Attempted Replication

A)	Matching Samples				
	Slap et al. Data: Past Year Suicide Attempts				
		N	*n* (%)		
	Adopted	214	16 (7.5)		
	Nonadopted	6,363	197 (3.1)		
	My Replicated Data: Past Year Suicide Attempts				
		N	*n* (%)		
	Adopted	234	19 (8.1)		
	Nonadopted	6,639	195 (2.9)		
B)	Comparing Results With and Without Add Health Sample Weights (with Slap et al. data) Past Year Attempts				
		N	*n* (%)	χ^2(1df)	*p*
	Unweighted			20.12	.0001
	Adopted	234	19 (8.1)		
	Nonadopted	6,639	195 (2.9)		
	Weighted			1.91	0.15
	Adopted	217	17 (6.2)		
	Nonadopted	6,264	185 (3.4)		
C)	Examining How the Weights Affect Significance Levels (Among all Add Health Respondents) Past Year Attempts				
		N	*n* (%)	χ^2(1df)	*p*
	Unweighted			6.20	.013
	Adopted	560	33 (5.9)		
	Nonadopted	20,740	773 (3.8)		
	Weighted			.25	.6
	Adopted	514	31 (4.6)		
	Nonadopted	18,919	690 (3.9)		

Source. National Longitudinal Study of Adolescent Health, 1995

unweighted data. This test, of course, did not apply the special Slap et al. study criteria of parents who had never divorced, never separated from their child, and currently lived together with their child at the time of interview. The results are instructive and are found in Table 1, Part C. They show that among all 560 adoptees, compared to the remainder ($N = 20{,}740$), statistically significant differences were found when all cases were counted and the sample weights were not applied. The comparison showed the attempted suicide rate for adoptees at 5.9 percent, and 3.8 percent for the nonadopted ($p < .01$); yet when the sample weights were applied, differences dropped to less than a percentage point and the chi-square probability dropped to nonsignificance.

There appears to have been something unique in the purposely sampled adopted respondents who came from homes where biological and adopted children co-resided as siblings. This group of 21 cases was examined separately and an attempted suicide rate of 10 percent was noted, far higher than from other sample subsets. Clearly, this evidence suggests that applying the Add Health survey weights alone appears to account for the disparities in these two studies' results.

Table 2 displays the differences in rates of attempted suicide between adopted and nonadopted respondents at each Wave point. Results are displayed with the new definition of adoptive status based on nonrelative adoptions only. Male and female responses are presented separately, since past research has

TABLE 2
Suicide Attempts and Adoption Status (Based on Wave III Direct Questions; Nonrelative Adoptions Only)[a]

	Males				Females			
	N	*n* (%)	χ^2(1df)	*p*	*N*	*n* (%)	χ^2(1df)	*p*
Wave I suicide attempts past yr.			21.729	.001			.8573	.36
Adopted	165	2 (0.1)			181	17 (7.7)		
Nonadopted	6,596	136 (2.0)			7,366	376 (5.4)		
Wave II suicide attempts past yr.			5.106	.03			.2006	.65
Adopted	66	4 (7.7)			64	3 (7.1)		
Nonadopted	5,031	89 (1.8)			5,661	262 (5.1)		
Wave III suicide attempts past yr.			2.208	.14			.0695	.79
Adopted	165	3 (3.9)			181	4 (1.7)		
Nonadopted	6,590	78 (1.1)			7,365	134 (2.2)		

Source. National Longitudinal Study of Adolescent Health, 1995–2001.
[a]Each variable distribution was based on weighted data.

repeatedly shown substantially higher suicide attempts for girls. An additional analysis of suicide attempts by adoption status, not displayed here, was done with the Wave I household roster-based definition of adoption. For each of the six cross tabulations done at each interview wave, there were no significant or substantial differences in suicide attempt rates for the adopted and nonadopted, in these same gender comparisons.

When the definition of adoption was based on nonrelative adoptions, Table 2 shows a trend that is puzzling. For females, the pattern was clear and consistent with the household roster-based definition of adoptive status results; namely, that female adoptees were no more likely to attempt suicide than their nonadopted peers at each Wave point. For males at Wave I, significantly more of the nonadopted attempted suicide than adoptees did. Here the results did not display a great magnitude of difference; it was only the relative rarity of the event that led the chi-square values to attain significance. Yet at Wave II adopted males were 6 percent more likely to attempt suicide than their nonadopted peers, a statistically significant difference. At Wave III the gap dropped to a nearly 4 percent difference, which approached significance ($p = .14$) with chi-square. These differences for males at Wave II and III could be meaningful ones.

On the basis of these puzzling and potentially problematical data trends two additional closely related correlates of suicide attempts were investigated: suicide thoughts and depression. As expected, suicide thoughts were found to correlate very highly with suicide attempts. All people (at Wave III) attempting suicide indicated having suicide thoughts as well; only 5 percent of those not attempting suicide had suicide thoughts. A 19-item CES-D type of depression scale was also administered to respondents at Waves I and II. For Wave III the scale was cut back to 10 items from the original list. Depression scale items were highly intercorrelated with each other. Representative scale items included some of the following agree-disagree statements: feeling the blues, experiencing frequent loss of appetite, feeling depressed, feeling too tired, and feeling fearful. Seventy-five percent of the respondents who had attempted suicide at Wave III scored 6 or higher on the 30-point scale, demonstrating intermediate or high levels of depression; for non-attempters the comparable percent with scores of 6 and over was 31 percent. These closely related behaviors should be helpful in confirming the attempted suicide findings.

They could show that elevated levels of attempted suicide for Wave II and III adopted males were part of a pattern showing this group's higher risk for having more suicide ideation and depression; however, they could also suggest, by the absence of these trends, that the group's higher suicide attempts may have been a statistical anomaly.

Table 3 shows no differences for adopted males in having suicide thoughts, as compared to the nonadopted respondents. The same pattern was true for adopted females. At each Wave point adoptees were undifferentiated in suicide thoughts as compared to the nonadopted. Table 4 displays the depression score means (with SVYMEAN) and 95 percent confidence interval ranges for adopted and nonadopted respondents at each wave point. The means of depression for adopted males were comparable to the means shown for nonadopted males. For females, at Wave I, the mean depression scores were noticeably higher than for nonadopted females (15.2 as compared to 11.8). Logistic regression analysis (SVYLOGIT) confirmed the difference as a statistically significant one at the .01 probability level. Yet 1 year later (at Wave II) and 6 years later (at Wave III) these differences appear to have faded.

DISCUSSION

Focusing on several important dimensions of adolescent and young adult mental health—suicide ideation/attempts and depression—this report has addressed the longstanding controversy over whether adopted adolescents display more problems symptoms than the nonadopted. With nationally representative longitudinal data, the Add Health study suggests few divergences in suicide ideation, attempts, and depression between adopted and nonadopted adolescents and young adults. Overall, the convergences between both groups stand out. In applying two alternative measures of adoption status over the three different wave intervals, for both males and females, only in one place—for adopted males interviewed at Wave II—were statistically higher suicide attempts observed. When this result was compared with responses from two other close correlates of suicidality—suicide thoughts and depression—the pattern of responses suggest that elevated suicide attempts for this group may have been a statistical anomaly. Adopted males were little differentiated from the nonadopted in their suicide thoughts and depression. For adopted girls, with nine different

TABLE 3
Suicide Thoughts and Adoption Status (Based on Wave III Direct Questions; Nonrelative Adoptions Only)[a]

	Males				Females			
	N	*n* (%)	χ^2(1df)	*p*	*N*	*n* (%)	χ^2(1df)	*p*
Wave I suicide thoughts past yr.			3.394	.07			3.749	.06
Adopted	162	20 (5.6)			181	41 (24.4)		
Nonadopted	6,530	661 (10.4)			7,308	1,164 (16.0)		
Wave II suicide thoughts past yr.			.0706	.79			.0130	.91
Adopted	66	6 (9.6)			64	9 (14.0)		
Nonadopted	4,999	411 (8.3)			5,637	751 (14.7)		
Wave III suicide thoughts past yr.			.0847	.77			1.0529	.30
Adopted	163	18 (7.2)			181	17 (9.9)		
Nonadopted	6,482	363 (6.2)			7,275	446 (6.8)		

Source. National Longitudinal Study of Adolescent Health, 1995–2001.
[a]Each variable distribution was based on weighted data.

TABLE 4
Depression and Adoption Status (Based on Wave III Direct Questions; Nonrelative Adoptions Only)[a]

	Males			Females		
	Mean	*95% Confidence Interval*	*N*	*Mean*	*95% Confidence Interval*	*N*
Means of Wave I depression scale scores (based on 19 items, ranging from 0–57)						
Adopted	11.1	9.1 to 13.2	165	15.2*	12.1 to 18.3	180
Nonadopted	10.0	9.7 to 10.3	6,556	11.8	11.4 to 12.2	7,327
Means of Wave II depression scale scores (based on 19 items, ranging from 0–57)						
Adopted	10.6	9.1 to 12.1	66	13.9	10.2 to 17.6	63
Nonadopted	10.3	9.9 to 10.7	5,013	12.3	11.9 to 12.6	5,639
Means of Wave III depression scale scores (based on 10 items, ranging from 0–30)						
Adopted	4.5	3.3 to 5.7	164	5.0	3.9 to 6.2	181
Nonadopted	4.1	3.9 to 4.2	6,548	4.9	4.7 to 5.1	7,321

Source. National Longitudinal Study of Adolescent Health, 1995–2001.
[a]Each variable distribution was based on weighted data.
*$p < .05$ with logistic regression.

comparisons made, only one turned up as significantly different: elevated levels of depression for female adoptees at Wave I. While these comparisons alone will hardly suffice as a complete appraisal of the mental health differences between both groups, these findings represent some important preliminary evidence. At this point, it appears that adopted youth and young adults exhibit similar levels of suicidality and depression as those raised by biological parents. The importance of making appraisals of adoptee mental health from general population surveys like Add Health, rather than from samples drawn from the ranks of clinic patients or agency clients, cannot be underestimated if one is to avoid having sample selection biases.

Findings obtained in this investigation now cast doubt over what has been established about adoptive relationships from earlier studies of the Add Health project. Wave III self-report data showed between 15 to 25 percent of those depicting themselves as adopted in earlier waves of Add Health (depending on whether one uses the weighted or unweighted data) indicated being adopted by blood relatives. With such a sizable percentage of respondents involved in relative adoptions, doubt is now cast on all claims linking previous Add Health findings to the larger body of knowledge about nonrelative adoptions. Most adoption research is built around studying nonrelative adoptions, where genetically dissimilar people, without prior acquaintance, become joined in familial relationships. If Add Health is to shed light on this population, researchers will be obliged to revisit their claims with the 346 adoptees identified as nonrelative adoptees in Wave III, or with the 301 persons who indicated having been a nonrelative adoptee at Wave 1.

The claim advanced by Slap et al. that adoption poses a risk for attempted suicide among adolescents was clearly not supported in this analysis. Their article title suggested overreaching conclusions when one considers that their analysis frame included fewer than two-fifths of all adoptees in the Wave I household sample. The most serious problem this report has shown, was from not applying the Add Health survey weights. Had the

weights been applied, their study could have been a nationally representative one. Without the weights the study degraded into a convenience sample. It was especially important to have applied the weights with the adoption issue under review. About 10 percent of the unweighted Wave I adoptee respondents were purposely sampled with additional cases of adoption families that included both biological and adopted children. Past research suggests these adoption families are unique and different from other, more typical, adoption families without biological children. Past research suggests adoptees in these families are likely to be more problem prone (Feigelman & Silverman, 1979; Sharma, McGue, & Benson, 1998). Fertile adoptive parents have been found to more often pursue humanitarian goals in their adoption decisions, and to more often adopt hard-to-place children. With their older and sometimes physically and or emotionally disabled adopted children—many whom were casualties of abuse and neglect—they are more likely to encounter developmental problems.

By no means is the controversy about the mental health difficulties of adoptees settled by these findings. A more thorough appraisal of all relevant Add Health data, utilizing all three waves with the weighted data, should show where and to what degree adoptees may be at greater risk for mental health problems than the nonadopted. Evidence from past studies consistently shows adoptees disproportionally overrepresented among the ranks of counseling patients, yet it is important not to infer from this that they are sicker, rather that they are quicker to act to get help when problems are perceived. It is altogether possible that their readiness to use therapeutic resources may alleviate some of their long-term problem potential. Only with a more complete appraisal of these questions longitudinally can we begin to gain the most correct answers.

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