Behavior Problems and Mental Health Contacts in Adopted, Foster, and Nonadopted Children

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The implications of adoption for the emotional and behavioral adjustment of children have been an issue in child welfare for many years. Past research has suggested that adopted children are over-represented in mental health settings. In addition, some studies have suggested that adopted and nonadopted children differ on measures of social, emotional, behavioral, and cognitive functioning. The current study used data from a large, representative sample in the United States to examine whether adopted children are more likely to have had mental health contacts or emotional or behavioral problems than nonadopted children. Age of placement in the adoptive home was examined as a variable contributing to the adjustment of adopted children. Results suggest that adopted and foster children are more likely to have mental health contacts than nonadopted children. Results are mixed regarding whether adopted and foster children have more behavior problems than nonadopted children. However, significant differences between adopted, foster, and nonadopted children disappeared when a small group of influential cases were removed. This suggests that the differences seen between the groups reflect a small number of cases and are not representative of the groups of adoptees and foster children as a whole. The vast majority of adopted children showed patterns of behavior problems similar to those of nonadopted children. These results are discussed in relation to the past literature and areas for future research.

Keywords: Adoption, behavior problems, fostering, mental health.

Abbreviations: BP: children living with at least one biological parent; BPI: Behavior Problem Index; CHS: Child Health Supplement; FC: children in foster care; NHIS: National Health Interview Survey; NRA: children adopted by a nonrelative.

Introduction

The emotional and behavioral adjustment of adopted children has received a great deal of attention as a result of the alleged over-representation of adopted children in mental health settings. Empirical literature has suggested that adopted children are at increased risk for developing emotional and behavioral problems. Research with clinical populations has shown an over-representation of adopted children and adolescents in clinical populations. However, the extent of the over-representation has varied widely. While adopted children have been estimated to make up roughly 2% of the population (Hersov, 1990; Zill, 1985b), adoptees have made up from 2.4% to 21.2% of these clinical samples (Canada: Jerome, 1986, 1993; Kostopoulos et al., 1988; UK: Goldberg & Wolkind, 1992; U.S.A.: Brinich & Brinich, 1982; Goodman, Silberstein, & Mandell, 1963; Kim, Davenport, Joseph, Zrull, & Woolford, 1988; Schechter, 1960; Senior & Himaldi, 1985; Warren, 1992).


In a prospective longitudinal study conducted in Sweden, adopted children were reported by their teachers to have more problem behaviors than their nonadopted peers at age 11 yet this difference disappeared by age 15 (Bohman, 1970, 1971; Bohman & Sigvardsson, 1978, 1980, 1990). In contrast, children in foster care had significantly more problem behaviors than both adopted and nonadopted peers at both ages 11 and 15. In a community sample examining 260 adopted and nonadopted children ages 6 to 11, Brodzinsky et al. (1984) found that parents rated adopted children higher in behavior problems and lower in social competence and
school achievement than nonadopted children. No significant age or sex differences were found. Similarly, in an analysis of the 1981 Child Health Supplement of the National Health Interview Survey, Zill (1985b) found that adopted children had a higher mean score on a behavior problems index than nonadopted children.

Research has also suggested that the older a child is when placed in an adoptive home, the more likely that child is to have emotional and behavioral problems (Cohen, Coyne, & Duvall, 1993; Verhulst, Althaus, & Versluis-den Bieman, 1990b). In Zill's analyses (1985b), significantly more adopted children than nonadopted children had seen a psychologist or psychiatrist. A similar pattern was found when children adopted in infancy were compared with children adopted after infancy; children adopted after infancy had a higher mean on the behavior problem index and more mental health contacts than children adopted in infancy. Relatedly, in a study of internationally adopted children residing in the Netherlands, Verhulst et al. (1990b) found that the older a child was at placement, the more likely that child was to develop emotional or behavioral problems and to perform poorly in school. Analyses showed that age of placement was a stronger predictor of emotional and behavioral problems than either age or sex.

Although there seems to be some evidence for the role played by age of placement in the development of emotional and behavioral problems, research findings have not been consistent. Verhulst, Althaus, and Versluis-den Bieman (1992) found that early neglect, abuse, and changes in caretaking environment each increased the risk of later maladjustment in international adoptees. Children adopted beyond infancy are more likely to have experienced abuse and disruptions in care than children adopted as infants. However, other research has found that age of placement is not related to emotional and behavioral adjustment (Andresen, 1992; Jerome, 1993).

The many inconsistencies in the research findings make it difficult to draw clear conclusions regarding the emotional and behavioral adjustment of adopted children. One possible source of the variations in past research may be the wide range of methodologies used. Many of the studies of clinical populations used small, nonrepresentative samples without control groups, making it impossible to generalize the findings to adopted children as a whole. Additionally, the sample characteristics of the nonclinical samples varied a great deal, making it difficult to compare across studies. For example, some studies did not differentiate between relative and nonrelative adoptions; it is likely that these are two very different experiences, psychologically speaking.

Some of the inconsistencies in past research findings may be the result of the barriers to collecting data on adoption in the United States. These barriers include erratic records, confidentiality laws, and the lack of a national reporting system for adoption statistics. The combination of these barriers and the low rate of adoption make it very costly to gather large, representative samples. As a result, few of the prior studies were randomized in a way that allows generalization of their findings.

In the present study, we tried to avoid some of these weaknesses. First, we built the study around a carefully randomized sample that was large enough to capture a reasonable number of adopted children, despite their low incidence in the population at large. Second, we limited our attention to nonrelative adoptions. Third, we designed our study so that we could compare adopted children with two other groups: (1) children living with at least one biological parent and (2) foster children. Foster children constitute a useful comparison group since they, like adopted children, are living with caretakers who are not biologically related to them. However, foster children differ from both adopted and nonadopted children in that they do not have the permanent family relationship with their caretakers that the other two groups of children have.

Our goal was to determine whether adopted children were more likely to experience behavior problems and mental health contacts than nonadopted children. We examined age of placement as a variable contributing to emotional and behavioral adjustment. Additionally, we hypothesized that our comparison group, foster children, would have the most mental health contacts and the highest scores on a behavior problem index. We expected foster children to be followed by children placed in their adoptive homes after 6 months of age, children placed in their adoptive home prior to 6 months of age, and nonadopted children.

**Method**

**Data Source and Participants**

The National Health Interview Survey (NHIS), a periodic assessment of major health issues in the United States (Chyba & Washington, 1993) was our data source. Data is collected through personal interviews conducted with household members. The households are selected for interview using a probability sample of the civilian noninstitutionalized population of all 50 states and the District of Columbia. The NHIS consists of a basic health questionnaire that remains the same each year; this data is collected on every household member. The survey also adds special topic questionnaires that vary from year to year, which can be used with the basic questionnaire.

For the current study, we used data from the 1988 NHIS and its Child Health Supplement (CHS) to examine our hypotheses. The basic sample consisted of 47,485 households containing 122,310 individuals. For the CHS, one child under 17 years of age was sampled from each household that had children in that age range. Personal interviews were conducted with the adult family member who knew the most about the sampled child; this was usually the child’s mother. Interviews were completed regarding 17,110 children 17 years of age and younger (95% of those children identified as eligible on the basic health questionnaire). Data on emotional and behavior problems was collected only on children aged 5 to 17 \( (N = 11,840) \). We separated those children into three groups: children adopted by nonrelatives (NRA, \( N = 188 \)), children in foster care (FC, \( N = 37 \)), and children who were living with at least one biological parent (BP, \( N = 10,766 \)). Children living with other relatives or nonrelatives not specified as adoptive or foster parents were excluded \( (N = 849) \).

Not surprisingly, foster children had proportionately more data missing than the other two groups (FC = 38% missing at least one variable, NRA = 21%, BP = 14%). It appeared that many foster parents were unable to provide basic background data about their foster children. This led to some foster children being excluded from the analyses. Only cases with complete
data on each variable were included in the analyses for all three groups (BP, \(N = 9315\); NRA, \(N = 150\); FC, \(N = 23\)).

**Measures**

Demographic information about the children, their parents, and their families was taken from the CHS (see Table 1). For the children, the demographic variables included age, sex, race, placement status (NRA, FC, or BP), and age of placement (age of NRA child at time of placement in the adoptive home). Age of placement for foster children was not included as a variable due to the limited information about placement specific to foster care (e.g., number of foster placements, length in foster care, amount of contact with biological family). The NRA group was divided into children placed in the adoptive home before 6 months (\(N = 105\)) and after 6 months of age (\(N = 45\)) for certain analyses. Parental demographic variables included family income and parental education. No information was available regarding the type of adoption (e.g., interracial, international, “open” adoption, family composition, and so on).

Mental health contact was derived from a series of dichotomous questions included in the CHS regarding use of mental health services. These questions inquired if the target child had ever received treatment or counseling for an emotional or behavioral problems and if that treatment had occurred in the past 12 months.

Behavioral problems were measured using the Behavior Problem Index (BPI), a 28-item rating scale of child behavior based on the Achenbach Child Behavior Checklist (CBCL) and other scales (Zill, 1985a). These items were selected for the measure because they had previously demonstrated the ability to discriminate children who had received clinical treatment from those who had not. In addition, they represented some of the more common behavioral problems in children and adolescents. Statements were rated by a parent (or other knowledgeable respondent) on a 3-point scale (as being often true, sometimes true, or not true of their child during the past 3 months). The index covered a variety of behavioral problems. The items were recoded to create a total scale score similar to that used on the CBCL (0 = not true, 1 = sometimes true, 2 = often true). Twenty-eight items were available in rating children aged 5 to 11 and 26 items were available in rating adolescents ages 12 to 17. We calculated the internal consistency reliability for the BPI and found it to be acceptable (.91 for children and .92 for adolescents).

**Results**

**Behavior Problems**

Multiple regression techniques were used to examine the relationships between the independent variables and the dependent variable of behavior problems (as measured by the BPI). In the first step of the regression, the dummy-coded variables for type of placement were entered as a group¹. In the second step of the regression, demographic variables were entered as a group. Separate regressions were performed for each age group (5 to 11 and 12 to 17). The results of the final model for each age group are presented in Table 2. When the demographic variables were included in the model, the direction, magnitude, and significance of the effects for type of placement remained relatively unchanged from the initial model for each age group.

For children ages 5 to 11, type of placement was significant in predicting total score on the BPI for children who had been placed in their adoptive home prior to 6 months of age and for foster children. The predicted means of the BPI for children in these groups were significantly higher than the predicted mean for non-adopted children (Table 3). The magnitude and direction of the effects was as predicted, with the exception of the effect for children placed in the adoptive home after 6 months of age. We did not find a significant effect for children who were placed in the adoptive home after 6 months. Small sample size in this group (\(N = 24\)) may have contributed to the lack of power to detect differences in this group. The overall fit of the model was also significant.

Similar results were seen for adolescents ages 12 to 17. Type of placement was significant in predicting the total score on the BPI both for those placed in the adoptive home before 6 months of age and for those placed in the adoptive home after 6 months of age (see Table 2). The predicted means for these groups were significantly higher than the mean of the non-adopted group (see Table 3). The magnitude and direction of the effects were as predicted with the exception of the foster children. Again, small sample size in this group (\(N = 13\)) may have

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¹ Skewness and kurtosis for each group by age is as follows. Ages 5 to 11, BP: 1.6/3.0, NRA \(\leq 6\) months: 1.3/1.8, NRA \(> 6\) months: 1.4/3.1, FC: 0.9/0.3. Ages 12 to 17, BP: 1.8/3.8, NRA \(\leq 6\) months: 1.2/0.8, NRA > 6 months: 1.3/1.2, FC: 0.5/–1.1.
Table 2
**Multiple Regression: Type of Placement and Sum of the Behavior Problem Index, Model 2**

<table>
<thead>
<tr>
<th>Coefficients</th>
<th>Ages 5 to 11</th>
<th>Ages 12 to 17</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Constant</strong></td>
<td>11.673/0.000*</td>
<td>14.873/0.000*</td>
</tr>
<tr>
<td><strong>SE</strong></td>
<td>(0.706)</td>
<td>(1.175)</td>
</tr>
<tr>
<td><strong>NRA</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Placed before 6 months</td>
<td>3.010/0.046*</td>
<td>2.727/0.033*</td>
</tr>
<tr>
<td><strong>SE</strong></td>
<td>(0.912)</td>
<td>(1.190)</td>
</tr>
<tr>
<td>Placed after 6 months</td>
<td>0.856/0.008</td>
<td>5.404/0.047*</td>
</tr>
<tr>
<td><strong>SE</strong></td>
<td>(1.440)</td>
<td>(1.680)</td>
</tr>
<tr>
<td><strong>FC</strong></td>
<td>9.622/0.062*</td>
<td>-0.436/−0.003</td>
</tr>
<tr>
<td><strong>SE</strong></td>
<td>(2.169)</td>
<td>(2.104)</td>
</tr>
<tr>
<td><strong>F</strong> (10 df)</td>
<td>23.917</td>
<td>16.043</td>
</tr>
<tr>
<td><strong>p-value</strong></td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td><strong>R²</strong></td>
<td>.016</td>
<td>.034</td>
</tr>
</tbody>
</table>

* Unstandardized/standardized regression coefficients.
* Standard error for unstandardized coefficients.

For ages 5–11: BP = 4856, NRA ≤ 6 mo = 62, NRA > 6 mo = 24, FC = 10; For ages 12–17: BP = 4459, NRA ≤ 6 mo = 43, NRA > 6 mo = 21, FC = 13.

Model controls for the following demographic variables: Child age, parent education, family income, child race, child sex.

*p < .05.

Table 3
**Predicted Means for Behavior Problem Index**

<table>
<thead>
<tr>
<th></th>
<th>Ages 5 to 11</th>
<th>Ages 12 to 17</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BP</strong></td>
<td>Mean (N)</td>
<td>Mean (N)</td>
</tr>
<tr>
<td>Placed before 6 months</td>
<td>9.7 (62)</td>
<td>9.6 (43)</td>
</tr>
<tr>
<td>Placed after 6 months</td>
<td>7.4 (24)</td>
<td>12.2 (21)</td>
</tr>
<tr>
<td><strong>FC</strong></td>
<td>16.7 (10)</td>
<td>7.1 (13)</td>
</tr>
</tbody>
</table>

* Fifty-six total points were possible for children age 5 to 11 and 52 total points were possible for adolescents age 12 to 17.

limited our ability to detect differences. Alternatively, it may be that being in a foster care placement does not have the same impact for older children as it does for younger children; this difference may, in turn, influence the amount of behavior problems they exhibit. The overall fit of the model was significant for this age range as well.

Verhulst et al. (1990a) have suggested that the problems that often are attributed to adopted children in general are actually present in only a relatively small number of cases. When these cases are included in analyses with other adopted children, the mean problem score of the group is raised, camouflaging the fact that the vast majority of adopted children have no more problems than nonadopted children. To explore this possibility, we performed regression diagnostic techniques to determine whether certain cases (known as “outliers” or “influential cases”) unduly influenced the regression results (Bollen & Jackman, 1990; Fox, 1997). These diagnostics detected a small number of adopted (N = 13) and foster children (N = 3) who may have exerted undue influence on the regression results. To assess their degree of influence, these cases were temporarily removed from the data and the regressions were re-estimated. These results are presented in Table 4.

For both age groups, exclusion of the small group of outliers noticeably changed the estimated effects for type of placement in terms of both magnitude and statistical significance. For children ages 5 to 11, adopted children (whether placed before or after 6 months of age) were not significantly different from nonadopted children in terms of their scores on the BPI. Although the effect for foster children in this age group remained significant, it decreased in magnitude by more than one standard error. A similar picture was seen in the 12- to 17-year-old sample, where the effects of the placement variables were no longer statistically significant. These results suggest that the overall differences in behavior problem scores between adopted, foster, and nonadopted children are largely the result of a very small number of adopted and foster children who have high scores on the BPI.

Mental Health Contact

Logistic regression was used to examine the dependent variable of mental health contacts. In the first step of the

3 Influential cases were detected using Cook’s D, Studentized Deleted Residuals, and Standardized Betas for all variables in the model. Cases were identified as influential if they fell above a designated cutoff point on all three statistics. Thirteen adopted children, 3 foster children, and 34 nonadopted children were detected as influential cases. For a detailed description of these procedures, please contact the authors.

3 We want to make clear that we are not arguing that these “outliers” do not belong in the sample. We are merely trying to demonstrate the undue influence this small number of observations has on the overall results.
Table 4
Multiple Regression: Type of Placement and Sum of the Behavior Problem Index
Excluding Influential Adoptee/Foster Cases, Model 2

<table>
<thead>
<tr>
<th></th>
<th>Coefficients</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ages 5 to 11</td>
<td>Ages 12 to 17</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>11.562</td>
<td>14.894</td>
<td></td>
</tr>
<tr>
<td>SEb</td>
<td>(0.703)</td>
<td>(1.167)</td>
<td></td>
</tr>
<tr>
<td>NRA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Placed before 6 months</td>
<td>1.257</td>
<td>-0.166</td>
<td></td>
</tr>
<tr>
<td>SEb</td>
<td>(0.945)</td>
<td>(1.254)</td>
<td></td>
</tr>
<tr>
<td>Placed after 6 months</td>
<td>-0.068</td>
<td>2.790</td>
<td></td>
</tr>
<tr>
<td>SEb</td>
<td>(1.460)</td>
<td>(1.748)</td>
<td></td>
</tr>
<tr>
<td>FC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>6.318</td>
<td>-1.434</td>
<td></td>
</tr>
<tr>
<td>SEb</td>
<td>(2.384)</td>
<td>(2.166)</td>
<td></td>
</tr>
<tr>
<td>F(10 df)</td>
<td>22.453</td>
<td>15.514</td>
<td></td>
</tr>
<tr>
<td>p-value</td>
<td>.000</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>R²</td>
<td>.044</td>
<td>.033</td>
<td></td>
</tr>
</tbody>
</table>

a Unstandardized/standardized regression coefficients.
b Standard error for unstandardized coefficients.

For ages 5–11: BP = 4856, NRA ≤ 6 mo = 57, NRA > 6 mo = 23, FC = 8; For ages 12–17: BP = 4459, NRA ≤ 6 mo = 38, NRA > 6 mo = 19, FC = 12.

Model controls for the following demographic variables: Child age, parent education, family income, child race, child sex.
*p < .05.

Table 5
Logistic Regression: Type of Placement and Mental Health Contact

<table>
<thead>
<tr>
<th></th>
<th>Ever received treatment</th>
<th>Treated in past 12 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>-4.318</td>
<td>-4.486</td>
</tr>
<tr>
<td>SE</td>
<td>(0.227)</td>
<td>(0.300)</td>
</tr>
<tr>
<td>NRA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Placed before 6 months</td>
<td>0.699*</td>
<td>0.988*</td>
</tr>
<tr>
<td>SE</td>
<td>(0.267)</td>
<td>(0.307)</td>
</tr>
<tr>
<td>Placed after 6 months</td>
<td>1.003*</td>
<td>1.098*</td>
</tr>
<tr>
<td>SE</td>
<td>(0.382)</td>
<td>(0.455)</td>
</tr>
<tr>
<td>FC</td>
<td>1.635*</td>
<td>2.127*</td>
</tr>
<tr>
<td>SE</td>
<td>(0.479)</td>
<td>(0.496)</td>
</tr>
<tr>
<td>χ² (7 df)</td>
<td>271.562</td>
<td>99.030</td>
</tr>
<tr>
<td>p-value</td>
<td>.0000</td>
<td>.0000</td>
</tr>
</tbody>
</table>

Ever received treatment: BP = 8585, NRA < 6 mo = 95, NRA > 6 mo = 38, FC = 21; Treated in the past 12 months: BP = 8574, NRA < 6 mo = 95, NRA > 6 mo = 38, FC = 21.

Model controls for the following demographic variables: Child age, parent education, family income, child race, child sex.
*p < .05.

regression, we entered the dummy-coded variables for type of placement. In the second step of the regression, we added the demographic variables. Separate analyses were conducted to examine each of two dependent variables: (1) whether the child had ever been treated for emotional or behavior problems, and (2) whether a mental health contact had occurred in the past 12 months. Results of the final model are presented in Table 5. When the demographic variables were included in the model, the direction, magnitude, and significance of the effects for type of placement remained relatively unchanged from the initial model for both age groups.

Placement status was significant in predicting the likelihood of a mental health contact for foster children, children placed in the adoptive home after 6 months of age, and children placed in the adoptive home before 6 months of age. The change in chi-square from the previous model was also significant. The likelihoods of receiving treatment for an emotional or behavioral problem are presented in Table 6. As predicted, foster children were most likely to have received treatment, followed by children placed in the adoptive home after 6 months of age, and children placed in the adoptive home before 6 months of age. Children living with at least one biological parent were least likely to have received treatment for an emotional or behavioral problem.

As predicted, foster children were the most likely to have received treatment in the past 12 months for an
emotional or behavioral problem (see Table 5). Placement status was a significant predictor of treatment for an emotional or behavioral problem in the past year. The overall change in chi-square was significant for this model. The likelihoods of receiving treatment for an emotional or behavioral problem in the past 12 months are presented in Table 6. As we saw in our previous analysis, foster children were most likely to have received treatment during the past 12 months, followed by children placed in the adoptive home after 6 months of age, children placed in the adoptive home before 6 months of age, and children living with at least one biological parent.

As seen in the regression results for the BPI, exclusion of the small group of influential cases noticeably changed the estimated effects for type of placement in terms of both magnitude and statistical significance. In the regressions examining whether the child had ever been treated for emotional or behavior problems and whether a mental health contact had occurred in the past 12 months, adopted children were no longer significantly different in their likelihood of receiving a mental health contact. Foster children were still significantly more likely to have had a mental health contact, both ever and in the past 12 months, but the effect decreased in magnitude by almost one standard error.

Discussion

Results of the regression analyses examining emotional and behavioral problems partially supported our predictions. First, we predicted that foster children would have the highest score on a behavior problems scale, followed by children placed in their adoptive homes after 6 months of age, children placed in their adoptive home before 6 months of age, and nonadopted children. For children aged 5 to 11, the results of the regression on the overall score on the behavior problem scale generally supported our prediction. The lone exception was children placed in their adoptive homes after 6 months of age; they did not have a higher score on the behavior problem scale than nonadopted children. For adolescents aged 12 to 17, the regression results on the overall score from the behavior problem scale again partially supported our predictions; the exception was foster children. Foster children did not have a higher score on the behavior problem scale than nonadopted children.

Further ad hoc analyses revealed that when we removed a small number of influential cases from the adoptee and foster groups, the “significant” differences in emotional and behavioral problems become insignificant. Although we are not questioning the legitimacy of the initial regression results, it is clear that these results were skewed by a small number of influential cases. For the most part, adopted and nonadopted children look very similar in terms of their scores on the behavior problem scale.

The distribution of scores on the behavior problem scale also highlights that there is a small group of adopted children with very high scores. Approximately 5% of adopted children have scores greater than three standard deviations from the mean of the BPI as compared to 1.7% of nonadopted children. This small group of adopted and foster children contributed disproportionately to the differences between adopted and nonadopted children in this sample. It seems likely that these are the children who end up in clinical samples; this would explain why studies of clinical samples have shown large differences between adopted and nonadopted children. This is also reflected in a meta-analysis of 66 studies on the psychological adjustment of adoptees performed by Wierzbicki (1993). The mean study effect size was .72, suggesting that adoptees had significantly higher levels of maladjustment. Yet the author noted that the studies finding that adoptees are over-represented in clinical populations were the greatest contributor to this effect size.

Two recent studies have also suggested the possibility of distributional differences in the behavior problems of adopted and nonadopted children (Haugaard, 1998; Sharma, McGrue, & Benson, 1998). Haugaard presents three different possible distributions to explain the small differences in adjustment between adopted and nonadopted children; one of these hypotheses is very similar to our findings reported above. Sharma et al. noted small but consistent differences in adjustment between adopted and nonadopted children, with larger differences in the upper tails of the distributions. The distribution of behavior problems reported in their research is very similar to our findings.

We believe that it would be an error to interpret the differences we report here as suggesting that adoption per se puts children at risk for behavior problems since the vast majority of adopted children show patterns of behavior problems that are very similar to those of nonadopted children. Most adopted children in our sample (88%) have behavior problem scale scores similar to those of nonadopted children. In fact, recent research using a nationally representative sample of children in the United States found no significant differences between adopted and nonadopted children on a range of adjustment variables (Borders et al., 1998). Our conclusions are similar to those of other adoption researchers (Brodzinsky et al., 1984; Brodzinsky, Smith, & Brodzinsky, 1998; Haugaard, 1998; Sharma et al., 1998).

Although the differences found between adopted and nonadopted children in terms of emotional and behavior problems are statistically significant, whether these differences hold clinical significance is quite another question. When the proportions of children with BPI scores over the 90th percentile are examined, adopted children generally are only slightly over-represented in comparison to nonadopted children, with the lone exception of adopted adolescents who had been placed after the age of 6 months (see Table 7). Again, when the influential cases are removed, these small differences disappear. Given the actual scores on the behavior problem scale in this representative sample of children in the United States, there is little reason to expect a need for differential treatment for the vast majority of adopted children.

In previous research on behavior problems in adopted children, small differences often have been interpreted as suggesting special clinical problems in adopted children. One such line of research, presented by Kirschner (1992; Kirschner & Nagel, 1988), suggests that there is a distinct
pattern of behavior and symptoms present in adopted children referred for treatment; Kirschner labels this the “Adopted Child Syndrome.” This hypothesized “syndrome” consists of antisocial and delinquent behaviors (such as lying, stealing, running away, and impulsivity), all of which are typically associated with conduct disorder. Kirschner even suggests that this syndrome can lead to patricide. Some might try to use the fact that we found a statistically significant difference between the BPI scores of adoptees and nonadoptees in support of the existence of such a syndrome. However, this would be in error. The differences in BPI scores that we found are very small and they disappear entirely when we set aside a small subset of particularly troubled children. Additionally, when the final models for each age group are examined, the total variance accounted for is very small (5–11, $R^2 = .044$; 12–17, $R^2 = .033$). We emphasize these points because of our concern that an error in interpretation could lead to the pathologizing of a very effective intervention for children.

Our analyses of mental health contacts also supported our predictions. First, we predicted that foster children would be most likely to receive a mental health contact, followed by children placed in their adoptive home after 6 months of age, children placed in their adoptive homes before 6 months of age, and nonadopted children. The results supported our predictions both for (1) the likelihood of ever having received treatment for an emotional or behavioral problem and (2) the likelihood of having received treatment in the past 12 months. Additional ad hoc analyses revealed that, when we removed a small number of influential cases from the adoptee and foster groups, the significant differences in mental health contact for adopted children disappeared. This finding supports our earlier suggestion that a small and particularly troubled group of adopted children may be ending up in clinical populations, thus creating the over-representation of adopted children in clinical samples.

When we examined the distribution of adopted children referred for mental health services it appeared that adoptive parents sought such help at a lower threshold (in terms of the number and severity of behavior problems) (Warren, 1992). At one standard deviation above the mean on the BPI, adopted children are almost twice as likely to have received a mental health contact in the past 12 months as nonadopted children ($NRA = 29\%$, $BP = 16\%$). This suggests that the increased likelihood of mental health contact is not related purely to an increased number of behavior problems.

Warren (1992) has suggested several reasons why adoptive families might have a relatively low threshold at which they seek professional help for their children. First, some adoptive parents may be “looking for problems” due to the stigma attached to adoption in this country (Brodzinski, 1987). Second, problems experienced by adopted children may be more disruptive in an adoptive family than in a nonadoptive family because the problems may be seen as a threat to family identity. Third, the fact that most adoptive parents have had extensive contact with social service agencies during and after the adoption may help them to understand the potential benefits of mental health treatment. Such an awareness might lead them to seek treatment before their children’s problems become very severe. Finally, some researchers have suggested that adoptive families have a higher income than nonadoptive families and that these resources allow adoptive parents to seek mental health services for their children more frequently than parents of nonadopted children (Ingersoll, 1997).

Our findings regarding foster children are difficult to interpret for two reasons. First, the sample size for foster children was very small and limited the power of our statistical techniques to detect any differences. Second, it was common for foster children to be missing some background data; this led to their exclusion from many individual analyses. It seems clear that foster parents often have limited information about the children in their care.

Despite these limitations, it remains true that young children in foster care do have significantly higher scores on the behavior problem scale than children in any other placement type. For young children, foster care appears to be associated with a significant elevation in behavior problems. This may be related to the fact that foster children often have to move from one foster home to another and are unable to form significant attachments to any one caretaker. One possible conclusion is that moving children from foster care to adoptive homes as soon as possible might be beneficial to the behavioral adjustment of these children. However, it must be recognized that many children who are in foster care have been neglected or abused. Such preplacement experiences may contribute to the behavior problems seen in foster children; we should not expect adoption to “undo” such damage. Because our sample did not include information about childhood abuse and neglect, we cannot generalize our findings regarding foster children.

Two additional issues regarding the current study should be pointed out. One pertains to research...
suggesting that adopted children are more likely to show an increased risk for externalizing and learning problems (Brodzinsky et al., 1987; Rogeness, Hoppe, Carlos, Fischer, & Harris, 1988; Verhulst et al. 1990a). This was not explored in the current study, and research continues to be needed in this area. A second relates to the lack of information about type of adoption. We were not able to explore issues related to type of adoption as this information was not available to us. Given the diversity of adoption today, it is important to consider these issues in future research.

Our results suggest two additional areas for future research. One has to do with the impact of pre-placement experiences on the behavioral adjustment of adopted children. Many children adopted beyond infancy have experienced abuse or neglect from previous caretakers and have had many disruptions in care. As a result, attachment difficulties may leave these children vulnerable to emotional and behavioral problems (Groze & Rosenthal, 1993). With recent changes in adoption practices, including the increase in “special needs” adoptions, it becomes increasingly important to understand the impact of pre-placement experiences on adoption adjustment. Future research that examines pre-placement experiences as well as placement type may help us to better understand the complex relationship between changes in family placement and behavior problems.

Another target for further study is the small group of adopted children who have very high behavior problem scale scores. Since we suspect that these are the children who frequently are seen in the mental health system for treatment, it is crucial that we gain a better understanding of the factors that make these children vulnerable to emotional and behavioral problems. It is likely that a variety of factors contribute to the emotional and behavioral difficulties seen in these children; such factors might include (1) a genetic predisposition to emotional and behavior problems, (2) prenatal substance abuse by the birth mother, (3) pre-adoption experiences such as neglect, abuse, and multiple placements, and so on. Although these factors may be associated with adoption, they are not specific to adopted children. We believe that it is a serious mistake to suggest that adoption per se leads to emotional and behavioral problems in adopted children. Such a misinterpretation of the data adds unneeded emotional and behavioral problems in adopted children. It is a serious mistake to suggest that adoption per se leads to emotional and behavioral problems in adopted children.

References


BEHAVIOR PROBLEMS


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