

## Legal, Individual, and Environmental Predictors of Court Disposition in a Sample of Serious Adolescent Offenders

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**Abstract** Historically, the juvenile court has been expected to consider each youth's distinct rehabilitative needs in the dispositional decision-making process, rather than focusing on legal factors alone. This study examines the extent to which demographic, psychological, contextual, and legal factors, independently predict dispositional outcomes (i.e., probation vs. confinement) within two juvenile court jurisdictions (Philadelphia, Phoenix). The sample consists of 1,355 14- to 18-year-old male and female juvenile offenders adjudicated of a *serious* criminal offense. Results suggest that legal factors have the strongest influence on disposition in both jurisdictions. For example, a higher number of prior court referrals is associated with an increased likelihood of secure confinement in both jurisdictions. Juveniles adjudicated of violent offenses are more likely to receive secure confinement in Phoenix, but are more likely to be placed on probation in Philadelphia. Race is unrelated to dispositional outcome, but, males are consistently more likely than females to be placed in secure confinement. Importantly, individual factors (e.g., developmental maturity) generally were not powerful independent predictors of disposition. Finally, an examination of the predictors of juvenile versus adult court transfer in Phoenix

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indicated that males, older juveniles, and those with a violent adjudicated charge were more likely to be transferred to adult court, while juveniles scoring high on responsibility as well as those juveniles with an alcohol dependence diagnosis were more likely to be retained in juvenile court.

**Keywords** Adolescence · Juvenile justice · Waiver to adult court · Sentencing · Maturity

The contemporary juvenile justice system must balance the two competing challenges of optimally providing for youths' positive development and ensuring public safety (Grisso, 2003), with the former goal differentiating it from adult criminal courts. Although landmark juvenile cases, including *Kent v. U.S.* (1966) and *In re Gault* (1967) have reduced differences between adult and juvenile courts by providing juveniles with more procedural guarantees of due process, they have also highlighted the enduring role of personal and environmental characteristics specific to each youth (e.g., maturity, behavioral and emotional factors) in dispositional decision-making (*In re Gault*, 387 U.S. 1, 1967; *Kent v. United States*, 383 U.S. 541, 1966). In theory, the primary goal of the juvenile justice system is to administer "custom-made" dispositions to youths based on a case-by-case consideration of each youth's distinct rehabilitative needs (Connell, 1980; Horwitz & Wasserman, 1980).

This customization should result in different juvenile court dispositions for adolescent offenders whose personality characteristics and social backgrounds differ but who may commit similar offenses. In practice, however, as is the case in adult criminal courts, dispositional decisions in contemporary juvenile courts are typically grounded in the principle of "formal rationality." Specifically, sentencing decisions are based primarily on legal factors, such as the type and severity of the current offense and the individual's prior record (Ainsworth, 1991; Zimring, 1998; Feld, 1999). Such formalism has been operationalized in dispositional regimes in juvenile courts including mandatory minimum sentences, sentencing guidelines developed by sentencing commissions, and determinate sentencing based on a sentencing "grid" (Torbet & Szymanski, 1998). Such formalism is indigenous to the criminal court.

The effects of such legal formality in juvenile courts is confirmed by numerous studies showing that legal factors are the strongest influence on dispositional decisions (Campbell & Schmidt, 2000; Hoge, Andrews, & Leschied, 1995; Horwitz & Wasserman, 1980; Kueneman, Linde, & Kosmick, 1992; Thomas & Cage, 1977). Among these legal factors, a youth's prior record is an especially important predictor of disposition (Matarazzo, Carrington, & Hiscott, 2001). In particular, the severity of a juvenile's sanctions for prior adjudicated offenses significantly influences the likelihood that a youth is placed in secure confinement (Carrington & Moyer, 1995; Henretta, Frazier, & Bishop, 1986; Lee, 1996; Phillips & Dinitz, 1982; Stryker, Nagel, & Hagan, 1983; Thornberry & Christensen, 1984).

Although current research confirms the secondary role of individual and contextual factors in shaping juvenile courts dispositions (Niarhos & Routh, 1992; Campbell & Schmidt, 2000), some researchers have found that certain extralegal factors, including the presence or absence of substance abuse problems, family dysfunction, deviant peer associations, antisocial attitudes, and antisocial personality factors, are related to dispositional outcome, even after controlling for legal factors (Hoge et al., 1995; Campbell & Schmidt, 2000). Other studies have found that certain contextual factors, such as whether the juvenile is attending school, working, or living in a two-parent household, are associated with dispositional outcomes, even after controlling for legal and offender characteristics, but the findings of this research have been inconsistent (Cohen & Kluegel, 1978; Kueneman & Linden, 1983; Kueneman et al., 1992; Thomas & Cage, 1977). Still other studies show that neighborhood and race also contribute to juvenile court dispositions (Sampson & Laub, 1993; see Feld, 1999 for a review).

One reason for this inconsistency is that few studies have examined multiple individual, contextual, and legal factors simultaneously. In a notable exception, Niarhos and Routh (1992) examined thirty-eight variables, including legal factors, demographic factors, family functioning, intellectual and social functioning, and treatment recommendations, to identify the relations between clinical assessment and subsequent disposition in a sample of 234 male status and criminal juvenile offenders. They found that only legal factors, including the number of arrests and detention prior to the adjudicatory hearing, predicted final disposition; none of the other sixteen individual or contextual factors was significantly associated with disposition outcome. Although this study included a large number of relevant extralegal factors, it was limited by its exclusion of females and youths who did not receive a court-ordered clinical assessment. Also, extralegal variables were obtained retrospectively by coding psychological reports, resulting in the loss of fourteen important variables (including, for example, parental marital status, parent education level, and the presence of an emotional or behavioral disorder) that were dropped due to missing data. This study also failed to examine other potentially important extralegal variables, such as gang involvement and developmental maturity.

Some studies have found that demographic factors which, in and of themselves, should have no bearing on dispositional decision-making (e.g., age and race) are nevertheless strongly associated with dispositional outcomes (Sanborn, 1996). Older youths tend to receive more severe dispositions (Kueneman et al., 1992; Marshall & Thomas, 1983; Phillips & Dinitz, 1982), although there is some evidence that this effect disappears after controlling for legal variables (Carrington & Moyer, 1995). Other studies have found that non-white juveniles receive harsher dispositional outcomes than white juveniles (Bishop & Frazier, 1996; Frazier, Bishop, & Henretta, 1992; Sampson & Laub, 1993), although, again, some research indicates that minority and white juveniles receive similar outcomes once legal factors are controlled (Henretta et al., 1986; Horwitz & Wasserman, 1980). Two theories for the inconsistency of findings on the influence of race on dispositional decision-making have been proposed. First, McCord and colleagues suggest that these inconsistencies may be due to undetected minor racial biases at earlier stages of the adjudication process that compound to result in more pronounced racial bias at the dispositional decision stage, reflected in the finding that, ultimately, black juveniles are three times more likely than whites to end up in residential placement (McCord, Spatz Widom, & Crowell, 2002). Second, the relationship between race and disposition decision varies widely by the jurisdiction of the juvenile court (Britt, 2000).

Cross-jurisdictional differences in dispositional decision-making may explain inconsistent findings for a number of extralegal factors related to dispositional outcome and not just race (Sampson & Laub, 1993). Jurisdictions differ widely in how the court is structured, how cases are processed, and how dispositional decisions are made (Feld, 1991; Stapleton, Aday, & Ito, 1982). Further, differences in jurisdictional decision-making may reflect differences in the social context of the particular court system (see Britt, 2000). To the extent that different studies are conducted in different locales, they may yield very different pictures of the factors that affect dispositional decision-making. The study of multiple jurisdictions is a method that has often been used to account for the indirect effect of community context (i.e., sociodemographic, economic, legal, and political characteristics unique to a locale) on dispositional decision-making (e.g., Eisenstein, Flemming, & Nardulli, 1998; Flemming, Nardulli, & Eisenstein, 1992). As a consequence, another important limitation of previous studies of dispositional outcome is that they typically focus on a single site and fail to compare decision-making across multiple jurisdictions (i.e., Campbell & Schmidt, 2000; Hoge et al., 1995; Horwitz & Wasserman, 1980; Niarhos & Routh, 1992).

## Mental health, maturity and juvenile court decision making

Previous studies of factors that predict juveniles' court dispositions also have been limited by what they have *not* included in their models. Two variables not evaluated in prior research on dispositional decision-making — mental health and developmental maturity — are especially important factors to consider in any evaluation of dispositional decision-making in juvenile court. In a large scale evaluation of mental health symptomatology in a sample of over 18,000 detained Pennsylvania youth, Cauffman (2004) found that approximately 70% of males and 81% of females scored above the clinical cutoff on at least one of the following five scales of the Massachusetts Youth Screening Instrument (Version 2; MAYSI-2; Grisso, Barnum, Fletcher, Cauffman, Peuschold, 2001): Alcohol/Drug use, Angry-Irritable, Depressed-Anxious, Somatic Complaints, and/or Suicide Ideation. Yet, despite the widespread prevalence of mental health problems among juvenile offenders, with the exception of a few studies that have examined substance abuse, we do not know whether and how the presence of symptoms or disorder affects dispositional decisions. One might expect that the presence of mental health problems would increase the likelihood of offenders being sent to institutional placement, where, presumably, mental health treatment services are more readily available than in the community. Alternatively, such problems could be interpreted as a mitigating circumstance. Given the rehabilitative focus of the juvenile justice system, it is important to gain a better understanding of the general trend for placement (e.g., secure confinement vs. probation) for those juvenile offenders who suffer from serious mental illness.

Although the link between juveniles' developmental immaturity and courts' dispositional decision-making has received scant empirical attention, research shows that there are important differences between adolescents and adults that affect antisocial decision-making and, therefore, that such differences should be taken into account in sanctioning decisions. Specifically, relative to adults, juveniles are impaired in their levels of personal responsibility, have difficulty seeing things in long-term perspective, are less likely to look at things from the perspective of others, and have more difficulty restraining their aggressive impulses (Scott, Reppucci, & Woolard, 1995; Steinberg & Cauffman, 1996). As a consequence, juveniles are less mature than adults in ways that impair their judgment and make them inherently less accountable for their actions (Cauffman & Steinberg, 2000; Steinberg & Cauffman, 1999, 2000; Steinberg & Scott, 2003).

It is not at all obvious how variations in offenders' developmental maturity would, or should, affect dispositional decision-making. To the extent that developmental immaturity mitigates criminal blameworthiness (Steinberg & Scott, 2003), one might hypothesize that juveniles who are less mature than their same-aged peers would be more likely to be granted probation and less likely to be sent to secure confinement; presumably, this is the rationale behind the language in *Kent* that instructs courts to take into account the maturity of the minor when making decisions about the transfer of cases to adult court. On the other hand, to the extent that deficiencies in such qualities as impulse control, foresight, self-reliance, and the ability to resist peer pressure make an offender more dangerous, one might predict that offenders who are less mature than their same-aged peers would be more likely to be confined. Indeed, this question — whether immaturity should be considered a mitigating factor or an aggravating one in sentencing decisions — was raised during oral arguments in *Roper v. Simmons*, the recent U.S. Supreme Court case concerning the constitutionality of the juvenile death penalty (*Roper v. Simmons*, 543 U.S. 551, 2005).

The current study examines twenty different demographic, psychological, contextual, and legal factors that might be expected to influence dispositional decision-making in the juvenile justice system. Importantly, two of these factors, which have been neglected in past research, are particularly relevant to *juvenile* justice populations, developmental maturity and mental illness.

More specifically, we attempt to distinguish both male and female serious offenders whose dispositions result in secure confinement versus those who are released on probation into the community.

## Method

### Participants

Participants were adolescents enrolled in the Pathways to Desistance study (see Mulvey et al., 2004), a prospective study of 1,355 serious juvenile offenders (86% male) in Phoenix ( $N = 654$ ) and Philadelphia ( $N = 701$ ). Complete details of the study methodology are provided in Schubert et al. (2004).

Adolescents were eligible for the study if they were between 14–18 years of age (mean age 16.0 years) and adjudicated of a serious criminal offense. Eligible crimes included felony offenses against persons and property, as well as several misdemeanor weapons offenses and sexual assault. Specifically, the juveniles were sentenced for a range of committing offenses: 41% for violent crimes against persons (e.g., murder, rape, robbery, assault), 26% for property crimes (e.g., arson, burglary, receiving stolen property), 10% for weapons, 4% for sex crimes, and 4% for other crimes (e.g., conspiracy, intimidation of a witness). Because drug law violations represent an especially large proportion of the offenses committed by this age group, the proportion of juvenile males with drug offenses was capped at 15% of the sample at each site to ensure adequate sample heterogeneity with respect to criminal offending. However, all females meeting the age and adjudicated crime requirements and all youth whose cases were being considered for trial in the adult system were eligible for enrollment, even if the charged crime was a drug offense. Approximately 20% of youths approached refused to participate and our participation rate (number of enrolled participants divided by the number invited to participate) was 67% (not all youths were approached given operational and design constraints). To assess participation bias, we compared those adjudicated of eligible charges who did and did not enroll in the study. Results suggested that our participants were somewhat younger at adjudication (15.9 vs. 16.1 for non-participants), had more prior petitions (2.1 versus 1.5 for non-participants), were somewhat younger at first petition (13.9 years versus 14.2 for non-participants), and were somewhat more likely to be non-Hispanic Caucasian (25% versus 20% for non-participants). Although statistically significant, these differences are modest in magnitude.

Participants were interviewed, on average, 36.9 days ( $SD = 20.6$ ) after their adjudication (for those in the juvenile system) or their decertification hearing in Philadelphia or an adult arraignment in Phoenix (if in the adult system). Participants were predominantly lower SES, with fewer than 6.3% of the participants' parents holding a four-year college degree, and 33% with parents having less than a high-school education. 41.5% of the participants are African-American, 33.5% Hispanic, 20.2% non-Hispanic Caucasian, and 4.8% other.

### Procedures

The juvenile court in each locale provided the names of eligible adolescents (based on age and adjudicated charge). Interviewers then attempted to contact each eligible juvenile and his or her parent or guardian to ascertain the juvenile's interest in participation and to obtain parental consent. Once the appropriate consents had been obtained, interviews were conducted either in a facility, if the juvenile was confined, or at the juvenile's home or a mutually agreed-upon location in the community.

The baseline interview was administered over two days in two, two-hour sessions. Interviewers and participants sat side-by-side facing a computer, and questions were read aloud to avoid any problems caused by reading difficulties. Respondents could answer the questions aloud or, to maximize privacy, enter their responses on a keypad (although in some facilities, this option was not available). When interviews were conducted in participants' homes or in community settings, attempts were made to conduct them out of the earshot of other individuals. Honest reporting was encouraged, and confidentiality was reinforced by informing participants of the requirement for confidentiality placed upon us by the U.S. Department of Justice that prohibits our disclosure of any personally identifiable information to anyone outside the research staff, except in cases of suspected child abuse or where an individual was believed to be in imminent danger. All recruitment and assessment procedures were approved by the IRBs of the participating universities, and adolescents were paid \$50 for their participation (when allowed by facility rules).

## Variables

*Dependent Variable: Disposition.* We obtained the dispositions (sentences received) from the court files and categorized them into two groups: probation and confinement (including residential treatment facilities). In Philadelphia, 34.1% received probation and 65.9% were sent to confinement. In Phoenix, 73.5% received probation and 26.5% received confinement. In addition to the type of disposition received, we also obtained information from the court files as to whether the youth had been transferred to the adult court system.

*Independent Variables:* We considered demographic, legal, individual, and environmental factors. We describe each in detail below.

*Demographic.* Four demographic variables were considered: age, race, gender, and parent's education level. Age was coded continuously. Sex of the respondent was coded as 1 (male) and 2 (female). Three variables were created for race/ethnic categories: white, black, and Hispanic.<sup>1</sup> Socioeconomic status was based on both the participant's as well as a collateral's response to mother's and father's level of education.<sup>2</sup> The maximum response given by either the participant or collateral was used and an average was calculated as previous research has shown that parental education may be the most stable component of a family's social class (Steinberg, Mounts, Lamborn, & Dornbusch, 1991). Response options ranged from (1) some graduate/professional school to (6) grade school or less, with low scores being indicative of higher educational attainment.

*Legal.* Current and past legal involvement was assessed in four ways. First, we reviewed all the charges and coded whether the most serious adjudicated crime charge was for a violent person offense (e.g., murder, rape, robbery, aggravated assault, etc.) or not (coded 1 for violent offense, 0 otherwise). We also coded whether the case was processed in juvenile (coded 0) or adult (coded 1) court. To capture past legal experience, we created two variables using official court records. The first was a count of the total number of court referrals ever experienced (defined as the number of arrests that were brought to the attention of the court), and the second

<sup>1</sup> Specifically, for the regression analyses, we created three dichotomous variables. Blacks were scored 1 for black, 0 for Hispanic, and -1 for white. Hispanics were scored 1 for Hispanic, 0 for Black, and -1 for white. Whites were scored 1 for white, and -1 for black and Hispanic. Alternative coding procedures yielded similar substantive conclusions with regard to the null race/ethnicity effects, nor did the alternative coding procedures alter other coefficient estimates.

<sup>2</sup> Approximately 89% of the participants had collateral information, with the biological mother being the modal informant (67%).



was whether the disposition of the subject's last prior offense was probation or not (coded 1 for probation and 0 otherwise).

*Individual.* We assessed two broad sets of individual factors: psychosocial maturity and mental health problems, as well as two specific factors: gang involvement and IQ. Psychosocial maturity was assessed based on self-report measures including responsibility, resistance to peer pressure, perspective taking, and temperance. Mental health problems were assessed using DSM-IV diagnostic criteria.

*Responsibility* was assessed using the personal responsibility scale of the Psychosocial Maturity Inventory (30 items,  $\alpha = .89$ ) (PSMI Form D; Greenberger & Bond, 1976; Greenberger, Josselson, Knerr, & Knerr, 1974). These items indicate self-reliance, identity, and work orientation. Participants respond on a 4-point Likert scale ranging from "Strongly agree" to "Strongly disagree," with higher scores indicating more responsible behavior. As a scale, the PSMI appears to conform to its hypothesized factor structure (Greenberger, Knerr, Knerr, & Brown, 1974) and to possess a theoretically consistent pattern of convergent (e.g., teacher ratings of students' psychosocial maturity) and discriminant (e.g., social desirability) relations with other constructs (Greenberger, Knerr et al., 1974; Josselson, Greenberger, & McConochie, 1975).

*Resistance to peer pressure* was assessed using the Resistance to Peer Pressure Inventory (Steinberg, 2002), which assesses the weight that adolescents invest in their peers' opinions. Participants are first presented with two conflicting descriptions (e.g., "Some people go along with their friends just to keep their friends happy" and "Other people refuse to go along with what their friends want to do, even though they know it will make their friends unhappy"), and are asked to choose the description that describes them best. Next, the participant must decide if the description is "Sort of true" or "Really true." The measure contains 10 items, with higher scores indicating greater resistance to peer pressure. The measure was found to have adequate internal consistency ( $\alpha = .73$ ).

*Perspective taking* considered both time perspective and social perspective taking. *Time perspective taking*, or the ability to foresee short and long term consequences, was assessed with the 8-item Future Outlook Inventory (FOI; Cauffman & Woolard, 1999). Items were drawn from various measures of similar constructs (Scheier & Carver, 1985; Strathman, Gleicher, Boninger, & Edwards, 1994; Zimbardo, 1990). The FOI asks participants to rate from 1 to 4 (1 = Never True to 4 = Always True) the degree that each statement applies to them (e.g., "I will keep working at difficult, boring tasks if I know they will help me get ahead later"), with higher scores indicating a greater degree of future consideration and planning ( $\alpha = .68$ ). *Social perspective taking*, or the ability to take other people's perspectives into account, was measured using a subscale from the Weinberger Adjustment Inventory (WAI, Weinberger & Schwartz, 1990). The WAI asks subjects to describe themselves on five-point Likert scales (1 = Almost Never to 5 = Almost Always) regarding what they have usually been like or felt like over the past year or more. The 5-item "consideration of others" scale ( $\alpha = .73$ ) consists of items such as, "before I do something, I think about how it will affect the people around me."

*Temperance*, or the ability to control one's impulses, was assessed using two scales from the WAI. A 12-item self-restraint score ( $\alpha = .84$ ) was calculated by aggregating subscales measuring impulse control (e.g., "I do things without giving them enough thought" [reverse coded]), and suppression of aggression (e.g., "I lose my temper and 'let people have it' when I'm angry" [reverse coded]). Studies of the reliability, convergent and divergent validity, and factor structure of the WAI are encouraging (for a review, see Farrell & Sullivan, 2000). For example, self-reported WAI scores correlate moderately with peer- and teacher-based WAI ratings, and WAI subscales relate differentially to external constructs (Weinberger, 1996). The WAI is associated with indices of self-regulated decision making (Miller & Byrnes, 2001) and is predictive of such socially (in)competent behavior as drug use (e.g., Farrell & Danish, 1993).

*Substance Abuse and Mental Health* was assessed using the Composite International Diagnostic Interview (CIDI), a highly structured clinical interview based on DSM-IV and ICD-10 diagnostic criteria (Kessler & Üstün, 2004). The CIDI is a computerized assessment tool that was developed to be administered by non-clinical interviewers (Kessler et al., 2004). Previous research using a blind clinical reappraisal approach has found good concordance between DSM-IV diagnoses based on the Structured Clinical Interview for DSM-IV-TR (SCID; First, Spitzer, Gibbon, & Williams, 2002) and the CIDI (Kessler, Berglund, Demler, Jin, & Walters, 2005). While the CIDI contains modules that measure a range of mental health outcomes, the present study only obtained diagnostic information on major depressive disorder, dysthymia, manic episode, post-traumatic disorder, alcohol abuse, alcohol dependence, drug abuse, and drug dependence in the previous year. All items were coded as 0 (no diagnosis) or 1 (diagnosis).

Finally, we obtained a measure of the participant's self-reported gang involvement (coded 1 for gang membership versus 0 for no reported gang membership) and a measure of IQ using the Full-Scale IQ Two-Subtest (FSIQ-2) Wechsler Abbreviated Scale of Intelligence (WASI) (Psychological Corporation, 1999). The WASI can produce an estimate of general intellectual ability based on two (Vocabulary and Matrix Reasoning) out of the four subtests and can be administered in approximately 15 min. The WASI is correlated with the Wechsler Intelligence Scale for Children ( $r = .81$ ) and the Wechsler Adult Intelligence Scale ( $r = .87$ ), and has been normed for individuals between the ages of 6 to 89 years (Psychological Corporation, 1999).

*Environmental.* We examined parent-related and school-related environmental factors. In the parent domain, we measured whether the participant was living with his/her two biological parents (coded 1 versus 0 for other family compositions) and whether their biological mother or biological father had ever been arrested (coded 1 for either mother or father arrested versus 0 otherwise). In the school domain we included three measures: participants' reports of what their grades were like in school (with lower scores indicating better grades), and participants' reports of whether they were currently in school (coded 1 versus 0 for not in school).

Table 1 presents descriptive statistics for all study variables for the full sample as well as the two jurisdictions separately. Significant differences across the two sites in variables are denoted in the last column, which reflects *t*-test mean differences.<sup>3</sup>

#### Plan of analysis

In addition to the presentation of a full sample set of estimates (including site-by-predictor interactions), and because of geographical variations in criminal justice processing, we also predicted disposition (as a dichotomous variable, probation versus all forms of confinement) separately for Phoenix and Philadelphia using logistic regression models. We present the analysis in this fashion so that readers can gauge the contribution of the predictors in general, in an interactive fashion, and then separately across jurisdictions. Throughout the analyses, regression coefficients are presented in an Odds Ratio (OR) format, which is a useful means to gauge the increase in the chances/probability of experiencing the outcome. An OR greater than 1 signifies a higher probability of experiencing the outcome (placement), while an OR less than 1 signifies

<sup>3</sup> Because of the number of tests conducted in Table 1, we also employed a Bonferroni correction, which is a correction made to the alpha level when multiple statistical tests/comparisons are being performed simultaneously. The Bonferroni correction is given by  $\alpha/n$ , where alpha is the significance level (.05 in our case) and  $n$  is the total number of comparisons (28 in our case). This calculation adjusts the alpha level from the standard  $p < .05$  to  $p < .001$ . When this correction is made to the comparisons found in Table 1 (where we originally reported 20 significant differences across the two sites), four comparisons are no longer significant at the Bonferroni corrected alpha level (age, prior court referrals, alcohol abuse, grades), and sixteen remain significant. In short, the substantive conclusions do not change very much with such a correction.



**Table 1** Site descriptives and comparisons

	Full sample ( <i>N</i> = 1355)	Philadelphia ( <i>N</i> = 701)	Phoenix ( <i>N</i> = 654)	Site comparisons
Final disposition (% placement/ probation)	40.4/ 41.0	60.8/ 31.4	18.5/ 51.4	$\chi^2 = 274.89; p < .001$
<b>Demographic</b>				
Age (Mean, <i>SD</i> )	16.0 (1.14)	16.1 (1.20)	16.0 (1.07)	$t = 2.47; p < .05$
Sex (% Male)	86.4	86.4	86.4	$\chi^2 = .00; n.s.$
<b>Race (%)</b>				
African-American	41.5	71.8	9.0	$\chi^2 = 553.5; p < .001$
Hispanic	33.5	15.3	53.1	
White	20.2	10.3	30.9	
Other	4.8	2.7	7.1	
Parent education	4.3 (.92)	4.3 (.77)	4.3 (1.07)	$t = 0.56; n.s.$
<b>Legal</b>				
Violent charge (%)	54.5	55.8	53.1	$\chi^2 = 1.01; n.s.$
Prior court referrals	2.15 (2.46)	1.96 (2.08)	2.36 (2.79)	$t = -2.95; p < .01$
Probation- last prior (%)	22.4	14.7	30.7	$\chi^2 = 50.03; p < .001$
Adult court (%)	14.8	1.3	29.4	$\chi^2 = 211.08; p < .001$
<b>Individual</b>				
IQ	84.6 (13.03)	80.7 (12.34)	88.9 (12.40)	$t = -12.04; p < .001$
Gang involvement (%)	23.2	13.0	34.3	$\chi^2 = 85.78; p < .001$
<b>Psychological</b>				
MDD (%)	5.2	5.6	4.9	$\chi^2 = .22; n.s.$
Dysthymia (%)	0.4	0.4	0.5	$\chi^2 = .01; n.s.$
Manic episode (%)	2.6	2.1	3.1	$\chi^2 = 1.27; n.s.$
PTSD (%)	3.8	3.3	4.4	$\chi^2 = 1.40; n.s.$
Alcohol abuse (%)	7.8	5.7	10.1	$\chi^2 = 8.85; p < .01$
Alcohol dependency (%)	7.2	3.1	11.5	$\chi^2 = 35.03; p < .001$
Drug abuse (%)	18.5	17.8	19.3	$\chi^2 = .39; n.s.$
Drug dependency (%)	12.2	7.8	16.8	$\chi^2 = 25.17; p < .001$
PSMI overall	3.0 (.46)	3.1 (.48)	2.9 (.42)	$t = 6.75; p < .001$
Future orientation	2.3 (.55)	2.4 (.56)	2.2 (.52)	$t = 6.64; p < .001$
Temperance	2.9 (.85)	3.0 (.86)	2.8 (.84)	$t = 5.15; p < .001$
Consideration of others	3.5 (.88)	3.6 (.91)	3.4 (.83)	$t = 4.30; p < .001$
Resistance to peers	3.0 (.58)	3.1 (.53)	2.9 (.59)	$t = 8.54; p < .001$
<b>Environmental</b>				
Two-parent family (%)	12.3	6.3	18.7	$\chi^2 = 48.22; p < .001$
Parent criminal Hx (%)	43.5	39.4	48.0	$\chi^2 = 10.27; p = .001$
Grades	4.8 (1.90)	4.9 (1.89)	4.7 (1.90)	$t = 2.79; p < .01$
Enrolled in school (%)	71.7	78.6	64.4	$\chi^2 = 33.78; p < .001$

*Note.* Probation was coded as 1 and placement was coded as 2; All other dichotomous variables were coded as 0 for 'No' and 1 for 'Yes' such that percentages indicate the number coded as 1/Yes; Lower values indicate greater parental education and better grades; MDD: Major Depressive Disorder; PTSD: Post Traumatic Stress Disorder.

a lower probability of experiencing the outcome (placement). Because many more cases went through adult court in Phoenix than Philadelphia (192 youths compared to 9 youths), we also present a logistic regression model predicting juvenile versus adult court processing for the Phoenix subjects.

## Results

The results of our analyses conducted using the full sample as well as by separate jurisdiction are presented in Table 2. As the table indicates, of the demographic variables included in the model for the full sample, only site, sex, and age were significantly related to disposition; notably, ethnicity/race and parental education were not significant predictors. Males were more likely than females to be confined, while older juveniles were more likely to receive probation. In addition, juveniles from Philadelphia were more likely to be sent to secure placement, while juveniles from Phoenix were more likely to receive probation.

**Table 2** Logistic regression coefficients predicting disposition (Probation v. Placement)

	Full sample		Philadelphia		Phoenix	
	OR	SE	OR	SE	OR	SE
Demographic variables						
Site	0.134	0.031*				
Age	0.805	0.059*	0.737	0.069*	0.856	0.119
African-American	3.076	2.617	1.811	2.511	3.44	3.725
Hispanic	1.9	1.617	1.066	1.454	2.735	3.164
White	4.123	5.182	2.06	4.176	6.249	10.296
Sex	0.271	0.064*	0.21	0.062*	0.453	0.186*
Parents education	1.042	0.103	1.009	0.144	1.046	0.159
Legal variables						
Violent	0.978	0.155	0.754	0.156	1.756	0.497*
Number of priors ever	1.488	0.065*	1.706	0.140*	1.366	0.075*
Probation disposition prior	0.447	0.089*	0.405	0.115*	0.431	0.129*
Individual variables – general						
IQ	0.985	0.006*	0.992	0.008	0.979	0.012
Gang involvement	1.284	0.275	0.906	0.286	1.776	0.548
Individual variables – psychological						
CIDI-major depressive disorder	1.733	0.664	1.45	0.722	1.935	1.187
CIDI-dysthymia	1.714	1.839	3.003	4.356	0.774	1.277
CIDI-manic episode	1.214	0.576	0.677	0.454	1.927	1.25
CIDI-posttraumatic stress disorder	2.02	0.845	3.288	2.087	1.296	0.787
CIDI-alcohol abuse	0.881	0.259	1.333	0.596	0.738	0.324
CIDI-alcohol dependence	1.577	0.571	1.942	1.691	1.458	0.621
CIDI-drug abuse	1.502	0.316*	1.255	0.347	2.039	0.705*
CIDI-drug dependence	2.27	0.652*	2.618	1.185*	1.973	0.785
Responsibility (PSMI)	0.981	0.186	0.899	0.208	1.048	0.404
Responsibility (resistance to peers)	1.181	0.182	1.061	0.216	1.297	0.338
Perspective (future orientation)	1.084	0.172	1.054	0.213	1.261	0.355
Perspective (consideration of others)	1.026	0.101	1.045	0.13	1.013	0.186
Temperance	0.895	0.093	0.952	0.126	0.809	0.155
Environmental variables						
Two parent family	0.745	0.199	0.483	0.193	1.031	0.365
Parental criminal history	1.167	0.187	1.253	0.261	1.253	0.349
Grades in school	0.999	0.043	1.004	0.056	0.967	0.075
Enrolled in school	1.033	0.05	0.988	0.066	1.1	0.084
Log likelihood	−513.484		−311.621			

\* $p < .05$ .

Two of the legal variables are significant predictors of disposition. Subjects with more prior court referrals are more likely to be sent to confinement for their current disposition, however, those who received probation on their last prior offense are more likely to get probation again. Somewhat surprisingly, those subjects who are adjudicated on a violent charge are no more or less likely than their counterparts to be confined. Finally, three of the individual characteristics, but none of the contextual factors, are significant predictors of disposition. Specifically, those with a diagnosis of drug abuse, and those with a diagnosis of drug dependence are more likely to be sent to secure confinement while juveniles with a higher IQ were less likely to receive secure placement and more likely to receive probation.

In addition to the main effects noted above, a series of interactions between jurisdiction (site) and each of the independent variables was conducted. In that model estimation (not shown), only a handful of interaction terms attained significance. Given the large number of interactions conducted and the fact that no discernable pattern was able to be detected among these significant few, these interactions were not interpreted. Instead, we estimate the logistic regression model separately for the two jurisdictions. As can be seen, the results are substantively similar across jurisdiction. In Philadelphia, both age and gender are significant with males more likely to be confined than females and older youths more likely to receive probation than younger youths. In addition, youths who received probation on their prior offense are more likely to receive probation again whereas those who had more court referrals are more likely to receive placement. Finally, those in Philadelphia who present with a drug dependence diagnosis are more likely to be confined than those without a diagnosis. In Phoenix, while there is no effect for age, we see similar gender findings with males more likely to be confined than females. In addition, those who received probation on their prior offenses are more likely to receive probation on their current disposition whereas those with a drug abuse diagnosis are more likely to be confined. Interestingly, while Phoenix exhibited similar findings on previous court referrals — those with more priors are more likely to be confined — one difference did emerge with youths who exhibited violence during their committing offense being more likely to receive placement than those who did not exhibit violence during their committing offense.

Lastly, we examine the predictors of juvenile vs. adult court adjudication in Phoenix, the results of which are summarized in Table 3. (As noted earlier, only a small number of offenders in the Philadelphia sample were transferred to adult court.) We estimate one overall model that simultaneously includes demographic, legal, individual, and environmental characteristics. As in the previous analyses, two demographic characteristics (age and sex) are significant predictors of transfer, with older youths and males being more likely to be sent to adult court. Among the legal characteristics, a violent committing offense was associated with increased likelihood of waiver to adult court. Of the individual and environmental characteristics, only two, alcohol dependence and responsibility (as assessed via the Psychosocial Maturity Inventory) were significant. Subjects diagnosed with alcohol dependence and subjects scoring high in responsibility were less likely to be sent to adult court and more likely to be retained in juvenile court.

## Discussion

Although the evolving juvenile court more closely resembles the criminal court in its procedures, its punishment regimes vary extensively across jurisdictions and individuals. Our analysis of the factors associated with dispositions received in a large sample of serious juvenile offenders shows quite persuasively that, at least at the broad level of distinguishing between those who are released on probation vs. those who are placed in confinement, individual and environmental factors are much less important than legal factors. Of the numerous variables studied — including those that

**Table 3** Predictors of Juvenile vs. Adult court processing (Phoenix sample only)

	OR	SE
Demographic variables		
Age	2.532	0.308*
African-American	1.76	1.455
Hispanic	1.758	1.573
White	1.933	2.442
Sex	0.194	0.084*
Parents education	1.192	0.142
Legal variables		
Violent	2.891	0.672*
Number of priors ever	1.044	0.044
Probation disposition prior	0.699	0.169
Individual variables — general		
IQ	1.017	0.009
Gang involvement	1.12	0.298
Individual variables – psychological		
CIDI-major depressive disorder	1.423	0.788
CIDI-dysthymia	0.686	0.921
CIDI-manic episode	0.56	0.388
CIDI-posttraumatic stress disorder	0.717	0.437
CIDI-alcohol abuse	1.149	0.411
CIDI-alcohol dependence	0.402	0.164*
CIDI-drug abuse	1.095	0.333
CIDI-drug dependence	1.256	0.43
Responsibility (PSMI)	0.493	0.151*
Responsibility (resistance to peers)	1.118	0.221
Perspective (future orientation)	1.034	0.252
Perspective (consideration of others)	1.164	0.173
Temperance	1.239	0.195
Environmental variables		
Two parent family	0.855	0.242
Parental criminal history	1.082	0.242
Grades in school	0.94	0.059
Enrolled in school	1.055	0.064
Log-likelihood	−274.246	

\* $p < .05$ .

many believe *ought* to influence juvenile sentencing decisions — the most consistent predictor of institutional placement was the offender's number of prior court referrals; as expected, individuals with a longer list of priors were more likely to be placed in secure confinement. Whether the current conviction was for a violent crime did not consistently lead to institutional placement, however. In Phoenix, violent crimes were more likely to result in institutional placement, but this was not necessarily the case in Philadelphia. In both locations, males were more likely than females to be placed in secure confinement, even when controlling for legal, individual, and environmental differences, but no racial or socio-economic differences were observed. Of the individual and environmental factors included in our model, only a scant few (which varied by jurisdiction) were found to predict disposition. Moreover, even though we observed mean-level differences between the jurisdictions among the predictors used in our study (see Table 1), the factors related to disposition were more similar than different across the two jurisdictions.

Our analysis of factors influencing the transfer of juveniles to adult courts in Phoenix yields findings similar to those described above for disposition decisions. Waiver to adult court is more likely when subjects are older, male, and violent (based on committing offense), and less likely when the juveniles are diagnosed with an alcohol dependence and when juveniles score higher on a measure of responsibility. We did not have a sufficient number of waiver cases in Philadelphia to conduct a parallel analysis. The higher transfer rate in Phoenix compared to Philadelphia may be due to both (a) the statutory limit of 18 on the age correctional jurisdiction in Arizona versus 21 in Pennsylvania, and (b) the smaller number of therapeutic placement options available to the juvenile courts in Arizona.

The present analyses cannot specifically address how or whether certain factors (e.g., maturity) are being considered by the courts when making disposition decisions, because the rationale behind each decision is unknown, and because, in most instances, it is unlikely that the court has access to much of the individual and environmental data considered in this study. Further, we did not specifically assess to what types of information about the youth the judge had access. As such, the analyses presented here can highlight overall trends in the factors that influence disposition outcomes, but cannot draw specific conclusions about the processes that lead to such outcomes (as we were not aware of what information was available to judges at the time of sentencing). In addition, while a lengthy record of prior arrests or convictions was found to influence dispositional decisions, the reason for this may be twofold. For example, a judge could view a high number of priors as evidence of a strong commitment to criminal activity with no evident sensitivity to prior sanctions. On the other hand, the judge could also view it as evidence of the failure of prior efforts at interventions designed to produce desistance. In either case, prior failures is both the cause of repeated contacts with the criminal justice system, and also the conclusion by judges and prosecutors that the offender can no longer benefit from services in the juvenile court or the protections of juvenile court privacy. Thus, as suggested by some, prior record and the decision to invoke a strong disposition may be endogenous, complicating any causal story about prior records and dispositional decision making (Slobogin, 1999).

This study is as important for what was *not* found to predict disposition as for what was found. Although one must be cautious in the interpretation of null findings, we find no evidence, in our sample of serious offenders, that ethnic minority youth are more likely than white youth to be placed in secure confinement, either with or without controlling for other factors. (It is unlikely that this finding is due to Type II error given the size of the combined site sample and the relative precision with which both ethnicity and dispositional placement are measured).<sup>4</sup> This is consistent with previous studies showing that ethnicity has not been found to be a significant predictor of juvenile recidivism after socioeconomic status is taken into account (Cottle, Lee, & Heilbrun, 2001). And, as indicated by our findings, socioeconomic status (as represented by parental education) was not associated with disposition. Some analysts have suggested that disproportionate minority confinement is driven primarily by cases involving less serious crimes, a possibility that we are unable to examine, because our entire sample had been convicted of a felony-level or comparably serious offense. In any event, the present analyses suggest that the

<sup>4</sup> A reviewer correctly noted that only four of the eight significant effects reported are consistent predictors across the sites, and that this may be due to increased statistical power in the combined sample. We note that given the large number of predictor variables, it is not surprising that for the individual site analyses only a handful of predictors were significant. Thus, the fact that eight variables were significant in the full sample is likely due to increased power from a larger sample size. At the same time, when we estimated the effect of the independent variables in a block fashion across sites (i.e., demographic only, legal only, individual-general only, individual-psychological only, and environmental only), we were led to substantively similar conclusions. That is, independent variables that were significant in the block fashion were also significant in the full estimation, and conversely independent variables that were not significant in the block fashion were not significant in the full estimation.

causes of disproportionate minority confinement lie either in the adjudication of less serious crimes, in selection biases that occur prior to disposition (e.g., likelihood of being arrested, formally charged, found guilty), or in genuine racial differences in offending.

As noted in the introduction, the juvenile justice system was founded to provide for individualized treatment of offenders, administering dispositions based on a case-by-case consideration of each youth's distinct rehabilitative needs. We find little evidence that the systems studied in the present analysis function in this way. Of the many psychological variables examined, the only significant predictor of institutional placement was the presence of drug problems — all other factors being equal, juveniles with such problems were twice as likely to be confined than their peers. This could be due to two very different processes. First, it may indicate that courts viewed juveniles with drug problems as more dangerous than other offenders, more likely to re-offend, and therefore more deserving of incarceration. Alternatively, it may reflect judges' attempts to use secure placement as a way of delivering drug treatment services to offenders who need them.

We find that adolescents' psychosocial immaturity did not add anything unique to the determination of dispositional outcomes. We noted earlier that formulating a clear directional hypothesis concerning the impact of this variable on placement was difficult, because immaturity could be viewed as either a mitigating condition or a risk factor for re-offending. In order to examine this issue further, we re-analyzed the data, hypothesizing that developmental immaturity would be a stronger predictor of incarceration among older juveniles, where immaturity is more aberrant and, hence, more likely to be viewed as a risk factor. Even within this analysis, however, we found no significant age by maturity interactions in the prediction of dispositional placement. Although we have no way of knowing, the lack of an effect for any of the maturity variables could have resulted from our combining data from different courtrooms that have conflicting views of the importance of these factors. In essence, the effect of maturity may be cancelled out by the fact that some judges may evaluate immaturity as a mitigating factor that makes the youth less culpable, whereas others may see it as an aggravating factor that increases the youth's risk for future dangerousness. Equally likely is that when judges evaluate the maturity of a youth, they are relying on observations of demeanor during court proceedings, rather than psychological measures of psychosocial attributes. Conclusions based on such observations can reasonably be expected to vary widely from court to court, and from case to case.

#### Legal formalism, mental health and developmental maturity on dispositions

These results illustrate the tensions between legal formalism and individualized justice in the modern juvenile court. Since *Gault*, these two dimensions are often in competition, and juvenile courts are challenged to integrate these competing concerns in fashioning dispositions (Feld, 1999). In fact, legal formalism is characteristic of the modern juvenile court, placing primacy on proportionality and public safety in deciding which offenders are incarcerated (Zimring, 1998). Compared to the juvenile court of 50 years ago, contemporary juvenile court judges are willing, and at times required by statute, to hand out lengthy sentences for offenders who commit serious crimes or who have several prior appearances in juvenile court. In the criminal court, sentencing logic also has evolved to narrow judicial discretion and make punishment harsher and more certain. At a minimum, sentencing in criminal courts is structured to encourage judges to consider punishment with public safety as the primary goal of sentencing, regardless of the offender's age.

In this article, we examined the relative influence of developmental factors compared to offense or offender characteristics in sentencing outcomes for adolescent offenders. The primacy of public safety and retributive concerns in the contemporary juvenile court lead to dispositions



where developmental factors are of little significance. Legislators have anticipated this in some states by narrowing judicial discretion through minimum sentences and mandatory placements for certain classes of offenses and offenders (Feld, 1991, 1999).

In conclusion, the juvenile and criminal court have converged not only in procedure but in sentencing logic. The same factors that most influence criminal court sentencing also predict juvenile court sentencing. Evidently, the popular image of the juvenile court as a flexible and lenient institution that engages in individualized decision-making is outdated, or at least overly simplistic. We find little individualization in determining whether to place an offender in secure confinement or release a juvenile back into the community. Whether these decisions would change if the court was informed of the juvenile's psychological development and mental health, or if they would be more effective in ensuring public safety and positive development, is an important concern for the future of the juvenile court.

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