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Reducing Suspensions by Improving Academic Engagement among School-age Black Males

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Abstract

This chapter will address the excessive use of suspensions and other disciplinary actions against Black males who are disengaged from school. Academically disengaged students often come to school late, miss assignments, have difficulty understanding schoolwork, and may have attentional challenges or alternative learning styles. Black males can become disengaged from school for a variety of reasons, including being dissatisfied with school because of noninclusive curricula, racial biases, and poor relationships with teachers. In addition, some Black males are not socialized to the academic environment due to unclear and inconsistent messages about school from home and the community. Finally, some Black males have learning or attentional disabilities that are misunderstood or misdiagnosed. Research suggests that academically disengaged students account for the majority of all suspensions. This study will examine responses of students, parents and teachers who completed *Monitoring the Future: A Continuing Study of American Youth*. The chapter will clarify the relationship between suspensions and academic disengagement, and provide policy solutions for school leaders to develop strategies to reduce suspensions by providing a more inclusive and compassionate learning environment for Black males.

Reducing Suspensions by Improving Academic Engagement among School-age Black Males

Black students are currently about 2.3 times more likely to be suspended than White students (Hinojosa, 2008). The longstanding and persistently disproportional rates of suspension between races have led to what many researchers refer to as the "discipline gap" (Gregory & Weinstein, 2008). Despite mounting evidence that suspensions are ineffective at correcting behavior and commonly precede dropping out (Dupper, 1994; Dupper, Theriot, & Craun, 2009), out-of-school suspensions continue to be the most widely used form of school discipline in the United States.

The purpose of this study is to address the excessive use of suspensions and other disciplinary actions against Black males who are disengaged from school due to dissatisfaction with school, lack of academic socialization, and/or disability. The objectives are to: (1) Clarify the relationship between suspensions and academic disengagement, and (2) Provide policy solutions for school leaders to develop strategies to reduce suspensions by providing a more inclusive and compassionate learning environment for Black males.

Relevant Literature

Use of suspension. Elevated public awareness and perceptions of violence have increased schools' reliance on suspensions, zero tolerance and other exclusionary disciplinary policies (Christle, Nelson, & Jolivette, 2004; Skiba & Peterson, 1999). There are general concerns about the reliability and subjectivity in disciplinary referrals (Vavrus & Cole, 2002; Wright & Dusek, 1998). Through ethnographic research, Vavrus and Cole (2002) found that many suspensions resulted from a buildup of nonviolent events, where one student often carries the brunt of many students' misbehaviors. However, some studies suggest that school culture and administrative

leaders can mitigate high suspension rates (Mukuria, 2002). For example, regular monitoring and analysis of narrative disciplinary referrals have been recommended to improve precision and application of disciplinary measures that are consistent with the students' infractions (Gale M. Morrison, Peterson, O'Farrell, & Redding, 2004; Sugai, Sprague, Horner, & Walker, 2000).

Antecedents to suspensions. Some studies found unique characteristics of the students that were associated with greater chances they would be suspended (McConville & Cornell, 2003; Mendez, 2003). McConville & Cornell (2003), for example, found that students' self-reports of aggressive behavior significantly correlated with suspensions. However, G. M. Morrison, Anthony, Storino, and Dillon (2001) found that students with repeated suspensions, whether in school or out of school, were suspended for more attitudinal offenses than aggressive delinquent behaviors. Another study noted that academic challenges are significant, yet often overlooked, antecedents to disciplinary referrals (Tyler-wood, Cereijo, & Pemberton, 2004). Black students with academic disabilities and behavioral disorders were also more likely to be suspended (Krezmien, Leone, & Achilles, 2006), especially in Black males (Osher, Woodruff, & Sims, 2002).

Similarly, studies indicated that students with lower reading skills are more likely to receive disciplinary referrals (McIntosh, Horner, Chard, Dickey, & Braun, 2008). A longitudinal study found lower academic achievement levels among students prior to suspension, but also found significantly lower levels of academic gains throughout the three years post-suspension (Arcia, 2006). Unfortunately, as a result, among students of all races, being suspended frequently (Carpenter II & Ramirez, 2007) and being retained in a grade (Jimerson, Anderson, & Whipple, 2002; Stearns, Moller, Potochnick, & Blau, 2007) often precedes dropping out (Balfanz, Herzog, Douglas, & Iver, 2007; Rumberger, 1995).

With respect to disproportionate suspension rates among Black students, many studies have noted the impact of ecological variables beyond the school, such as community influences (Day-Vines & Day-Hairston, 2005). Eitle and Eitle (2004) found that Black students were more likely to be suspended in majority Black grade schools. These findings are often a result of “fewer resources, weaker academic ethos, and a lower level of reported misconduct” (Eitle & Eitle, 2004, p.279).

Cultural expressions of certain behaviors, such as movement and speech, may be misinterpreted as threatening to teachers who lack cultural awareness (Day-Vines & Day-Hairston, 2005). One study found that Black students with a history of disciplinary referrals were more likely to be viewed negatively by their teachers and tended to receive less deference (Gregory & Thompson, 2010). In addition, it has been shown that Blacks in general, tend to receive harsher penalties, such as corporal punishment, than any other students (Shaw & Braden, 1990). Another study revealed that natural adaptations to life in some impoverished areas indirectly influence the students' chances of being suspended from school (Kirk, 2009), including anti-social behaviors (Gottfredson & Hirschi, 1990). Few studies have examined suspensions and disciplinary referrals among Hispanic students. One study noted Hispanic students' rates of suspensions and number of referrals were generally greater than Whites, but less than Blacks (Kaushal & Nepomnyaschy, 2009; Losen, Gillespie, & Orfield, 2012).

Engagement vs. Disengagement. Student engagement, as defined by Furrer and Skinner (2003), is the effort, enjoyment, and interest expressed while participating in academic activities. Because they are involved in classroom interactions, show genuine interest in learning, and are motivated, engaged students are less likely to be bored, inattentive, be disrespectful. (Skinner & Belmont, 1993). Conversely, disengaged students are less likely to aspire to higher educational

goals, have lower grades, and are more likely to drop out of school (Kaplan, Peck, & Kaplan, 1997). To improve the learning environment for Black students, there must be better teacher-student relationships (Crosnoe, 2002), restructuring of the education system (Boykin, 1994), and student investment in achievement (Newmann, 1981).

Teacher-student relationships. With the understanding that Black students use teachers as tools to navigate an unfamiliar school system (Kesner, 2000), teachers must to engage in emotion and perception management in such a way that does not discourage student learning and engagement (Reyes, Brackett, Rivers, White, & Salovey, 2012). Teachers' perceptions, expectations, and behaviors are often shaped by stereotypes and thus impede learning for minority students. Findings from Crosnoe, Johnson, and Elder (2004) suggest that strong teacher-student relationships are positively related to higher levels of student academic achievement. Beliefs about negative socialization practices, including, but not limited to barriers in teacher-student bonding and racial biases, cause negative relationships between families and school institutions (Cartledge et al., 2001).

Learning contexts. On many occasions, it has been postulated that Black students would perform better with curricula that is more reflective of their native African culture (Boykin, 1994; Hurley, Boykin, & Allen, 2005; Kagan, Zahn, Widaman, Schwarzwald, & Tyrrell, 1985; Qin, Johnson, & Johnson, 1995). Boykin (1994) contends that, among the number of learning contexts, communal learning may serve as a mediator for achievement success in Black children. The communal learning context operates strictly on the use of interdependence among group members, the expectation of mutual responsibility, and the desire to maintain strong social bonds (Hurley, Boykin, & Allen, 2005). In the 2005 study on communal learning versus individual learning, Hurley et al. (2005) use pre- and post- tests to show the effectiveness of different

learning contexts. The results indicate that students in high-communal learning contexts outperformed students in low-communal learning contexts among fifth grade Black students. A number of related studies show similar results (Garibaldi, 1979; Hurley et al., 2005; Kagan et al., 1985; Qin et al., 1995; Slavin, Hurley, & Chamberlain, 2001).

Academic Investment. Another key component to engagement is academic identification (Newmann, 1981). This is the extent to which one's self-esteem is affected by academic goal attainment and achievements (Osborne, 1999). When students experience academic failure, their natural response is to no longer care about that particular academic domain (Aronson, 2002), resulting in academic disidentification. Research done by Cokley, McClain, Jones, and Johnson (2012) has shown that Black males when compared to Black girls and Whites have higher levels of academic disidentification. Cokley and Moore (2007) attributed such findings to the lack of Black male role models and high achieving Black students who have cool pose in school settings. Steele (1992) suggested that academic disidentification is a defense mechanism to avoid negative feelings associated with stereotype threat. As a result, students begin to devalue education, which is linked to lower grades and dropping out of school (Osborne, 1999).

Successful interventions. Some studies have revealed successful strategies for reducing suspensions and disciplinary referrals. Defensive Management training for teachers has demonstrated effectiveness with training teachers to better manage noncompliance among students to prevent unnecessary disciplinary referrals. Mukuria (2002) found that principals of predominantly Black urban middle schools with low rates of suspension were more effective in promoting parental involvement, creating a structured environment, implementing school wide discipline programs, and cultivating mutual respect among students and teachers. Another study

found that improving school engagement through mentoring improved behavior control at an urban school (Holt, Bry, & Johnson, 2008).

Improving teacher efficacy and teacher-student dialogue and aligning their mutual understanding of school rules also demonstrated effectiveness (Pas, Bradshaw, Hershfeldt, & Leaf, 2010; Thompson & Webber, 2010). "Whole-school" and school wide interventions that focus on school wide improvements in instructional methods, positive reinforcement, such as teacher "praise notes" (Nelson, Young, Young, & Cox, 2010), behavioral modeling, and data-based evaluation, have also demonstrated effectiveness (Bohanon et al., 2006; Lassen, Steele, & Sailor, 2006; Luiselli, Putnam, Handler, & Feinberg, 2005). Resilience and skill building among students also reduced behavioral problems and subsequent disciplinary referrals among students (Wyman et al., 2010). Attention to students' mental health also reduced suspensions and disciplinary referrals (Caldwell, Sewell, Parks, & Toldson, 2009). Parents' active racial socialization of their children may protect adolescents from the diminished engagement (e.g., academic attitudes, personal efficacy) associated with negative views of their group identity (Smalls, 2009).

Gaps in the Literature. The literature clearly demonstrates that school and nonschool-related factors can independently influence the frequency of suspensions and disciplinary referrals at school. What is less clear is the relationship among the various influences. For example, the literature establishes that aggression and delinquency are associated with higher rates of disciplinary referrals. However, it is unclear whether aggression and delinquency manifest as a direct delinquency in the school or an attitude that disrupts the class. Researchers have established that low academic performance is related to a high number of disciplinary referrals. However, the literature is less clear about the indirect relationships between the

developmental factors associated with disciplinary referrals. The literature also clearly establishes racial differences in suspensions and disciplinary referrals between Black and White students. However, the literature rarely examines differences in the paths Black and White students take to receive suspensions and disciplinary referrals. There is also a noticeable void in studies that include Hispanic participants.

Research Hypotheses

Based on the literature this study hypothesizes the following:

1. School-age Black males with better grades, more school engagement, fewer classroom distractions, less delinquency at school, and less truancy will have fewer disciplinary referrals.
2. Black males with no disciplinary referrals will be more likely to have supportive parents, a positive outlook on life, and engage in fewer thrill-seeking, aggressive, and delinquent behaviors.
3. There will be distinct differences in suspensions and disciplinary referrals based on race with Black males experiencing a unique path toward disciplinary referrals including school-related factors and nonschool-related factors.
4. Student's grades are directly affected by the number of disciplinary referrals received.

Method¹

The study is a secondary-analysis of 4,164 Black, White, and Hispanic 8th and 10th grade males who completed *Monitoring the Future: A Continuing Study of American Youth* (Johnston, Bachman, O'Malley, & Schulenberg, 2008). Two items were used to measure the student's experience with suspensions and disciplinary referrals. The first question asked, "Have you ever

¹ See Appendix 1 for a detailed description of the methodology.

been suspended or expelled from school?" with responses options of "yes" and "no." The second question read, "Now thinking back over the past year in school, how often did you get sent to the office, or have to stay after school, because you misbehaved?"

Select interval items from the *Monitoring the Future* questionnaire were used to measure school and nonschool-related factors with a hypothesized relationship with disciplinary referrals. Through the use of various statistical means, the ten contributing factors that were most relevant were ascertained including: grades; academic disengagement; drugs, alcohol and weapons use at school; attitudes/feelings towards school; classroom interruptions; hopelessness; positive self-worth; thrill-seeking behaviors; aggressive behaviors; general delinquency; and parental involvement.

Statistical Findings

Descriptive and Preliminary Analysis

Participants of this study included 703 Black males (6.7 percent), 709 Black females (6.7 percent), 2,757 White males (26.1 percent), 2,886 White females (27.3 percent), 704 Hispanic males (6.7 percent), and 736 Hispanic females (7 percent) for a total of 8,495 participants. Ninety-six percent of the total sample was public school students. Females were included in preliminary analyses only and all participants with missing data were excluded from structural equation modeling (SEM). Fifty-one percent of the participants were in the 8th grade, and 49 percent were in the 10th grade.

The majority (67.8 percent) of the participants attended school in large metropolitan statistical areas (MSA). The regional distribution of participants included: northeast (22.1 percent), north central (22.1 percent), south (35.2 percent), and west (20.5 percent). Twenty-six percent of the total sample reported being suspended at least once, with no significant differences

between grade levels and size of MSA. However, significant and substantial regional differences were found, with 41 percent of students in the south reporting having been suspended or expelled as compared to 20 percent to 18 percent for the other three regions.

Findings revealed statistically significant differences in the percent of Black, White, and Hispanic male students who reported having been suspended or expelled from school with 59 percent of Black male students reporting that they had been either suspended or expelled from school as compared to 42 percent of Hispanic males, and 26 percent of White males². As a whole, a smaller percentage of female students reported a previous suspension or expulsion. However, 43 percent of Black females reported having been suspended or expelled from school as compared to 26 percent and eleven percent of Hispanic and White females respectively.

School-related Factors and Disciplinary Referrals

MANOVA was used to test the hypothesis that students who report having received fewer disciplinary referrals will have experienced fewer classroom interruptions and will have fewer incidents of truancy and be less involvement with drugs, alcohol and weapons while at school. In addition, it is hypothesized that students who reported receiving fewer disciplinary referrals will report higher grades, have a more positive attitude about school, and a higher level of academic engagement than students with more disciplinary referrals. Table 1 displays the means, standard deviations and F-ratios of the factors that have a hypothesized relationship with disciplinary referrals among Black, White, and Hispanic male students. The table marks variables that are significant by race and reported frequency of receiving disciplinary referrals.

Insert table 1-----

² $\chi^2(5) = 873.5, p < .01$

The MANOVA revealed a higher frequency of disciplinary referrals has a statistically significant relationship with lower grades, less academic engagement, more truancy, more delinquent behavior in school, and fewer positive attitudes about school. When examined through the lens of race, Black and Hispanic students reported having lower grades, more positive attitudes about school, though lower levels of academic engagement than their White counterparts. Hispanic students reported a higher frequency of truancy than did Black and White students.

Figures 1a, 1b, 2a, and 2b illustrate the linear relationship between grades, attitudes about school, delinquency in school, and academic disengagement with respect to disciplinary referrals for Black, White and Hispanic students. As shown in Figures 1a and 1b, grades and attitudes about school each have an inverse relationship with disciplinary referrals, and significant main effects for race, as well as significant interaction effects between race and disciplinary referrals. The means plots suggest that the interaction effects for grades³ and attitudes about school⁴ are both related to the factors having a more robust linear relationship with disciplinary referrals for White students than for Black and Hispanic students.

Figures 2a and 2b illustrate the relationship between delinquency at school, and academic disengagement with respect to disciplinary referrals. Both figures demonstrate that each variable has a positive relationship with disciplinary referrals. Delinquency at school had an interaction effect⁵ that reveals that the strongest association between delinquency and disciplinary referrals is for White students. Of all factors measured, academic disengagement has the strongest relationship with disciplinary referrals.

³ $F = 3.2, df = 6, p < .01$

⁴ $F = 3.1, df = 6, p < .01$

⁵ $F = 3.7, df = 6, p < .01$

Insert figure 1a and 1b-----

Insert figure 2a and 2b-----

Nonschool-related Factors and Disciplinary Referrals

A second MANOVA was completed to test the hypothesis that nonschool-related factors, including hopelessness, positive self-worth, thrill-seeking behaviors, aggression, delinquency, and parental involvement, have a statistical relationship with disciplinary referrals among Black, White, and Hispanic male students. Table 2 displays the means, standard deviations, and F-ratios of factors that were hypothesized to have a relationship with the reported frequency of disciplinary referrals. The MANOVA revealed that, all six measures had a statistically significant relationship with the reported frequency of disciplinary referrals. Aggressive behavior and delinquent behavior had the most substantial relationship with reported disciplinary referrals. Significant differences surfaced between Black, Hispanic and White students for three of the six measures: thrill-seeking behavior, aggressive behavior and parental involvement. Black and Hispanic males reported engaging in fewer thrill-seeking behavior, more aggressive behavior and having less parental involvement than did White males

Insert table 2 -----

Structural Equation Modeling

Of the school and nonschool-related factors that were examined, six had very strong correlations with disciplinary referrals. These factors were used to create a path model to determine their direct and indirect effects on the reported frequency of disciplinary referrals

received by male students. Figures 3, 4, and 5 display the path model tested for Black, White and Hispanic male students, respectively⁶.

Insert figure 3 -----

Insert figure 4 -----

Insert figure 5 -----

Invariance between races. Given the large number of variables that had significant main effects for race when analyzing with MANOVA, race differences between the path models and coefficients were further examined through SEM. Upon analyzing the data, by calculating the goodness of fit for each group, no strong racial differences were revealed. For school related behaviors, disciplinary referrals exhibited the strongest direct and total negative effects on grades for all races. For nonschool-related behaviors, aggressive behaviors had the strongest total effects on disciplinary referrals for all races and academic disengagement had the strongest direct effect on disciplinary referrals for both Black and White males. However, for Black males, academic disengagement had a significant direct impact on truancy. The model demonstrates similarities and invariance in the path toward more school participation and higher levels of academic success for Black, White, and Hispanic male students.

Insert table 3-----

Discussion

Consistent with the literature on racial disparities in suspension and disciplinary referrals (Day-Vines & Day-Hairston, 2005; Eitle & Eitle, 2004; Kaushal & Nepomnyaschy, 2009; Kirk, 2009), this study found stark racial differences in the reported number of suspensions between

⁶ The initial maximum likelihood test of the model resulted in a good overall fit, $\chi^2(21) = 126.4$, $p < .01$, $\chi^2/df = 6.2$, comparative fit index (CFI) = .95, root mean square error of approximation (RMSEA) = .05, and normed fit index (NFI) = .94.

Black, Hispanic, and White males. At fifty-nine percent, twice as many Black males reported being suspended or expelled as compared to White males. When examining differences by both genders and race, more males reported having been suspended or expelled than their female counterparts. However, far more Black females reported being suspended than did White males.

The associated school-related and nonschool factors examined were unsuccessful in fully accounting for the variance in reported suspensions or expulsions and disciplinary referrals across racial groups. The current literature suggests that racial disparities in suspensions and disciplinary referrals may be explained by the influence of associated school-related and nonschool-related factors such as cultural mismatches, a lack of cultural awareness among teachers (Day-Vines & Day-Hairston, 2005), and the racial composition of schools (Eitle & Eitle, 2004).

The existing literature suggests that several school-related factors and student characteristics are antecedents to school suspension and disciplinary referrals. In this study, Black and Hispanic males generally reported more positive attitudes toward school and were less likely to report seeking satisfaction from "thrill-seeking" behaviors, both of which had statistically significant relationships with fewer reported disciplinary referrals. However, Black and Hispanic males reportedly engaged in more aggressive behaviors, had lower grades, and exhibited higher levels of academic disengagement than did White males.

For each racial group, academic disengagement was a strong predictor of disciplinary referrals. However, for Black males, academic disengagement was also a strong predictor of truancy. No such relationship manifested for White males, indicating that Black males, and to a lesser extent Hispanic males, tend to abandon school in response to feeling academically disengaged. In this study, highly disengaged students reported frequently failing to complete or

turn in their assignments, not working up to their full potential, arriving to class late without an approved excuse, and finding schoolwork difficult to understand. The final model suggests that the direct effect of academic disengagement on truancy, and the subsequent direct effect of truancy on grades, accounted for a significant portion of racial differences in grades.

Overall, the purpose of this study was to determine whether strategies are possible to reduce the frequency of disciplinary referrals and subsequent suspension, particularly among students who are disproportionately subjected to these disciplinary measures. This study found evidence that disciplinary referrals are more associated with negative attitudes and dispositions about school than the use of drugs, alcohol and weapons at school. This implies that disciplinary referrals can be mitigated by improving the structure and culture of the school to promote more positive attitudes about learning, more resources to help students learn appropriate school and class etiquette, and providing extra assistance with schoolwork. Like previous studies, this study found an "attitude-achievement paradox" (Mickelson, 1990) among Black male students, whereby their positive attitudes about school did not translate to successful academic outcomes. These findings suggest that academic engagement is a possible mediator between attitudes and grades.

Although this study revealed racial differences in disciplinary referrals and suspensions, the racial differences revealed in examining the factors associated with more reported disciplinary referrals do not reasonably account for the significant differences in suspension rates among Black students. As previously stated, Black males tend to not report negative attitudes about school and do not report using drugs, alcohol and weapons while at school, yet they are subject to more suspensions than any other group examined. The high suspension rates of Black males paired with that of Black females suggest that school culture and climate might account

for much of the racial differences in suspensions. This study found no direct effect of drug, alcohol and weapon use at school on disciplinary referrals for Black males, but a significant link for White males. Therefore, it is more likely that Black students are being subjected to harsher penalties for similar, or even less serious infractions than those committed by their White and Hispanic classmates.

Readers should consider several limitations within the context of the findings. First, since data were collected about socially desirable attributes and some delinquent behaviors, some participants may have used impression management during self-report procedures. Although all surveys were confidential, it is likely that some respondents may have embellished grades and other desirable attributes, and denied suspensions, criminal activity, and other negative attributes. In addition, the survey was lengthy and solicited information beyond this study's scope. The length may have created some fatigue and led to "Yea-Saying" or "Nay-Saying", whereby respondents tend to select only the positive or negative answers on the survey. Finally, readers should not infer causality when interpreting results of the MANOVAs as the statistical techniques can only speak of relationships between variables.

Collectively, the results of this study suggest that a number of school and nonschool-related factors have a significant impact on suspensions and disciplinary referrals. The most significant among them are aggressive behaviors and academic disengagement. However, in addition to individual factors, the findings also suggest a combination of variables that create a specific path that leads Black and Hispanic males to disproportionately receive school suspensions and disciplinary referrals. In the final model, delinquency and aggressive behaviors were found to precede academic disengagement and the use of drugs, alcohol, and weapons at school. Once Black and Hispanic males become disengaged and involved in school crime,

disciplinary referrals and truancy followed, which negatively impacted their achievement outcomes as measured by school grades.

Implications for Policy and Practice

- Educational policy should recognize the significant contribution of school engagement to school disciplinary outcomes by implementing strategies for improving student experiences and connections with school. This study found school engagement to be the strongest predictor of suspension and disciplinary referrals across racial groups, and disciplinary referrals were found to be associated most with negative attitudes and dispositions toward school. Implementing school-based programs that are designed to promote positive schooling experiences and school connectedness may promote higher levels of student engagement, which will in turn reduce suspensions and disciplinary referrals. In addition, strategies for improving school engagement and decreasing the number of disciplinary actions taken against males of color should seek to promote parental involvement, creation of a structured environment, school-wide discipline programs, and the cultivation of mutual respect between teachers and students.
- Policymakers should recognize the impact of disengagement on truancy and the subsequent impact of truancy on achievement outcomes such as school grades. While school disengagement was found to predict disciplinary referrals for all racial groups, Black males were the only group where disengagement was also found to predict truancy. This study supports implementing school-based truancy prevention programs that target disengaged students. The areas of engagement that are particularly important to address in these programs are related to increasing student effort and motivation to participate in the educational process by coming to class on time and completing assignments. Raising levels

of engagement can potentially prevent problems of truancy, which can in turn prevent low achievement outcomes. The findings of this study also suggest that in order to prevent truancy and low levels of academic achievement, schools, administrators, and policymakers must consider the underlying factors that contribute to school disengagement such as negative school culture and perceived unfairness in school disciplinary practices.

- Since Black males who are more likely to be suspended exhibit higher levels of hopelessness and lower positive self-worth, counseling and mental health services at the school to mitigate disciplinary referrals should be strengthened. Students often misbehave because of treatable mental health and adjustment problems, including depression, attention deficits, and acute stress and trauma reactions. Coping resources at the school, including counselors, social workers, and recreational therapists, can improve student behavior and reduce suspensions and disciplinary referrals.
- Educational policy is needed that emphasizes, addresses and corrects unfair applications of zero tolerance disciplinary policies, racial-biases in instruction, and racial inequities in enforcing school disciplinary measures. Stark racial differences were found in suspensions and disciplinary referrals among the racial groups in this study. Consistent with the findings of Morrison, Peterson, O'Farrell, & Redding (2004), policymakers should consider implementing systems of regular and consistent monitoring and analysis of disciplinary referrals to improve upon precision, accuracy, fairness, and equity in the application of disciplinary measures.
- Policies are needed to expand school- and community-based delinquency prevention programs that promote high academic achievement, positive attitudes toward school, pro-social skills, character building and school engagement. The results of this study suggest a

significant relationship between delinquency, aggressive behaviors, and the frequency with which students received disciplinary referrals. In light of previous research findings related to the association between students with lower reading skills and school disciplinary referrals (McIntosh, Horner, Chard, Dickey, & Braun, 2008), it is also important to emphasize and promote reading achievement in these programs.

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Appendix I: Detailed description of methodology

The authors provide background information about the data analyzed from the *Monitoring the Future* study.

Participants

The study will include 4,164 Black, white, and Hispanic males (Black male N = 703) who completed *Monitoring the Future: A Continuing Study of American Youth* (Johnston et al., 2008). The original study used three stages. In Stage 1, researchers selected particular geographic areas; in Stage 2 they selected one or more schools in each area; and in Stage 3, they selected students within each school. The geographic areas used in this study are the primary sampling units (PSUs) developed by the researchers for nationwide interview studies. Selections of schools were made to ensure that the probability of drawing a school was proportionate to the size of its eighth or tenth grade class. Within each school, about 350 students were included in the data collection.

Procedure

This study used secondary data analysis from University of Michigan's Institute for Social Research that used nationally representative samples of eighth and tenth graders in public and private schools in a multistage research design. In Stage 1, researchers selected particular geographic areas; in Stage 2 they selected one or more schools in each area; and in Stage 3, they selected students within each school. The geographic areas used in this study are the primary sampling units (PSUs) developed by the researchers for nationwide interview studies. Selections of schools were made to ensure that the probability of drawing a school was proportionate to the size of its eighth or tenth grade class. Within each school, about 350 students were included in the data collection.

Trained local research representatives administered questionnaires in each school, following standardized procedures detailed in a project instruction manual. The questionnaires were administered in classrooms during normal class periods. Students were given a descriptive flyer stressing confidentiality, and apprised of the voluntary nature of the study at the start of the questionnaire administration. Each participating student was instructed to read a confidentiality statement that read: “If there is any question you or your parents would find objectionable for any reason, just leave it blank.” In order to protect the confidentiality of responses and the identity of respondents, a number of alterations were made in the original dataset to prepare it for public release, including describing the respondents’ general environment without identifying school or state, and omitting the respondents’ birthdays and other specific identifiers.

Contributing factors

Select interval items (listed in categories below) from the *Monitoring the Future* questionnaire were used to measure school and nonschool-related factors with a hypothesized relationship with disciplinary referrals. To reduce data, Likert scale items from the survey questionnaire were clustered with principle component analysis (PCA). Factor structure was explored with varimax rotation and Kaiser Normalization. Ten factors were accepted based on their eigenvalues that exceeded 1, and the logical arrangement of items. The ten-factor solution explained 61.9 percent of the total variance. With the exception of "grades" and "truancy," which were measured with single items, all of the factors below were derived through PCA.

Grades. *Monitoring the Future* recorded grades with responses to the question, “Which one of the following best describes your average grade in this school year?” Respondents selected one of the following options: (1) “an A+, A or A-minus average”; (2) “a B+, B or B-minus average”; (3) “a C+, C or C-minus average”; or (4) “a D or less than a D average”.

Academic Disengagement. Participants rated the frequency in which they exhibited behaviors that indicated that they were disobedient and insubordinate at school. The following items, with corresponding factor loadings, were derived from PCA: “Now thinking back over the past year in school, how often did you (1) fail to complete or turn in your assignments?” (.73); “(2) try to do your best work in school?” (-.60); “(3) feel that the school work was too hard to understand?” (.46); and “(4) during an average school week, about how many times do you come to class late (after class has begun) without an approved excuse?” (.59). The range for the sum of the items was 4, indicating the respondent was fully engaged in the school process, and 20, indicating the student "almost always" disengaged from school.

Drugs, alcohol and weapons use in school. Participants rated the frequency in which they engaged in drug, alcohol, and weapons use at school. The following items, with corresponding factor loadings, were derived from PCA: “During the last four weeks, on how many days (if any) were you (1) under the influence of marijuana or some other illegal drug while you were at school?” (.74); “(2) under the influence of alcohol while you were at school?” (.73); “(3) smoking cigarettes or using chewing tobacco while you were at school?” (.73); and “(4) carrying a weapon such as a gun, knife, or club to school?” (.56). The response choice for each item was: 1="none," 2="one day," 3="two days," 4="3-5 days," 5="6-9 days," and 6="10 or more days." The range for the sum of the items was 4, indicating the respondent did not engage in any of the behaviors during the past four weeks, and 24, indicating that for 10 or more days, the respondent engaged in all behaviors.

Attitudes/feelings toward school. Students rated the frequency in which they had positive feelings about school over the previous year. The following items, with corresponding factor loadings, were derived from PCA: “Now thinking back over the past year in school, how often

did you (1) enjoy being in school?" (.84); "(2) hate being in school?" (-.80); and "(3) find your school work interesting?" (.70). The response choice for each item was: 1="never," 2="seldom," 3="sometimes," 4="often," and 5="almost always." The range for the sum of the items was 3, indicating the respondent had no positive feelings about school over the last year, and 15, indicating the student almost always felt good about participating in school.

Classroom interruptions. Two items measured participants' experiences with interruptions and disruptions during class. The following items, with corresponding factor loadings, were derived from PCA: "During an average school week, about how many times (1) does misbehavior or goofing off by other students in your class interfere with your own learning?" (.83); and "(2) do your teachers interrupt the class to deal with student misbehavior or goofing off?" (.81). The response choice for each item was: 1="never," 2="less than once a week," 3="1-2 times a week," 4="3-5 times a week," 5="6-9 times a week," 6="10-19 times a week," and 7="20 or more." The range for the sum of the items was 2, indicating the respondent never experiences classroom disruptions, and 14, indicating that during the average week, the student experiences disruptions 20 or more times.

Hopelessness. Six interval items were used that allowed students to rate the extent to which their lives were hopeless and meaningless. The following items, with corresponding factor loadings, were derived from PCA: "(1) I feel that my life is not very useful" (.78); (2) "The future often seems hopeless" (.78.); "(3) Sometimes I think that I am no good at all" (.77); "(4) Life often seems meaningless" (.76); "(5) I feel I do not have much to be proud of" (.73); and (6) "I feel that I can't do anything right" (.73). The response choice for each item was: 1="disagree" 2="mostly disagree" 3="neither" 4="mostly agree" and 5="agree," and the range

for the sum of the items was between 6 and 30, with 6 indicating hopeful feelings about life, and 30 indicating feelings of hopelessness and a lack of meaning in life.

Positive self-worth. Students rated the extent to which they agreed with statements that asked whether they were a person of worth. The following items, with corresponding factor loadings, were derived from PCA: “(1) I enjoy life as much as anyone” (.77); “(2) On the whole, I’m satisfied with myself” (.77); “(3) I take a positive attitude toward myself” (.76); “(4) I feel I am a person of worth, on an equal plane with others” (.73); “(5) It feels good to be alive” (.73); and “(6) I am able to do things as well as most people” (.71). The response choice for each item was: 1="disagree" 2="mostly disagree" 3="neither" 4="mostly agree" and 5="agree," and the range for the sum of the items was between 6 and 30, with 6 indicating feelings of negative self-worth, and 30 indicating feelings of positive self-worth.

Thrill Seeking Behaviors. Participants rated the extent to which they agreed with statements that indicated a penchant for risky behaviors. The following items, with corresponding factor loadings, were derived from PCA: “(1) I like to do frightening things” (.82); “(2) I like new and exciting experiences, even if I have to break the rules” (.79); “(3) I get a real kick out of doing things that are a little dangerous” (.78); “(4) I like to test myself every now and then by doing something a little risky” (.77); “(5) I prefer friends who are exciting and unpredictable” (.65); and “(6) I would like to explore strange places” (.61). The response choice for each item was: 1="disagree" 2="mostly disagree" 3="neither" 4="mostly agree" and 5="agree," and the range for the sum of the items was between 6 and 30, with 6 indicating low levels of engagement in thrills seeking behaviors, and 30 indicating high levels of engagement in thrill seeking behaviors.

Aggressive Behaviors. Participants rated the frequency in which they exhibited aggressive behaviors. The following items, with corresponding factor loadings, were derived from PCA: “During the last 12 months, how often have you (1) gotten into a serious fight in school or at work?” (.80); “(2) taken part in a fight where a group of your friends were against another group?” (.77); “(3) hurt someone badly enough to need bandages or a doctor?” (.74) and “(4) you run away from home (for more than 24 hours)?” (.48). The response choice for each item was: 1="not at all," 2="once," 3="twice," 4="3 or 4 times," and 5="5 or more times." The range for the sum of the items was 4, indicating the respondent never engaged in the specified aggressive behaviors over the last 12 months, and 20, indicating that during the past year, the student participated in each of the behaviors 5 times or more.

Delinquent Behaviors. Participants rated the frequency in which they exhibited aggressive behaviors. The following items, with corresponding factor loadings, were derived from PCA: “During the last 12 months, how often have you (1) taken something not belonging to you worth under \$50?” (.78); “(2) taken something not belonging to you worth over \$50?” (.68); “(3) damaged school property on purpose?” (.64) and “(4) gone into some house or building when you weren't supposed to be there?” (.62). The response choice for each item was: 1="not at all," 2="once," 3="twice," 4="3 or 4 times," and 5="5 or more times." The range for the sum of the items was 4, indicating the respondent never engaged in the specified delinquent behaviors over the last 12 months, and 20, indicating that during the past year, the student participated in each of the behaviors 5 times or more.

Parents' involvement with school. Four interval items were use to gauge specific aspects of participants' relationship with their parents that were posited to have a relationship with academic success. The following items, with corresponding factor loadings, were derived from

PCA: “How often do your parents (or stepparents or guardians) (1) check on whether you have done your homework?” (.75); “(2) provide help with your homework when it's needed?” (.68); “(3) limit the amount of time you can spend watching TV?” (.68); and “(4) require you to do work or chores around the home?” (.58). The response choice for each item was: 1="never," 2="rarely," 3="sometimes," and 4="often." The range for the sum of the items was 4, indicating the respondents' parents never assisted with school work or placed any restrictions on his behavior, and 16, indicating the students' parents were "often" involved with their education and learning.

Analysis Plan

This study was completed in four phases. First, descriptive information about the research participants and rates of suspension and disciplinary referrals was calculated and compared using Chi-square analysis. Second, multivariate analysis of the variance (MANOVA) was used as an exploratory technique to test main effects for race and frequency of receiving disciplinary referrals for associated variables. Because of the large sample size, this study did not consider any finding with a p value above .01 as significant. Third, using information gathered from MANOVA, the researcher selected variables for a path model to confirm their relationship with frequency of disciplinary referrals and subsequent academic performance. AMOS 17 was used to test model fitness and calculate regression estimates of direct and indirect effects. Fourth, invariance between races was estimated for the overall model and the path estimates by imposing a series of model constraints through nested model comparisons.

Table 1: Means, standard deviations, and f ratios of school-related factors that are related to the frequency of disciplinary referrals among Black, White, and Latino school-age males

	<i>Race</i>	<i>Frequency of Disciplinary Referrals</i>					<i>F-Ratio</i>	
		<i>Never M (SD)</i>	<i>Seldom M (SD)</i>	<i>Sometimes M (SD)</i>	<i>Often M (SD)</i>	<i>Total M (SD)</i>	<i>Referrals</i>	<i>Race</i>
Drugs/Delinquency at school <i>4 Least - 24 Most</i>	Black	4.2 (1.5)	4.6 (1.8)	5.0 (2.6)	5.2 (3.3)	4.6 (2.1)	29.7**	3.9
	White	4.2 (1.2)	4.7 (2.2)	4.9 (2.0)	6.3 (3.9)	4.5 (1.9)		
	Latino	4.6 (2.2)	4.7 (1.9)	4.7 (2.0)	5.5 (2.8)	4.7 (2.2)		
	Total	4.3 (1.4)	4.7 (2.1)	4.9 (2.2)	5.8 (3.5)	4.6 (2.0)		
Attitudes/Feelings Toward School <i>3 Least - 15 Most</i>	Black	9.2 (2.7)	9.3 (2.5)	8.8 (2.5)	7.4 (3.2)	8.9 (2.8)	53.5**	17.6**
	White	9.1 (2.5)	8.1 (2.5)	7.6 (2.5)	6.5 (2.7)	8.6 (2.6)		
	Latino	9.4 (2.7)	8.7 (2.5)	8.3 (2.4)	7.0 (2.6)	8.8 (2.7)		
	Total	9.2 (2.5)	8.4 (2.5)	8.0 (2.5)	6.8 (2.8)	8.7 (2.6)		
Disengagement from School <i>4 Least - 20 Most</i>	Black	9.2 (2.1)	9.9 (2.1)	10.5 (2.1)	11.0 (3.0)	9.9 (2.3)	88.6**	13.7**
	White	8.8 (1.7)	9.5 (2.0)	10.2 (2.1)	11.0 (2.6)	9.2 (2.0)		
	Latino	9.4 (2.0)	10.3 (2.0)	10.7 (1.9)	11.4 (2.6)	10.1 (2.2)		
	Total	8.9 (1.8)	9.7 (2.1)	10.4 (2.1)	11.1 (2.7)	9.4 (2.1)		
Grades <i>1 Lowest - 4 Highest</i>	Black	2.9 (0.9)	2.8 (0.8)	2.6 (0.8)	2.4 (0.9)	2.7 (0.9)	69.1**	11.8**
	White	3.3 (0.8)	2.9 (0.9)	2.7 (0.9)	2.2 (0.9)	3.1 (0.9)		
	Latino	2.9 (0.9)	2.7 (0.9)	2.4 (1.0)	2.0 (0.9)	2.7 (1.0)		
	Total	3.2 (0.8)	2.8 (0.9)	2.6 (0.9)	2.2 (0.9)	3.0 (0.9)		
Truancy (Last month) <i>1 None - 4 Four days or more</i>	Black	1.1 (0.4)	1.1 (0.5)	1.4 (0.8)	1.5 (1.0)	1.2 (0.6)	62.7**	11.0**
	White	1.1 (0.3)	1.3 (0.6)	1.3 (0.7)	1.7 (1.0)	1.2 (0.5)		
	Latino	1.2 (0.5)	1.4 (0.8)	1.5 (1.0)	1.8 (1.0)	1.3 (0.8)		
	Total	1.1 (0.4)	1.3 (0.6)	1.3 (0.8)	1.7 (1.0)	1.2 (0.6)		
Classroom Interruptions <i>2 Least - 14 Most</i>	Black	7.3 (3.0)	7.7 (2.9)	7.2 (2.7)	8.1 (3.4)	7.5 (3.0)	2.9	5.4
	White	7.0 (3.0)	6.8 (2.7)	7.1 (2.9)	7.6 (2.8)	7.0 (2.9)		
	Latino	6.8 (3.1)	6.8 (2.9)	6.9 (2.6)	7.3 (3.3)	6.8 (3.0)		
	Total	7.0 (3.0)	6.9 (2.8)	7.1 (2.8)	7.6 (3.1)	7.0 (2.9)		

Note. *M* = Mean; *SD* = Standard Deviation; **p* < .01; ***p* < .001. Data retrieved from *Monitoring the Future: A Continuing Study of American Youth* (Johnston, Bachman, O'Malley, & Schulenberg, 2008).

Table 2: Means, standard deviations, and f ratios of nonschool-related factors that are related to the frequency of disciplinary referrals among Black, White, and Latino school-age males

	Race	Frequency of Disciplinary Referrals					F-Ratio	
		Never M (SD)	Seldom M (SD)	Sometimes M (SD)	Often M (SD)	Total M (SD)	Referrals	Race
Hopelessness <i>6 Least - 30 Most</i>	Black	11.9 (6.5)	11.8 (6.0)	12.1 (7.0)	13.2 (7.4)	12.1 (6.5)	6.1**	2.8
	White	11.1 (5.8)	12.6 (6.3)	13.2 (6.1)	15.1 (6.9)	11.8 (6.1)		
	Latino	12.9 (5.4)	13.5 (6.3)	13.1 (6.5)	14.4 (6.7)	13.3 (6.0)		
	Total	11.3 (5.8)	12.6 (6.3)	12.9 (6.3)	14.5 (7.0)	12.1 (6.2)		
Positive Self-worth <i>6 Least - 30 Most</i>	Black	25.7 (5.8)	25.2 (6.2)	25.1 (6.7)	24.3 (7.1)	25.3 (6.2)	7.9**	2.7
	White	25.9 (5.1)	24.9 (5.4)	24.8 (5.4)	23.0 (5.9)	25.4 (5.3)		
	Latino	24.8 (5.7)	25.1 (5.2)	23.6 (6.1)	22.5 (6.5)	24.4 (5.8)		
	Total	25.8 (5.3)	25.0 (5.5)	24.6 (5.8)	23.2 (6.3)	25.3 (5.5)		
Thrill Seeking Behaviors <i>6 Least - 30 Most</i>	Black	18.6 (6.3)	19.5 (6.5)	19.9 (7.2)	20.9 (7.4)	19.3 (6.7)	17.4**	28.8**
	White	20.4 (6.2)	23.2 (5.4)	24.4 (5.7)	23.6 (6.2)	21.6 (6.2)		
	Latino	20.1 (6.4)	22.7 (5.3)	22.8 (5.9)	22.7 (6.3)	21.6 (6.1)		
	Total	20.2 (6.3)	22.5 (5.7)	23.2 (6.3)	22.7 (6.6)	21.3 (6.3)		
Aggressive Behaviors <i>4 Least - 20 Most</i>	Black	5.4 (2.8)	6.2 (3.6)	7.1 (3.6)	8.1 (4.6)	6.2 (3.5)	79.1**	22.4**
	White	4.6 (1.7)	5.3 (2.3)	5.8 (2.7)	7.2 (3.6)	5.0 (2.2)		
	Latino	5.1 (2.6)	5.7 (2.7)	6.3 (3.1)	9.3 (4.9)	6.0 (3.4)		
	Total	4.7 (2.0)	5.5 (2.7)	6.2 (3.0)	7.9 (4.3)	5.3 (2.7)		
Delinquent Behaviors <i>4 Least - 20 Most</i>	Black	5.6 (3.0)	6.1 (3.7)	7.6 (4.6)	8.5 (5.6)	6.4 (4.0)	62.2**	5.2
	White	5.1 (2.2)	6.1 (3.2)	6.9 (3.4)	7.7 (4.0)	5.6 (2.8)		
	Latino	5.0 (1.7)	6.5 (3.7)	7.1 (4.0)	9.3 (5.5)	6.4 (3.7)		
	Total	5.1 (2.3)	6.1 (3.4)	7.1 (3.8)	8.3 (4.8)	5.8 (3.2)		
Parents' involvement with school and learning <i>4 lowest-16 highest</i>	Black	10.7 (3.0)	11.2 (3.0)	9.7 (3.0)	9.2 (3.4)	10.5 (3.1)	12.1**	10.6**
	White	11.3 (2.9)	10.9 (2.9)	10.4 (3.1)	10.6 (3.0)	11.1 (2.9)		
	Latino	10.3 (2.9)	10.7 (3.2)	9.7 (3.5)	9.0 (3.3)	10.2 (3.1)		
	Total	11.2 (2.9)	10.9 (3.0)	10.1 (3.1)	9.9 (3.2)	10.9 (3.0)		

Note. M = Mean; SD = Standard Deviation; *p < .01; **p < .001. Data retrieved from *Monitoring the Future: A Continuing Study of American Youth* (Johnston, Bachman, O'Malley, & Schulenberg, 2008).

Table 3: Standardized estimates of direct and indirect effects of factors associated with receiving disciplinary referrals among Black, White, and Latino school-age males

	<i>Delinquent Behaviors</i>	<i>Aggressive Behaviors</i>	<i>Drugs/Delinquency at School</i>	<i>Disengagement from School</i>	<i>Disciplinary Referrals</i>	<i>Truancy</i>
<i>Exogenous Variables</i>						
<i>Disciplinary Referrals</i>						
Black	(.02)	.19** (.05)	.01	.22**		
White	(.07**)	.24** (.04)	.10**	.28**		
Latino	(.03)	.32** (.00)	.01	.25**		
<i>Grades</i>						
Black	(-.04**)	(-.06**)	(-.02)	(-.09**)	-.19** (-.02*)	-.16**
White	(-.04**)	(-.09**)	(-.05**)	(-.10**)	-.31** (-.02**)	-.05**
Latino	(-.02)	(-.11**)	(-.02)	(-.09**)	-.31** (-.01)	-.05
<i>Truancy</i>						
Black	.15* (.06*)	(.11)	.13* (.00)	.22** (.03**)	.12*	
White	.14** (.06**)	(.09**)	.15** (.01**)	.11** (.04**)	.15**	
Latino	.16** (.09)	(.11)	.18** (.01)	.17** (.03**)	.14**	
<i>Disengagement from School</i>						
Black	.08	.17**				
White	.19**	.03				
Latino	.23**	.11				
<i>Drugs/Delinquency at School</i>						
Black	.32**	.30**				
White	.19**	.29**				
Latino	.26**	.27**				

Note: Figures in parenthesis are indirect effects. *p < .01; **p < .001

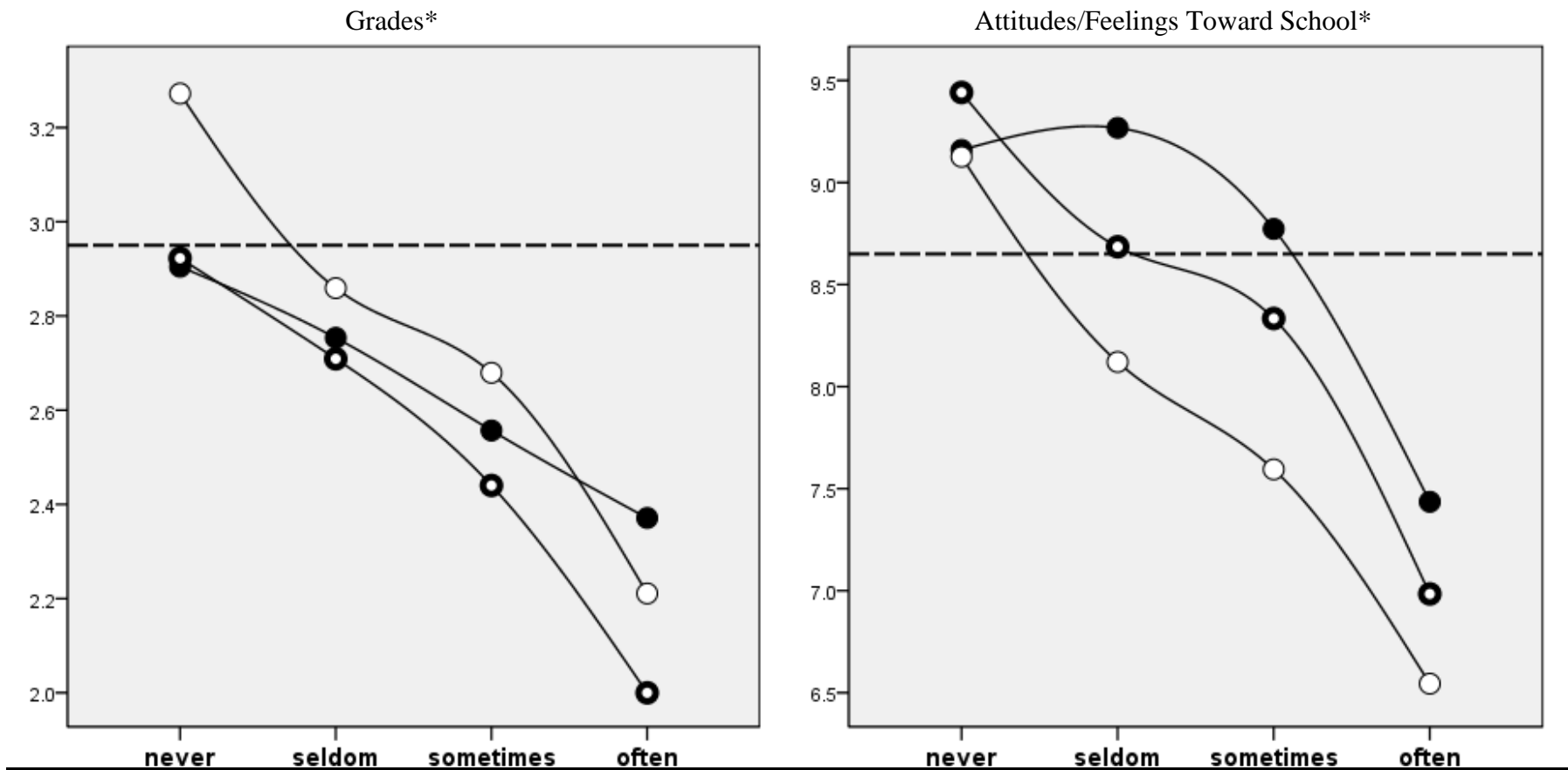


Figure 1a & 1b: Means plots of race (separate plots) and frequency of disciplinary referrals (X Axis) on school-related factors (Y Axes) among Black, Hispanic, and White 8th and 10th graders. Note: ● = Black students; ◐ = Hispanic students; and ○ = White students. The dashed reference line on the Y-axis marks the estimated mean of the dependent variable. *Main and interaction effects for disciplinary referrals and race.

Disengagement from School*

Drugs/Delinquency at School**

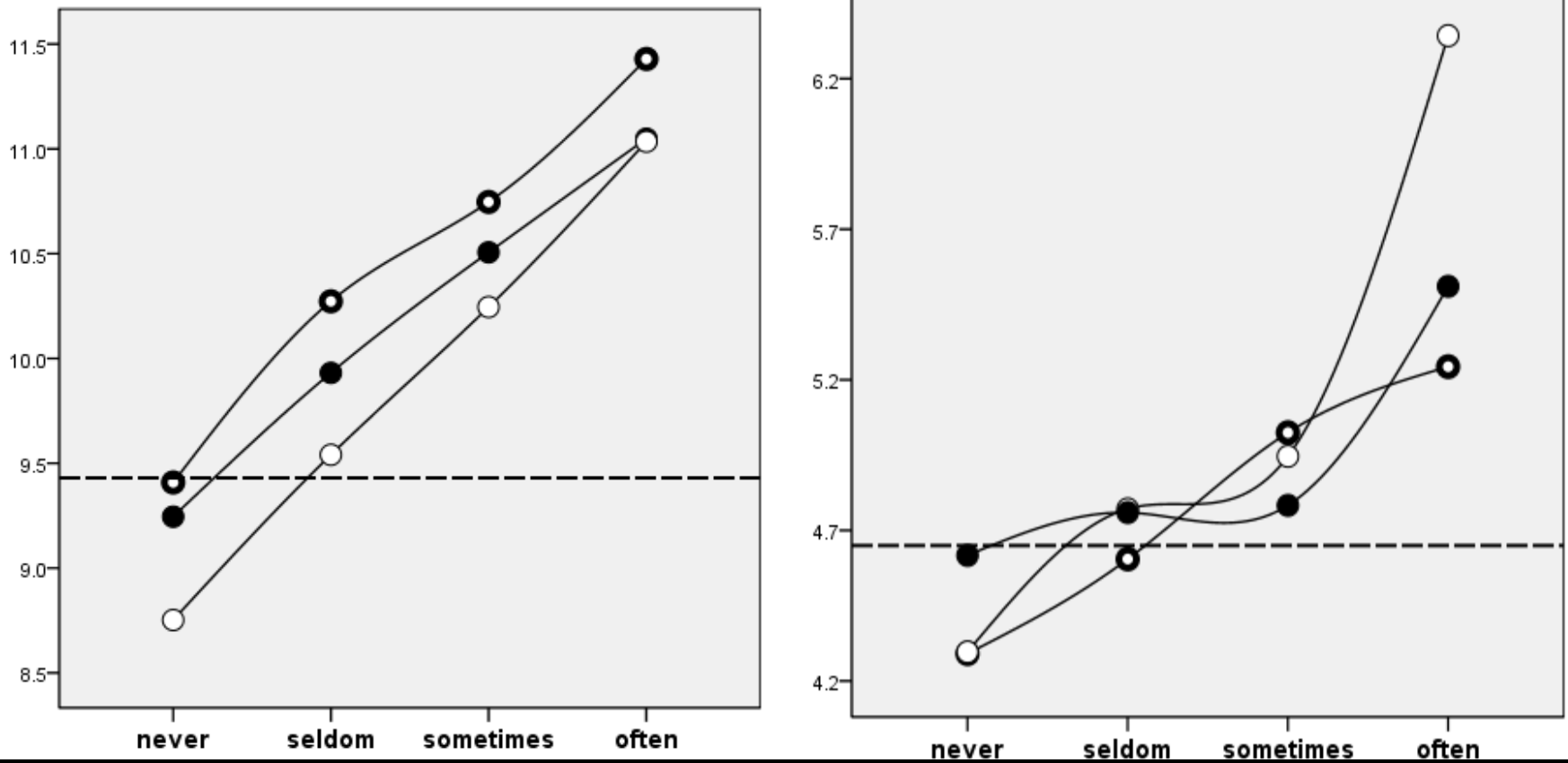


Figure 2a & 2b: Means plots of race (separate plots) and frequency of disciplinary referrals (X Axis) on school-related factors (Y Axes) among Black, Hispanic, and White 8th and 10th graders. Note: ● = Black students; ◐ = Hispanic students; and ○ = White students. The dashed reference line on the Y-axis marks the estimated mean of the dependent variable. Main effects for disciplinary referrals and race; **Main for disciplinary referrals and interaction effects for disciplinary referrals and race.

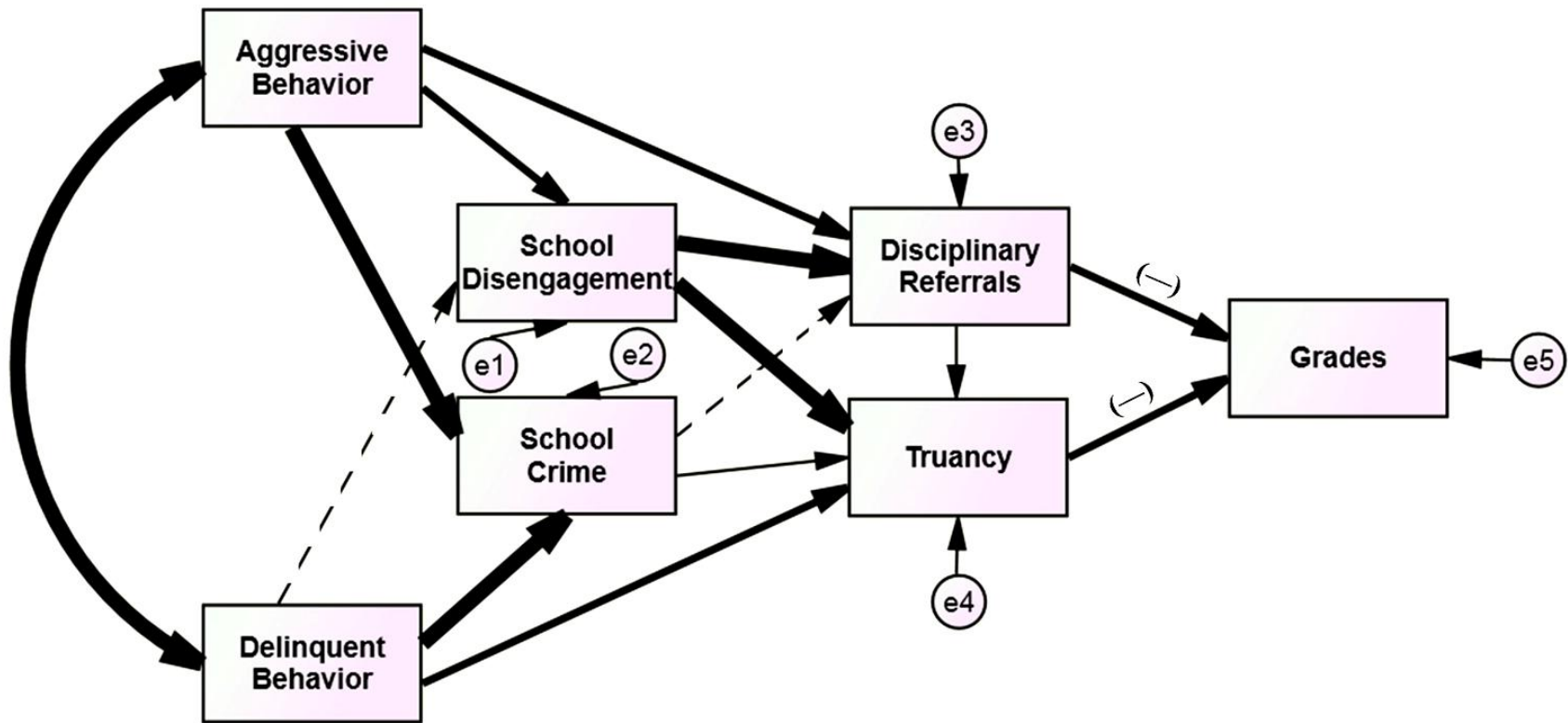


FIGURE 3: The relationship between factors associated with disciplinary referrals and subsequent grades among Black male 8th and 10th grade students (N=458). Note: The thickest lines represent standardized path estimates that are greater than .20, the medium lines represent estimates that are between .15 and .19, and the thinnest lines represent estimates that are less than .15. Curved lines with two way arrows represent covariance and straight lines with one way arrow represent paths. The minus sign (-) indicates an inverse relationship. All path coefficients are significant ($p < .01$), except for the parameter represented by the dashed line. Data retrieved from *Monitoring the Future: A Continuing Study of American Youth* (Johnston, Bachman, O'Malley, & Schulenberg, 2008).

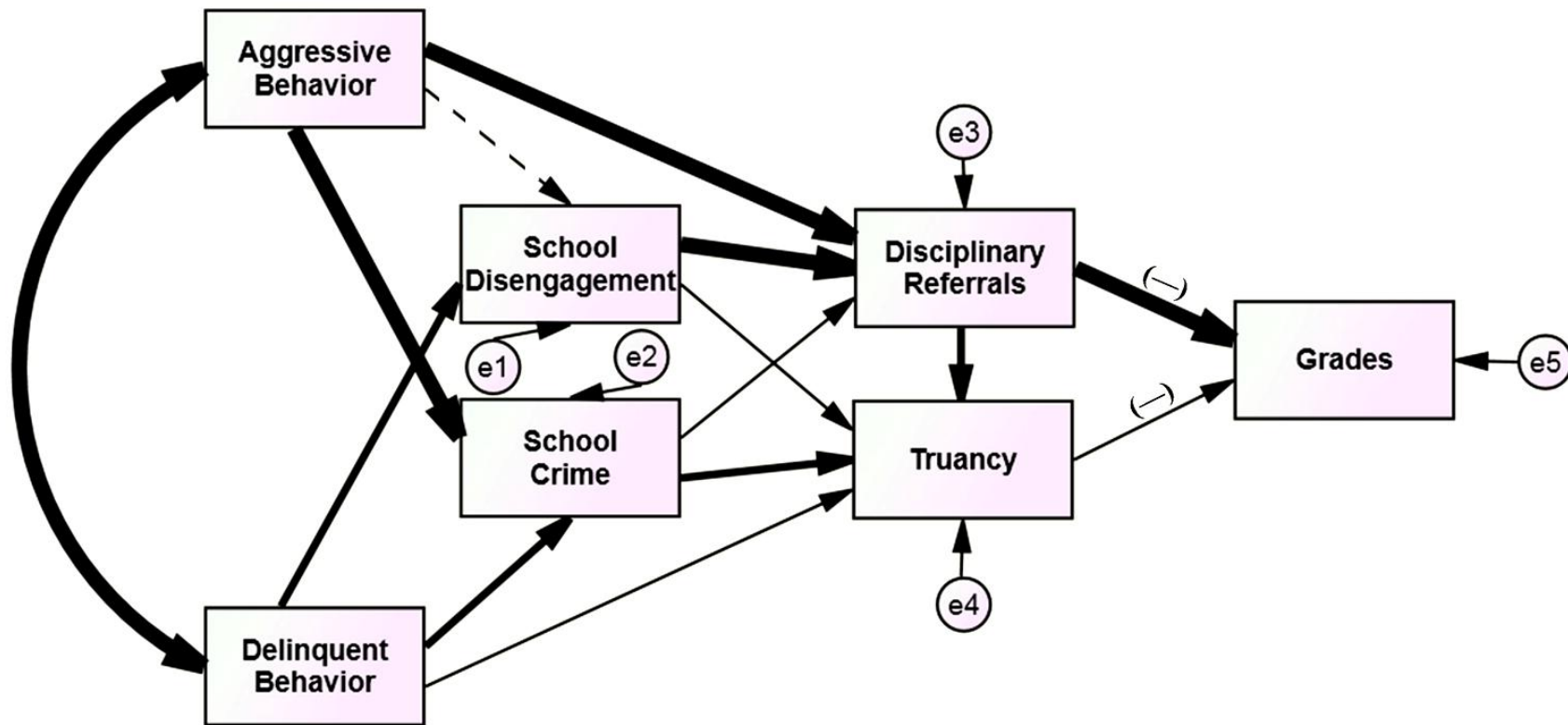


FIGURE 4: The relationship between factors associated with disciplinary referrals and subsequent grades among White male 8th and 10th grade students (N=696). Note: The thickest lines represent standardized path estimates that are greater than .20, the medium lines represent estimates that are between .15 and .19, and the thinnest lines represent estimates that are less than .15. Curved lines with two way arrows represent covariance and straight lines with one way arrow represent paths. The minus sign (-) indicates an inverse relationship. All path coefficients are significant ($p < .01$), except for the parameter represented by the dashed line. Data retrieved from *Monitoring the Future: A Continuing Study of American Youth* (Johnston, Bachman, O'Malley, & Schulenberg, 2008).

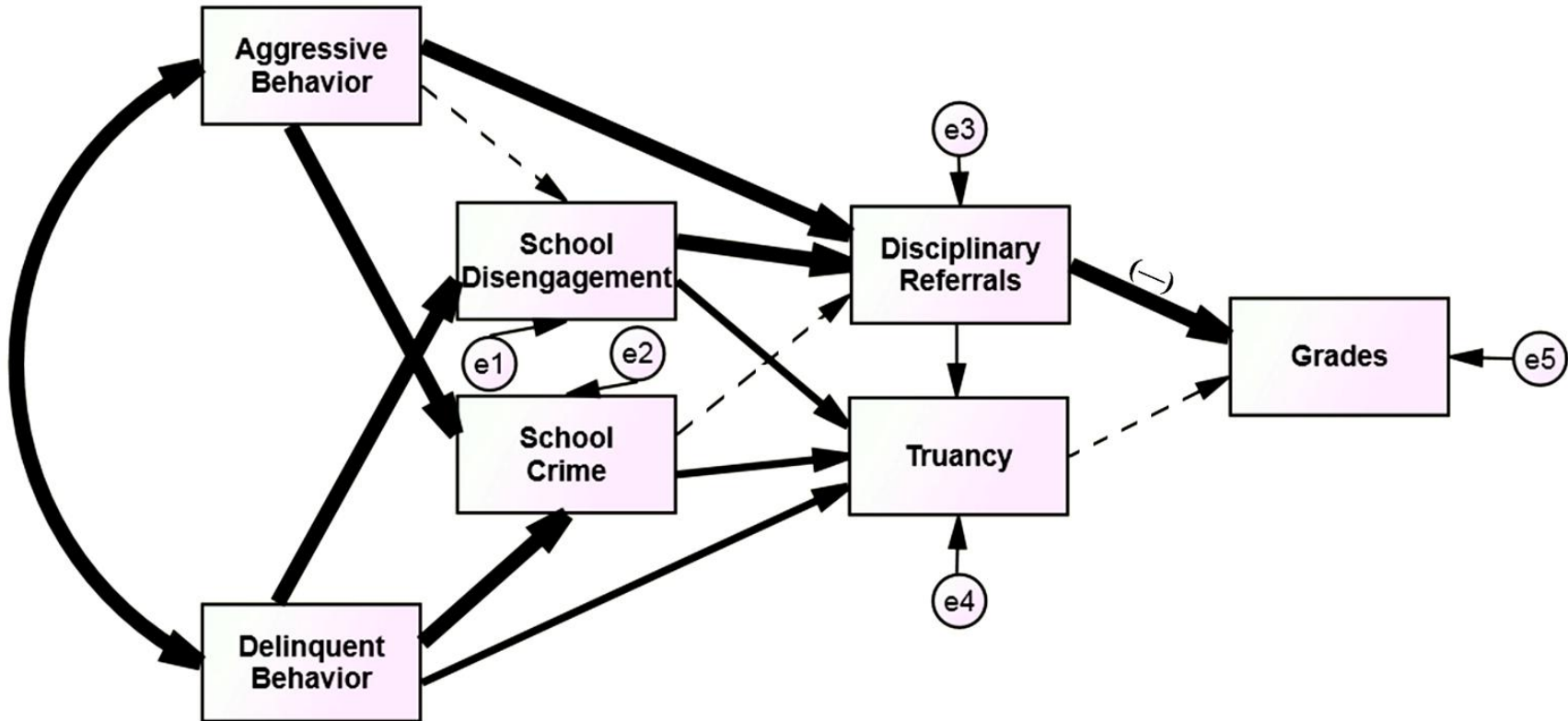


FIGURE 5: The relationship between factors associated with disciplinary referrals and subsequent grades among Latino male 8th and 10th grade students (N=498). Note: The thickest lines represent standardized path estimates that are greater than .20, the medium lines represent estimates that are between .15 and .19, and the thinnest lines represent estimates that are less than .15. Curved lines with two way arrows represent covariance and straight lines with one way arrow represent paths. The minus sign (-) indicates an inverse relationship. All path coefficients are significant ($p < .01$), except for the parameter represented by the dashed line. Data retrieved from *Monitoring the Future: A Continuing Study of American Youth* (Johnston, Bachman, O'Malley, & Schulenberg, 2008).