
A Gendered Perspective on the Relationship Between Self-Control and Deviance

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Abstract

A consistent finding within criminology is the large sex gap in offending. Although research has examined this phenomenon extensively, the sex gap is still largely unexplained. This study proposes the sex gap in offending can be better understood through exploring the relationship between self-control and gender identity. Using data collected as part of the Tucson Youth Project, this study found gender identity was a crucial link between sex, self-control, and involvement in deviant behavior. Specifically, femininity was associated with greater self-control, and both these variables predicted deviance, even when controlling for sex. In contrast, masculinity had no effect on deviant behavior.

Keywords

Self-Control, BSRI, gender identity, deviance

Introduction

In spite of several decades of feminist work in criminology, most of the dominant theories in the field have failed to adequately address the dramatically different rates of crime for women and men. The relatively persistent association of boys with masculinity and girls with femininity would lead to the expectation that the sex gap in crime may be due to the fact that boys' masculine identity leads to crime and girls' feminine identity prevents such behaviors. Thus, it is somewhat surprising that very few studies have employed measures of gender identity as an explanatory variable for crime and delinquency. In addition, only a few theories have specifically considered the importance of gender. Hagan's (1985) power control theory proposes that differences in power between parents may influence gender socialization of children, and Messerschmidt's (1993) structured action theory examines the process of how individuals use deviance to accomplish masculinity. These perspectives have been very valuable in forwarding our understanding of female crime, and the differences between

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male and female motivations for crime. Understanding the value of gender within the framework of theories that have garnered a great deal of support in the field may serve as one way to improve our understanding of the relationship between sex and deviance. This study attempts to explain sex differences in deviant behavior through the inclusion of gender identity in one of the prevailing theories in criminology—the general theory of crime. Specifically, this study examines how gender identity may be linked both to self-control and deviant behavior.

Self-Control Theory

Developed by Gottfredson and Hirschi (1990), the general theory of crime claims that criminal and analogous behaviors are more likely to be committed by individuals who lack self-control. Defined as the extent to which an individual is vulnerable to temptations of the moment (Gottfredson & Hirschi, 1990, p. 87), self-control is argued to be a relatively stable trait that is developed through early childhood socialization. The requirements to adequately develop self-control are to have a parent or other caretaker monitor the child's activities, recognize deviant acts, and correct these behaviors (Gottfredson & Hirschi, 1990, p. 98-100).

Although the recommended steps to create self-control in children are fairly clear in this theory, there are obviously many ways that the early socialization may fail to include these steps. For example, one recent study indicates that mothers who are low in self-control tend to supervise and punish their children in ways that produce lower self-control (Nofziger, 2008). Other studies have indicated parents who engage in deviant acts do not adequately control their children's behaviors (Laub & Sampson, 1988) and that authoritative parenting, which demands the child fulfill high expectations while at the same time being supportive and nurturing, result in increased self-control (Burt, Simons, & Simons, 2006; Hay, 2001). Individuals who experience inadequate socialization and fail to develop self-control tend to be impulsive, shortsighted, more likely to engage in physical than mental activities, and be nonverbal. These characteristics lead them to engage in various acts of force or fraud providing the individual with immediate gratification, excitement or a thrill, release from momentary irritation, or actual tangible gains (Gottfredson & Hirschi, 1990).

Self-control is one of the dominant theories in the field of criminology, having been subjected to numerous empirical studies examining various aspects of the theory. Studies have used self-control to predict acts as diverse as drinking or cutting class among college students (Gibbs & Giever, 1995), school-yard bullying by juveniles (Nofziger, 2001), and extreme forms of violent offending, including homicide (Piquero, MacDonald, Dobrin, Daigle, & Cullen, 2005). A meta-analysis of 21 studies using self-control demonstrated that self-control was a "strong predictor of crime" (Pratt & Cullen, 2000, p. 944). A further test of how "general" this theory is would determine whether it applies to both male and female offending, and whether it is capable of explaining the sex gap in deviant behavior.

Originally, Gottfredson and Hirschi argued that the large and persistent difference in male and female offending is consistent with the concept of self-control (Gottfredson & Hirschi, 1990, pp. 145-149). These sex differences emerge early and are stable, which is similar to the patterns associated with the characteristics of self-control. In addition, they argue that parenting practices are differentiated by the sex of the child, thus creating variation in both the direct supervision and the socialization experiences of children. For example, parents may overlook certain behaviors in boys that would be quickly curtailed if done by girls. The expectation from these differences is that the self-control of girls will be higher than boys and girls would have fewer opportunities to engage in deviance, thus leading to a substantial sex gap.

Past research has been somewhat successful demonstrating that self-control provides a partial explanation for the sex gap in offending. First, numerous studies have established that measures of self-control are valid for both girls and boys and that this finding is consistent across different racial groups within the United States as well as across a wide range of countries (Vazsonyi & Crosswhite, 2004; Vazsonyi, Pickering, Junger, & Hessing, 2001; Vazsonyi, Wittekind, Belliston, & Van Loh, 2004). Second, several studies have demonstrated that girls have a higher average level of self-control than boys (Chapple & Johnson, 2007; Mason & Windle, 2002; Tittle, Ward, & Grasmick, 2003). Third, studies have found that self-control predicts offending fairly consistently for both boys and girls (Ozbay, 2008; Vazsonyi & Crosswhite, 2004; Vazsonyi et al., 2001). As measures of self-control are applicable to both sexes, girls tend to have higher self-control, and as self-control consistently predicts a range of deviant and criminal behaviors for both sexes, it is logical to conclude that the sex difference in self-control may be related to the sex gap in deviant behavior.

In spite of the general support for this theory, it has been subjected to several feminist critiques. For example, Miller and Burack (1993) argue that self-control theory fails to acknowledge the pervasive power imbalance between men and women within society. They argue that employing gender-neutral language when discussing parenting or victimization ignores the ways that lives are gendered. They further critique Gottfredson and Hirschi for ignoring that victimization experiences are patterned by gender (as well as race and poverty) and argue that this theory may be inadequate to address such crimes as rape or domestic violence. In addition, by placing a high emphasis on the importance of child rearing, Miller and Burack argue that this theory essentially blames mothers, as primary caregivers, for the failure to instill adequate self-control in children. Such a critique demonstrates the ways in which traditional (male) theories of offending often fail to consider the important nuances of women's criminal and familial experiences; however, nothing in these critiques derails the fundamental argument of the importance of self-control in predicting deviant behavior. Thus, perhaps what is needed is not a rejection of this theory but a consideration of how gender matters in relationship to parenting, victimization, and, most centrally, self-control.

One approach for incorporating a more feminist or gendered perspective in self-control theory is to examine the ways that self-control is related to both sex and gender identity. In one recent study, self-control was found to mediate the relationship between

sex and offending (Tittle et al., 2003), indicating that the sex gap in offending may actually be due to a sex gap in self-control. Although previous findings begin to answer the key question of the role self-control plays in predicting deviant behavior for men and women, they do not adequately address the mechanism that links sex and self-control. This study argues that this crucial connection can be provided by an examination of the gender identity of the individual.

Gender Identity

Self-control theory argues that the principle source of self-control is parenting that adequately monitors, recognizes, and corrects deviant behaviors. These practices may vary by the sex of the child for the reasons discussed above. Sex differences in parenting have long been considered to not only affect characteristics such as self-control but also the gender socialization of the individual. Gender socialization is the process through which “children internalize the capacities, values, and motivations” (Gerson, 1985, p. 30) that are considered to be appropriate for their sex within a given culture and time. Gender identity is therefore the degree to which the individual internalizes these characteristics or “how individuals relate to masculine and feminine qualities” (Horwitz & White, 1987, p. 159).

Within our culture, the characteristics and behaviors associated with gender identities are very distinct. The gender socialization of girls focuses on developing a concern for relationships and connections with others (Gilligan, 1982) as well as encouraging characteristics such as gentleness, affection, passivity, and dependence (Bem, 1974; Broverman, Broverman, Clarkson, Rosenkrantz, & Vogel, 1970; Naffin, 1985). For boys, masculinity in American society depends on the ability to be tough, forceful, independent, assertive, and ambitious (Bem, 1974; Bernard, 1989; Broverman et al., 1970; Cook, 1985; Mannarino & Marsh, 1978). Although gender socialization practices encourage girls to embrace femininity and boys to develop masculine characteristics, there is variation in how closely individuals identify with these traits (Bem, 1974; Spence & Helmreich, 1980).

Although gender identity has not often been used in examinations of crime and deviance, several studies do indicate that the degree to which individuals identify with masculine and feminine traits are important. One study examined how gender identity impacts parental attachment (Haigler, Day, & Marshall, 1995), a key factor in social control theories of crime and a basic requirement for successful development of self-control. In another study, Horwitz and White (1987) examined how femininity and masculinity predict a variety of behaviors, one of which was delinquency. Although Haigler et al. (1995) found that those classified as feminine had greater attachments to parents than masculine respondents, Horwitz and White found that the link between their measures of gender identity and crime was relatively insignificant and in fact found that masculinity was inversely related to drug use. Therefore, in spite of increased attention to both the role of gender in crime and the process of constructing gender in the literature, the relationship between gender identity and crime is still unresolved.

Conceptualizations of gender identity have varied over the last three decades. Whereas some studies propose that gender is a persistent underlying personality trait (Bem, 1974, 1981; Holt & Ellis, 1998), others argue that gender is created or consciously “done” within specific contexts and situations (West & Zimmerman, 1987). Both perspectives may be valuable in contributing to a full understanding of the role of gender in crime and deviance. The current study employs the trait-based approach due to the belief that the creation of gender within certain contexts does not occur outside of a gendered culture and is not performed by a gender neutral individual. Individuals draw on culturally proscribed ideas of masculinity or femininity to portray a desired gender. These individuals are more likely to engage in the gendered activities that are more closely connected to how they view themselves. Even though their presentation of gender may vary in different contexts, their acts are still likely to be influenced by their underlying gender identity. Although focusing on gender identity does not encompass all the nuances of the relationship of gender and crime, it does allow for an assessment of whether identification with culturally relevant gendered traits predicts the likelihood of involvement in deviant acts.

One of the early conceptualizations of trait-based gender identity was presented by Bem (1974) who operationalized gender as a distinct component of an individual's personality. Bem argued that individuals possess both feminine and masculine characteristics simultaneously. Thus, one's gender identity is a combination of these two sets of characteristics and remains fairly stable throughout the life course as well as across a variety of situations (Bem, 1974). This perspective led to the development of the Bem Sex Role Inventory (BSRI), one of the most common ways to assess gender identity. This measure has stood up to various criticisms (Ballard-Reisch & Elton, 1992; Lara-Cantu, 1989) and continues to be employed in a variety of fields.

One potential criticism of the BSRI is that characteristics perceived as masculine or feminine change over time. In spite of the fairly substantial social changes that have occurred since the original development of the BSRI, most studies continue to find traits that were originally identified as masculine are rated as more desirable for men and those that were rated as feminine are seen as more desirable for women (Auster & Ohm, 2000; Holt & Ellis, 1998; Spence & Buckner, 2000). Some studies, however, have found that the consistency of these measures vary by the sex of the respondent and whether feminine or masculine traits are being considered. For example, Auster and Ohm (2000) found that both sexes believed that the feminine traits from the original BSRI are desirable for women, but there were mixed findings relating to the masculine traits, with men in particular failing to identify most of the 20 items as desirable for men (Auster & Ohm, 2000, p. 240). In addition, a recent meta-analysis of over 60 studies that used the BSRI found the differences between women and men are declining. While women are reporting higher masculinity scores over time, men are reporting lower masculinity scores (Twenge, 1997). Such findings indicate a possible convergence between the sexes on the masculine dimension of gender, but social perceptions of femininity have remained fairly stable and largely self-identified with women.

In the decades since the BSRI was developed, several modifications to this scale have been developed. The first change is that the masculine and feminine components of gender identity were not found to represent one combined “gender-identity” measure. Instead, femininity and masculinity are more often conceptualized as separate dimensions that can be either high or low within one individual (Ballard-Reisch & Elton, 1992; Cook, 1985; Costos, 1990; Lara-Cantu, 1989; Spence, 1993; Wong, McCreary, & Duffy, 1990). Therefore, instead of being only masculine or feminine, an individual may actually be high, or low, on both of these gender scales. A second change is a shortening of the original 40 items representing masculinity and femininity to a short form, using only 10 items for each gender, which has been found to be more reliable than the original scale (Bem, 1981; Campbell, Gillaspay, & Thompson, 1997).

This study uses the BSRI to examine whether the sex gap in deviance can be explained by a consideration of how gender identity is related to self-control. To accomplish this goal, four related hypotheses concerning the relationship between sex, gender identity, self-control, and deviance are tested. First, due to the socialization practices that vary by sex, both self-control and gender identity are expected to be associated with the sex of the individual. Specifically, girls are expected to have both higher self-control and femininity, whereas boys are expected to have higher masculinity. Second, increased identification with feminine characteristics, even when controlling for sex and self-control, is expected to decrease participation in deviance, whereas identification with masculine characteristics is expected to increase such activity. Third, the relationship between sex and offending is hypothesized to be largely indirect through gender identity and self-control. Finally, it is expected that gender identity will influence self-control, and thus that the effect of masculinity and femininity on offending will be at least partly indirect through the individual’s level of self-control.

Data and Method

Data and Sample Characteristics

The data for this study were collected as part of the Tucson Youth Project, an endeavor to provide tests for several theories of criminology and examine a variety of different topics over a 3-year time span. Due to the breadth of this project, separate modules, administered to different groups, addressed specific issues of interest. The data for this study are from a module that focused on a number of personality characteristics and their relationship to crime and deviance. The respondents predominantly were freshman enrolled in an introductory sociology course at a large public university. The total enrollment for this course was just under 500 students, with an average attendance of approximately 300 students on any given day. On the day of the administration, students were told briefly about the purpose of the study and asked whether they would be willing to participate by completing the survey. Some students refused to participate, and therefore left the classroom; a total of 263 surveys were completed by this sample. Table 1 provides the demographic characteristics of this sample.

Table 1. Demographic Characteristics of Sample

	<i>n</i>	Valid percentage
Sex		
Male	101	40.1
Female	151	59.9
Age		
Below 18	2	0.9
18	80	33.8
19	100	43.3
20	26	11.3
21	11	4.8
22 or older	14	6.1
Race		
White	190	75.7
Hispanic	40	15.9
Black	6	2.4
Asian	12	4.8
Native American	3	1.2

Although this sample is not nationally representative, it is very similar to the student freshman population at the university. As this university is located in the southwestern area of the United States, there is a higher percentage of Hispanic students than in the national population. Specifically, the population of freshman at this institution is composed of 70% White, 13% Hispanic, and 11% African American, Asian, or Native American students. This is similar to the racial distribution of the sample for this study with 76% White respondents, 16% Hispanic, and 8% respondents of other races. This sample consists of more women than the University population (60% in sample vs. 51% in University) and is relatively young, with 93% being between the ages of 18 and 21 as opposed to 67% in this age range in the whole University. The sex difference may be explained due to the discipline of the selected class (sociology) as opposed to more traditionally male-dominated fields like engineering. The younger age of the sample is attributed to the high concentration of freshmen who take introductory classes. In fact, 51% of the sample were freshman and an additional 38% were sophomores. Although there are some differences in the demographics of this sample from the university population as a whole, it is largely representative of this university.

Although university samples are often criticized as being nonrepresentative of the larger population, research using these samples can provide important information. Limiting studies of crime to high risk groups, such as incarcerated individuals, ignores the fact that most crimes and a lot of deviance is never brought to the attention of officials and many individuals who engage in behaviors that are legally classified as crimes are never officially labeled or sanctioned. In addition, although harsh criticism of such samples exists, recent reviews and studies have found a number of strengths in

these methods (Flere & Lavric, 2008; Payne & Chappell, 2008), including the fact that findings from college samples are comparable to national patterns and trends and that such samples provide good tests of theory on offending and victimization. Therefore, although this sample clearly has limitations, it allows a preliminary examination of the relationship between sex, self-control, gender, and deviance.

Analytic Strategy

The items of interest in this study are latent variables; therefore, standard regression methods are inappropriate because assumptions are violated. The use of structural equation modeling (SEM), through analysis of moment structures (AMOS), allows for measurement error to be controlled while also controlling for any reliability problems in the measurement of the latent concepts, thereby correcting for any unreliability in the scales (Bollen, 1989). In addition, the examination of multiple pathways between the variables allows for measuring the direct and indirect effects of sex, self-control, and gender on deviant behavior.

For each model in these analyses, AMOS generates a number of different fit indexes (Bentler, 1990; Bollen, 1986, 1989; Hu & Bentler, 1995, 1999). For the purposes of this study, two fit measures are reported. While the chi-square measure is typically reported in such analyses, this statistic is significantly influenced by any non-normality in the data. As the dependent variable in this study is fairly skewed, with relatively low levels of deviant behavior, it is expected that this fit measure would demonstrate problems with the data. As an alternative, AMOS generates a number of fit statistics that are based on a comparison between an independent model and the proposed model. The comparative fit index (CFI) and the root mean square error of approximation (RMSEA) are both based on a noncentral chi-square distribution and are thus more appropriate for this study. Models are judged to be acceptable if the CFI is above .90 and the RMSEA is close to 0, with any value above .10 indicating a poor-fitting model.

Measures

Deviance. The primary dependent variable is involvement in a range of deviant acts. The specific items, their corresponding factor loadings, and the relevant statistics for this additive scale are all included in Table 2. The measure includes 12 items representing a range of behaviors, including some minor forms of deviance such as cheating on a test or stealing something worth less than US\$2, to more serious acts such as being in a gang fight, using hard illicit drugs, and stealing items worth more than US\$50. Respondents indicated how often (0 = *never* to 3 = *often*) they engaged in each type of act. The most common type of act was cheating on a test ($M = 1.03$) and the least common was having ever used inhalants ($M = 0.05$). To simplify the final SEM models, the 12 items were combined as an additive measure of deviance ($\alpha = .772$). This measure has a range of 0 to 21, a mean of 4.56, and a standard deviation of .25. This indicates that the average respondent reported that they engaged in a minimum of

Table 2. Measurement of Deviant Behavior

Item	M	SD
Have you ever ... (0 = never, 1 = once or twice, 2 = several times, 3 = often)		
Driven a car when you had been drinking	0.89	0.997
Damaged or destroyed property that did not belong to you	0.51	0.716
Been involved in a gang fight	0.11	0.438
Stolen something of small value (below US\$2)	0.78	0.814
Stolen something of medium value (US\$2-US\$50)	0.41	0.698
Stolen something of large value (worth more than US\$50)	0.13	0.439
Cheated on a test	1.03	0.815
Do you currently use marijuana? (0 = no, 1 = yes)	0.27	0.443
Have you ever used ... (0 = no, 1 = yes)		
Cocaine	0.07	0.261
Ecstasy	0.07	0.249
Inhalants	0.05	0.227
LSD	0.11	0.307
Additive measure statistics		
M	4.46	
SD	3.77	
Cronbach's α	.772	

NOTE: LSD = lysergic acid diethylamide.

two distinct deviant acts more than once or in almost five acts, one time each. Therefore, although not a highly deviant sample, there is a range of deviant experience adequate for the proposed analyses.

Gender identity. There are two primary explanatory variables, in addition to sex, in this study. The first of these is gender identity, consisting of separate masculine and feminine latent variables. The items for these measures were based on the short form of the BSRI (Bem, 1981; Campbell et al., 1997). For each BSRI item included in the survey, respondents selected a score from 1 to 5 to indicate how much each characteristic described them (1 = *never or almost never applies to you* and 5 = *always or almost always applies*). Due to findings in previous research that the BSRI produces two separate measures of masculinity and femininity (Ballard-Reisch & Elton, 1992; Cook, 1985; Costos, 1990; Lara-Cantu, 1989; Spence, 1993; Wong et al., 1990), two separate gender measures are created for the current study to correspond to the respondents' masculinity and femininity. To have a preliminary set of items to use in a confirmatory factor analysis (CFA) in AMOS, a principal components factor analyses was first conducted on the full set of 20 items. This analysis showed two clear factors coinciding with femininity and masculinity; however, two items that were initially expected to represent femininity failed to converge on the feminine scale. The items "shy" and "soft-spoken" loaded on a separate factor so the final set of variables used in the confirmatory factor analyses included 8 items for femininity and 10 items for masculinity. The specific

Table 3. Measurement of Gender Identity

Please indicate on a scale of 1-5 how well each of the following words describes you in general. A 1 means that the word never or almost never applies to you and a 5 means that it always or almost always applies.

Masculinity items	Standardized MLE	Femininity items	Standardized MLE
Independent	.430***	Yielding	.233*
Assertive	.560***	Tender	.713***
Forceful	.444***	Gentle	.659***
Dominant	.625***	Sympathetic	.811***
Masculine	.277***	Understanding	.674***
Aggressive	.584***	Compassionate	.692***
Individualistic	.404***	Affectionate	.663***
Competitive	.534***	Feminine	.383***
Ambitious	.582***		
Leader	.665***		
Fit statistics			
Masculinity		Femininity	
<i>df</i> = 35		<i>df</i> = 20	
CFI = .977		CFI = .997	
RMSEA = .126		RMSEA = .056	

NOTE: MLE = maximum likelihood estimates; CFI = comparative fit index; RMSEA = root mean square error of approximation.

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

items are all listed in Table 3, along with the maximum likelihood estimates (MLE) for each item and the relevant statistics from each measurement model. Various fit statistics indicate that this model is a good fit, with a CFI of .98 for the masculinity model and over .99 for the femininity model. All of the items are significant at $p < .001$ with the exception of “yielding” on the femininity scale, which is only significant at $p < .05$.

Self-control. The second primary explanatory variable is self-control. One of the most common ways of measuring this concept is through the use of a series of attitudinal items designed to assess how closely respondents identify with different elements of self-control, such as impulsivity, risk seeking, and physical activities. Studies either examine these elements or dimensions as separate pieces of self-control (Grasmick, Tittle, Bursik, & Arneklev, 1993; also see Pratt & Cullen, 2000, for review) or combine these individual indicators into a unidimensional indicator of self-control (i.e., Gibbs & Giever, 1995; Nofziger, 2001; Piquero et al., 2005). The current study uses a range of attitudinal items to represent a unidimensional concept of self-control. Principal component factor analyses narrowed the items to 23, and a CFA indicated that all 23 items significantly reflected the underlying latent concept of self-control, with a model CFI of .98. The MLE for the individual items in this measurement model as well as the fit statistics are presented in Table 4.

Table 4. Measurement of Self-Control

Please rate the following statements according to how strongly you agree or disagree with them. 1 = *strongly agree*, 2 = *agree*, 3 = *undecided*, 4 = *disagree*, 5 = *strongly disagree*

	Standardized MLE
I do whatever brings me pleasure here and now, even at the cost of some distant goal	.643
I act on the spur of the moment without stopping to think	.558
I find it exciting to do things that might get me in trouble	.599
I like to test myself by doing risky things	.576
Excitement and adventure are more important to me than security	.596
I'm pretty wild	.536
I try to get things I want even when I know it's causing problems for other people	.496
Take your pleasure where and when you can get it	.471
If you want to have fun, you have to be willing to take chances	.523
I'm more concerned with what happens to me in the short run than in the long run	.466
Don't postpone until tomorrow a good time that can be had today	.378
I see no need for hard work	.410
If it feels good, do it	.442
Rules were made to be broken	.601
I like to take chances	.468
Here today, gone tomorrow, that's my motto	.381
It is alright to get around the law if you can get away with it	.523
I like it when things happen on the spur of the moment	.391
If a friend calls with an offer to have a good time, I usually drop what I'm doing and go along	.457
To get ahead, you have to do some things that are not right	.460
I'd rather spend my money on something I want now than put it in the bank	.363
Sometimes I will take a risk just for the fun of it	.513
If things I do upset people, it's their problem not mine	.381
Fit statistics	
df	230
CFI	.976
RMSEA	.080

NOTE: MLE = maximum likelihood estimates; CFI = comparative fit index; RMSEA = root mean square error of approximation.

Findings

Before conducting a series of structural models, it was necessary to determine the nature of the relationships between sex, gender identity, self-control, and offending. Due to the assumptions that boys are socialized to be masculine and girls feminine, it is possible that sex and the two measures of gender identity were so intertwined as to be indistinguishable. After running the CFA for both the measures of masculinity and

femininity, two additive variables using the indicators of these latent concepts were created to subject them to bivariate analyses and to provide descriptive information.

For this sample, masculinity has a greater range than femininity, ranging from 20 to 50, as compared to femininity scores of 12 to 35. In addition, the mean for masculinity is 33, whereas the mean for femininity is 28. Although these numbers may indicate that the sample is more likely as a whole to identify with masculinity, it is important to remember that there were two additional items for the masculinity scores. When the number of items is taken into account, there was not a great deal of difference in how respondents identified with masculine and feminine traits; however, when these measures were examined by the sex of the respondent, some interesting patterns did emerge.

In a cross tabulation between sex and each measure of gender identity, the chi-squares were both significant, but a more pronounced difference by sex on the femininity measure emerged (sex by masculinity, $p < .05$; sex by femininity, $p < .001$). A total of 6% of the responding women and 27% of the men indicated scores more than one standard deviation below the mean (indicating very low identification with feminine traits). High association with femininity (more than one standard deviation above the mean) was reported by 36% of women but only 4% of men. Thus, for femininity, there appear to be strong sex differences, with men being much more likely to reject association with feminine traits than women. A similar but slightly less pronounced pattern emerged when examining the masculinity scores for men and women. On the masculinity measure, 8% of the men and 21% of the women fell more than one standard deviation below the mean. More women reported that they identified strongly with masculinity than men did for femininity. Specifically, while 34% of the men fell more than one standard deviation above the mean on masculinity, a total of 11% of the women also fell into this category. This finding indicates that both sexes associate most strongly with what are considered to be sex appropriate characteristics, but women are more willing to view themselves as masculine than are men to see themselves as feminine.

To assess the bivariate relationships between sex, self-control, and gender, a Pearson's correlation analysis was conducted to ensure that the gender measures were distinguishable from biological sex. Table 5 indicates that while these three variables are significantly correlated, they also represent distinct concepts. Being female was significantly and positively correlated with femininity ($r = .501, p < .001$) and negatively and significantly correlated with masculinity ($r = -.337, p < .001$). Interpretation of these data also indicates that being male significantly and negatively correlated with femininity and significantly, positively correlated with masculinity. While these results fit with the expectation that women are more likely to identify with feminine traits and men with masculine ones, the analysis indicates it is not a deterministic or potentially multicollinear relationship. In fact, masculinity and femininity are such distinct concepts that they were not significantly correlated with each other.

Table 5 also provides information on the correlations between sex, gender, and self-control. This analysis indicates that self-control was more strongly correlated with femininity ($r = .406, p < .001$) than with masculinity ($r = -.154, p < .05$). Sex also was

Table 5. Scale Statistics and Correlations between Sex, Femininity, Masculinity, and Self-Control

Scale statistics	N items	n	α	M	SD
Femininity	8	204	.804	28.54	5.34
Masculinity	10	214	.773	33.22	6.17
Self-control	23	262	.878	74.79	12.26

Pearson's correlations	Femininity	Masculinity	Self-control
Sex (0 = male, 1 = female)	.501***	-.337***	.290***
Femininity		-.078	.406***
Masculinity			-.154*

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

significantly correlated with self-control ($r = .209, p < .001$), indicating that girls had higher self-control than boys. These results indicate that self-control is likely a characteristic that is more strongly associated with women and femininity than with men and masculinity. Thus, this first step in the analysis indicated support for the first hypothesis² in this study; self-control and gender identity were in fact associated with sex at the bivariate level.

As a second step to determine the relationship between sex, gender identity, and self-control, an SEM was run. Figure 1 provides the standardized MLE for the structural relationships in this model.¹ The fit indicators showed a moderately well fitting model, with a CFI of .95 and the RMSEA of .080. In this model, sex did significantly predict both measures of gender identity and self-control. Approximately, 19% of the variation in femininity and 11% of the variation in self-control was explained by this model; however, only 5% of the variation in masculinity was explained, indicating that masculinity may be less connected to sex than femininity. This finding is consistent with recent research demonstrating a convergence of the sexes in masculine but not in feminine characteristics (Auster & Ohm, 2000; Twenge, 1997). This analysis also supports the first hypothesis, demonstrating that sex is related to both self-control and gender identity.

To test whether gender identity predicts offending while controlling for sex and self-control, a second structural model was created to examine the direct effects of gender, sex, and self-control on offending. Figure 2 presents the MLE and fit statistics of this model. This is again a fairly good fitting model (CFI = .951, RMSEA = .080), and it predicted nearly 24% of the variation in deviance for this sample. The results show partial support for the second hypothesis in this study. Sex and self-control each significantly reduced deviance, and, when controlling for these variables, femininity further decreased offending by .283 units ($p < .001$). Masculinity was not significantly related to deviance in this model. Unlike the dominant focus on masculinity and crime, it appears that femininity may be the more important element of gender identity to consider in predictions of deviance.

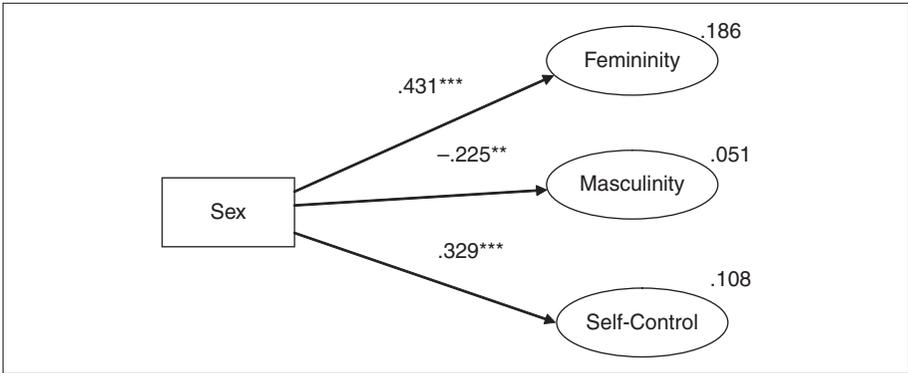


Figure 1. Standardized maximum likelihood estimates of sex on femininity, masculinity, and self-control
 Note: $df = 817$; CFI = .953; RMSEA = .080.

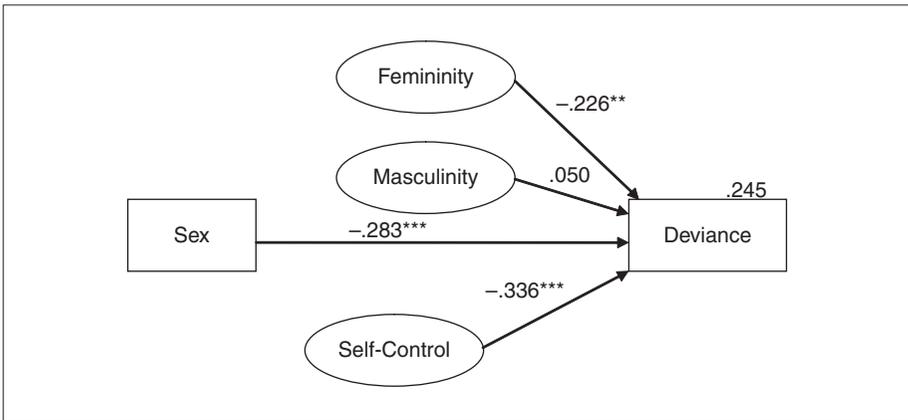


Figure 2. Standardized maximum likelihood estimates of sex, femininity, masculinity, and self-control and offending
 Note: $df = 857$; CFI = .951; RMSEA = .080.

The final two hypotheses relate to the indirect effects between the variables. The results of the full structural model, including these effects, are displayed in Figure 3. Table 6 lists the statistics for this model. The final model includes direct effects of sex on femininity, masculinity, self-control, and offending as well as direct effects of femininity, masculinity, and self-control on offending. Indirect effects of sex are estimated on offending through self-control and gender identity. In addition, there are potential indirect effects of sex on self-control through femininity and masculinity. Finally, deviance may also be influenced indirectly by femininity and masculinity through self-control.

Table 6. Standardized Maximum Likelihood Effects for the Full Structural Model

Variable	MLE	Variable	MLE
Self-control		Masculinity	
HereNow	.644***	Independent	.411***
ActSpur	.546***	Assertive	.547***
Trouble	.603***	Forceful	.475***
RiskyTest	.577***	Dominant	.648***
Excite	.600***	Aggressive	.607***
Wild	.533***	Individualistic	.386***
GetWant	.523***	Competitive	.528***
Pleasure	.459***	Ambitious	.546***
FunChance	.524***	Leader	.641***
ShortRun	.458***	Masculine	.334***
Postpone	.354***	Femininity	
NoWork	.420***	Yielding	.243***
FeelGood	.428***	Tender	.704***
Rules	.600***	Gentle	.670***
Chances	.461***	Sympathetic	.682***
Motto	.384***	Understanding	.443***
Law	.545***	Compassionate	.680***
LikeSpur	.378***	Affectionate	.682***
GoodTime	.454***	Feminine	.443***
GetAhead	.478***		
Spend	.363***		
RiskFun	.507***		
Upset	.401***		
Structural elements in model			MLE
Sex → Femininity			.434***
Sex → Masculinity			-.226**
Sex → Self-control			.134
Fem → Self-control			.387***
Masc → Self-control			-.083
On deviance		MLE	Total effect
Sex		-.168**	-.387
Femininity		-.220**	-.351
Masculinity		.069	.097
Self-control		-.331***	
Fit statistics			
df			852
CFI			.955
RMSEA			.077

NOTE: MLE = maximum likelihood estimates; CFI = comparative fit index; RMSEA = root mean square error of approximation.

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

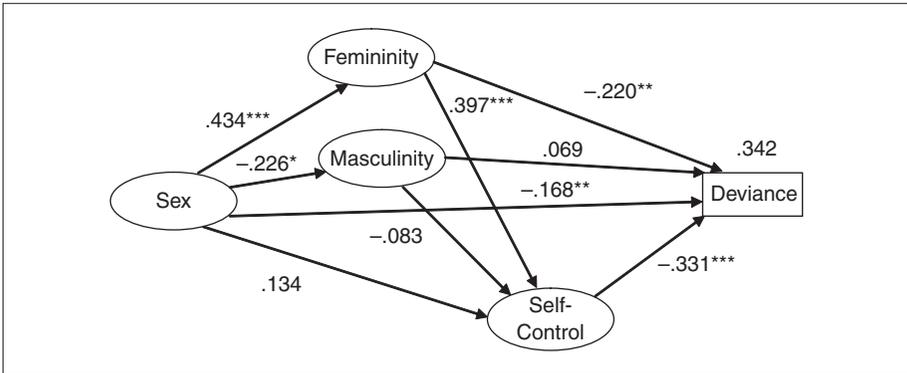


Figure 3. Full structural model of the relationships between sex, self-control, masculinity, femininity, and crime
 Note: $df = 853$; $CFI = .954$; $RMSEA = .078$.

As a whole, the fit of this model is good ($CFI = .954$ and $RMSEA = .078$). Hypothesis 3 predicted that the effect of sex on offending would largely be indirect through self-control and gender. This hypothesis is not fully supported with these data. The effect of sex drops from $-.283$ in the direct effects model to $-.168$ in the full model, but the direct effect of sex on deviance remains significant ($p < .01$). Although this is a substantial drop, sex continues to be an important direct predictor of deviant behavior, and thus the effect of sex is not fully explained by gender identity and self-control. There are important indirect effects of sex on deviance as well. The total effect of sex on offending is $-.387$ (see Table 6), thus indicating that more than half (57%) of the total effect of sex on deviance is accounted for by the indirect effects through self-control and femininity. Hypothesis 3 is therefore partially supported as the majority of the effect of sex on deviance is indirect through self-control and gender identity, but a substantial portion of the effect of sex remains unexplained by these variables.

The final hypothesis tested in this study was that the effect of gender on deviance would be partly indirect through self-control. This hypothesis is also partially supported. Femininity was significantly related to self-control and, therefore, contributes to participation in deviant behavior indirectly through this variable. The total effect of femininity on deviant behavior is $-.351$, representing a direct effect of $-.220$ and an indirect effect through self-control of $-.131$. In contrast, masculinity is not directly or indirectly a significant predictor of offending. Therefore, there is only partial support for the indirect effects of gender through self-control as hypothesized. Such an indirect association exists for femininity but not for masculinity.

Discussion and Conclusions

An adequate explanation of the sex gap in crime remains as one of the most challenging questions in criminology. The goal of this project was to explore this issue by

examining the relationship between sex, self-control, and gender identity. The findings of this study are consistent with some past research, but there also were some surprises.

Most studies that have examined self-control and sex differences in offending have found the link is at least partly due to the higher average self-control of women (Chapple & Johnson, 2007; Mason & Windle, 2002; Tittle et al., 2003). This study also finds that being female results in higher self-control and that at least part of the effect of sex on deviant behavior is through self-control. However, this study takes an additional step by considering how the gender identity of the individual may also be related to self-control and thus influence offending. When gender identity is accounted for, sex no longer directly influences self-control. This indicates that self-control is not linked to sex, but instead gender identity, and implies that the gender socialization practices that develop feminine traits in particular also produce greater self-control. This is true regardless of the sex of the individual. As our society encourages feminine traits in women and not for men, this relationship between gender identity and self-control may account for an important piece of the gender gap in criminal and deviant behaviors. As self-control is positively associated with femininity, and both these traits reduce deviance, individuals who identify themselves as feminine are at very low risk for crime and deviance. It would be beneficial in future studies to explore the socialization practices that increase these traits to decrease crime and deviance in both sexes.

While this study finds a link between femininity and deviance, unexpectedly no relationship was found between masculinity and deviance. Thus, it is not men being masculine that matters for crime, but rather the level of self-control and femininity that actually prevents crime from occurring. This is in contrast to work that presents crimes as social expressions of masculinity (Messerschmidt, 1997, 1999, 2000; Miller, 2002). Critics may attempt to explain this finding by arguing that this study simply does not include the more "masculine" types of crime. However, it does include criminal acts such as theft, destruction of property (vandalism), drug use, and being involved in gang fights. Thus, such a critique is not wholly justified. What this finding indicates is that it is important to investigate the ways that femininity prevents crime in future studies and theories that focus on gender.

The lack of an association between masculinity and crime in the current study does not lead to the conclusion that masculinity no longer needs to be considered. Instead, it may be important to consider interactions between sex and gender identity. It is possible that identifying as masculine may result in very different behaviors for men and women. For example, identifying with masculine traits, such as independence and assertiveness, for women may lead to engaging in positive behaviors, such as athletics, choosing a male-dominated field of study in college, or greater success in the workforce. In contrast, masculine gender identity for men may be expressed in more deviant forms of assertiveness and independence, such as violence or heavy drinking. In essence, the effect of masculinity on deviant behavior would vary depending on the sex of the individual. Thus, future studies on the effects of gender identity may benefit from including interactions between sex and gender as well as by studying different outcome behaviors that may be influenced by gender identity.

By allowing both sexes to indicate how much they identify with characteristics that represent both masculinity and femininity, this study was able to assess how gender identity influences behavior beyond simple sex comparisons. Although this study provides an important contribution for our understanding of the sex gap in crime, it is important not to overstate these findings. This study is based on a convenience sample of undergraduates, a population that is in many ways very different from those who would engage in high levels of deviant behaviors, and in particular violent crimes that are more strongly associated with masculinity. Masculine gender identity includes traits such as being aggressive, forceful, and dominant. Due to the nature of the current sample, violent behaviors are relatively rare and were thus not included in this study. Replicating these analyses on more deviant groups, such as juveniles who are at high risk for violence due to poverty or community disorganization and experiences with family violence, who are gang members, or who are incarcerated individuals, may find that masculine gender identity is a significant predictor of violent forms of deviant behavior. Thus, while this study does provide a starting point to examine how sex, gender identity, and deviance are related, it is suggested that further studies with different types of samples may provide additional insights.

Another important limitation of this study is that the data are cross-sectional. Therefore, at best we can conclude that self-control and gender are associated with each other and with deviance, but no definitive claim about the causal order between these characteristics can be made. In the current analyses, a potential causal direction is implied with gender identity leading to self-control. The implication is that gender identity is a trait that is more persistently part of the respondent's identity and influences other characteristics. Although it is possible that self-control influences college-aged respondents' assessment of their gendered characteristics, it is more likely that the respondents' sex influenced the parenting practices that create both self-control and gender. As gender socialization is pervasive in our culture, the assumption is that if there is a relationship between self-control and gender, it is the level of masculinity and femininity that will influence later levels of self-control. However, self-control theories also argue that self-control develops very early and remains relatively stable across the life course (Gottfredson & Hirschi, 1990). Ideally, longitudinal data that included measures of self-control and gender identity could be examined to determine whether these traits develop concurrently or influence each other over time.

In spite of these limitations, this study presents some provocative findings. Many researchers have accepted the relationship between sex and crime at face value without questioning the underlying cause of this relationship. There are three major contributions of this study in examining this connection. First, a substantial portion of the relationship between sex and offending is accounted for by inclusion of gender identity and self-control. In fact, more than half of the effect of sex on deviant behavior is explained by gender identity and self-control. As a whole, this study demonstrates that a great deal of the sex gap in offending may be best explained through socialization practices that develop feminine gender identity and self-control. Therefore, as American gender socialization trains women to be feminine, and discourages feminine traits in men,

gender socialization is potentially interfering in the adequate development of self-control in boys. The second contribution is that, unlike most work examining gender and crime, this study concludes that femininity is the crucial form of gender identity. Masculinity does not actually predict deviant behavior in this analysis. This indicates that work focusing on the ways deviant behavior is a presentation of masculinity may benefit from examining how prosocial behaviors are reflections of femininity. Finally, this study adds to the literature in support of self-control theory. Even while controlling for gender identity, which may likely develop through similar socialization practices of monitoring and controlling behavior, self-control continues to significantly influence deviant behavior.

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Notes

1. Due to space constraints, the maximum likelihood estimates for each of the indicators of the latent variables are not included in this figure or any table. All the indicators of the latent variables were significant at $p < .001$, and a full set of tables are available from the author on request.
2. Hypotheses
 - H1: Sex will influence both self-control and gender scores.
 - H1a: Girls will have higher self-control and femininity scores than boys.
 - H1b: Boys will have higher masculinity scores than girls.
 - H2: Gender identity will influence participation in deviance.
 - H2a: Identification with feminine characteristics will decrease deviance.
 - H2b: Identification with masculine characteristics will increase deviance.
 - H3: The effect of sex on deviance will be partially indirect through masculinity, femininity, and self-control.
 - H4: Gender identity will influence self-control.
 - H4a: Identification with masculine traits will lower self-control.
 - H4b: Identification with feminine traits will increase self-control.
 - H5c: The effect of gender on deviance will be partly indirect through self-control.

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Bio

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