

Public Attitudes Toward Juveniles Who Commit Crimes: The Relationship Between Assessments of Adolescent Development and Attitudes Toward Severity of Punishment

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Abstract

In this article, the authors used a statewide survey to investigate the extent to which beliefs regarding the age at which youth reach maturity, the role of peer influences, and other factors, such as abuse during childhood, are associated with measures of how harshly juveniles should be treated by the justice system. The results of this study provide strong support for the hypothesis that assessments of adolescent development are important predictors of attitudes about how juveniles should be treated in the justice system. In all cases, variables measuring attitudes surrounding adolescent development explained substantially more of the variance in attitudes toward punishment than did demographic and socioeconomic variables.

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When scholars discuss appropriate punishments for youth violence, the capacity of children to think rationally and make appropriate decisions is often the principal theme. Research on child and adolescent development provides reliable information concerning the developmental differences between juveniles and adults (Cauffman & Steinberg, 2000; Steinberg & Cauffman, 1996). This research has shown that juveniles have not yet developed the full range of cognitive and volitional competencies (Feld, 2004; Hewitt, Regoli, & Kierkus, 2006; Logan, 1998; Steinberg & Scott, 2003) and that they differ socially, psychologically, and physically from adults. Researchers have argued that adolescents are less mature, are more impulsive, and engage in more risk-taking behaviors than adults (Gardner & Steinberg, 2005; Hewitt et al., 2006). Moreover, because of the way they function psychosocially, such behavior is more expected in youth than it is in adults (Cauffman & Steinberg, 2000; Choudhury, Blakemore, & Charman, 2006; Feld, 1999). Although adolescence is a phase during which some youth engage in unlawful behavior, there is substantial evidence that most adolescents involved in delinquent activity will stop when they reach young adulthood (Jessor & Jessor, 1977). For this reason, there are laws in our society that prohibit juveniles from voting, purchasing alcoholic beverages, or legally signing their name to a document without the accompanying signature of a parent or guardian.

Nevertheless, 44 states have laws that disregard the scientific evidence confirming the developmental limitations of children and allow those as young as 10 years to be sentenced to “life without the possibility of parole” (Human Rights Watch, 2008). In 29 states, that sentence is mandatory for youth convicted of certain crimes, mostly first-degree murder. In 2008, Human Rights Watch reported that 2,484 young offenders were serving life without parole sentences in the United States—an increase of 159 from the number (2,225) reported in 2005; approximately 109 of those received that sentence for crimes other than homicide. Human Rights Watch also reported that no other country in the world has individuals serving these sentences as youths.

A recent decision of the U.S. Supreme Court has somewhat constrained the extent to which such sentences are allowed. The May 17, 2010, U.S. Supreme Court (2010) decision, *Graham v. Florida*, held that the Eighth

Amendment's Cruel and Unusual Punishment Clause "does not permit a juvenile offender to be sentenced to life in prison without parole for a nonhomicide crime" (p. 1). Under this decision, however, life without parole sentences is still allowable for juveniles who have been convicted of homicides, including assisted homicides. Prior to this decision, 44 states, the District of Columbia, and the federal jurisdiction permitted life without parole for juvenile nonhomicide offenders (U.S. Supreme Court, 2010, appendix to opinion of the Court). Nor does the decision in any way impact the laws, which exist in every state and at the federal level, that permit juveniles to be tried and sentenced as adults. In their decision, the concurring judges also emphasized that the possibility of parole in no way ensures that a person serving sentences for crimes committed as a juvenile will eventually be granted parole or released from prison, arguing that

The Constitution prohibits the imposition of a life without parole sentence on a juvenile offender who did not commit homicide. A State need not guarantee the offender eventual release, but if it imposes a sentence of life it must provide him or her with some realistic opportunity to obtain release before the end of that term. (U.S. Supreme Court, 2010, p. 32)

Much of the rationale for the discrepancy between research on adolescent development and the presence of harsh sentencing laws for juveniles stems from the perception that there is a public mandate to be "tough on crime." Public policy discussions often take place without reference to the substantial research base that already exists on these subjects. These discussions tend to occur in the immediate aftermath of high-profile crimes and gang-related homicides that have received national media attention. Proponents of "tough sentences" tend to rely on opinion polls that ask a few narrow questions (Cullen, Fisher, & Applegate, 2000; Roberts & Stalans, 1997). There is a scarcity of public opinion data on responses to more specific questions, such as the extent to which individuals support the imposition of severe sentences for juveniles who commit serious crimes and the extent to which individuals base their assessments of appropriate sentencing on their understanding of adolescent development and culpability. Hence, it is unclear what the general public's perceptions really are regarding culpability and the extent to which assessments of development are linked to assessments of severity of punishment. Nowhere is this discussion more salient than in recent debates around the fate of juveniles who are sentenced to adult facilities for the rest of their lives for homicides and assisted homicides.

This article addresses this gap in the literature and in the public policy debate. Specifically, it examines the link between assessments of child and adolescent development and attitudes toward the appropriate level of punishment for juveniles, particularly juveniles who have committed homicide or assisted homicide. Using representative statewide survey data from Michigan, we used multivariate analytic techniques to investigate the extent to which a set of measures assessing youth maturity and responsibility were associated with a set of variables that measured how harshly juveniles should be treated by the justice system. Michigan is 1 of 19 states that allow children of any age to be tried and punished as adults, including a sentence to adult prison for natural life (Human Rights Watch, 2005). In 2008, 347 juvenile offenders were serving life without parole sentences in Michigan, making it the second-highest state in the nation in number of youth sentenced to adult facilities for life. None had been sentenced for nonhomicide crimes.

The article first presents a review of the literature on public opinion toward juvenile crime and the research on child and adolescent development. The following sections present our methodology, including a discussion of our survey, variable definitions, and analytical techniques; highlight our results; and discuss limitations. The final section covers our discussion and policy implications.

Review of the Literature

Research on Public Opinion on Juvenile Crime and Sentencing Options

The public's concern about juvenile crime is often the impetus for state legislators to craft laws that aggressively punish juvenile offenders (Roberts, 2004). Some public opinion surveys have found that a majority of respondents supported treating juvenile offenders as harshly as adult criminals (Moore, 1994; Soler, 2001). The reaction of policy makers and politicians has been to lower the age at which juveniles accused of committing violent crimes can be exposed to adult sanctions. Today, most states have lowered the majority age for such crimes from 17 to 14 years, with others having no lower limit for criminal prosecution (Griffin, Torbet, & Szymanski, 1998).

An assessment of the sources used to shape public opinion, however, suggests that responses were influenced by high-profile crimes that received national attention, such as school shootings, or were affected by mass polls that typically asked a few simplistic questions (Cullen et al., 2000; Roberts & Stalans, 1997). Each act of juvenile violence covered extensively by the

media heightens public concern about how to treat juveniles who commit such acts (Logan, 1998) and influences how the public subsequently responds to opinion surveys.

A recent public opinion study that included more complex options found that only 5% of respondents supported the harshest option of "life without the possibility of parole in an adult prison" (Kubiak & Allen, 2008, p. 14). In addition, research that looks more deeply into adults' attitudes toward juvenile crime suggests that the public's response may be more complicated than some political rhetoric (Roberts, Stalans, Indermaur, & Hough, 2003; Schiraldi & Soler, 1998; Stalans & Henry, 1994). For example, several surveys have found public support for rehabilitation as a goal of juvenile justice policy (Moon, Sundt, Cullen, & Wright, 2000; Roberts, 2004). Other research has found support for sanctions and programs that are alternatives to prison (Krisberg & Austin, 1993). Overall, the research suggests that assessments of public sentiment about juvenile crime and appropriate responses vary greatly and depend on when and how public opinion is gauged (Nagin, Piquero, Scott, & Steinberg, 2006).

Research on Adolescent Development and Culpability

There are specific developmental differences that distinguish the quality of decisions made by juveniles versus decisions made by adults (Nelson, Leibenluft, McClure, & Pine, 2005). Developmental psychologists frequently report differences among the thought processes and behaviors of children, adolescents, and adults. Neuroscience research suggests that these behaviors reflect more fundamental differences in brain development, biological maturation, and intellectual functioning (Paus et al., 1999; Sowell, Thompson, Holmes, Jernigan, & Togo, 1999). In addition, neurobiological evidence suggests that the human brain does not mature until a person reaches his or her early twenties. Therefore, adolescents cannot have the same physiologic capability as adults to make mature decisions or to control impulsive behavior (Feld, 2004; Nelson et al., 2005). According to Feld (1999), these differences affect the degree of responsibility that can appropriately be expected from adolescents. Punishment for crimes committed by youth must be subject to what he defines as a "youth discount." This youth discount is justified because adolescents are inherently more impulsive, exercise less self-control, fail to adequately calculate long-term consequences, and engage in more risky behavior than adults. The youth discount preserves the future life chances of youth when they reach maturity. The argument is, "If juveniles as a class typically make worse decisions than

adults, then sentencing policies should protect them from the full consequence of their bad decisions” (Feld, 2004, p. 23).

The literature on adolescent psychological development covers two broad categories: research that attributes youthful immaturity to cognitive differences and research that attributes immaturity to psychosocial differences. Specific developmental factors influence adolescent decision making. Differences in cognitive development are also important in assessing the competence of younger adolescents who participate in delinquent activity. The ability of adolescents to reason and understand is not developed as fully as that of adults. Several psychosocial factors can negatively influence judgment in adolescence and contribute to choices about engaging in delinquent behavior, including peer influence, temporal perspective, risk perception, and risk preference (Scott & Grisso, 1997).

Cognitive capacity. Research indicates that decision-making capacities improve throughout childhood until midadolescence. Although there is much variability among individuals, preadolescents and younger teens differ substantially from adults in their abilities. The capacity to process information and think critically is a developmental process manifested through knowledge in specific domains. Cognitive skills mature and develop throughout adolescence (Scott & Grisso, 1997), with some researchers arguing that differences between older adolescents and adults are small.

Others argue, however, that although abstract cognitive differences between older adolescents and adults may be minor, it is important to focus on the conditions under which decisions are made. Rather than looking at abstract cognitive capacities measured in experimental settings, their arguments focus on (a) the link between cognitive capacity and the conditions under which adolescents are able to adequately use their full cognitive capacity and (b) the link between cognitive ability and decision making under risk.

Psychosocial development. Many theories explain the differences between adolescents and adults in risk-taking behavior. The most important difference involves the relative influence of peers. Researchers have found that when adolescents commit acts that are risky, most notably crimes, they do so in the company of peers (Erickson & Jensen, 1977; Gardner & Steinberg, 2005; Zimring, 1998). Adolescent peer influence is driven by two primary forces: social comparisons and conformity. Adult risk-taking behavior, however, typically occurs when adults are alone (Zimring, 1998). These two constructs manifest when adolescents measure their own behavior by comparing it with peers and when they conform to the behaviors and attitudes of peers (Scott &

Grisso, 1997). These constructs lay the foundation of understanding how adolescent peers influence each other's decision making.

Overall Research Question and Statement of Hypotheses

Our study centers on investigating the extent to which the growing body of knowledge generated by developmental and cognitive psychologists and neuroscientists affects how individuals determine the appropriate response of the justice system to juvenile violence, particularly homicides and assisted homicides. As described in the "Method" section, we include several measures of adolescent development. We use them as explanatory variables in a series of equations predicting measures of respondents' attitudes toward severity of punishment for adolescents in the justice system. Specifically, we test a set of hypotheses about the link between attitudes toward adolescent development and attitudes toward punishment. Our broad hypothesis states that respondents who view adolescents as more responsible for their own actions, without taking into account other influences, will be more likely to support harsher punishment for adolescent criminals. The specific hypotheses include the following:

Hypothesis 1 (H1): The earlier the age at which a respondent considers a child/youth to be responsible for his or her own actions, the more severe will be the respondent's judgments concerning how the child/youth should be dealt with by the juvenile justice system.

Hypothesis 2 (H2): The less importance respondents give to the ability of adolescents to control their impulses and to understand the consequences of their actions, the more severe will be their judgment concerning how the child/youth should be punished by the juvenile justice system.

Hypothesis 3 (H3): The higher a respondent's regard for the potential for rehabilitation for young offenders, the less severe will be that person's judgments concerning how the youth should be dealt within the juvenile justice system.

Hypothesis 4 (H4): The less weight given to life experiences of adolescents, such as abuse during childhood, the more severe will be the respondent's judgments concerning how children and youth should be dealt within the juvenile justice system.

Hypothesis 5 (H5): Respondents who consider peer pressure as a factor that should be considered in sentencing are more likely to support less severe sentencing options.

Method

Survey Design

After we reviewed the literature and held discussions with community focus groups, we formulated survey questions to address current juvenile sentencing policies. We identified questions to be submitted and selected for inclusion in statewide surveys during the summers of 2005 and 2006. Administered by a university-based research center, the survey uses random digit dialing (RDD) techniques to create a representative sample of Michigan residents aged 18 years and older. Selection of individuals within each county represents that county's proportion of the state's population. There were no attempts to oversample any specific geographic areas (e.g., urban vs. rural) or population groups (e.g., African American).

A 2006 Federal Communications Commission report stated that 94.5% of households in Michigan have telephones. However, that includes cell phones, which are not included in the random selection process. Using figures from Survey Sampling International (www.surveysampling.com/en/services/telephone-data-collection.aspx) on the number of listed telephone numbers in Michigan ($n = 2,467,096$) and the number of households (<http://www.census.gov/acs/www>; $n = 3,890,000$), the survey research center concluded that approximately 63.4% of households in Michigan have telephone numbers that are listed and available for inclusion in a random selection process.

The 2005 survey was fielded between May 5, 2005, and July 12, 2005, and yielded 750 completed interviews. In 2006, the survey was fielded between March 30, 2006, and July 23, 2006, and yielded 640 completed interviews. The survey was longer in 2006 ($M = 28.68$ min, $SD = 28.8$ min) than in 2005 ($M = 20.21$ min, $SD = 29.84$ min) because additional questions (not pertinent to our study) were included. The order of the questions relevant to our study was identical in both, so additional questions should not have affected the results analyzed and discussed below.

We calculated response rates using rigorous standards set by the American Association of Public Opinion Research (AAPOR). The association's calculation tool determines response rates, based on the Standard Definitions, Version 2 (<http://www.aapor.org>), of AAPOR. The response rates we provide here are computed using the following formula: completed surveys / (completed surveys + partial completes) + (refusals/terminations, noncontacts) + estimate (unknown households + unknown others). In 2005, the response rate was 25%, and in 2006, it was 27.5%.¹

Variable Definitions

Outcome variables. We investigated the role of attitudes toward treatment of adolescents within the juvenile justice system with four different outcome variables. The first was an index that measured how severely an adolescent should be treated within the juvenile justice system. This measure included three separate items that asked the respondent to state how much they agreed or disagreed with three statements: (a) A child who commits a violent offense should be eligible to receive the same punishment an adult would receive; (b) adolescents 14, 15, and 16 years old who commit violent crimes should be eligible to be imprisoned in adult prisons; and (c) adolescents convicted of committing violent offenses should not be sentenced to prison for life. We identified these three items on the basis of a factor analysis of the eight attitude items included in the survey questionnaire. Higher values indicate more severe punishment options.

Our second outcome measure specifically dealt with Michigan's law on the sentencing of adolescents. The variable measured agreement with Michigan law, based on a 5-point scale ranging from "strongly disagree" to "strongly agree." Specifically, participants were asked, "How strongly do you agree or disagree with Michigan's law that requires an adolescent to be sentenced to life without any possibility of parole for certain offenses?"

The third and fourth outcome variables included each respondent's preferred sentence for homicide and assisted homicide. The questions were worded as follows:

Tell me which of the following punishments you think an adolescent convicted of committing a homicide (assisted homicide) should receive as punishment, offering three options—(a) The adolescent should be sentenced to a juvenile facility and should be released after 21 years of age, (b) the adolescent should be sentenced to a juvenile facility with the possibility of parole after 21 years of age, and (c) the adolescent should be sentenced to adult prison and no possibility of parole at the age of 21 (the reference category).

Predictor variables measuring attitudes toward adolescent development. We included six different measures of attitudes toward adolescent development. The first two were direct measures of when respondents considered youth fully responsible for their actions. These variables allowed us to test H1 and

provide global assessments of respondent's views on adolescent responsibility. The two variables were based on these questions: (a) At what age do you think a child is as totally responsible for his or her behavior? and (b) Tell me how much you agree or disagree with the following statement (from 1 = *strongly disagree* to 5 = *strongly agree*): Adolescents aged between 12 and 17 years are as responsible as adults.

The next set of items corresponds to H2 to H5 and assesses different aspects of adolescent cognitive and sociopsychological development. Each of these items was based on the same 5-point scale. The specific wordings were as follows: An adolescent's ability to control their impulses and understand the consequences of their actions should be taken into consideration when deciding the punishment for an adolescent; adolescents below the age of 18 and who commit violent offenses are strong candidates for rehabilitation; adolescents abused as children should receive the same sentence for committing a violent offense as an adult; and peer pressure should be taken into consideration when deciding the punishment for an adolescent.

Demographic and socioeconomic control variables. The following three household composition variables were included: number of adults aged 18 years and older currently living in the household, number of children or teens aged between 5 and 17 years in the household, and number of children younger than 5 years in the household. Other variables included the age of the respondent, a race variable with three categories—White (excluded category), African American, and Other race or ethnicity—a four-category variable for marital status (married, separated or divorced, widowed, and single as the excluded category), a five-category income variable, education (six categories, with high school as the reference category), and gender (male as the reference category). Preliminary analyses strongly suggested that respondents who refused to provide any information on income had responses that were qualitatively different and more severe than other respondents. Instead of excluding these individuals or using an algorithm to assign income values to them, we created a separate category for income, in addition to the four income quartiles. Individuals not willing to report income were included, for a total of five income categories. We also included a variable indicating which year the interview occurred.

Data Analyses

Descriptive statistics for each variable in the models are presented in Table 1. Ordinary least squares regression was used for the models predicting how severely respondents believed an adolescent should be treated and the level

Table 1. Descriptive Statistics

	<i>M</i> or %	<i>SD</i>
Index measuring how severely an adolescent should be treated	7.80	2.60
Level of agreement with Michigan's law	2.92	1.372
Sentence for homicide		
Released after 21 years of age	13.2%	—
Juvenile prison with possibility of parole	66.5%	—
Adult prison or no parole	20.3%	—
Sentence for assisted homicide		
Released after 21 years of age	28.7%	—
Juvenile prison with possibility of parole	58.4%	—
Adult prison or no parole	12.9%	—
Attitudes and values concerning adolescent development		
At what age do you think a child is as totally responsible for his or her behavior?	16.7	3.30
Adolescents aged between 12 and 17 years are as responsible as adults	2.40	1.13
An adolescent's ability to control impulses and understand the consequences of actions should be taken into consideration	3.79	0.96
Adolescents who commit violent offenses are strong candidates for rehabilitation	3.61	1.02
Adolescents abused as children should receive the same sentence as adults	2.61	1.13
Peer pressure should be taken into consideration when deciding the punishment	2.90	1.21
Household composition		
Number of adults in household	1.94	0.83
Number of children 5-17 years of age	0.57	1.08
Number of children younger than 5 years	0.16	0.63
Demographic variables		
Respondent's age	51.0	16.6
Female (male: reference category)	62%	—
Race		
White (reference category)	81.2%	—
African American	13.0%	—
Other ethnicity	5.8%	—
Marital status		
Single (reference category)	19%	—
Married or cohabitating	57%	—

(continued)

Table 1. (continued)

	<i>M</i> or %	<i>SD</i>
Separated or divorced	13%	—
Widowed	11%	—
Year of interview 2005	54%	—
Income		
Income Quartile 1	18%	—
Income Quartile 2	20%	—
Income Quartile 3 (reference category)	18%	—
Income Quartile 4	17%	—
Income missing	27%	—
Educational level		
Less than high school education	3.8%	—
High school (reference category)	42.1%	—
Some college	13.2%	—
College	17.6%	—
Other education	7.9%	—
Advanced degree	15.6%	—

of agreement with Michigan's law (see Tables 2 and 3). Multinomial logit estimation was used to predict the preferred sentencing option for homicide and assisted homicide (see Table 4).

Overall, each separate model provided strong support for H1. The earlier the age a respondent considered a child/youth to be responsible for his or her own actions and the more strongly respondents agreed that adolescents aged between 12 and 17 years were as responsible as adults, the more severe were the respondent's judgments concerning how the child/youth should be dealt with by the justice system and the higher their level of agreement with Michigan's law. In the two preferred sentencing models, increases in the age at which youth were considered fully responsible for their actions were associated with greater odds ratios of choosing the less severe sentencing options relative to the option of adult prison and no probability of parole for homicide and assisted homicide. Those who expressed greater agreement with the statement that youth aged between 12 and 17 years were as responsible as adults were less likely to choose one of the less severe options as opposed to the excluded category of adult prison and no possibility of parole. The observed effects were not only statistically significant ($p < .01$ in all but one case) but also large in magnitude. Tables 2 and 3 indicate that a 1-*SD* increase in agreement with the statement that young people aged 12 to 17 years are as responsible as adults was associated with a 0.224-*SD* change in the

Table 2. Predictors of Severity of Treatment and Agreement With Michigan's Law

	Severity of treatment	Agreement with Michigan's law
	Standardized β	Standardized β
Constant		
Attitudes and values concerning adolescent development		
At what age do you think a child is as totally responsible for his or her behavior?	-.065***	-.116***
Adolescents aged between 12 and 17 years are as responsible as adults	.223***	.212***
An adolescent's ability to control impulses and understand the consequences of actions should be taken into consideration	-.037*	.005
Adolescents younger than 18 years and who commit violent offenses are strong candidates for rehabilitation	-.361***	-.182***
Adolescents abused as children should receive the same sentence for committing a violent offense as adults	.481***	.232***
Peer pressure should be taken into consideration when deciding the punishment for an adolescent	-.022	-.025
Household composition		
"Including yourself," how many adults aged 18 years and older currently live in your household?	.000	.014
How many children or teens aged 5 to 17 years currently live in your household?	-.019	.060*
How many children younger than 5 years currently live in your household?	.034*	.001
Demographic variables		
Respondent's age	-.023	-.079*
Female respondent (male: reference category)	-.037*	-.070**
Race (White: reference category)		
African American	-.012	-.094
Other ethnicity	-.047	-.031

* $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

Table 3. Index Measuring How Severely an Adolescent Should be Treated Within the Juvenile Justice System and How Strongly Do You Agree or Disagree With Michigan's Law That Requires an Adolescent to be Sentenced to Life Without Any Possibility of Parole for Certain Offenses?

	Severity of treatment	Agreement with Michigan's law
	Standardized β	Standardized β
Marital status (single: reference category)		
Married or cohabitating	-.004	.112**
Separated or divorced	.013	.100***
Widowed	.000	.065*
Income (Quartile 3: reference category)		
Income Quartile 1	.006	.029
Income Quartile 2	-.006	.010
Income Quartile 4	.011	-.020
Income missing	.009	.091**
Educational level (high school: reference category)		
Less than high school education	.008	-.004
Some college	.012	.027
College	-.012	-.008
Other education	.004	-.026
Advanced degree	-.014	-.033
Year of interview 2005	.015	.035
Number of cases	1,137	1,137
R^2	.442	.347
Adjusted R^2	.429	.331
R^2 change .015 ($p = .193$)	—	—

* $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

index measuring severity of treatment and a 0.208-*SD* increase in level of agreement with Michigan's law. In Table 4, the odds ratio associated with a 1-year increase in the age at which adolescents were considered as responsible as adults was 1.138 in the homicide equation and 1.115 in the assisted homicide equation, indicating 13.8% and 11.5% increases, respectively, in the odds of choosing the option that juveniles should be released after 21 years of age in the sentence-for-homicide equation. A 1-point increase in the level of agreement with the statement that adolescents aged between 12 and 17 years are as responsible as adults was associated with an odds ratio of 0.710 for the option of choosing release after age of 21 and 0.795 for the

Table 4. Multinomial Logit: Preferred Sentence for Homicide and Assisted Homicide (Adult Prison, No Possibility of Parole: Reference Category)

	Homicide		Assisted homicide	
	Released after 21 years of age	Juvenile prison with possibility of parole	Released after 21 years of age	Juvenile prison with possibility of parole
Intercept	Exp(B)	Exp(B)	Exp(B)	Exp(B)
Attitudes and values concerning adolescent development				
At what age do you think a child is totally responsible for his or her behavior?	1.138***	1.123**	1.113**	1.115***
Adolescents aged between 12 and 17 years are as responsible as adults	0.710**	0.729**	0.835	0.795**
An adolescent's ability to control impulses and understand the consequences of actions should be taken into consideration	1.182	1.217	1.084	1.163
Adolescents younger than 18 years and who commit violent offenses are strong candidates for rehabilitation	1.592***	1.521***	1.157	1.220*
Adolescents abused as children should receive the same sentence for committing a violent offense as an adult	0.450***	0.491***	0.591***	0.563***
Peer pressure should be taken into consideration when deciding the punishment for an adolescent	1.399**	1.131	1.028	1.087
Household composition				
Adults aged 18 years and older in household	1.023	0.784	0.746*	0.869
Children or teens aged 5 to 17 years currently in household	1.243	1.312**	1.266	1.092

(continued)

Table 4. (continued)

	Homicide		Assisted homicide	
	Released after 21 years of age	Juvenile prison with possibility of parole	Released after 21 years of age	Juvenile prison with possibility of parole
Intercept	Exp(B)	Exp(B)	Exp(B)	Exp(B)
Children younger than 5 years currently in household	0.498**	0.630**	0.806	0.779
Demographic variables				
Respondent's age	0.990	0.987	0.997	0.990
Female respondent (male: reference category)	1.421	1.391	1.049	1.294
Race (White: reference category)				
African American	1.716	0.992	0.778	1.257
Other ethnicity	2.143	2.146	1.367	1.189
Marital status (single: reference category)		1.136	1.333	
Married or cohabitating	1.013	0.632	0.692	1.288
Separated or divorced	1.039	0.606	0.480	1.023
Widowed	0.728			0.718
Income (Quartile 3: reference category)				
Income Quartile 1	0.916	0.457	0.600	0.589
Income Quartile 2	0.610	0.584	0.846	0.600
Income Quartile 4	0.462	0.900	0.925	0.611
Income missing	0.443*	0.385*	0.458*	0.416**
Educational level (high school: reference category)				
Less than high school education	1.442	0.850	0.526	0.703
Some college	0.727	0.756	0.994	1.268
College	0.923	1.600	2.201	1.545
Other education	1.989	0.890	1.038	1.635
Advanced degree	1.274	1.507	1.805	1.672
Year of interview 2005	1.533	1.139	1.007	1.010
Pseudo R ²		N = 1,337		
Cox and Snell	.254		.213	
Nagelkerke	.311		.252	
McFadden	.173		.128	

* $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

option of juvenile prison with the possibility of parole rather than the more severe option—adult prison with no possibility of parole.

H2 dealt with cognitive aspects of adolescent development and was tested with a direct measure of whether an adolescent's ability to control impulses and understand the consequences should be considered in sentencing. This hypothesis was supported in the estimation of index of how severely an adolescent should be treated but not in the equations that dealt with Michigan's law and sentences for homicides and assisted homicides. H3, which looked at the potential for rehabilitation and was an indirect measure of how respondents assessed an adolescent's ability to develop cognitively and/or psychologically, was strongly supported in all four of the equations. In each case, respondents who agreed more strongly with the statement that those who commit crimes while younger than 18 years are strong candidates for rehabilitation were less likely to agree with Michigan's law and more likely to choose less severe sentencing options. The results in Tables 2 and 3 indicated that a 1-*SD* increase in agreement that adolescents are strong candidates for rehabilitation was associated with a 0.224-*SD* change in the severity index variable and a 0.208-*SD* change in the level of agreement with Michigan's law. In the sentencing option equations, the odds ratios associated with the rehabilitation variable attitudes were 1.592 and 1.521 for homicide and assisted homicide, respectively, for the option of release after 21 years of age compared with the excluded option of adult prison and no option of release after 21 years of age.

The last two hypotheses tested the extent to which respondents considered environmental factors as important in influencing their attitudes toward juveniles and appropriate punishment. H4 was tested with the variable that measured attitudes toward adolescents who had been abused as children and H5 with the variable that measured attitudes regarding the importance of peer pressure. The results provided strong support for the importance of considering prior abuse in how adolescents should be treated in the juvenile justice system; however, the results provided no support for the consideration of peer pressure as a factor that influenced respondents' attitudes regarding appropriate levels of punishment. As measured by the size of the standardized coefficients in Tables 2 and 3 and the size of the odds ratios in Table 4, the variable assessing whether adolescents abused as children should receive the same sentence as adults was the strongest predictor variable among the six variables measuring different dimensions of adolescent development.

In separate analyses, we did find that the variables measuring attitudes toward adolescents' ability to control their impulses and the role of peer pressure were significant predictors of the age at which a juvenile is considered as responsible as an adult. In addition, when the two variables measuring

respondents' perspectives on the age at which adolescents are as responsible as adults were excluded from the analyses, these two variables measuring adolescents' ability to control their impulses and peer pressure did reach statistical significance in all the outcome measures, with the exclusion of assisted homicide for peer pressure and agreement with Michigan's law for adolescents' ability to control their impulses. It seems that variables measuring the age of responsibility seem to capture the effects of the peer pressure and impulse variables, which seem to operate through affecting the age at which respondents consider juveniles fully responsible for their actions.

Demographic and socioeconomic control variables. For each of our outcome variables, we first estimated the model with only the adolescent development variables as predictors; we then estimated each model with the addition of the demographic and socioeconomic control variables. For each of the four models, the subset of the adolescent development variables explained substantially more of the total variance than did the subset of demographic and socioeconomic control variables. The addition of the demographic and socioeconomic variables did not result in a statistically significant change in the variance explained in the equation for the index measuring the extent to which respondent believes juveniles should be treated as adults within the juvenile justice system, R^2 change = .015 ($p = .193$); in the agreement with Michigan law's equation, the change in R^2 was .034 ($p = .010$). Changes in the pseudo R^2 in the multinomial logit equations were of similarly low magnitudes.

Among the household composition variables, the number of children younger than 5 years in the household was most strongly and consistently correlated with the outcome variables. For three of the outcomes—sentence for assisted homicide, agreement with Michigan's law, and assessment of whether a juvenile should be treated as an adult by the justice system—increases in the number of young children in the household were associated with increases in the severity of the response regarding juvenile treatment. Households with children aged between 5 and 17 years were less consistent in their assessments. In only two of the four cases did this variable attain conventional levels of statistical significance. Increases in the number of school-aged children in the household were associated with more severe and less severe predicted outcomes. Increases in the number of school-aged children in the household were associated with increases in the level of agreement with Michigan's law as well as a more severe outcome response. These respondents also showed higher odds for choosing release after 21 years of age for the crime of assisted homicide, as opposed to adult prison or no option

of parole. The more adults that were in the household decreased the odds that a respondent would choose either of the less severe options.

The older the respondent, the greater the severity for the index variable on how juveniles should be treated but with small decreases in the level of agreement with Michigan's law. Female respondents scored lower on the index variable and lower levels of agreement with Michigan's law. African American respondents were far less likely to agree with Michigan's law than were Whites. Respondents in the third race or ethnicity category (Other) were considerably less likely than Whites to agree that juveniles should be treated as adults or relatively severely within the justice system.

The marital status variables were associated with statistically significant relationships in two of the four models. Compared with singles, the three other marital status groups were more likely to support Michigan's law. The standardized betas ranged from .07 (widowed) to .11 (married to cohabiting) compared with the excluded group of single respondents.

No statistically significant relationships were observed in the associations found between the income quartile categories and the four outcome variables. In contrast, the severest responses came from respondents who refused to provide income information. Education tended not to be associated with the outcome variables. Finally, no differences were observed based on year of interview.

Limitations of Study

Similar to all RDD surveys, there are limitations regarding the obtained sample. Residents without telephones or those who use cellular phones exclusively would be excluded from the possible population of those surveyed. Similarly, those who chose to respond versus those who did not may differ. Declining response rates in RDD surveys have led to challenges of the method. However, higher response rates alone do not reduce nonresponse bias (Groves, 2006). In fact, sample representativeness, even with declining response rates, has been substantiated, and these results have been replicated (see Keeter, Kennedy, Dimock, Best, & Craighill, 2006). In our own study, we did, however, have an overrepresentation of female respondents. Missing data on income also prevented a clear picture of how income levels may influence perspectives regarding appropriate punishment for juveniles. Although our study was conducted at two different times, it is nonetheless a cross-sectional study. Hence, we are unable to assess how attitudes change over time. Nor are we able to directly test the hypothesis that changes in

perceptions regarding adolescent development would result in changes in attitudes toward how adolescents should be sentenced. Moreover, we trust the self-reported views of respondents. Other public opinion researchers, such as Carlsmith, Darley, and Robinson (2002), have expressed the perspective that this approach must be viewed with caution.

Discussions and Policy Implications

This study was conducted in the state of Michigan because of its standing on juveniles serving life without the possibility of parole. This is a compelling issue that has national implications, and the public's view should be confirmed by rigorous scientific investigation. Overall, we found strong support for our basic hypothesis that those respondents who view adolescents as more responsible for their own actions, without taking into account other influences, will more likely support harsher punishment for adolescent offenders.

Four of our hypotheses were strongly supported by the analyses. These results have strong implications for policy advocates working to achieve more humane sentencing options for juveniles. Perhaps the most important public policy consideration is that citizens are influenced by human development theory in terms of how they seem to formulate their opinions regarding how juvenile offenders should be sentenced. These findings suggest that policy makers can appeal to this citizens' knowledge base as they make policy regarding sentencing of juvenile offenders.

In the public policy debate, more attention needs to be paid to these factors and far more education must be provided on what we know about human development throughout childhood and adolescence. This information needs to become a central part of the policy debate. As a counterpoint to sensational media coverage that fuels the flame of public opinion and can create overreactions about juvenile crime, public education and debate needs to shift to a discussion of why less draconian measures than treating adolescents as adults are more appropriate, more just, and more cost-effective. A campaign that challenges media images of incorrigible and violent youth that are pervasive in television and movies and also in video games and YouTube videos needs to be launched. To be most effective, this campaign needs to be linked to research that deals with human development theory. Although our study found strong evidence that a link exists between respondents' understanding of human development and their attitudes toward punishment, our descriptive results also indicated that many Michigan residents have perceptions about the maturity level of adolescents (the mean age at which respondents

considered youth as responsible as adults was 16.7; the median was 17 years) that are not in accordance with the vast and growing body of research on the cognitive and social-psychological development of adolescents. To the extent that changes in the public's level of knowledge regarding human development would result in changes in attitudes toward severity of punishment, a successful public education campaign in the media, together with increased emphasis on human development theory at the high school and university levels, could have a major impact on the juvenile justice system.

In addition, the public needs to become more aware of the human development consequences of severe juvenile sentences. There is a plethora of clear and convincing evidence to support the conclusion that severe sentencing undermines the human development potential of youth and can even result in suicides. A study conducted by The Center for Disease Control and Prevention Task Force found that when children are imprisoned with adult inmates, they are 36 times more likely to commit suicide than if they are incarcerated in a juvenile detention facility (McGowan et al., 2007). Moreover, between the years 2000 and 2002, inmates younger than 18 years had a suicide rate of 101 per 100,000, which was the highest of any cohort of inmates held in U.S. incarceration facilities. By comparison, the suicide rate for 14- to 17-year-olds not in jail during the same period was just 5.32 per 100,000 (Office of Statistics and Programming, 2007).

Juveniles placed in adult facilities also experience a heightened incidence of mental disorders (Hayes, 2004). For example, the Arizona Pima County Adult Probation Department estimated that at least 80% of its juveniles have a diagnosed mental disorder (Garcia, 2007). Unfortunately, many adult jails are not equipped to identify and respond to the emotional and mental health needs of youth. These facilities lack the appropriate screening and assessment tools to identify mental health problems in that population. Moreover, the personnel operating many adult facilities are not trained to acknowledge youth as having unique needs. Therefore, their staffs are not equipped to provide young people with special service or attention in detention.

State and federal policy makers should examine the policies around the majority age at which a child can be held accountable in the adult criminal justice system and establish policies that are consistent across states and reflect the research on adolescent behavior. In our perspective, life without the possibility of parole as a legislative requirement must be eliminated in favor of more humane and just policies toward juvenile offenders. Our results suggest that a substantial percentage of the population would be supportive of such a change. Current laws in every state protect adolescents from their inability to make sound judgments and their natural propensity to be impulsive (Coalition

for Juvenile Justice, 2007). However, some laws, specifically criminal laws, ignore the immaturity of adolescents. Fifteen states regard youth as young as 10 years old as responsible enough to be put on trial in juvenile court (Griffin et al., 1998). In 44 states and the District of Columbia, youth as young as 14 years can be tried in the adult criminal justice system (Griffin, 2003).

To reiterate, brain and developmental research has confirmed the developmental differences between adolescents and adults. We now know that the prefrontal cortex, which governs the “executive functions” of reasoning, advanced thought, and impulse control, is the final area of the human brain to mature, which explains why adolescents have difficulties making wise decisions (Thompson, 2004). This new research creates new questions for the criminal justice system: How do we hold young offenders accountable for their actions when we know they have not finished developing? And how do we ensure that punishment does not compromise the very process of adolescent development itself? Our results suggest that many citizens find this knowledge important in establishing appropriate punishment for juveniles.

Research driven by public opinion should offer effective methods to inform the public about important issues. Public awareness campaigns that focus on creating a deeper and more informed understanding of adolescent development and the potential for rehabilitation among young offenders may represent a more effective pathway for implementing laws and policies that reflect current research on adolescent development. These campaigns could focus more strongly on portraying success stories of youth who have committed crimes but who lead lives as responsible and productive citizens as a result of programs that focus on rehabilitation rather than punishment. Human development theory should become more widely included in high school and college curricula, so that all citizens have a strong, scientifically based understanding of child and adolescent development.

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Note

1. If calculation by American Association of Public Opinion Research for “cooperation rate” was used, it would eliminate the unknown households from the calculation, raising the rate to 52%.

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