MOTHER'S AGE AND RISK FOR PHYSICAL ABUSE

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Abstract—It is widely believed that young mothers are at greater risk of engaging in physical abuse. However, this relationship is not clearly supported by previous empirical research. This study reexamines the issue using a nationally representative sample of 1,997 mothers. All analyses controlled for family income, race, number of minor children in the home, age of abused child, mother's education, and whether mother was a single parent. Physical abuse was measured with the Conflict Tactics Scales. Using mother's age at time of birth of the abused child, the younger the mother, the greater the rate of child abuse; however, there was not a significant relationship when mother's age was measured at time of abuse. Large families and minority group children were also found to be at greater risk of abuse. The paper discusses implications for further research and for prevention of child abuse.

Key Words—Physical abuse, Mother's age, Minority, Family.

YOUNG, POORLY EDUCATED, single mothers from lower socioeconomic groups are commonly identified as being at high risk to abuse (Garbarino, 1977; Murphy, Orkow, & Nicola, 1985; Straus, Gelles, & Steinmetz, 1980). However, as Bolton (1981, p. 486) points out "... the seemingly obvious relationship between adolescent parenting and child maltreatment has escaped clear confirmation by empirical research." That confusion continues in our review of the literature and Starr's (1988). In view of the inconsistency in findings on the link between mother's age and child abuse, additional research is needed. The study reported in this paper is a step in that direction. It is based on a large and representative sample of American mothers, and it includes information on a number of other variables associated with early motherhood as well as being related to child abuse: family income, number of minor children in the household, age of abused child, mother's education, race, and whether the mother was a single parent. These variables might be confounded with mother's age and the confounding might explain some of the inconsistencies in the previous research. The purpose of this study was to estimate the relationship between mother's age and physical abuse of children. We hypothesized (a) The younger the age of the mother, the greater the probability of physical abuse; and (b) The more minor children at home, the greater the probability of physical abuse.

RISKS ASSOCIATED WITH EARLY MOTHERHOOD

Young mothers are widely thought to be at greater risk of child abuse because of a number of characteristics associated with early child bearing are also associated with an increased risk of abusive behavior (Straus, Gelles, & Steinmetz, 1980), including:

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• Inadequate support systems (Dunst, Vance, & Cooper, 1986).
• Insufficient knowledge and experience in child rearing (Field, 1980; McAnarney, Lawrence, & Aten, 1979; Yoos, 1987).
• Inadequate education (Mott & Marsiglio, 1985).
• Early repeated pregnancy (Matsuhashi et al., 1989).
• Perinatal difficulties (Elmer & Gregg, 1967; Lia-Hoagberg et al., 1990; Ounsted, Oppenheimer, & Lindsay, 1974).
• Failure to secure prenatal care during the first trimester mothers (Lia-Hoagbert et al., 1990).
• Immaturity, unfulfilled dependency needs, and poor knowledge of child development (Field, 1980; McAnarney et al., 1979; Starr, 1988).
• Marital violence (Straus, Gelles, & Steinmetz, 1980; Stets & Straus, 1987).

Although the above listed life circumstances and characteristics associated with early motherhood would seem to place a young mother at a higher probability for abuse, a detailed examination of the evidence indicates that much of it is questionable or inconsistent. For example, Starr’s review of the evidence on single parenthood (1988) indicates that a clear linkage has not been established.

PREVIOUS STUDIES OF MOTHER’S AGE AND CHILD ABUSE

The studies reviewed in the previous section show that early child bearing is linked to characteristics and life circumstances that are associated with a high risk of abusive behavior. However, as noted earlier, reviews of the empirical studies did not find consistent evidence showing that younger mothers are at greater risk of child abuse. Table 1 summarizes the studies reviewed by Bolton and studies published since then. The + signs in the last column of Table 1 show that five of the 12 studies found evidence supporting the hypothesis that the rate of child abuse is greater for young mothers. In Table 1 “?” indicates four reported findings that can be interpreted as providing some, but questionable, support for the age hypothesis; and the “0” indicates that three studies found no relationship. Thus, our review is consistent with Bolton’s (1981) conclusion that the empirical evidence fails to support the seemingly obvious relationship between early parenthood and child abuse.

There could be many reasons for the discrepancies between these studies, including methodological deficiencies that might invalidate some of the studies and differences in the way the studies were carried out. For example, Gil (1970) reported no relationship of age of mother to child abuse. However, Gil failed to compare the age distribution of the abusive mothers with the age distribution of mothers in the general population. Straus et al. (1980) did find support for the age hypothesis, but their age categories (under 30 and 30 and over) do not provide information on the presumably high-risk groups of the teens to the early twenties. The discrepancies between studies might also be due to lack of standardized procedures for defining abuse, and lack of multivariate analysis to control for confounding with other variables identified in the preceding section. Another possible source of inconsistency may occur because older mothers tend to have more children, and additional children require dividing material and emotional resources and may increase the risk of child abuse (Straus, Gelles, & Steinmetz, 1980; Zuravin, 1988). Differences in marital status between study populations is still another
Table 1. Summary of Research on Relation of Mother's Age to Physical Abuse

<table>
<thead>
<tr>
<th>Author &amp; Date</th>
<th>Sample</th>
<th>Mother's Age at time of</th>
<th>Relation of Age to Abuse</th>
<th>Age Hypothesis Supported*</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Humane Assoc., 1977*</td>
<td>Mothers validated for child abuse</td>
<td>1st birth</td>
<td>No age difference</td>
<td>0</td>
</tr>
<tr>
<td>Benedict et al., 1985</td>
<td>Mothers reported for physical abuse</td>
<td>Birth of abused child</td>
<td>Abusive mothers younger</td>
<td>?</td>
</tr>
<tr>
<td>Bolton et al., 1980</td>
<td>Mothers reported for child maltreatment</td>
<td>1st birth</td>
<td>Higher rate by adolescent mothers</td>
<td>+</td>
</tr>
<tr>
<td>Bolton &amp; Lanier, 1981</td>
<td>Mothers reported for child maltreatment</td>
<td>1st birth</td>
<td>Higher rate by adolescent mothers living alone</td>
<td>+</td>
</tr>
<tr>
<td>Coll. et al., 1987</td>
<td>Low-middle SES primiparous Caucasian women</td>
<td>1st birth</td>
<td>Higher rate of punishment by adolescents, but difference n.s. when SES &amp; ed. controlled</td>
<td>?</td>
</tr>
<tr>
<td>Gil, 1970*</td>
<td>Mothers reported for physical abuses in 30 U.S. cities/counties</td>
<td>1st birth</td>
<td>Teens over represented in report population but no diff. between mothers under &amp; over 20</td>
<td>?</td>
</tr>
<tr>
<td>Kinard, 1976*</td>
<td>Mothers of 30 physically abused and 30 nonabused children</td>
<td>1st birth</td>
<td>No age difference, but both groups have higher % of teens than in general population</td>
<td>?</td>
</tr>
<tr>
<td>McCarthy, 1978*</td>
<td>Mothers reported for physical abuse</td>
<td>1st birth</td>
<td>Teens over represented in abuse sample</td>
<td>+</td>
</tr>
<tr>
<td>Murphy et al., 1985</td>
<td>Mothers in Mother-Infant, Children &amp; Youth project</td>
<td>Birth of abused child</td>
<td>No age difference</td>
<td>0</td>
</tr>
<tr>
<td>Philliber &amp; Graham, 1981</td>
<td>Urban Black &amp; Hispanic Primiparas</td>
<td>1st Birth</td>
<td>No relationship to age</td>
<td>0</td>
</tr>
<tr>
<td>Straus et al., 1980</td>
<td>National sample of 1,146 parents</td>
<td>Abuse</td>
<td>Higher rate by mothers under 30</td>
<td>+</td>
</tr>
<tr>
<td>Zaravin, 1988</td>
<td>Single parent welfare mothers</td>
<td>1st birth</td>
<td>No overall difference but higher rate by young mothers with multiple children</td>
<td>+</td>
</tr>
</tbody>
</table>

* + = Yes; ? = Some support, but not clear; 0 = No relation with age. *As reanalyzed by Kinard & Klerman, 1980.

source of inconsistency because the presence of a partner may affect the probability of abuse. If a spouse is available, this in itself may increase the chance of abuse by another family member. Although factors such as the availability of parental support, number of children, and presence of a spouse may somewhat mitigate the effect of early motherhood, we expect to find that even with these factors controlled, youthfulness will remain a risk factor for physical abuse. Finally, the studies used different methods to measure maternal age.

In view of these problems, it is difficult to conclude from existing studies whether the mother's age is a risk factor for child abuse. The study reported in this paper, although it has its own limitations, can help overcome some of these problems because it uses a standardized measure of abuse, a large and representative sample of mothers, and also applies multivariate analysis to control for confounding of age and abuse with other variables.

METHOD

Sample and Procedure

The subjects are part of the National Family Violence Survey (Straus & Gelles, 1986, 1990). This is a nationally representative sample of American families conducted in 1985. To be
eligible for inclusion, a household had to include adults 18 years of age or older who were either (a) currently married, (b) currently living as a male-female couple, (c) divorced or separated within the last 2 years, or (d) single parent with a child under 18 years of age and living in the household. The interviews were conducted by telephone in the summer. The response rate was 84%. Further information on the sampling design, characteristics of the sample, and validity of the telephone interviews is given in Straus & Gelles (1986, 1990). The cases analyzed for this paper are women between the ages of 18 and 46 with a child age 17 and under at home (N = 1,997).

Logistic regression (logit) was used to test the hypotheses, while controlling for six variables: family income, number of minor children in the household, age of abused child, mother’s education, race, and whether the mother was a single parent. The analysis was done using the microcomputer program STATA (Hamilton, 1990). Logit is the appropriate regression technique when the dependent variable is dichotomous, either occurring or not occurring (Aldrich & Nelson, 1984; Hanushek & Jackson, 1977; Hamilton, 1990).

Measurement of Physical Abuse

For purposes of this research, physical abuse was measured by use of the Conflict Tactics Scales (CTS) (Straus, 1979, 1990a, 1990b). The CTS is intended to measure use of reasoning, verbal aggression, and physical aggression between parent and child. This instrument has been used in many studies of physical violence between spouses and by parents toward children. The CTS begins by asking the subject to think about the problems and conflicts that she had with the child during the previous 12 months, and then to respond to a list of questions on what she did in those situations. The list begins with items making up the reasoning scale, then goes on to items in the verbal aggression scale, and finally the violence or physical aggression scale. The violent acts are arranged in increasing order of severity. The first three of the violence scale items refer to acts such as spanking that are considered to be ordinary physical punishment. The remaining six items are used to create the measure of child abuse. These are acts that have a higher risk of producing an injury than the ordinary physical punishment acts. The six items making up the child abuse scale of the CTS are: kicked, bit, or hit with fist; hit or tried to hit with something; beat up; burned or scalded; threatened with a knife or gun; used a knife or gun. If the mother reported using one or more of these acts, she was classified as having engaged in physical abuse.

Independent and Control Variables

Mother’s age. Two measures of mother’s age were used: (1) age at the time of abuse and (2) age at time of abused child’s birth. Since the abuse data are for the 12 months up to the time of the interview, mother’s age at time of abuse is approximately the same as the mother’s age at the time of interview. Age at time of the child’s birth was computed by subtracting the age of the child from the mother’s current age. For purposes of this paper, women over the age of 46 were excluded from the sample.

Control variables. The section on Risks Associated with Early Motherhood indicates a number of variables that are likely to be confounded with early motherhood and which therefore need to be controlled. Consequently all analysis controlled for family income, race, number of minor children, age of abused child, mother’s education, and whether the mother was a single parent. By including these variables in the analysis, we can determine the effect of mother’s age net of the other variables and also investigate their effect on the risk of child abuse.
Table 2. Descriptive Statistics for Abuse and Nonabuse Cases

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Abuse</th>
<th>No. Abuse</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mother's age at abuse</td>
<td>32.9 ± 6.2</td>
<td>34.6 ± 6.8</td>
</tr>
<tr>
<td>Mother's age at time of child's birth</td>
<td>24.6 ± 5.1</td>
<td>25.5 ± 5.3</td>
</tr>
<tr>
<td>Race = white</td>
<td>47.5%</td>
<td>60.8%</td>
</tr>
<tr>
<td>Single parent</td>
<td>27.5%</td>
<td>25.7%</td>
</tr>
<tr>
<td>Family income</td>
<td>$22,000</td>
<td>$24,941</td>
</tr>
<tr>
<td>Number of minor children in household</td>
<td>2.2 ± 1.2</td>
<td>1.9 ± 1.0</td>
</tr>
<tr>
<td>Mean age of referent child</td>
<td>8.4 ± 4.5</td>
<td>8.8 ± 5.4</td>
</tr>
<tr>
<td>Mother's education</td>
<td>12.7 ± 2.4</td>
<td>17.9 ± 2.6</td>
</tr>
</tbody>
</table>

RESULTS

Abuse and Nonabuse Cases

Of the 1,997 cases analyzed for this paper, 12.6% or 251 mothers reported acts that the CTS classify as abuse. The remaining 1,746 cases are the comparison group. The minimum age for eligibility to participate in the study was 18, therefore, the age range for the mothers analyzed was 18–46 at the time of the interview. The average family income was $24,518 (SD = $15,106) with 19.2% having a family income less than $10,000. Sixteen percent of the mothers were college graduates and 64.9% had completed high school. Nineteen percent had less than 4 years of high school. Table 2 compares the abuse and nonabuse cases in respect to each of the independent variables in the study.

Mother's Age

The logit analysis using mother's age at time of abuse showed trends that were consistent with the hypotheses, but not statistically significant. However, analysis using mother's age at time of birth of the abused child produced a statistically significant relationship, as shown in Table 3. The odds ratio is shown in Table 4, and the relationship is graphed in Figure 1. The downward slope of all the plot lines in Figure 1 shows that the younger the mother at the time of the birth of the "referent child," the higher the probability of child abuse during the year of this study.

Other Risk Factors

Family size. The lower half of Figure 1 shows that the plot line for families with five or more children is above that for three children, and the lowest line is for families with one child at

Table 3. Logistic Regression of Child Abuse on Mothers Age at Birth of Abused Child and Six Other Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Logit Coefficient</th>
<th>Standard Error</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mother's age</td>
<td>-0.277</td>
<td>0.015</td>
<td>-19.90</td>
<td>0.047</td>
</tr>
<tr>
<td>Race</td>
<td>-0.503</td>
<td>0.014</td>
<td>-3.480</td>
<td>0.001</td>
</tr>
<tr>
<td>Number of children</td>
<td>0.213</td>
<td>0.012</td>
<td>3.479</td>
<td>0.001</td>
</tr>
<tr>
<td>Mother's education</td>
<td>0.126</td>
<td>0.014</td>
<td>8.777</td>
<td>0.115</td>
</tr>
<tr>
<td>Age of child</td>
<td>-0.0105</td>
<td>0.014</td>
<td>-0.787</td>
<td>0.331</td>
</tr>
<tr>
<td>Single parent</td>
<td>0.0782</td>
<td>0.017</td>
<td>-0.453</td>
<td>0.651</td>
</tr>
<tr>
<td>Family income</td>
<td>-0.0786</td>
<td>0.0593</td>
<td>-1.326</td>
<td>0.185</td>
</tr>
<tr>
<td>Constant</td>
<td>-1.4116</td>
<td>0.475</td>
<td>-3.348</td>
<td>0.001</td>
</tr>
</tbody>
</table>

Note. Number of obs = 1997; Log Likelihood = -735.9628; chi-square = 38.24; p < .0001.
home, indicating that the risk of physical abuse increases as the number of children increases. However, all three plot lines show that the younger the age of the mother, the greater the probability of physical abuse.

*Minority groups* The logit analysis also found that minority status, which in this sample is almost entirely Afro-American and Hispanic, is associated with an increased probability of child abuse. In the upper half of Figure 1, this is shown by the higher plot line for minority mothers. Figure 1, however, also shows that early motherhood is a risk factor for child abuse among white mothers as well as among minority-groups mothers.

*Nonsignificant variables* Four other variables analyzed in the logistic regression model were not found to be statistically significant. Specifically, we found that low-education mothers, young children, single mothers, and low-income mothers are not more likely to abuse or be abused. When the overlap of the four variables with the three significant variables is taken into account, as was done in the logistic regression analysis, they become nonsignificant.

**DISCUSSION**

The results of this study show that the younger the mother at the time of the birth of the abused child, the higher the probability of child abuse during the year of this study, whereas we found no significant difference according to the age of the mother at the time of the abuse. These findings confirm Zuravin’s (1988) argument of the importance of age at first birth rather than age at time of abuse. The difference between the two ways of measuring mother’s age can be illustrated by imagining two mothers, both age 22 at the time of abuse. However, one is the mother of a 1-year-old, and the other the mother of a 6-year-old. The later had to cope with birth, and with care of an infant, at age 16. For the reasons indicated earlier in this paper, there are circumstances associated with such early child rearing that increase the risk of abuse.

The results also support hypothesis 2: The more children, the greater the risk of child abuse. This result is not surprising since additional children require dividing material and emotional resources, which increase the probability of child abuse (Straus et al., 1980; Zuravin, 1988).
Figure 1. Physical abuse by mother's age, number of children, and race.
Although we found that minority group mothers have a higher probability of child abuse, the data also indicate that early motherhood is a risk factor for child abuse among white mothers as well as among minority group mothers.

Our finding that the age of the child is not related to child abuse contradicts other data indicating that infants are at greater risk of physical abuse. This discrepancy could have several explanations. For example, the discrepancy could reflect differences in the way physical abuse is measured. The measure of physical abuse used in this study is based on whether the child was severely assaulted, regardless of whether the assault resulted in an injury; whereas, most other data, for example, the data from state child protective services records analyzed by the American Association For Protecting Children (1986), is largely based on whether there was an injury that brought the case to public attention. Wauchope and Straus (1990) found that infants are not attacked more often than older children. However, shaking a 6-year-old is unlikely to produce an injury, while shaking a 6-month-old can be fatal. Thus, when child abuse is measured by whether the child is injured, there is a higher rate of child abuse among infants, even though there is no difference in the percent of infants and older children who are assaulted by a parent (Straus, 1990b).

Our findings that low-education mothers, single mothers, and low-income mothers are not more likely to abuse contradicts previous studies showing that these variables are risk factors for child abuse. Since the model tested in the present study is more fully specified than has previously been the case, it suggests that the previous findings may reflect confounding with the factors that are controlled in this study: early motherhood, large family size, and minority groups status. Further research on the nonsignificant variables is needed to resolve the discrepancies between studies and might also yield additional understanding of the etiology of child abuse, as we think has resulted from our analyses of the discrepancies between studies of the effect of mother’s age and of child’s age on child abuse.

SUMMARY AND CONCLUSIONS

The relationship between mother’s age and child abuse is often mentioned but seldom adequately investigated. Moreover, the results of those investigations are inconsistent. The research reported in this paper was undertaken in the hope that it could provide more definitive data on the issue. It reports findings based on a study of 1,997 mothers in the 1985 National Family Violence Survey. It uses a perspective that assumes that physical abuse of children is a complex phenomena with multiple causes. The present study includes six variables identified as related to child abuse that might be confounded with mother’s age. The findings can be summarized as follows:

1. The younger the mother, the greater the risk of physical abuse, provided mother’s age is measured as age at time of birth of abused child. A significant relationship was not found when mother’s age was measured as age at time of abuse. This suggests that the problem lies in difficulties in coping with birth and infancy at a young age due to immaturity, lack of education, and low income at that point.

2. Minority group children are at higher risk of physical abuse.

3. The number of children in the household adds to the risk of child abuse. At age 25, mothers with five or more minor children at home have about double the probability of physically abusing a child than mothers with one child at home.

The use of logistic regression enabled us to conclude that the findings on mother’s age apply regardless of the age of the child, number of children, minority groups status, education, being a single parent, or low income.
These findings have implications for steps that can be taken to prevent physical abuse. The findings confirm the importance of making contraceptives and abortion widely available so that motherhood can be postponed and to enable family size to be controlled. The findings further suggest that steps to reduce the poverty that is so often associated with minority groups (Roberts, 1979) and young motherhood status can lower the rate of child abuse. Although our study found that poverty was not significant by itself, it is associated with early childbearing and high fertility. Thus a reduction in poverty can have an indirect effect by reducing the number of young mothers and multichild families and therefore help bring about a lower incidence of child abuse.

Other factors also need to be investigated to fully understand the circumstances that produce a high rate of abuse among young mothers. For example, the support system available to the mother as well as cultural norms and expectations may affect the risk of a young mother physically abusing a child. Thus, an adolescent mother may not be at a high risk of abusing her child if adequately supported by members of informal and support networks (Barrera, 1981; Dunst et al., 1986; Garbarino, 1982; Held, 1981; Howse & Kotch, 1984) or raised in a society that does not advocate the use of corporal punishment. Nevertheless, the findings of this study suggest that unless mitigating factors such as social support are identified and present, early motherhood is associated with an increased risk of physical abuse.

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REFERENCES


Résumé—On estime généralement que le risque de maltraitance physique est partiellement élevé chez les jeunes mères. Toutefois, il existe peu de preuves empiriques pour appuyer cette croyance. Cette étude s’est donc penchée sur la question en recueillant des données à partir d’un échantillon national représentatif comprenant 1,997 mères. Les variables suivantes ont été prises en considération: le revenu familial, la race, le nombre d’enfants en âge mûr vivant à la maison, l’âge des enfants maltraités, la scolarité de la mère, et enfin, son statut civil pour connaître s’il s’agit d’une famille mono-parentale. La maltraitance a été mesurée à l’aide du Conflicts Tactics Scale. L’étude démontre que plus les mères sont jeunes au moment de la naissance, plus le taux de maltraitance se trouve élevé; cependant, on note que l’âge de la mère au moment de la maltraitance n’apparaît pas un facteur significatif par rapport à la maltraitance. Les enfants de parents monoparentaux sont plus exposés au risque de maltraitance. L’article dégage des conclusions concernant de futures recherches possibles et la prévention des mauvais traitements.

Resumen—Es una creencia generalizada que las madres jóvenes están en mayor riesgo de abusar físicamente de sus hijos. Sin embargo, esta relación no está claramente comprobada en investigaciones anteriores. Este estudio reexamina este aspecto usando una muestra nacional representativa de 1,997 madres. Todos los análisis utilizados controlaron ingreso familiar, raza, número de hijos menores en la casa, edad del niño abusado, educación de la madre, y si la madre estaba sola en la crianza. El abuso físico fue medido con la "Conflicts Tactics Scales." Utilizando la edad de la madre en el momento del nacimiento del hijo abusado, siempre más joven la madre, mayor la tasa de abuso al niño; sin embargo, no hubo una relación significativa cuando la edad de la madre se medía en el mismo momento del abuso. Las familias numerosas y los hijos de grupos minoritarios también se encontró que estaban en mayor riesgo de abuso. El trabajo discute las implicaciones para futuras investigaciones y para la prevención del abuso a los niños.