

# PERSONALITY, GENDER, AND SELF-CONTROL THEORY REVISITED: RESULTS FROM A SAMPLE OF INSTITUTIONALIZED JUVENILE DELINQUENTS

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Two empirically unresolved areas of study of Gottfredson and Hirschi's (1990) self-control theory are personality and gender. The theory states that personality is unrelated to self-control and crime, and prior studies have found that self-control operates differently for males and females. Using data from confined delinquents in the California Youth Authority ( $n = 791$ ) and measures derived from the Weinberger Adjustment Inventory which is a superordinate measure of personality, the current study explored the linkages between self-control and institutional misconduct. MANOVA and negative binomial regression models showed that wards with lower self-control/self-restraint had greater levels of diverse institutional misconduct. However, self-control was predictive of misconduct in only three of ten multivariate models and only among males. Self-control was unrelated to institutional misconduct among females. Implications for theory and research on the general theory are provided.

Michael Gottfredson and Travis Hirschi's self-control approach in *A General Theory of Crime* (1990) has emerged as an influential theoretical perspective in criminology evidenced by more than 2,000 citations and many empirical tests. According to Gottfredson and Hirschi (1990), an individual's level of self-control is the outcome of

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parental socialization occurring in approximately the first ten years of life. Parents who responsibly monitor their child's behavior, recognize their child's inappropriate or deviant behavior, and appropriately sanction, punish, or correct their child's behavior are likely to instill or inculcate self-control. Parents who are unable or unwilling to fully invest and participate in the responsibilities inherent to parenting fail to instill self-control. Because the effects of early-life parental socialization are so profound (cf., Wright & Beaver, 2005; Wright, Beaver, DeLisi, & Vaughn, 2008), an individual's level of self-control is theorized to be relatively stable and endure over the life course.

Persons with low self-control demonstrate a constellation of attitudinal and behavioral characteristics. They tend to (1) have a here-and-now orientation whereby they seek immediate as opposed to delayed gratification; (2) prefer easy and simple tasks and dislike activities that require diligence, tenacity, and persistence; (3) engage in behaviors that are risky and exciting rather than cautious and cognitive; (4) fail to see the longer-term benefits of investing in social institutions; (5) are attracted to endeavors that entail little skill or planning; and (6) are unkind, insensitive, hot-tempered, self-centered, and unsympathetic to others. Although each of these constructs is consistent with psychological research on personality, Gottfredson and Hirschi are adamantly opposed to the notion that self-control is itself a personality construct (1990, pp. 108-111). In their words (1990, p. 111):

The search for personality characteristics common to offenders has thus produced nothing contrary to the use of low self-control as the primary individual characteristic causing criminal behavior. People who develop strong self-control are unlikely to commit criminal acts throughout their lives, regardless of their other personality characteristics. In this sense, self-control is the only enduring personal characteristic predictive of criminal (and related) behavior. People who do not develop strong self-control are more likely to commit criminal acts, whatever the other dimensions of their personality.

Indeed, control theories generally deny the existence of personality traits that lead to crime (Hirschi, 1969; Gottfredson & Hirschi, 1990; Reckless, Dinitz, & Kay, 1957). For instance, Reckless and his colleagues (1957, p. 570) concluded that self-control is not applicable to neurotic, pre-psychotic, and "pathological conditions or faulty character development (psychopathic personality)." In subsequent work, Gottfredson and Hirschi argued that many personality traits that appear to be related to crime are actually byproducts of self-control (Hirschi & Gottfredson, 1993, p. 49).

## LITERATURE REVIEW

### *Self-Control and Personality*

Despite the claims of Gottfredson and Hirschi that self-control is not a personality construct, other researchers have provided evidence which suggests that it is.<sup>1</sup> For instance, O'Gorman and Baxter (2002) assessed the empirical interrelationships between a self-reported measure of self-control, the Conscientiousness scale from the Five Factor Model of Personality (NEO-FFI; Costa & McCrae, 1992), and Carver and White's (1994) scales of behavioral inhibition and behavioral activation derived from Gray's (1970) be-

havioral inhibition system/behavioral activation system (BIS/BAS) theory. Across these diverse measures, they found that self-control overlapped empirically with these measures and strongly correlated with conscientiousness ( $r = .89$ ). O’Gorman and Baxter (2002, p. 538) concluded that “psychometric analysis of candidate measures of the self-control construct can be of value in locating these measures in the network of existing personality scales and in specifying their unique variance.” Similarly, Armstrong (2005) compared the predictive validity of self-control and hostile attribution bias which is a dispositional tendency to attribute hostile intent to others in ambiguous social interactions. Consistent with the general theory, Armstrong found that self-control was a stronger predictor of intent to commit aggression, theft, and drug use vis-à-vis hostile attribution bias. This is important because it cast self-control as more integrally related to delinquency than a personality profile characterized by hostility.

Others have studied personality facets that are similar to the elements of low self-control theorized by Gottfredson and Hirschi (1990). To illustrate, O’Connell (2003) utilized structural equation modeling to examine the effects of aggression and sensation-seeking on marriage, employment, school enrollment, drug use, and arrest among a sample of 577 incarcerated drug offenders. He found that aggression was negatively associated with all social bonds and positively associated with drug use and arrest, whereas sensation-seeking was negatively associated with drug use. This suggests that aggression—which is encapsulated by the temper dimension in Gottfredson and Hirschi’s self-control construct—is importantly related to both prosocial and antisocial outcomes. Marcus (2003) compared the most widely-used criminological measure of self-control—the attitudinal scale developed by Grasmick, Tittle, Bursik, and Arneklev (1993)—to the Retrospective Behavioral Self-Control Scale, the self-control scale from the California Psychological Inventory (CPI-Sc, Gough, 1975), the Sixteen-Personality-Factor-Questionnaire (16PF-Q<sub>3</sub>; Cattell, Eber, & Tatsuoka, 1970), and the NEO-FFI. Self-control was strongly correlated with all personality measures on the core items of self-control theorized by Gottfredson and Hirschi (also see, Marcus, 2004).

Using a cohort of serious offenders from the California Youth Authority, Cauffman, Steinberg, and Piquero (2005) found that “temperance” which is the ability to regulate emotional and behavioral impulses as measured by the Weinberger Adjustment Inventory significantly predicted antisocial behavior. Based on data from a statewide population of institutionalized delinquents, Vaughn, DeLisi, Beaver, Wright, and Howard (2007) found significant overlap between self-control as it is conceptualized in the sociological criminology literature and psychopathology and advised: “To be sure, self-control is closely connected with psychopathology, specifically narcissism, and is a much broader construct than has been reported in the criminological literature. Indeed, self-control is likely subsumed by narcissism. Present study findings also add depth to the construct of self-control by showing that there are linkages between it and other individual-level constructs, such as narcissism and psychopathy, which are important ingredients in understanding antisocial conduct” (p. 816).

Even research outside the purview of self-control theory suggests that self-control has convergent validity with personality constructs. For instance, Miller, Lynam, and Jones (2008) used the Five Factor Model of Personality with special emphasis on Agreeableness

and Conscientiousness to explore personality correlates with externalizing behaviors. They found strong empirical overlap and concluded “that an antagonistic interpersonal approach, along with a tendency to behave rashly with little consideration of the potential consequences, is linked with an array of externalizing behaviors” (2008, p. 163). The same conclusion can be inferred from *A General Theory of Crime*.

### *Self-Control and Gender*

Despite the generality thesis advanced by Gottfredson and Hirschi, there is lingering concern and mixed evidence that self-control has differential effects by gender (cf., Gibbs, Giever, & Martin, 1998; Harrison, Jones, & Sullivan, 2008; LaGrange & Silverman, 1999; Özbay, 2008; Tittle, Ward, & Grasmick, 2003). For instance, in their meta-analysis, Pratt and Cullen (2000, p. 947) concluded that comparisons between male and female samples as they relate to self-control should be viewed with caution. Vazsonyi, Pickering, Junger, and Helsing (2001) used data from 8,417 adolescents sampled from Hungary, the Netherlands, Switzerland, and the United States to evaluate the comparative generality of the theory. They found that self-control is tenable across variations by gender, age, and nationality. Overall, self-control accounted for 21% of the variance in male total deviance and 25% of the variance in female total deviance. Using a university sample of 425 students, Higgins (2004) employed structural equation modeling to show that self-control theory is general in the sense that its basic structure works for males and females. Other evidence that self-control operates consistently for males and females has been found for a range of behavioral outcomes including drunk driving, delinquency, and general deviance (Gottfredson, 2006; Keane, Maxim, & Teevan, 1993; Vazsonyi et al., 2001). In their assessment of the evidence, Gottfredson and Hirschi (1990, p. 148) suggest that “variables related to differences in criminality among boys are the same as those for girls.”<sup>2</sup>

To the extent that self-control manifests differently by gender, the reason could be that self-control subsumes personality constructs which themselves manifest at different levels among males and females (Hayslett-McCall & Bernard, 2002; Moffitt, Caspi, Rutter, & Silva, 2001). There is precedence in the literature suggesting this is the case. For example, LaGrange and Silverman (1999) found that the risk-taking dimension was more predictive of delinquency among girls whereas impulsivity was more predictive of delinquency among boys. Using data from the National Longitudinal Survey of Youth, Chapple and Johnson (2007) found that relationships between impulsivity, maternal attachment, and antisocial discipline were stronger among boys than girls, suggesting gender variation in the ways that self-control is inculcated by parenting. The cognitive component of self-control was also more strongly related to impulsivity among boys than girls. Using a Turkish sample of 974 university students, Özbay (2008) found that the risk taking dimension of self-control predicted deviance among males and females. Additionally, simple tasks predicted deviance but only among females. In sum, prior investigators have shown that self-control overlaps with personality constructs or is itself a personality construct. If this is the case, prior evidence of differential expression of self-control by gender could be explained by gender differences in personality traits.

### *Self-Control and Institutional Misconduct*

To date, virtually all of the voluminous literature on self-control theory has centered on the interrelationships between self-control, delinquency, crime, and related imprudent behaviors. Relatively few studies have evaluated Gottfredson and Hirschi's theory as it relates to criminal justice settings, particularly institutional misconduct. A handful of studies have been conducted, however. DeLisi, Hochstetler, and Murphy (2003) performed a validation study of the Grasmick et al. measure of self-control using exploratory factor analysis, confirmatory factor analysis, and structural equation modeling. They found that none of the six dimensions of the construct—temper, risk taking, impulsivity, physical activity, self-centeredness, and preference for simple tasks—were predictive of three forms of prison offending: drug use, weapons possession, and fighting. One reason for the null findings is that self-control may operate indirectly through other social processes to influence prison offending. To illustrate, Hochstetler and DeLisi (2005) used the same sample and found that although self-control did not directly predict three forms of aggression (fighting with inmates, retaliating against other inmates, and weapons possession); it strongly predicted participation in the illicit inmate economy. Prisoners with low self-control were more likely to immerse themselves in this antisocial economy, which in turn strongly predicted fights, retaliation, and weapons use. Finally, using both the Grasmick et al. (1993) attitudinal scale and a behavioral measure of disputatiousness, DeLisi, Hochstetler, Higgins, Beaver, and Graeve (2008) found linkages between offender self-control and an array of maladaptive behaviors in prison, including drug use, fights with correctional staff, weapons possession, total infractions, and retaliating against another prisoner. Those with low self-control were also more likely to be placed in disciplinary units/administrative segregation and have worse social relations with staff. Unfortunately, all of these studies used data from adult offenders, thus little is known about the linkages between self-control and institutional misconduct among adolescents.

## METHOD

### *Participants and procedures*

Data were derived from a cohort of 813 serious delinquents committed to the California Youth Authority between 1997 and 1999 who were originally studied to assess mental health problems among the institutionalized delinquent population (Haapanen & Steiner, 2006). The original study was conducted to explore the usefulness of the instruments used in the CYA's Treatment Needs Assessment (TNA) battery. Wards who completed screening questionnaires were followed to determine whether they were subsequently placed in mental health programs, were prescribed medications used to treat serious mental health problems, and/or were identified by staff as requiring these services. The TNA battery included four self-report assessments that were administered during the educational testing phase of the clinic process with 8 to 15 wards at a time by casework staff at the reception center. Assessments were machine scored using Scantron technology and used to supplement official mental health records maintained at ward institutions and in the CYA central office. In addition to psychiatric information, the data contain a rich array of variables pertinent to the study of institutional behavior, including demographics, prior

juvenile history and juvenile justice system involvements, commitment and sentencing information, and official records of misconduct handled through the CYA's Disciplinary Decision-Making System (DDMS).

### *Measures*

*Weinberger Adjustment Inventory:* The Weinberger Adjustment Inventory (WAI) assesses broad, superordinate personality functioning among adolescents. Two major dimensions, distress and self-restraint, are included in the current data. Self-restraint consists of impulse control, suppression of aggression, responsibility, and consideration of others, the lack of which encapsulates the personality profile of offenders as theorized by Gottfredson and Hirschi (1990). Distress consists of anxiety, depression, low self-esteem, and low well-being. The WAI had excellent reliability with the current data for self-restraint ( $\alpha = .96$ ,  $M = 3.31$ ,  $SD = .86$ ) and distress ( $\alpha = .92$ ,  $M = 2.46$ ,  $SD = .99$ ). The WAI has been shown to have good validity and reliability (Feldman & Weinberger, 1994; Weinberger, 1990) and even compares favorably with established personality inventories, such as the Minnesota Multiphasic Personality Inventory (see Huckaby, Kohler, Garner, & Steiner, 1998).

*WAI personality typology:* A four-quadrant personality typology has been created from the WAI by intersecting the distress and restraint dimensions at age-appropriate means. These personality types are 1) reactive which describes youth who are high distress and low restraint ( $n = 288$ , 36.5%), 2) nonreactive which describes youth who are low distress and low restraint ( $n = 239$ , 30.3%), 3) repressor which describes youth who are low distress and high restraint ( $n = 181$ , 23%), and 4) suppressor which describes youth who are high distress and high restraint ( $n = 80$ , 10.2%).<sup>3</sup> Prior research found that youths characterized by the nonreactive profile were significantly likely to recidivate after release from juvenile confinement. In addition, youths fitting the suppressor profile were least likely to reoffend (Steiner, Cauffman, & Duxbury, 1999).

*Demographics:* Age ( $M = 16.89$ ,  $SD = 1.11$ , Range = 12.6 to 20.4; continuously coded), race (White = 1, 17%,  $n = 135$ ; Non-White = 0, 83%,  $n = 656$ ), and sex (male = 1, 81%,  $n = 640$ ; female = 0, 19%,  $n = 151$ ) were included as control variables based on their links to institutional misconduct with younger wards, Non-Whites, and males expected to have higher levels of misconduct than older wards, Whites, and females (DeLisi, 2003; Harer & Steffensmeier, 1996; Trulson, 2007; Trulson, DeLisi, & Marquart, 2009; Wooldredge, Griffin, & Pratt, 2001).

*Other Covariates:* Commitment offense type refers to the primary delinquent offense for which the ward was confined and spanned four types: violent (52%,  $n = 412$ , coded = 1), property (30.5%,  $n = 241$ , coded = 2), drug (6%,  $n = 48$ , coded = 3), and other law violations (11.5%,  $n = 90$ , coded = 4). There are two measures of the ward's delinquent career, one official and one self-reported. Total prior delinquent offenses is a summary measure of the ward's delinquent career (e.g., police contacts) prior to confinement ( $M = 8.74$ ,  $SD = 5.46$ , Range = 1-34). The Achenbach Youth Self-Report (YSR, Achenbach, 1991) Externalizing score is a self-report of externalizing behaviors ( $M = 55.09$ ,  $SD = 11.30$ , Range = 25-91). Major psychiatric diagnosis for anxiety, depression, psychosis, or

a mood disorder (21% yes,  $n = 164$ , 79% no,  $n = 627$ ) is a dichotomous variable used to control for mental health which is often comorbid with institutional misconduct among youth in confinement (Abram, Teplin, Charles, Longworth, McClelland, & Dulcan, 2004; Cauffman, 2004; DeLisi et al., 2008; DeLisi et al., 2009; Ford, Chapman, Pearson, Borum, and Wolpaw, 2008; Teplin, Abram, McClelland, Dulcan, & Mericle, 2002).

*Dependent Variables:* Seven measures of institutional misconduct were used: total incidents reviewed by the parole board ( $M = 3.61$ ,  $SD = 5.88$ , Range = 0 to 82), assault against wards ( $M = .33$ ,  $SD = .75$ , Range = 0 to 5), assault against staff ( $M = .06$ ,  $SD = .30$ , Range = 0 to 3), sexual misconduct ( $M = .21$ ,  $SD = 1.88$ , Range = 0 to 51), suicidal activity ( $M = .09$ ,  $SD = .53$ , Range = 0 to 9), aggressive misconduct ( $M = .40$ ,  $SD = .87$ , Range = 0 to 5), and other/nonviolent misconduct ( $M = 2.90$ ,  $SD = 4.31$ , Range = 0 to 39) which included diverse acts of noncompliance, possession of contraband, and other violations of institutional rules and regulations. All measures of institutional misconduct are used in the MANOVA analysis. Two of the measures—sexual misconduct and suicidal activity—were omitted from negative binomial regression analyses because the models were unstable with model  $\chi^2$  statistics exceeding appropriate significance levels. Negative binomial regression models have emerged in recent years as the definitive estimation approach for count data of institutional misconduct (see Walters, 2007).

### *Analytical Strategy*

Two forms of analysis were conducted. First, multivariate analysis of variance tests were conducted for the four nominal-level personality types from the WAI personality quadrant (reactive, nonreactive, repressor, suppressor). It is hypothesized that reactive and nonreactive personality types will have greater levels of institutional misconduct because both score low on self-control/restraint. Second, negative binomial regression models were conducted to evaluate the effects of self-control/restraint, distress, age, race, commitment offense type, total prior delinquent offenses, self-reported externalizing behaviors, and major psychiatric diagnosis on 1) assaults against wards, 2) assaults against staff, 3) aggressive offenses, 4) other (non-aggressive) offenses, and 5) total misconduct reviewed by parole board. The negative binomial regression models were run separately by gender to examine whether self-control operated differently for males and females as shown in previous research (Burton, Cullen, Evans, Alarid, & Dunaway, 1998; LaGrange & Silverman, 1999).

## FINDINGS

As shown in Table 1 (next page), there are significant group differences in institutional misconduct across the four personality variants for total incidents reviewed by parole board ( $F = 8.72$ ,  $p < .0001$ ), assaults against other wards ( $F = 6.83$ ,  $p < .0001$ ), assaults against staff ( $F = 4.00$ ,  $p < .001$ ), suicidal activity ( $F = 2.27$ ,  $p < .05$ ), other misconduct ( $F = 8.92$ ,  $p < .0001$ ), and aggressive misconduct ( $F = 7.91$ ,  $p < .0001$ ). The only null finding emerged for sexual misconduct. For all forms of misconduct, wards with a reactive personality profile—characterized by low restraint and high distress—were the most noncompliant inmates. Those with a nonreactive personality profile with low restraint and low distress were the next most noncompliant followed by repressors and suppressors.

sors. Means misconduct levels were several times higher among wards with low restraint which includes a constellation of traits—inability to suppress aggression, inability to control impulses, lack of consideration for others, and irresponsibility—that comports with Gottfredson and Hirschi's (1990) general theory.

**Table 1**  
**MANOVA for Institutional Misconduct**

<i>Form of Misconduct</i>	<i>Reactive</i> <i>(n=288)</i>	<i>Nonreactive</i> <i>(n=239)</i>	<i>Repressor</i> <i>(n=181)</i>	<i>Suppressor</i> <i>(n=80)</i>	<i>F</i>
Total Incidents	4.90	3.81	2.04	1.99	8.73****
Ward Assaults	.46	.38	.15	.13	6.83****
Staff Assaults	.12	.03	.03	.04	4.00***
Sexual Misconduct	.34	.22	.07	.09	0.68
Suicidal Activity	.16	.04	.04	.13	2.27*
Other Misconduct	3.82	3.13	1.74	1.61	8.92****
Aggressive Misconduct	.58	.42	.18	.16	7.91****

\*\*\*\*  $p < .0001$ , \*\*\*  $p < .001$ , \*\*  $p < .01$ , \*  $p < .05$

Negative binomial regression models for assault against wards (Table 2), assault against staff members (Table 3, next page), and aggressive misconduct (Table 4, next page) allow an investigation for the effects of self-control on acts of force (Gottfredson & Hirschi, 1990) as measured by the restraint scale from the Weinberger Adjustment Inventory. Males with lower self-restraint were more likely to assault other youths in custody ( $b = -.41$ ,  $z = -2.56$ ), but self-restraint had no effect among females ( $b = .00$ ,  $z = 0.01$ ). For both genders, significant, negative effects emerged for age as younger wards were more likely to assault their peers. Prior offenses and psychiatric diagnosis were predictive of assaults among females but not males.

**Table 2**  
**Negative binomial regression model for assault against wards**

<i>Variable</i>	<i>Males (n=640)</i>			<i>Females (n=151)</i>		
	<i>b</i>	<i>SE</i>	<i>z</i>	<i>b</i>	<i>SE</i>	<i>z</i>
Self-Control	-.41	.16	-2.56**	.00	.39	0.01
Distress	.19	.13	1.49	.19	.23	0.82
Age	-.38	.13	-4.63***	-.32	.14	-2.27*
Race	-.42	.28	-1.51	.11	.41	0.28
Commitment Offense	-.04	.09	-0.43	.07	.18	0.40
Total Prior Offenses	.02	.02	0.97	.08	.03	2.46**
Externalizing Behaviors	-.01	.01	-1.01	.02	.02	0.74
Psychiatric Diagnosis	.02	.25	0.09	1.25	.40	3.14***
Model $\chi^2$			38.43***			30.80***
Pseudo R2			.041			.143

\*\*\*  $p < .001$ , \*\*  $p < .01$ , \*  $p < .05$



**Table 3**  
**Negative binomial regression model for assault against staff**

<i>Variable</i>	Males (n=640)			Females (n=151)		
	<i>b</i>	<i>SE</i>	<i>z</i>	<i>b</i>	<i>SE</i>	<i>z</i>
Self-Control	-.45	.31	-1.44	.92	.58	1.58
Distress	.38	.27	1.40	1.03	.32	3.18***
Age	-.53	.17	-3.05***	-.60	.22	-2.75***
Race	.38	.49	0.76	.17	.58	0.30
Commitment Offense	-.25	.23	-1.05	.01	.24	0.05
Total Prior Offenses	.01	.04	0.29	.11	.05	2.48**
Externalizing Behaviors	-.01	.01	-0.49	.07	.03	2.17*
Psychiatric Diagnosis	1.68	.46	3.63	1.02	.61	1.69
Model $\chi^2$			29.63***			32.10***
Pseudo R2			.124			.267

\*\*\*  $p < .001$ , \*\*  $p < .01$ , \*  $p < .05$

**Table 4**  
**Negative binomial regression model for aggressive misconduct**

<i>Variable</i>	Males (n=640)			Females (n=151)		
	<i>b</i>	<i>SE</i>	<i>z</i>	<i>b</i>	<i>SE</i>	<i>z</i>
Self-Control	-.43	.16	-2.66**	.30	.35	0.85
Distress	.21	.13	1.68	.38	.21	1.86*
Age	-.39	.08	-4.85***	-.38	.13	-2.94**
Race	-.30	.26	-1.17	.16	.37	0.43
Commitment Offense	-.07	.09	-0.74	.04	.16	0.25
Total Prior Offenses	.01	.02	0.79	.09	.03	3.16***
Externalizing Behaviors	-.01	.01	-0.97	.03	.02	1.67
Psychiatric Diagnosis	.30	.24	1.24	1.21	.36	3.37***
Model $\chi^2$			43.83***			44.26***
Pseudo R2			.043			.168

\*\*\*  $p < .001$ , \*\*  $p < .01$ , \*  $p < .05$

For assault against staff members, self-control was not significantly predictive for either males or females. Both effects approached statistical significance, albeit in opposite directions. For boys, low self-control was associated with assault against staff. For girls, more self-control was associated with assault against staff. In terms of the other covariates, girls with greater distress, more prior delinquent offenses, and more self-reported externalizing behaviors were more likely to assault staff. Strong, negative effects for age were found for both genders (see Table 3).

A significant relationship emerged between low self-control and aggressive misconduct among males ( $b = -.42, z = -2.66$ ) but not among females ( $b = .30, z = 0.85$ ). Across gender, younger wards were engaged in more aggressive misconduct during confinement. Once again, prior delinquent offenses and having a major psychiatric diagnosis were predictive of misconduct among female wards (see Table 4).

Null findings were found between self-control and other forms of misconduct. As was the case for assault against staff members, self-control approached significance in the expected direction among boys but had a non-significant, positive effect among girls. Among males, younger age, greater prior delinquencies, and psychiatric diagnosis were predictive of other forms of misconduct. Among girls, having a major clinical diagnosis was the only significant predictor of other forms of misconduct (Table 5, below).

**Table 5**  
**Negative binomial regression model for other misconduct**

Variable	Males ( $n=640$ )			Females ( $n=151$ )		
	<i>b</i>	<i>SE</i>	<i>z</i>	<i>b</i>	<i>SE</i>	<i>z</i>
Self-Control	-.15	.08	-1.78	.18	.22	0.85
Distress	.02	.06	0.40	.02	.14	0.15
Age	-.35	.05	-7.63***	-.09	.08	-1.07
Race	-.09	.14	-0.61	.34	.24	1.43
Commitment Offense	-.04	.05	-0.88	.07	.12	0.56
Total Prior Offenses	.03	.01	3.27***	.01	.02	0.65
Externalizing Behaviors	.01	.01	1.69	.06	.01	0.74
Psychiatric Diagnosis	.62	.14	4.52***	.45	.22	2.01*
Model $\chi^2$			115.85***			60.98***
Pseudo R2			.041			.092

\*\*\*  $p < .001$ , \*\*  $p < .01$ , \*  $p < .05$

As shown in Table 6 (next page), self-control was negatively and significantly predictive of total misconduct reviewed by parole board among males ( $b = -.19, z = -2.23$ ), but not among females. For boys, younger age, total prior offenses, and having a psychiatric diagnosis were predictive of total misconduct, whereas for girls the self-reported externalizing behaviors and psychiatric diagnosis predicted misconduct reviewed by the parole board.

**Table 6**  
**Negative binomial regression model for total misconduct reviewed by parole board**

<i>Variable</i>	<i>Males (n=640)</i>			<i>Females (n=151)</i>		
	<i>b</i>	<i>SE</i>	<i>z</i>	<i>b</i>	<i>SE</i>	<i>z</i>
Self-Control	-.19	.08	-2.23*	.17	.21	0.82
Distress	.07	.06	1.10	.07	.13	0.54
Age	-.35	.05	-7.68***	-.14	.08	-1.70
Race	-.04	.14	-0.27	.34	.23	1.47
Commitment Offense	-.04	.05	-0.83	.10	.11	0.87
Total Prior Offenses	.04	.01	4.21***	.02	.02	0.92
Externalizing Behaviors	.01	.01	1.13	.05	.01	3.69***
Psychiatric Diagnosis	.66	.14	4.67***	.66	.21	3.09***
Model $\chi^2$			128.96***			67.66***
Pseudo R2			.043			.093

\*\*\*  $p < .001$ , \*\*  $p < .01$ , \*  $p < .05$

## DISCUSSION

To summarize, the current study used the restraint scale from the Weinberger Adjustment Inventory, which includes indicators of impulse control, suppression of aggression, responsibility, and consideration of others to operationalize the self-control construct in Gottfredson and Hirschi's (1990) general theory and examine its linkages to institutional misconduct. We also compared prison offending for four personality categories derived from the WAI that were scored according to symptoms of self-restraint and distress. The discussion focuses on three broad findings and the implications they have for self-control theory.

First, the current analyses produced generally weak support for self-control as measured by the WAI restraint scale as a predictor of institutional misconduct. In the MANOVA analysis, there appeared to be a clear link between self-control and institutional misconduct, as groups that scored low on restraint—reactive and nonreactive types—had the highest mean values of offending for six of seven measures of institutional misconduct. The effects of self-control were significantly related to institutional misconduct in a mere 3 of 10 negative binomial regression models. The null relationship between self-control and institutional misconduct is supportive of prior research. For instance, DeLisi and his colleagues (2003, p. 258) found that none of the six elements of low self-control postulated by Gottfredson and Hirschi—impulsivity, risk taking, physical activity, self-centeredness, preference for simple tasks, and temper—predicted prison offending using structural equation modeling on a sample of male prisoners selected from Iowa.

That 7 of the 10 negative binomial regression models produced null findings between the WAI self-restraint measure and institutional misconduct is surprising, since the constructs within the measure are isomorphic to the dispositional profile advanced in the general theory. On the other hand, proponents of Gottfredson and Hirschi's theory would

argue that the findings are entirely unsurprising since control theories assert that personality constructs are not important predictors of criminal behavior (Gottfredson & Hirschi, 1990; Hirschi, 1969; Reckless et al., 1957). From this view, the superordinate personality constructs in the WAI perhaps do not capture the essence of self-control as it relates to institutional misconduct, although prior research has linked the WAI to deviance using the same data (Cauffman et al., 2005). Additional research on self-control theory as it relates to persons in institutional settings is needed to more comprehensively evaluate the generality of the theory.

Second, none of the regression models among female wards produced a significant effect for self-control. In fact, in none of the equations were the coefficients for self-control even in the expected direction. Instead, misconduct among girls in confinement is more often the outcome of having a psychiatric disorder, prior delinquent offenses, self-reported externalizing behaviors, and young age. Supplementary post hoc analyses revealed that male and female wards in the CYA evince significantly different levels of self-control for WAI restraint ( $t = 2.60, p = .005$ ), suppression of aggression ( $t = 2.90, p = .002$ ), consideration of others ( $t = 2.53, p = .005$ ), and responsibility ( $t = 2.89, p = .002$ ), with males having lower scores on all measures. For WAI distress ( $t = 2.31, p = .01$ ), depression ( $t = 2.66, p = .004$ ), low self-esteem ( $t = 2.19, p = .01$ ), and low well-being ( $t = 1.61, p = .10$ ), girls had worse distress than boys. Within the CYA, male and female wards have very different psychosocial profiles, and boys have significantly lower self-control (also see, Chapple, Hope, & Whiteford, 2005). In addition, low self-control tends to predict misconduct among male wards but not female wards. This adds to conflicting evidence about whether the general theory is truly general as it relates to gender and antisocial behavior (Chapple & Johnson, 2007; Gibbs et al., 1998; Harrison et al., 2008; LaGrange & Silverman, 1999; Özbay, 2008; Tittle et al., 2003).

Third and concomitantly, the current study builds on prior research (Cauffman et al., 2005; Vaughn et al., 2007) suggesting that Gottfredson and Hirschi's incarnation of self-control is meaningfully related to extant personality constructs and can be operationalized with personality measures. At face value, there is clear overlap between personality links to antisocial behavior and the profile of persons with low self-control (have a here-and-now orientation whereby they seek immediate as opposed to delayed gratification; prefer easy and simple tasks and dislike activities that require diligence, tenacity, and persistence; engage in behaviors that are risky and exciting rather than cautious and cognitive; fail to see the longer-term benefits of investing in social institutions; are attracted to endeavors that entail little skill or planning; and are unkind, insensitive, hot-tempered, self-centered, and unsympathetic to others) (Lahey & Waldman, 2007). Constructs such as prosociality, daring, negative emotionality, and having a difficult disposition should be empirically linked with Gottfredson and Hirschi's self-control construct to determine the extent to which these constructs have discriminant and predictive validity of antisocial and analogous behaviors.

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## ENDNOTES

1 To be fair to Gottfredson and Hirschi, it is often the case that researchers in different fields study similar or overlapping constructs but simply use different labels. Indeed, Cauffman, Steinberg, and Piquero (2005, pp. 149-150) similarly noted that the low self-control construct in the general theory is consistent with emotional regulation, response inhibition, psychosocial maturity, temperance, and related constructs. Even within criminology, empirical findings that are linked to self-control theory can also be claimed by competing theories (see Agnew, 2005; Conger, 1976, Higgins & Ricketts, 2004).

2 A criticism that has been levied against self-control theory is that it has either exclusively studied males or focused on behaviors that are more common among males than females. Recently, Harrison, Jones, and Sullivan (2008) evaluated the gendered expressions of self-control by exploring its viability among behaviors more common to females—eating disorders and Borderline Personality Disorder. Based on a sample of 161 female undergraduates, they found that women with low self-control were significantly likely to evince both eating disorders and Borderline Personality Disorder.

3 Of the original 813 wards in the sample, 22 had invalid WAI data and were excluded from analyses. These 22 cases were not significantly different for assaults on wards ( $t = -0.75, p = .4521$ ), other misconduct ( $t = -1.50, p = .1328$ ), aggressive misconduct ( $t = -0.32, p = .7526$ ), and total misconduct reviewed by parole board ( $t = -1.31, p = .1907$ ). For the personality quadrant analyses, an additional three cases were lost due to missing data.

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