Young Women’s Antisocial Behavior and the Later Emotional and Behavioral Health of Their Children

Sandra L. Martin, PhD, and Margaret R. Burchinal, PhD

Introduction

Antisocial and criminal behavior are on the upswing among US youth, especially among females. This trend raises questions concerning whether youthful female deviant behavior eventually will have negative behavioral and emotional consequences for the later children of these women.

Methods. Associations between the severity of early female antisocial behavior (including both drug-related and non-drug-related offenses) and the later behavioral and emotional health of the children of these women were examined among 1425 mother-child pairs of the National Longitudinal Survey of Youth.

Results. Multiple linear regression procedures indicated a significant positive relationship between the severity of the mothers’ early non–drug-related offenses and the later severity of the children’s scores on the Antisocial, Hyperactive, Anxious/Depressed, Headstrong, Peer Conflict/Social Withdrawal, Immature Dependency, and Total Problem subscales of the Behavior Problem Index.

Conclusions. This study demonstrated an association between the antisocial behavior of female youth and the later behavioral and emotional problems of the children of these women. Future research needs to determine the mechanisms underlying the intergenerational transmission of these types of problems so that effective preventive and therapeutic public health practices may be designed and implemented. (Am J Public Health. 1992;82:1007-1010)

Materials and Methods

The National Longitudinal Survey of Youth

The NLSY began in 1979 as a prospective study of factors that influence the labor force participation of American young people.

The original cohort included both men and women, aged 14 to 24 years, with an overrepresentation of African Americans, Hispanics, and economically disadvantaged non-Hispanic Whites. Since the inception of the project, 1-hour personal interviews of cohort members have been conducted annually, with 95% of the sample being reinterviewed each year.

Interview content varies from year to year, with information being collected on a multitude of factors, including socioeconomic, sociodemographic, familial, health, and behavioral characteristics. During the 1980 interview, the Self-Reported Delinquency Index was used to assess the frequency of cohort participation in antisocial activities (e.g., vandalism, selling drugs). During the 1986 interview, female participants who were mothers of children at least 4 years of age were administered the Behavior Problem Index to assess their children’s emotional and behavioral health. Thus, linking the 1980 and 1986 NLSY interviews allows examination of the relationship between the antisocial behavior of female youth and the later emotional and behavioral health of the children of these women.

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Sample Selection

Of the 1612 NLSY women who participated in the assessment of their children’s behavioral and emotional health, 1425 (88%) had complete information available for all selected analysis variables for both the 1980 and 1986 interviews; therefore, these 1425 women and their first-born children were selected to be included in this study. Comparison of the 1425 women with complete information with the 187 women with incomplete information indicated no statistically significant differences (P < .05) in terms of the women’s ethnicity, age, educational attainment, employment histories, marital status, number, age and gender of children, and children’s scores on the emotional/behavioral assessments.

Assessment of the Women

The severity of the antisocial behavior of the women in 1980 was assessed using the Self Reported Delinquency Index.9 This instrument is a listing of 16 specific antisocial behaviors (e.g., stealing items worth more than $50, selling hard drugs) to which the subject responds by noting the frequency of his or her participation in each of the behaviors during the past year (i.e., “never,” “once,” “twice,” “three to five times,” “six to ten times,” “eleven to fifty times,” and “more than 50 times”). Item scores are calculated by assigning the midpoint value of the first five response categories and assigning a score of 50 to those who responded in the “50 or more” category. Then, two summary indices, severity of drug offenses and severity of nondrug offenses, are created by summing the subject’s scores to pertinent behavioral items and dividing by the number of items composing each index (see Table 1 for the offenses included in each summary index). For analysis purposes, a square root transformation was used on the severity indices to help suppress the effects of the few extreme outlying values of these predictor variables.

Care was taken in administering the Self Reported Delinquency Index to promote an environment in which the respondents would feel comfortable answering potentially sensitive questions (e.g., respondents were assured of confidentiality; respondents recorded their answers on separate response sheets rather than responding aloud to questions; respondents placed their completed response sheets within envelopes, which they then sealed). Despite the delicate nature of these questions, more than 98% of all subjects completed the assessment. Although it should be recognized that any self-report measure of antisocial behavior is likely to represent an underreport of the true prevalence of the behavior, studies of the Self Reported Delinquency Index, which compared the severity indices with information concerning police contact and school behavior problems, report good reliability and validity.9

The 1980 and 1986 interviews also collected information concerning the women’s ethnicity, age, years of education, marital status, and poverty status. The poverty status of the women was assessed using modified federal guidelines based on income, family size, and residence.12,13

Assessment of the Children’s Emotional and Behavioral Health

The emotional and behavioral health of the children was assessed in 1986 using the Behavior Problem Index (BPI).10,11 This instrument is a listing of 28 specific childhood problem behaviors or symptoms, many items being drawn from previous scales.14-17 The child’s mother responds to each of the BPI items indicating whether the symptom in question has been typically exhibited by her child within the past 3 months. Positive responses to specific items are summed to create a Total Problem score and the following six empirically derived subscale scores: (1) Antisocial, (2) Hyperactive, (3) Anxious/Depressed, (4) Headstrong, (5) Peer Conflict/Social Withdrawal, and (6) Immature Dependency. The Total Problem score and the subscale scores have been standardized by age and gender based on general population samples (mean = 100, SD = 15). Reliability estimates of the Total Problem score range from .86 to .89, while those for the various subscale scores range from .54 to .73.10

Analysis

Linear regression analyses18 were conducted to examine the potential associations between the mothers’ severity of drug and nondrug offenses and their children’s levels of emotional and behavioral problems. First, the children’s BPI Total Problem scores were analyzed. Then, each of the five BPI subscale scores was analyzed. Three sets of predictor variables were used in the models. The first set consisted of the variables of interest, namely, the mother’s severity of drug and nondrug offenses indices. The second set of predictors included sampling variables that had been used to select the original NLSY cohort, specifically, ethnicity (African American, non-Hispanic White, Hispanic), poverty (yes, no), and an ethnicity by poverty interaction term. The interaction term was necessary because the NLSY oversampled Hispanics, African Americans, and impoverished non-Hispanic Whites. The third set of predictor variables was selected to control for potential confounders. These variables included the mother’s age at the time she

### Table 1—Number and Percentage of Women Who Committed Each Type of Offense and the Mean Annual Frequency of Each Offense

<table>
<thead>
<tr>
<th>Offense</th>
<th>Subjects Committing Offense</th>
<th>Offense Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Drugs</td>
<td>232</td>
<td>16</td>
</tr>
<tr>
<td>Using hard drugs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selling marijuana</td>
<td>75</td>
<td>5</td>
</tr>
<tr>
<td>Selling hard drugs</td>
<td>19</td>
<td>1</td>
</tr>
<tr>
<td>Nondrug</td>
<td>419</td>
<td>29</td>
</tr>
<tr>
<td>Assault</td>
<td>320</td>
<td>22</td>
</tr>
<tr>
<td>Physical fighting at school/work</td>
<td>272</td>
<td>19</td>
</tr>
<tr>
<td>Fraud</td>
<td>264</td>
<td>19</td>
</tr>
<tr>
<td>Petty theft</td>
<td>132</td>
<td>9</td>
</tr>
<tr>
<td>Vandalism</td>
<td>110</td>
<td>8</td>
</tr>
<tr>
<td>Aggravated assault</td>
<td>108</td>
<td>8</td>
</tr>
<tr>
<td>Fencing stolen goods</td>
<td>83</td>
<td>6</td>
</tr>
<tr>
<td>Auto theft</td>
<td>72</td>
<td>5</td>
</tr>
<tr>
<td>Robbery</td>
<td>35</td>
<td>2</td>
</tr>
<tr>
<td>Grand theft</td>
<td>21</td>
<td>1</td>
</tr>
<tr>
<td>Break and enter</td>
<td>19</td>
<td>1</td>
</tr>
<tr>
<td>Run gambling operation</td>
<td>19</td>
<td>1</td>
</tr>
</tbody>
</table>

was asked about her antisocial behaviors, the marital status of the mother in 1986, the age of the child in 1986, and the gender of the child. F tests (with a type I error rate of .05) were used to evaluate all statistical tests. Effect sizes for the variables of interest were measured using estimated regression coefficients, and 95% confidence intervals were calculated.

**Results**

**Description of the Women in 1980**

The study women included 688 (48%) non-Hispanic Whites, 481 (34%) Hispanics, and 256 (18%) African Americans. Of these women, 496 (35%) were living in poverty in 1980. In 1980, the women ranged in age from 15 to 23 years, with the mean age being 19.58 years (SD = 2.03). Their ages at the birth of the target children ranged from 13 to 24 years (mean = 18.13, SD = 2.22). A total of 713 (50%) of the women were never married, 594 (42%) were married, and 118 (8%) were divorced or separated during 1980. The women's educational levels in 1980 ranged from 0 to 16 years, with the mean being 10.88 years (SD = 1.87).

The results of the Self Reported Delinquency Index showed that 257 (18%) of the study women committed at least one drug offense during 1980 (232 [16%] women used hard drugs, 75 [5%] sold marijuana, and 19 [1%] sold hard drugs). Over all 1425 women, the severity of drug offense index ranged from 0 to 45, with a mean of 0.82 (SD = 3.65).

A total of 814 (57%) study women committed at least one nondrug offense, the most common being assault (419 women; 29%), shoplifting (320 women; 22%), physically fighting at school or work (272 women; 19%), and fraud (264 women; 19%). Over all 1425 women, the severity of nondrug offense index ranged from 0 to 12.92, with a mean of 0.40 (SD = 1.08).

**Description of the Women and Children in 1986**

The poverty, marital, and educational status of the women remained fairly stable from 1980 through 1986. The poverty status of 71% of the study women remained the same from 1980 through 1986, with 37% of the study women living in poverty in 1986. The marital status of 61% of the women remained constant over the two time points, with 352 (25%) women never being married, 774 (54%) being married, and 299 (21%) being separated or divorced during the 1986 interviews. There was a significant correlation between the women's years of education in 1980 and 1986 (r = .88, P < .0001), with the mean education level of the women in 1986 being 11.30 years (SD = 2.01).

No information concerning drug offenses or nondrug offenses was collected during the 1986 assessment; thus, it cannot be determined whether the women's antisocial and drug-related behaviors remained consistent over the 6-year study period.

In 1986, the target children ranged in age from 4 years to 12 years (mean = 7.45, SD = 2.08), with girls and boys being fairly equally represented in the sample (735 boys [52%] and 690 girls [48%]). The children's mean BPI Total Problem score (mean = 106.8, SD = 13.7) and the means of all six BPI subscale scores (i.e., Antisocial [mean = 108.1, SD = 13.7], Hyperactive [mean = 109.2, SD = 13.8], Anxious/Depressed [mean = 106.8, SD = 13.1], Headstrong [mean = 103.6, SD = 13.1], Peer Conflict/Social Withdrawal [mean = 105.8, SD = 12.9], and Immature Dependency [mean = 106.7, SD = 13.2]) were above the general population mean of 100, perhaps reflecting the large proportion of high-risk families in this sample (e.g., financially deprived families).

When the children's BPI Total Problem scores were analyzed, a statistically significant effect was observed for the mother's severity of nondrug offenses, F(1, 1413) = 30.81, P < .0001, with the children's problem behavior increasing with increasing frequencies of the mothers' nondrug offenses; however, the mother's severity of drug offenses was not found to be significantly related to the children's BPI Total Problem scores. When the six BPI subscale scores were modeled, similar results were found in that severity of nondrug offenses was significantly associated with each of the children's BPI subscale scores:

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Regression Coefficients</th>
<th>95% CI</th>
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<tbody>
<tr>
<td>Total Problem</td>
<td>-0.49 (1.39, 0.41)</td>
<td>4.27 (2.76, 5.78)</td>
</tr>
<tr>
<td>Antisocial</td>
<td>-0.02 (-0.87, 0.91)</td>
<td>3.58 (2.09, 5.08)</td>
</tr>
<tr>
<td>Hyperactive</td>
<td>-0.37 (-1.27, 0.53)</td>
<td>3.44 (1.93, 4.95)</td>
</tr>
<tr>
<td>Anxious/Depressed</td>
<td>-0.38 (-1.24, 0.48)</td>
<td>3.15 (1.70, 4.60)</td>
</tr>
<tr>
<td>Headstrong</td>
<td>-0.52 (-1.37, 0.33)</td>
<td>3.03 (1.61, 4.45)</td>
</tr>
<tr>
<td>Peer Conflict/Social Withdrawal</td>
<td>-0.41 (-1.27, 0.45)</td>
<td>2.29 (0.85, 3.73)</td>
</tr>
<tr>
<td>Immature Dependency</td>
<td>-0.16 (-1.04, 0.72)</td>
<td>2.01 (0.54, 2.94)</td>
</tr>
</tbody>
</table>

**Discussion**

In line with previous research that has demonstrated a link between female criminality and deviancy in the children of these women, this study found an association between the antisocial behavior of female youth and the later behavioral and emotional problems of the children of these women. This study extends past research by examining a range of severity of women's antisocial behaviors and a range of children's behavioral and emotional problems. Specifically, the present study found a positive relationship between the severity of antisocial behavior of female youth and the severity of behavioral and emotional problems of the children of these women 6 years later. This relation-
ship was found for non-drug-related offenses but not for drug-related offenses. However, some explanations and cautionary comments are in order.

First, one must interpret the results of this research with caution given the limitations of both the study design and the correlational nature of the study analysis. The observed association between the severity of women's antisocial behavior and the severity of their children's emotional and behavioral problems is likely due to life-style differences, which tend to be established by the teenage years. These life-style differences may be due to unobserved familial and social factors, such as family dysfunction, living in a high-crime neighborhood, and so forth. Thus, it is impossible from this study to specify the potential causal chain that connects the life experiences of adolescent females through to the later emotional and behavioral health of the children of these young women. Future studies of this topic need to concentrate on understanding the specific mechanisms underlying the intergenerational transmission of these types of problems.

Second, one must consider the fact that the measure of the women's drug and nondrug offenses and the measure of the children's emotional health occurred at two separate time points, with approximately 6 years between the two assessments. Therefore, we are unsure whether the early antisocial behavior and drug use of the women remained stable over the 6-year period. Furthermore, many unmeasured events might have occurred during that 6-year period that might have affected the children's emotional and behavioral development. In light of these considerations, it is interesting that we still see an association between the early behavior of the women and the later emotional and behavioral health of their children. However, this finding is not totally unexpected since research has suggested some degree of continuity in values and behaviors from adolescence through to early adulthood.

Third, the measures of female antisocial behavior and children's emotional and behavioral health were based on reports of the study women. As such, they are subject to the biases associated with self-report data.

Fourth, it is noteworthy that we did not find an association between the women's severity of early drug-related offenses and their children's later behavioral and emotional health, while we did find such a relationship when the women's non-drug-related offenses were examined. Further study of the data sheds some light on this finding. Of the 1425 study women, 568 reported committing neither drug nor nondrug offenses, 214 reported committing both drug and nondrug offenses, and 600 reported committing exclusively nondrug offenses; however, only 43 reported committing exclusively drug offenses. In other words, most of the drug offenders also committed nondrug offenses, while only about a third of the women who reported nondrug offenses also reported committing drug offenses. Therefore, the ability of this study to detect a potential effect of drug offenses, independent of that of nondrug offenses, may have been somewhat limited by the relatively small size of the drug offenses alone group.

In spite of the aforementioned study limitations, the findings do suggest some interesting paths for future investigation concerning the potential intergenerational transmission of behavioral and emotional problems. Gaining greater insight concerning the mechanisms underlying the relationship between parents' and children's emotional and behavioral health could, we hope, lead to the design and implementation of effective preventive and therapeutic public health policies aimed at enhancing the health of both parents and children.

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References