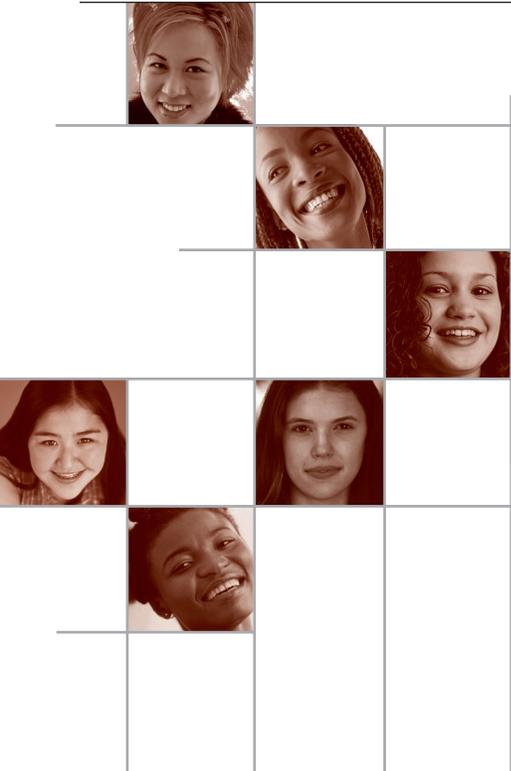




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Girls Study Group

Understanding and Responding to Girls' Delinquency

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Developmental Sequences of Girls' Delinquent Behavior

By David Huizinga, Shari Miller, and the Conduct Problems Prevention Research Group¹

According to data from the Federal Bureau of Investigation, from 1991 to 2000, arrests of girls increased more (or decreased less) than arrests of boys for most types of offenses. By 2004, girls accounted for 30 percent of all juvenile arrests. However, questions remain about whether these trends reflect an actual increase in girls' delinquency or changes in societal responses to girls' behavior. To find answers to these questions, the Office of Juvenile Justice and Delinquency Prevention convened the Girls Study Group to establish a theoretical and empirical foundation to guide the development, testing, and dissemination of strategies to reduce or prevent girls' involvement in delinquency and violence.

The Girls Study Group series, of which this bulletin is a part, presents the Group's findings. The series examines issues such as patterns of offending among adolescents and how they differ for girls and boys; risk and protective factors associated with delinquency, including gender differences; and the causes and correlates of girls' delinquency.

Introduction

In 2004, the Office of Juvenile Justice and Delinquency Prevention (OJJDP) convened the Girls Study Group (GSG) to examine the delinquent behavior of girls. At the request of GSG,² to uncover the

paths that girls who engage in delinquent behavior take, researchers from two long-term longitudinal studies of delinquency—the Denver Youth Survey and the Fast Track Project—collaborated to establish common delinquency measures, conduct analyses, and integrate findings on



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developmental patterns of girls' offending from childhood through adolescence.³

This bulletin describes some of the major results of that study. The first section briefly delineates developmental patterns of girls' delinquency, as described in current literature. The authors then describe the methodology used in the study and provide results on the prevalence and frequency of delinquent behaviors and the temporal patterns of girls' delinquency. A description of the methods by which the authors analyzed girls' developmental patterns of delinquency and what they learned about the developmental pathways that occur through girls' childhood and adolescence follows. The final section of the bulletin provides general conclusions and discusses implications of the findings.

Findings From the Current Literature

Existing research in four areas outlines patterns of girls' delinquency. These four research areas include examining running away as a pathway into delinquency; creating developmental life-stage models that examine the initiation and cessation of girls' delinquency at different ages; performing "stage-state" analyses, which identify groups of girls with different delinquency patterns at specific ages and across age periods; and performing "growth curve" analyses that identify groups of girls that share the same developmental progression in a single measure of delinquency.

Running Away and Delinquency

The high rate of abuse among court-involved girls has led some researchers to hypothesize that running away is a gendered pathway into delinquency. This postulation suggests that girls may

run away to escape abuse (particularly sexual abuse) and subsequently be arrested and charged with a status offense for running away (Belknap, Holsinger, and Dunn, 1997; Chesney-Lind and Pasko, 2004). Running away may also increase girls' risk for further delinquent behavior because of the survival and coping strategies girls resort to while on the run (e.g., panhandling, shoplifting for food or clothing, or exchanging sex for money) (Hagan and McCarthy, 1997; Chesney-Lind and Shelden, 1998).

Research examining abuse and running away as pathways into female juvenile delinquency offers some insights into this connection. Studies of justice-involved females show high rates of different types of trauma, including physical and sexual abuse and emotional neglect (Owen and Bloom, 1997). However, it is difficult to compare rates because studies use different definitions of abuse and trauma, and the youth studied may be involved at different points in the justice system (e.g., probation, detention, out-of-home placement, incarceration). For example, the National Council on Crime and Delinquency reported that 56 percent of female juvenile offenders in four California counties reported sexual abuse, 81 percent reported physical abuse, and 88 percent reported emotional abuse (Acoca and Dedel, 1998). On the other hand, results from Cook County, IL, indicate lower rates of sexual abuse (29.6 percent) among girls being held in detention (Abram et al., 2004).

Although higher rates of sexual abuse are found among court-involved females than court-involved males, rates of other types of abuse and trauma may not vary by gender. In the Cook County study noted above, rates of traumatic experiences (which included exposure to community violence), although high in both genders, were

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higher for boys (92 percent) than girls (84 percent). Another study suggests that rates of physical abuse are equivalent for both genders (35 percent) (Molnar et al., 1998).

Another line of study shows links between histories of physical and sexual abuse and subsequent delinquent and criminal activity (see reviews by Trickett and Gordis, 2004; Tyler, 2002). Widom and colleagues found that children of both genders who had been abused or neglected were more likely to have juvenile arrest histories than the nonabused controls. However, experiencing sexual abuse was no more likely than experiencing physical abuse or neglect to lead to an arrest (Widom, 1992, 1995). Another study using the same sample (which included boys and girls) looked at links between abuse, running away, and arrest (Kaufman and Widom, 1999). Abuse increased the likelihood that a youth would run away, and both abuse and running away increased the likelihood that a youth would be arrested. However, abuse was not the only factor leading to running away or to arrest, and simply running away (whether by an abused or non-abused youth) increased the risk of arrest.

Developmental Life-Stage Models

Another line of research, which commonly relies on community-based samples (as opposed to justice-involved youth), employs life-stage models based on the age when youth begin and when they desist from delinquency. Initial research (Moffitt, 1993; Patterson, DeBaryshe, and Ramsey, 1989) theorized two subtypes of youth:

- **Early starters.** Early starters exhibit behavioral difficulties early in development, with their antisocial behavior peaking in adolescence and persisting into young adulthood.

Risk factors for this group include inconsistent or harsh parenting and underlying neurological problems, such as attention difficulties (Loeber and Farrington, 2001).

- **Late starters.** Late starters do not exhibit behavioral difficulties until adolescence, and these problems may cease by young adulthood. Risk factors include affiliation with problem-prone peers and shifting social norms that ascribe status to risk-taking activity.

Early work in this line of research categorized youth based on the age at which they were first arrested or engaged in delinquency. These initial formulations were based on samples of boys (e.g., the Chicago Youth Development Study (Tolan, Gorman-Smith, and Henry, 2003) and the Oregon Youth Study (Capaldi and Patterson, 1991)). Studies indicate that early starters engaged in more delinquency (including more serious delinquency) that persisted over time, as compared to other youth. Data from the Dunedin sample (Moffitt et al., 2001) included both genders and identified late starting girls; however, there were too few early starting girls for analysis.

Stage-State Typologies Based on Personal Characteristics

Another body of research uses person-oriented stage-state typologies. These typologies use personal characteristics to place individuals into one of several types or states (in this case, youth engaged in similar delinquent behaviors) at different ages and then identify groups of individuals that have the same sequence of states over time. Using this approach, researchers can determine different life sequences or pathways from an initial state at a given age to an outcome state at a later age (Runyon, 1980).

For example, Huizinga (1995) categorized youth according to their pattern of delinquency involvement at each of several age groups. The types identified included nondelinquent/exploratory offender,⁴ status offender only, theft/property offender, aggressive offender, and a type that involved both theft/property and aggressive offending. Examining sequences of these types/states yielded several findings. First, a greater proportion of youth of both genders became delinquent as they grew older, increasing delinquent activity most between ages 13 and 14. Second, membership in any one of the types was relatively unstable, with 50 percent or less of a type retaining their classification in the next time period. However, youth involved in multiple forms of delinquency often remained involved in multiple forms of delinquency over longer periods of time. At all ages, youth most frequently transitioned from a nondelinquent state to a status/public disorder state and frequently transitioned from this state to a higher level of involvement in various kinds of delinquency.

Developmental Trajectory Approaches

More recent work identifies different developmental trajectories using statistical methods. These techniques typically focus on a single behavior (Nagin and Tremblay, 1999; Muthén and Muthén, 1998–2006). Although this body of work began with all-male samples, a small number of studies have examined all-female or mixed-gender samples. On the whole, these studies suggest that girls follow similar trajectories to those of boys.

To illustrate, Broidy and colleagues (2003) analyzed data from six sites to examine the relationship between developmental trajectories of childhood aggression and disruptive behavior and subsequent delinquency. Of the four sites that included both genders, three

identified a group of girls with physical aggression in childhood. However, aggressive behavior in childhood did not consistently lead to adolescent delinquency. Another study (Cote et al., 2001) followed a large sample of girls from age 6 to age 12. Researchers identified four trajectories of disruptive behavior—consistently low, consistently medium, medium to high, and consistently high—and placed most girls in the consistently low disruptive group. Girls whose disruptive behavior began in early childhood went on to have higher rates of conduct disorders in adolescence.

A third study examined female and male trajectories of antisocial behavior and outcomes through age 32 (Odgers et al., 2008). Girls and boys had identical trajectory groups—life-course-persistent, childhood-limited, adolescent-onset, and a low-trajectory group. The life-course-persistent and adolescent-onset groups had similar risk factors and poor adult outcomes for both genders. Finally, a recent study looked at trajectories of delinquency in adolescence and subsequent late adolescent outcomes (risky sexual behavior, partner violence, reported pregnancy, depression) (Miller et al., 2010). Four developmental trajectories of delinquency emerged: increasing, desisting, chronic, and nonproblem. Although the proportion of boys and girls varied (e.g., fewer girls were part of the desisting and increasing trajectories), each trajectory included both genders. In addition, both boys and girls with chronic or increasing trajectories had poor outcomes at age 19. Overall, developmental patterns and outcomes for girls mimicked those previously found for boys.

Methods

To assess girls' developmental patterns of delinquency, this study combines

information from the Fast Track Project and the Denver Youth Survey, both of which use similar measures of delinquency and measurement strategies.

The Fast Track Project. The Fast Track Project is a multisite, longitudinal investigation of the development of children's antisocial behavior and how this behavior can be prevented (Conduct Problems Prevention Research Group, 1992, 2000, 2007). The project includes three successive cohorts of children who were at moderate to high risk for antisocial behavior when they entered first grade.

The project took place at four sites—Durham, NC; Nashville, TN; Seattle, WA; and rural central Pennsylvania. At each site, the researchers matched sets of schools on the basis of ethnic composition, size, and percentage of students receiving free/reduced-price school lunches and then randomly assigned schools to intervention and control conditions. In each of the schools, moderate to high-risk children were selected on the basis of a screening process that included teacher and parent ratings. Children with moderate to high-risk scores were in the top 40 percent on the screening measure (see Conduct Problems Prevention Research Group, 2007, for further information). Using this method, researchers chose three successive cohorts of 891 high-risk children, half of whom they assigned to an intervention group and half to a control group (based on whether their initial school was in the intervention or the control group). The intervention students received a multi-year preventive intervention (Conduct Problems Prevention Research Group, 2007); however, their data are not included in this report. In addition, researchers selected a normative sample of students in the control schools who would be representative of each school. Researchers conducted annual interviews to collect self-report data from parents and children.

The current study relies on Fast Track data from the 151 girls in the control group and the 166 girls in the normative sample of students from the control schools. This bulletin examines the girls' data from grade 4 (when the delinquency measure was first available) to grade 11 (approximately ages 9–16).⁵

Denver Youth Survey. The Denver Youth Survey is a longitudinal study of problem and prosocial behavior⁶ from childhood to early adulthood. It focuses on delinquency, drug use, victimization, and mental health (Huizinga, Esbensen, and Weiher, 1991). Survey participants include 1,528 children and youth who were 7, 9, 11, 13, or 15 years old in 1987, along with 1 of their parents. Researchers selected these participants using a large probability sample of households in high-risk neighborhoods of Denver, CO.

The sample is almost equally divided by gender (46.7 percent are female) and is ethnically diverse.⁷ The research team interviewed survey respondents annually from 1988 to 1992, and annually from 1995 to 1999. The team conducted additional interviews with selected subsamples in 2003 and 2005. Because the research reported here is concerned with child and adolescent delinquency among girls, most of the Denver Youth Survey data used in this report were provided by girls between the ages of 7 and 17 ($n = 807$).

As described above, the Fast Track Project sample used in this study combines girls of higher risk with girls from a normative sample, and the Denver Youth Survey sample used in the study includes high-risk girls only. Thus, readers should note that the findings and conclusions of this report are representative of higher risk girls and not of the general population of girls.

Description of Measures and Analysis Groups

The study described in this bulletin had the advantage of using data from two previous studies. Each of these studies obtained nearly identical measures from samples of girls who were similar ages. The authors use this similarity in measurement to examine the extent to which findings are replicated in both samples.

The delinquency measures used in this report come from annual interviews with girls about their self-reported involvement in delinquent behavior over the preceding year. After a detailed review of the delinquency measures in each study, the authors grouped the items into summary measures of 11 kinds of delinquency. These include:⁸

- Running away.
- Other status offenses (e.g., truancy, curfew violations).
- Public disorder offenses.
- Minor property offenses.
- Serious property offenses.
- Minor assault.
- Serious assault.
- Drug sales.
- Alcohol use.
- Marijuana use.
- Other drug use.

Prevalence and Frequency of Offending

This section presents findings about the prevalence of offending and the average frequency of offending among juvenile offenders.

Ever-Prevalence

Ever-prevalence refers to the proportion of girls who engaged in a particular delinquent behavior at some time during the period covered. Figure 1 shows the ever-prevalence of different types of delinquency across the child and adolescent age periods in both the Fast Track Project and the Denver Youth Survey. Data from the Fast Track Project cover academic grades 4 to 11. Data from the Denver Youth Survey cover a roughly comparable age period (7 to 17). Although there is some variation between the studies, the rates of ever-prevalence are generally quite similar.

More than half of the girls reported that they engaged in truancy, minor property crimes, and alcohol use—the offenses most commonly reported in both studies. Females reported involvement in other offenses less frequently (see figure 1 for details).

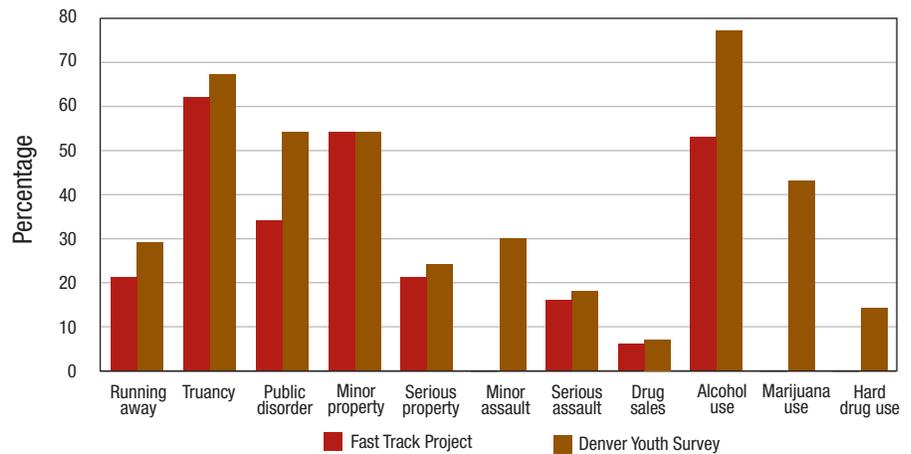
These estimates of ever-prevalence indicate that a large proportion of the girls in these two studies were involved in delinquent behavior at some time

during childhood or adolescence. For example, in the Denver Youth Survey, 91 percent were involved in at least one of the offenses considered; 88 percent were involved in an offense other than alcohol, marijuana, or drug use; and 87 percent were involved in offenses other than status offenses and alcohol, marijuana, and drug use. Across both studies, and excluding alcohol use, truancy had the highest prevalence, followed by minor property and public disorder offenses, serious property and runaway offenses, and lastly by serious assault and drug sales.

Prevalence by Age and/or Grade

Given the high rates of ever-prevalence, one should consider the ages at which girls commit these offenses. For this purpose, the authors determined the prevalence of these offenses by academic grade (grades 4 to 11) for the Fast Track sample and by age (7 to 17) for the Denver sample. During childhood (grades 4 and 5, ages 7 to 10),⁹ generally 10 to 19 percent of the girls participated

Figure 1. Ever-Prevalence of Types of Delinquency



Notes: This figure displays the proportion of girls who engaged in a particular delinquent behavior at some time during the period covered. Fast Track Project data include girls in grades 4 through 11. Denver Youth Survey data include girls between ages 7 and 17. The Fast Track Project measures of marijuana and other drugs are based on 30-day use and are not comparable to the annual delinquency measures. Therefore, they are not used in this report.

in minor property offenses at each grade and/or age, and 5 to 10 percent participated in alcohol use, minor assault, and public disorder offenses. The study found lower rates of participation for other offenses.

Excluding alcohol and marijuana use, truancy commonly has the highest prevalence at each age/grade during the adolescent period (grades 6–11, ages 11–16). In addition, truancy increases with age—from 10 percent at grade 6 to 33 percent by grade 11 (Fast Track) or from 4 percent at age 11 to 45 percent by age 16 (Denver Youth Survey). The prevalence of public disorder offending during adolescence decreased from 20 to 14 percent in Fast Track but increased from 13 to 25 percent in Denver. The prevalence of minor property offending varied across girls' adolescence (from 16 to 21 percent). The prevalence of minor assault and running away typically ranged from 5 to 12 percent, and the prevalence of serious property offending and serious assault typically ranged from 2 to 9 percent, depending on the sample and age of the girls.

In the Fast Track Project, alcohol use rose from 4 to 38 percent between grades 4 and 11, compared with a rise from 10 to 53 percent between ages 9 and 17 in the Denver Youth Survey. In the Denver Youth Survey, marijuana use rose from 2 to 26 percent and other drug use rose from 2 to 7 percent between ages 11 and 17.

Excluding alcohol and drug use, the authors observed an overall increasing trend in the prevalence of general delinquency as the girls grew older. In both studies, about 25 percent of girls engaged in delinquency at each age between 7 and 10 (Denver) and grades 4 and 5 (Fast Track). This rate increased

to approximately 27 to 32 percent during ages 11 and 12 (grades 6 and 7). After that, general delinquency levels increased substantially through age 15 (grade 10) to 39 percent of girls in the Fast Track Project and to 57 percent in the Denver Youth Survey. Rates remained at this level of delinquent behavior at age 16 (grade 11) and age 17. This evidence indicates that girls are substantially involved in some kind of delinquent behavior at each age and/or grade.

Frequency of Offending Behavior Among Girls Reporting Delinquency

Also, the authors determined the average number of offenses that active offenders (those who reported delinquent involvement in a given year) committed. Generally, with the exception of alcohol and drug-related offenses, delinquent girls committed an average of fewer than 10 offenses of any specific kind in a year. For some kinds of offenses (such as running away, serious property offenses, and minor assault), they committed five or fewer offenses. The frequency of engaging in either minor or serious kinds of offenses was relatively small. Even reports of alcohol and marijuana use suggest that use was only once every other week or less.

These observations also hold true for the average number of offenses that girls committed across all offending behaviors (excluding alcohol and drug use). Female offenders committed 5 or fewer offenses a year through age 11, and this number slowly increases to 21 to 23 offenses a year by ages 15 to 17. Thus, involvement in non-drug-related delinquency occurred less than once every 2 weeks between ages 15 and 17, and less than once a month for ages 11 and younger.

Initiation and Desistance Patterns

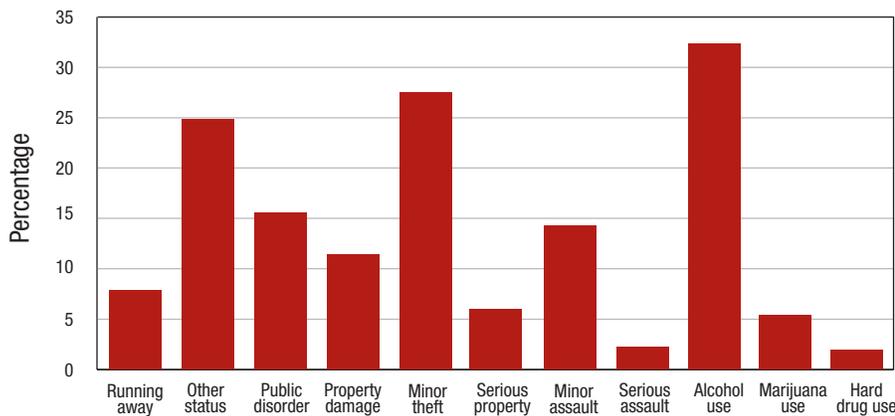
Next, the study determined the periods when girls first committed offenses (initiation) and the periods during which they ceased offending (desistance). This section examines how girls' offense patterns initiate, persist, and desist between ages 7 and 17 or grades 4 through 11.

Girls' First Offenses

Using data from the Denver Youth Survey, figure 2 displays the percentages of girls whose delinquency began with a particular kind of offense. Because a girl can initiate multiple offenses during the same delinquent event or time period, the values shown represent the percentage of girls who reported that a specific offense was the first or among the first set of offenses they committed.

The figure shows that most girls began offending with less serious offenses—alcohol use, status offenses, and minor



Figure 2. Girls' First Offenses

Notes: This figure shows which offenses girls committed first. Findings are from the Denver Youth Survey. Because girls can initiate multiple offenses in the same delinquent event or year, the percentages may add up to more than 100 percent.

thefts. Other behaviors, such as running away and more severe offenses such as serious property crimes or assault, were far less common as a first offense. Girls began offending with a variety of different offenses, and no single kind stood out as the most common first offense.

Age of First Offense

One may also wish to consider whether the very first kind of offense a girl commits depends on the age at which she began offending. Estimates that used data from the Denver Youth Survey suggest that girls did not start offending at a specific age or become involved in delinquency by committing any one offense. Girls' first reported offending varied across all offense types and was committed at different ages. Girls who sold drugs are an exception; most did not begin offending until their late teens.

The study also examined the age of girls' first offending for different kinds of delinquency. Although some girls began offending at each age period and with different offenses, the largest proportion of girls whose first offense was

a status offense (other than running away) began their offending between the ages of 13 and 14. The largest proportion of girls whose first offense was minor theft, minor assault, public disorder, property damage, or use of alcohol began these offenses during childhood (ages 7 to 10). In fact, almost half of the girls began to engage in some form of delinquency in childhood. Although this does not imply that their involvement is serious or long lasting, it does indicate that a large percentage of girls began their delinquent behavior at an early age.

Temporal Patterns of Delinquency

This study also examined girls' patterns of delinquent behavior over the course of their childhood and adolescence using information about girls' delinquent behaviors (excluding drug use) in grades 4 to 11 in the Fast Track Project and ages 7 to 17 in the Denver Youth Survey. Four patterns of delinquent behavior emerged:

- **Persisters.** These girls were continually involved in delinquent behavior over several years.

- **Desisters.** These girls stopped offending after a period of delinquent behavior.

- **Intermittent.** These girls were sporadically involved in delinquent behavior over several years.

- **Late bloomers.** These girls did not engage in delinquent behavior until late adolescence.

The largest proportion of delinquent girls in the Fast Track Project (46 percent) showed persistent patterns of delinquency. However, within this "persister" group, the age of onset varied—girls reported their first delinquent activity anywhere from middle childhood through adolescence. The next largest group of delinquent girls (23 percent) was the intermittent type. For these girls, their delinquent activity was sporadic and started and stopped at different ages. Late bloomers (19 percent) did not engage in delinquent behavior until late in high school. This study did not measure whether these girls desisted from delinquency or persisted into late adolescence and young adulthood. Twelve percent of delinquent girls were desisters. Within this type, some girls were delinquent for a shorter period of time (1–2 years) and then desisted, whereas other girls were delinquent over a longer period (4–6 years) and then desisted.

The Denver Youth Survey found that the persistent type accounted for 58 percent of the delinquent girls. The next most common type was late bloomers (18 percent), followed by intermittent offenders (12 percent) and desisters (12 percent). As in the Fast Track Project, the age of onset varied across age periods, with girls reporting their first delinquent activity anywhere from middle childhood through adolescence.

Across both samples, roughly one-half of the delinquent girls were the persistent offender type. In addition, a minority of the delinquent girls (22 percent in the Fast Track Project and 17 percent in the Denver Youth Survey) were active offenders across the entire age/grade period examined. A small proportion of delinquent girls were intermittent offenders (23 percent in the Fast Track Project and 12 percent in the Denver Youth Survey). About one-fifth were late bloomers (19 percent in the Fast Track Project and 18 percent in the Denver Youth Survey). Findings from both samples also indicate that 12 percent of the delinquent girls desisted from delinquency by ages 16 and 17 or grades 10 and 11 (although given the finding about intermittent offenders, the possibility of offending later in life cannot be ruled out).

Developmental Pathways in Girls' Delinquency

Using data from the Fast Track and Denver studies, the authors identified developmental sequences or pathways in girls' delinquency—changes in the kinds of delinquent behavior in which girls were involved over a period of years. As Loeber and colleagues (1993) noted, only a few studies have examined these kinds of developmental sequences of delinquency, and even fewer prospective studies have examined this issue. Furthermore, studies that focus on girls are sparse. As a result, little is known about the pathways that girls take in becoming involved in various kinds or patterns of delinquency.

This bulletin focuses on how girls engaged in certain delinquent behaviors at one age period become involved in other combinations of delinquent behaviors at older age periods. In this sense, a delinquent pathway represents a

particular sequence of behaviors that one group of girls traversed that can be distinguished from the sequences of behaviors that other groups of girls followed.

For the purposes of this study, the authors used cluster analytic methods¹⁰ to identify “clusters” or groups of girls involved in the same delinquent behaviors in a given age period. The authors then identified developmental sequences of delinquent behavior by grouping girls who shared the same sequence of age clusters over time. For these analyses, data were placed into 2-year grade/age groups and broader categories of delinquent behavior were used. Girls who were not delinquent at any of the age periods were not included in the Fast Track cluster analyses. Because the findings from the Fast Track Project and the Denver Youth Survey are different, the authors first describe them separately. A review of the similarities and differences across the two samples follows this description.

Developmental Sequences in the Fast Track Sample

To simplify the complexity of the over-time sequences, the authors defined four types of delinquency—status and public disorder offenses, property offenses and theft, assault and violent offenses, and alcohol use. In addition, the study used four adjacent time periods: grades 4 and 5, 6 and 7, 8 and 9, and 10 and 11.

Delinquency patterns by grade. The authors conducted separate cluster analyses at each of four time periods for girls who reported delinquency in at least one of the four time periods examined. Overall, each cluster of girls became increasingly differentiated over time. In addition, the proportion of girls who reported some delinquency increased over time (i.e., by grade), as did their overall level of delinquency.

At the same time, in each of the time periods, the largest cluster consisted of girls who reported no offending or low levels of delinquency. This group, however, did decrease in its relative proportion over time. Nonetheless, because these analyses did not include girls who reported never engaging in delinquency, this finding suggests that some girls move in and out of delinquent activity over time.

During the late elementary school years, or grades 4 and 5, delinquent behavior among girls was fairly undifferentiated and no distinct clusters were identified. By grades 6 and 7, three clusters of delinquent girls emerged—a low/nonproblem group, a status and/or public disorder offense and alcohol use group, and a highly versatile group. Most girls (85 percent) were in the low/nonproblem group. Within this group, about 60 percent were nondelinquent. The remainder primarily reported truancy or minor property offenses. The next largest group (12 percent) was involved in status offending and/or public disorder and alcohol use. All of the girls in this group reported some alcohol use, and about 75 percent engaged in status or public disorder offenses, primarily truancy. The third group of girls (3 percent) reported involvement in a range of offending behaviors. Virtually all reported truancy as well as minor property offending (87 percent for both offense types). Half of this group also reported serious property offending and alcohol use, and some (25 percent) reported serious assault behaviors.

In grades 8 and 9, three clusters emerged that were similar to those observed in grades 6 and 7. However, the proportion of girls in the low/nonproblem group decreased to 78 percent. About half of the girls in this group reported some low-level delinquent activity, commonly truancy or

alcohol use. The second cluster of girls in grades 8 and 9 (12 percent) reported a range of delinquent behaviors that was more diverse than in the earlier grades. Most prominent were truancy and minor property offenses. Less common but still prevalent in this group were running away and serious property offending. The third cluster of girls in these grades (10 percent) could be characterized by alcohol use and some status and/or public disorder offenses.

In grades 10 and 11, the authors observed a more differentiated set of four clusters. Most girls (43 percent) were classified in the low/nonproblem group. Only 33 percent of these girls did not offend. The others reported low levels of truancy, with a small number reporting minor property or public disorder offenses. The next largest group (34 percent) included girls who reported primarily status and/or public disorder offending and alcohol use. Sixty-three percent of the girls in this group reported status offenses, most commonly truancy, occasionally running away, and some reported public disorder. In addition, all of these girls drank alcohol.

A third group in these grades (14 percent) included girls who reported involvement in multiple offenses, including status offenses (primarily truancy), public disorder, both minor and serious property offending, and alcohol use. A final group of girls (9 percent) reported high rates of status offenses, especially truant behavior, with some reports of running away. Girls in this group also reported public disorder offenses, minor property offenses, and alcohol use.

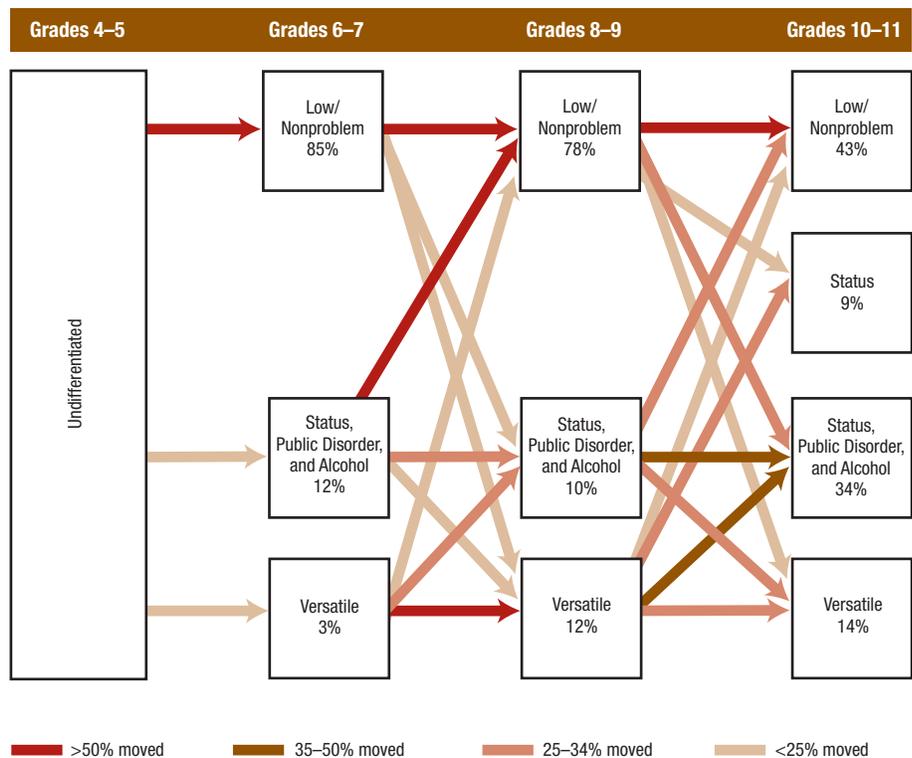
Fast Track: Transitions between delinquency patterns over time. Figure 3 portrays the over-time transitions between the clusters or groups of girls described above and the proportion of girls in each cluster at a given time

period. The dark red arrows indicate a transition where at least 50 percent of the girls in a particular cluster in one time period moved to another cluster in the next time period. Remaining arrows indicate transitions of less than 50 percent per arrow.

The figure illustrates a number of points about developmental pathways of girls' delinquency. First, it shows that girls make a number of transitions as they age—although the number of girls on each pathway varies considerably, girls' delinquency followed more than 20 distinct pathways. Most girls trend toward

less serious delinquency. Even when girls do engage in more serious activity, this delinquency is relatively short-lived. For example, almost 60 percent of the girls in the “status, public disorder, and alcohol use” cluster in grades 6 and 7 moved to the “low/nonproblem” group in the next time period (grades 8 and 9). Approximately 70 percent of the versatile offenders in grades 8 and 9 moved to less serious offender types in grades 10 and 11. Also, alcohol use plays a strong role in girls' delinquent behavior. With the exception of girls in grades 4 and 5, most girls took part in status and/or public disorder offending

Figure 3. Fast Track Project: Transitions Between Delinquency Patterns Over Time



Notes: Percentages in boxes show the proportion of girls in each grade group who were placed in each offense category. The arrows portray how many girls from one group moved to another.

Low/Nonproblem: Girls committed minor offenses or did not offend.

Status: Girls committed only status offenses.

Status, Public Disorder, and Alcohol: Girls committed status offenses, engaged in public disorder offenses, and used alcohol.

Versatile: Girls became involved in a variety of more serious delinquent behaviors, including status and public disorder offenses, minor and serious property offenses, and alcohol use.

and alcohol use. Finally, although the proportion is small, one group of girls was involved in more versatile, serious delinquent behavior in each grade period, and girls moved into and out of this group over time.

Developmental Sequences in the Denver Youth Survey

The findings about developmental sequences in the Denver Youth Survey are more complex than in the Fast Track Project in part because of the larger sample of girls, the extended age range in the Denver Youth Survey, and the inclusion of a measure of drug use. To reduce the complexity of the sequences, the authors created five age groups: ages 8–9, 10–11, 12–13, 14–15, and 16–17. Also, for simplification, the authors used five summary measures of delinquency: status and public disorder offenses, property and theft offenses, assault and violent offenses, alcohol use, and marijuana and hard drug use. In addition, youth with infrequent involvement in delinquency—one status offense, public disorder offense, incident of alcohol use, or minor offense over a 2-year period—were given a nondelinquent status, and property/theft and assault/violent offenses were coded to distinguish between minor and serious offending.

Delinquency patterns at different ages. Cluster analyses conducted in each of the age periods indicated that a single typology (a set of clusters or types) could be used to describe the girls in each of the age periods. Although not all of the clusters existed in any one age period, the clusters that did exist in each age period were included in the typology. The clusters include:

- **Nondelinquent or low-level minor offenders.** Most of these girls reported no delinquent behavior at any age. However, some of these girls reported up to one status, one public

disorder, one alcohol use, and/or one minor offense in the 2-year period.

- **Status and/or public disorder offenders.** These girls were involved in status or public disorder offenses. This group also included girls who reported alcohol use.
- **Property and/or theft offenders.** These girls were involved in property or theft offenses. Many were also involved in status or public disorder offenses, and some reported using alcohol.
- **Minor assault offenders.** These girls were primarily involved in minor assault offenses.
- **Versatile nonviolent offenders.** These girls were involved in a variety of delinquent behaviors, including serious property and/or theft offenses, status and/or public disorder offenses, alcohol use, and other drug use. However, they did not commit violent offenses.
- **Versatile violent offenders.** Girls in this group reported serious violent offenses, serious property and/or serious theft offenses, status and/or public disorder offenses, alcohol use, and other drug use.

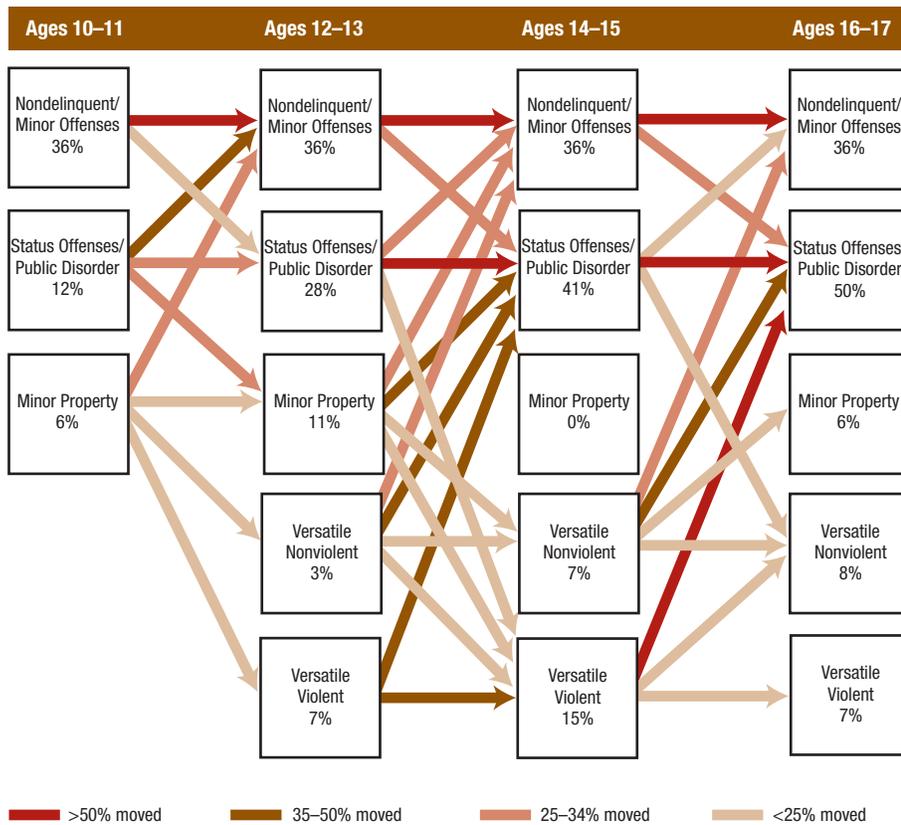
Although some of these delinquent types existed in all age periods, others existed only at specific ages. The nondelinquent and/or low-level type and the status and/or public disorder type occurred throughout the 7- to 17-year-old age period. However, the minor assault type occurred only in childhood, at ages 8–9 and 10–11. The property and/or theft offender types were present at all ages except for 14- to 15-year-olds. The versatile nonviolent and versatile violent types existed throughout the adolescent age range (12- to 17-year-olds).

Denver Youth Survey: Transitions between delinquency patterns over time. Figure 4 shows how girls move from one delinquent type to another as they grow older. For simplicity, the figure only shows paths that involve 10 percent or more of a delinquent type. As in figure 3, the paths are diagrammed using colored arrows to portray the proportion of girls who moved to a new offense group as they grew older. The dark red arrows indicate that at least 50 percent of a cluster made the transition to a new offense group. The minor assault cluster was not included because it was only found at younger ages. In addition, figure 4 only displays findings for girls ages 10 to 17.

Figure 4 shows that different groups of girls followed a large number of different sequences. No one sequence is descriptive of most or even a majority of girls. The largest group with a common sequence over time consists of those girls who were nondelinquent or low-level minor offenders, and this group included 22 percent of the girls. On the other hand, a portion of girls become involved in a greater diversity of offenses at each age period, including serious offenses. Also, girls in any delinquent group in one age period did not share a common offense history. Thus, no single pathway leads to involvement in specific patterns of delinquent behavior, whether the pattern of behavior is minor or serious.

Importantly, beginning with the 12- to 13-year-old age period, many of the girls involved in more serious offending discontinued this type of offending and returned to a status and/or public disorder type or a nondelinquent type in the next age period. “Careers” in serious offending were relatively short lived, and the majority of serious offenders returned to a “home base” of status/public disorder offending or a

Figure 4. Denver Youth Survey: Transitions Between Delinquency Patterns Over Time



Notes: Percentages in boxes show the proportion of girls in each age group who were placed in each offense category. The arrows portray how many girls from one group moved to another. Although not shown in this diagram, ages 7-9 were also studied.

Nondelinquent/Minor Offenses: Girls reported one status public disorder offense, incident of alcohol use, or minor offense over the 2-year period, or reported no offenses.

Status Offenses/Public Disorder: Girls became involved in status or public disorder offenses. This group also includes girls who used alcohol.

Minor Property: Girls were involved in property offenses and theft. Many were also involved in status or public disorder offenses and some used alcohol.

Versatile Nonviolent: These girls' offenses took many forms, including serious property crimes, theft, status and public disorder offenses, alcohol use, and other drug use. They did not commit violent offenses.

Versatile Violent: These girls' offenses took many forms, including serious violent offenses, serious property crimes, serious theft, status and public disorder offenses, alcohol use, and other drug use.

nondelinquent state, often within a year or two. At the same time, some girls who were involved in only status/public disorder or minor offending became more serious offenders, so that a sizable number of girls were involved in more serious offending patterns (generally 10 to 20 percent) at all adolescent ages.

Conclusion

Findings from this study show substantial consistency across epidemiological, temporal, and developmental sequence analyses and across the Fast Track and Denver samples. These similarities impart greater confidence in the results. Overall, the study findings offer important information about girls' delinquent

behaviors and the sequences of girls' offenses over time. Several central findings are outlined below regarding the types and extent of delinquent behaviors and the developmental sequences over time.

The following conclusions can be drawn about the types and extent of girls' delinquent behaviors:

- **Most of the girls were involved in delinquency at some point during their childhood or adolescent years.** The vast majority of girls (78 percent of the Fast Track Project girls and more than 90 percent of the Denver Youth Survey girls) reported involvement in some kind of delinquency during late childhood or adolescence, and a sizable proportion of girls were involved in delinquent offenses before middle school.
- **Girls reported a wide range of offending behaviors.** Although the most common pattern throughout the late childhood and adolescent years was being nondelinquent or involved in status or public disorder offenses, many girls also reported involvement in minor or serious property offenses or serious assault. At each age or grade, different groups of girls were involved in different combinations of delinquent behaviors.
- **Most girls who were involved in delinquency did not offend frequently.** With the exception of alcohol and drug offenses, girls who were involved in some delinquent activity generally reported five or fewer offenses per year through age 11. Between ages 12 and 17, female offenders generally reported 10 or fewer offenses of any specific type and 23 or fewer total offenses in a given year.

■ **Some girls could be distinguished by a versatile pattern of offending behavior.** Analyses of both samples found small groups of girls involved in more versatile offending patterns consisting of a range of delinquent behaviors, sometimes including serious offenses.

■ **Girls frequently used alcohol or drugs.** With the exception of girls in the earliest grades/ages (grades 4 and 5, ages 7 to 10), many girls involved in other delinquent behaviors also used alcohol and/or drugs.

The following conclusions can be drawn about the developmental sequences observed in girls' delinquency:

■ **Girls began offending with a range of different behaviors.** Among those girls who did report delinquency, these behaviors usually began with less serious offenses—alcohol use, status offenses, or minor thefts. Other behaviors (such as running away or violent offenses) were less common as a first offense. No single kind of offense occurred first for a majority of girls.

■ **Girls began and stopped offending at different ages.** For some girls, offending was limited to childhood; for others, it was limited to adolescence. Moreover, some girls did not start offending until late adolescence.

■ **Some girls reported persistent patterns of delinquency; others reported that these behaviors were more transient.** For some girls, delinquent behavior was fairly stable and chronic over time. Other girls' delinquent behavior was intermittent and stopped and started at different ages.

■ **Girls showed diverse patterns of offending over time.** Although some girls remained involved in status

and public disorder offending across different age periods, other girls moved from this pattern of offending to more varied and serious offense patterns. In general, the number of patterns and the movement between these patterns increased as girls became older.

■ **Girls typically did not become involved in serious delinquency over a long period of time.** Even when girls were involved in more serious offending, they often returned to a home base of status and public disorder offending or to a nondelinquent status after a year or two.

A number of implications follow from these findings on girls' delinquent behavior:

■ **Service providers should be concerned about girls' delinquent behavior.** The vast majority of girls studied were involved in some form of delinquency at some time during their late childhood to late teen years. Most offenses included status offenses, public disorder offenses, or minor crimes, but some girls were also involved in serious property and violent offenses.

■ **Although girls are involved in delinquency, no single or dominant delinquency sequence ("pathway") occurs for all girls.** Programs and interventions should not assume that one delinquency sequence applies to most girls. Simple generalizations about the sequence of girls' delinquent behaviors over time may be unwarranted. This study highlights and corrects common misconceptions—girls' delinquency does not always begin with running away, and girls' first offenses are not always status offenses. Professionals who work with delinquent girls should recognize the wide range

of developmental patterns that can occur over time, and understand that a girl's developmental sequence cannot be determined from a single delinquent behavior pattern at a fixed point in time.

■ **Intervention efforts should consider the offending patterns of girls.** Many girls are low-level and status offenders, and even the most serious female juvenile offenders tend to desist within a year or two. Given that girls typically have short serious offending careers, providers should be careful when employing interventions that have not been demonstrated as successful to ensure that the intervention does not extend offending careers. Interventions are not necessarily benign and may exacerbate problem and delinquent behavior (McCord, 2003; Huizinga and Mihalic, 2003; Poulin, Dishion, and Burrastron, 2001; Dishion, McCord, and Poulin, 1999).



- **Preventive interventions targeting delinquency in childhood should include both genders because girls' involvement in delinquency often begins early.** However, some early delinquent behaviors—especially assaults—frequently cease after childhood.
- **Service providers should systematically assess and treat substance use among delinquent girls.** Evidence in the samples used here and in other studies (Chassin, 2008; Grisso and Underwood, 2004; Tiplin et al., 2002) points to an overlap between status offending, public disorder offenses, and alcohol use.

The original question that the Girls Study Group posed concerned the temporal order and patterns of girls' delinquent behavior throughout childhood and adolescence. This study found that girls were delinquent and that there was great diversity in their patterns of delinquent involvement at any age. It also found great diversity in the timing and sequencing of delinquency over time. No one developmental sequence was applicable to most or even a majority of girls. However, general patterns were observed over time. More than half of all girls in both studies were involved in status and/or minor offenses only, and those who became involved in serious offenses tended to return to status and minor offending after 1 or 2 years.

The findings imply a need for additional research examining girls' involvement in delinquency during the child and adolescent years. One of the values in understanding over-time sequences of delinquent behavior is identifying turning points in girls' delinquent careers where specific causes and risks influenced their pathways of future delinquent behavior. Examining such causes and correlates was beyond the purview of this study and should be explored in future research.

Moreover, the current study is limited because it used annual measures of delinquency. Research examining sequences of offending over shorter durations may reveal patterns that do not occur in annual reports of offending.

Future research should also identify developmental patterns of arrests so that these patterns can be compared with patterns identified in surveys or self-reports of delinquent behavior. The combination of official arrest data and self-report sequences would help researchers determine when offending behavior begins, when arrests occur during a delinquent's career, which girls are arrested, and which girls enter the juvenile justice system. Such information can inform the design of juvenile justice system responses. If researchers then conducted similar analyses for boys, informative gender comparisons could be made.

Endnotes

1. The Conduct Problems Prevention Research Group includes Karen L. Bierman, Pennsylvania State University; John Coie, Duke University; Kenneth A. Dodge, Duke University; Mark T. Greenberg, Pennsylvania State University; John E. Lochman, University of Alabama; Robert J. McMahon, Simon Fraser University and the Child & Family Research Institute; and Ellen E. Pinderhughes, Tufts University.
2. This request stipulated that the report should focus exclusively on girls, be descriptive, and examine specific offense types across different developmental periods. The request also asked that the report not examine causes or correlates, as these issues are covered in separate GSG reports.

3. See the full report, *Developmental Sequences of Girls' Delinquent Behavior*, by Huizinga, Miller, and the Conduct Problems Prevention Research Group (2009) for more details.
4. An exploratory offender is an individual trying out various delinquencies for any of several reasons (e.g., for fun, for money, because of peer influence), but who has not adopted a delinquent orientation and who is not currently seriously involved in delinquency.
5. The total number of girls was 317—51 percent were white, 45 percent were African American, and 4 percent were other.
6. Prosocial behavior is behavior that conforms to the conventional rules and laws of society.
7. The total number of girls was 807—10 percent were white, 33 percent were African American, 44 percent were Hispanic, and 13 percent were other or mixed ethnicity.
8. The Fast Track Project measures of marijuana and other drugs are based on 30-day use and are not comparable to the annual delinquency measures. Therefore, they are not used in this report.
9. In these analyses, the childhood age groups from the two samples are not the same. Childhood in the Denver survey includes ages 7–10, which allowed information about younger ages to be included. In the Fast Track data, grades 4–5 were used for childhood.
10. Given a sample of objects or persons described by multivariate numerical scores, cluster analysis includes a number of statistical procedures that group individuals or objects into clusters that have

similar multivariate patterns that can be distinguished from other clusters with different multivariate patterns. See Hartigan (1975).

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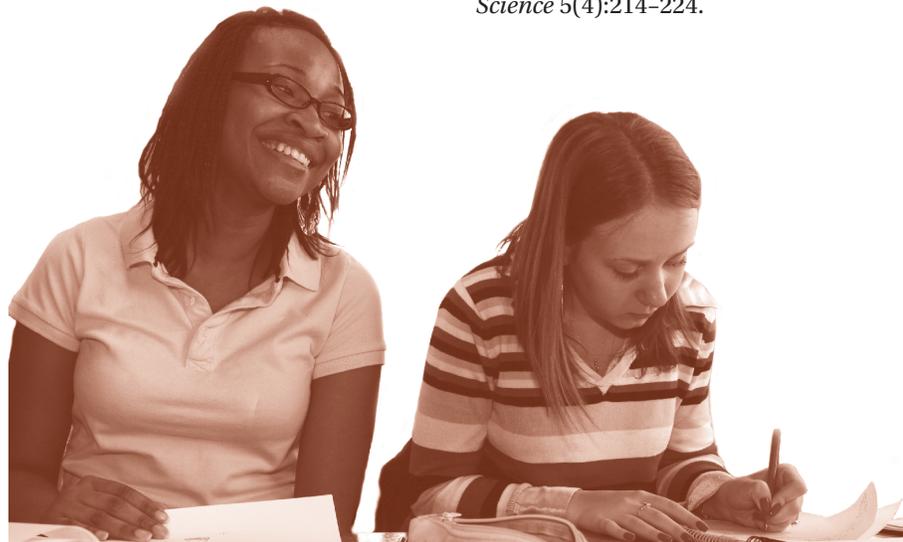
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