Published in final edited form as:

Deviant Behav. 2014 ; 35(12): 1023–1042. doi:10.1080/01639625.2014.903756.

Gender, Race, and Delinquent Behavior: An Extension of Power-Control Theory to American Indian Adolescents

David Eitle^a,

Professor and Department Head, Montana State University, Department of Sociology & Anthropology, Montana State University, P.O. Box 172380, Bozeman, MT 59717-2380, Office: (406) 994-5253, Fax: (406) 994-3177

Fallon Niedrist^a, and

Law Student, Lewis & Clark Law School

Tamela McNulty Eitle

Associate Professor, Montana State University, Department of Sociology & Anthropology, Montana State University, P.O. Box 172380, Bozeman, MT 59717-2380, Office: (406) 994-4713, Fax: (406) 994-3177

David Eitle: deitle@montana.edu; Fallon Niedrist: fallon.niedrist@gmail.com; Tamela McNulty Eitle: teitle@montana.edu

Abstract

Research testing Hagan's power-control theory has largely been tested with samples of non-Hispanic whites. We extend prior research by testing the theory's merits with a sample of American Indian (AI) adolescents. Overall, we find mixed support for the theory's merits. However, we find that our measure of patriarchy is a robust predictor of AI female delinquent activity. We also find that a grandparent in the household serves to greatly reduce involvement in violent behavior among AI females. Compared to a sample of non-Hispanic whites, these results reveal the importance of testing explanations of deviant behavior across racial and ethnic groups.

Gender is arguably the strongest correlate of crime and delinquent behavior. With few exceptions, males are more likely to be involved in such behavior than females (Steffensmeier and Allan 1996; Mack and Leiber 2005; Steffensmeier and Schwartz 2009). Although the "gender gap" in criminal and delinquent activity is well established, efforts to explain gender differences have only become a priority of scholars in the past few decades. One such explanation that was designed specifically to address the gender gap in crime and delinquency is power-control theory (Hagan, Simpson, and Gillis 1987). Power control theory, with its emphasis on the gender stratification of work, coupled with social control tenets, provides a compelling framework to explain both the gender gap in crime/delinquent activity but also to predict how the gender gap may converge among boys and girls raised in particular families. While the theory has enjoyed considerable attention because of its focus on a previously understudied phenomenon in criminology (the gender gap), empirical tests

Direct correspondence to: David Eitle, Department of Sociology & Anthropology, Montana State University, P.O. Box 172380, Bozeman, MT 59717-2380. deitle@montana.edu. Office: (406) 994-5253. Fax: (406) 994-3177.

^aCo-first authors

of its utility have produced mixed results. Despite the equivocal nature of these findings, the theory continues to intrigue scholars interested in understanding variation in gender differences in criminal involvement.

One question that has only recently been broached is that of the theory's applicability to racial and ethnic minorities. While a number of studies have explored the utility of power-control theory, many prior tests have depended upon largely (or wholly) non-Hispanic white samples. And while a couple studies have examined the utility of power control theory using racial and ethnic minority samples (e.g., Jensen and Thompson 1990; Mack and Leiber 2005), we are aware of no published study that has examined the theory's applicability to the experiences of American Indian/Alaskan Native (AI) individuals. As Cernkovich and Giordano (1992) noted years ago, we cannot assume that processes that explain white deviance will "automatically" be applicable to other racial and ethnic groups in America. In the present study, we examine the utility of power-control theory to explain delinquent involvement among a sample of AIs drawn from a nationally representative sample of students in the United States. As we will argue, there are compelling reasons as to why AIs may be a particularly apt group to test the merits of power-control theory.

Power-Control Theory

Power-control theory (Hagan, Gillis, and Simpson 1985; Hagan et al. 1987) is predicated on the notion that occupational authority is associated with parental socialization and supervision patterns in rearing boys and girls, resulting in differences in the gender gap for relatively minor forms of delinquent behavior. According to Hagan and colleagues, the positions of the father and mother in the labor force are reflected in the child rearing practices at home, creating what Hagan and colleagues refer to as an unbalanced or balanced family form. In unbalanced families, which are seen as patriarchal in nature, the father's occupational and corresponding authority in the family eclipses the mother's authority. Unbalanced families also include the traditional arrangement of the father being employed in the traditional labor market while the mother is not. In such households, mothers, who are charged with the primary socialization and control of the children, are apt to produce daughters who are like themselves—they are socialized into adherence to feminine, submissive roles that emphasize control and being risk averse. Boys, on the other hand, are socialized to be like their fathers—to reproduce the male position of authority and (relevant to delinquent propensities) to take risks. Although mothers in such unbalanced homes are the primary "instruments of control" in that they exert primary control over children, it is actually the daughters who are subjected to greater controls and constraints on their lives than the sons. These socialization and social control differences generate predictions of relatively great gender differences in delinquent activity.

In balanced or egalitarian families, mothers occupy similar positions in the public workplace as fathers. The result of such balance in authority in the workplace translates into a more balanced or egalitarian family, wherein mothers and fathers share the authority at home. In such families, socialization differences and control differences based on gender are reduced (based on the more egalitarian nature of parental authority and responsibility), with the resultant expectation that the gender gap in delinquent activity should be smaller.

While the basic tenets of the theory generated great interest among criminologists, early empirical tests of power-control theory produced mixed results. Hagan and colleagues found support for the theory (1985; 1989; Hagan, Gillis, and Simpson 1990) but others have found only partial support for the model (e.g., Hill and Atkinson 1988; Singer and Levine 1988; Morash and Chesney-Lind 1991) or no support (e.g., Jensen and Thompson 1990). Early tests have found that parental support appears to be most effective within same sex dyads (i.e., father-son, mother-daughter; see Hill and Akinson 1988), while Singer and Levine (1988) found that gender differences were greater in egalitarian families (contrary to power-control theory). Further, Singer and Levine (1988) found that maternal control of daughters is *greater* in egalitarian (compared to patriarchal) homes, contrary to the predictions of power-control theory. And while some tests (Jensen and Thompson 1990) have failed to find support for the theory's core propositions, others have pointed out that such tests did not directly test the theory, because they utilize a gradational measure of class, presumably based on fathers' social status (Blackwell 2000: pg. 445).

Such early findings have led to revisions and additions to the basic tenets of power control theory. For example, Morash and Chesney-Lind (1991) found that emotional ties between parent and children, or relational controls, might be as important in predicting delinquent activity as instrumental controls; other studies have also found support for the importance of relational controls in predicting delinquent behavior (Singer and Levine 1988; Grasmick et al. 1996; Hagan et al. 1990). Furthermore, although Hagan and colleagues argued that female-headed households were essentially an egalitarian family (since there is no power imbalance between parents in such families), others have criticized this categorization as failing to recognize that not all female-headed households are alike—that differences in authority in the workplace for females may translate into differences in socialization and control practices in child rearing at home (Morash and Chesney-Lind 1991; Mack and Lieber 2005). For instance, Mack and Lieber (2005) found a pronounced gender gap among children reared in female-headed households, even after controlling for risk taking and relational control measures.¹

One area of inquiry that remains underexplored, however, is the applicability of power-control theory to racial and ethnic minorities. As Mack and Lieber noted with regards to African-Americans, “studies of power-control theory...have either left African Americans out, collapsed African Americans with other minorities, or treated race as a simple control variable” (2005: 117). The same sentiment can be extended to other racial and ethnic minorities. Yet only a few published studies have attempted to evaluate the theory's capacity to explain delinquent activity among racial and ethnic groups. Of those studies, the results are (again) mixed as to whether race matters in the utility of power-control theory. For example, Mack and Lieber (2005) found that gender, not race, predicted delinquent activity across samples of white and African American children from single-parent families. Jensen

¹There have been a number of revisions to power control theory since its' original conception, with a variety of mediating variables being proposed. Among the mediators that have been proposed and tested are patriarchal gender role beliefs (Hagan et al. 2004), hierarchic self-interest (i.e., an individual expression of such societal dominance ideologies as competition, success orientation, and acceptance of social inequality; Hagan et al. 1998; Hadjar 2004; Hadjar et al. 2007), the influence of the media and churches (Avakame 1997), and sanction threat perceptions (Blackwell 2000). Tests of these mediators have largely supported their inclusion. Unfortunately, data limitations prohibit us from considering such mediators, so our test will be (largely) a test of the original model, with the consideration of two additional measures that have been used in elaborated models—relational controls and risk perceptions.

and Thompson (1990) found that there may be greater gender differences in freedom and risk taking among whites than blacks and that white females may be subject to the greatest degree of control of any of the four racial-gender dyads. And more recently, Kobayashi, Sharp, and Grasmick (2008) found support for the applicability of power-control theory across cultures, finding that a revised version of the theory predicted a smaller gender gap in deviant activity among Japanese college students (relative to American college students). Clearly, the question of whether or not the utility of power-control theory extends to racial and ethnic minorities has not been fully addressed.

One group that has been somewhat neglected by criminologists are AIs, despite compelling reasons to examine this racial group. American Indians have among the highest rates of crime and delinquency of any racial/ethnic group in America (Pridemore 2004; Greenfield and Smith 1999). As Morris and Wood wrote, "Criminology has long neglected indigenous minorities" (2010:248). Overall, very few efforts have been made to extend generalist explanations of crime and deviance to AIs, including power-control theory. However, there are compelling reasons as well as intriguing challenges as to why power-control theory may be applicable to explaining the gender gap in delinquency among AIs.

Compelling Reasons and Intriguing Challenges

Compared to non-Hispanic whites, AIs have unique cultural, structural, and historical experiences that serve to produce more egalitarian families (relative to whites). First, the very notion of the patriarchal family is a relatively recent phenomenon among many tribes in the United States. Before the introduction of Europeans in North America, AI tribes did not practice what would be deemed traditional patriarchy (Shoemaker 1995). However, all tribes practiced a gendered division of labor (Shoemaker 1995). Men were primarily hunters and warriors and were generally responsible for contact with outsiders, while women usually had authority in the home and were responsible for agriculture, gathering, and childbearing. These gendered divisions of labor, however, did not generally translate into a patriarchal society where women were subordinate to men. Rather, women were seen as having complementary roles to men with equal power, importance, and prestige, or what would be a balanced family type in power-control terminology.

One explanation for the apparent lack of patriarchal family form was women's economic contributions to the tribes. While European women were seen as making no economic contribution to the family, AI women were an invaluable economic asset to their tribes. Often, women raised and harvested crops that were essential to the diets of all, and childbearing was frequently conceptually tied to economic prosperity (Ackerman 1971). Women were seen as the creators of life and therefore vital to the survival of their tribe.

The freedom and power of AI women was severely curtailed, however, by the influence of European settlers. American Indian economies, which were based upon trade and agriculture, became swallowed by the wage labor economy. As this transformation occurred, women lost their power along with their place in economic production (Shoemaker 1995). Alongside this indirect power degradation, whites imposed assimilationist policies on AIs to force them to conform to Euro-American standards (Shoemaker 1995). Research on these

policies generally found them to be a source of the decline of AI women's power (Shoemaker 1995). However, the notion of patriarchy is still a relatively recent concept among AI tribes and coupled with other structural and historical experiences, contributes to a state of weaker patriarchal family forms and more egalitarian forms.

The AI family cannot be understood without considering the history of genocide, oppression, and the resultant marginalization of AIs—a history that still has consequences for them today. While a comprehensive discussion of these experiences is not possible here (for example, see Brave Heart and DeBruyn 1998), scholars have written about the severe adverse consequences of a history of political, social, cultural, and economic domination by whites, even characterizing the grief and depression felt as a result of such historical experiences as “historical trauma” (Whitbeck et al. 2004; Brave Heart 1998). Additionally, the isolation, prejudice, and discrimination against AIs has contributed to profound poverty and a lack of economic power generally among many AI families, which may, similar to African-American families (see Mack and Leiber 2005), reduce the dominant position of men and serve to produce households that are more egalitarian than white ones. The median income of AI households is about 70 percent of the national median income and AIs have rates of poverty and unemployment almost twice that of non-AIs (U.S. Census Bureau 2011).

While such experiences make for a compelling test of power-control theory, an application of the theory to AIs also encounters some unique challenges. First and foremost, AI youth, perhaps more than any other minority group, live in nontraditional households (Fuller-Thomson and Minkler 2005; Kopera-Frye 2009; Lonczak, Fernandez, Austin, Marlatt, and Donovan 2007). For example, Lonczak and colleagues (2007) reported that only slightly over one-third of AI youth live in original two-parent families, while roughly another third lived with a single parent. The last third was fairly evenly divided between living with a parent and a stepparent or other family members. In families that include an original parent, a third also lived with another adult family member in the household. Power-control theory, as it has been formulated, does not account for the role of other adult family members, particularly grandparents. One study found that the prevalence of grandparent caregiving in AI communities was 5.8%, which is significantly higher than instances of grandparent caregiving in white communities (1.3%) (Fuller-Thomson and Minkler 2005). Evidence also suggests that grandparents may play a fundamental role in the socialization of AI children—Kopera-Frye (2009) found that AI grandparent caregivers felt they most influenced the morals of the child. However, while one may assume that living in an extended family may reduce overall delinquency because of additional “supervisors” in the family, Lonczak and colleagues (2007) found that those youth living with extended family as well as a parent were nearly four times more likely to have tried tobacco when compared to those living in original two-parent homes. Clearly, any analysis of the gender gap in delinquent activity among AIs should consider the potential influence of extended family members and grandparents specifically.

Finally, the boarding school phenomenon (wherein AI children were removed from their families and placed in boarding schools miles away) in the early 1900s devastated the AI family form and as Mmari, Blum, and Teufel-Shone (2010) noted, produced a “generation

of children who essentially grew up without parents...”(P. 400). Indeed, Mmari and colleagues (2010) found in their study that many parents voiced a concern that they lacked parenting skills because they were raised in Indian Boarding Schools; the schools took them away from their parents and effectively removed all parenting role models and examples for how to raise their own children. Hence, there may be qualitative differences in the quality of socialization and control exercised by AI families relative to white families, which may complicate examinations of the gender gap across these two racial groups. However, Mmari and colleagues also found that the primary protective factor reported by their respondents was parental support, roughly analogous to relational controls of power-control theory.

In summary, the present study represents an initial application and test of power-control theory, extended to AI adolescent delinquency and gender differences in such activity. Additionally, we test the basic tenets of power-control theory with a control group of non-Hispanic whites in order to explore whether there are racial differences in the relationships explored. Drawn from power-control theory, we expect that measures of instrumental and relational control, risk taking/avoidance, and patriarchal family form will each serve to explain delinquent behavior for both males and females, and that grandparents present in AI households will serve to explain AI delinquent activity.

Data and Methods

This study analyzes the restricted use data from Waves I and II of the National Longitudinal Study of Adolescent Health, or the Add Health study (Harris 2009). Add Health is a nationally representative study of adolescents (7th–11th grade in 1994 when the study began; Wave II data was collected in the following year). The Add Health sample is representative of schools in the US with respect to region, urbanicity, school size, school sector, and racial composition (Harris et al. 2009). For our AI sample (N=398), we selected adolescents from the Add Health sample based on the following criteria. First, we selected those adolescents who indicated that their racial/ethnic identity was American Indian/Native American and that they lived in either a two-parent or stepparent family. Second, we selected only those respondents who participated in both Waves I and II of the in-home interview and for whom a valid Wave II sampling weight was available. Third, we selected only those students who answered the questions about delinquent behaviors in the survey. And fourth, we excluded respondents for whom we could obtain no measure of occupational or educational prestige (approximately 2.9% of the AI cases and 1.7% of the white cases were excluded). We selected non-white Hispanic respondents in a similar manner (N=5044). All measures used in the analyses were measured at Wave I, with the exception of the dependent variables, which were measured at Wave II (one year later) in order to reduce concerns about temporal ordering. Missing values on independent variables were substituted using a regression estimation procedure. Finally, due to the unequal probability of sample selection (Chantala 2006), all analyses were weighted to account for the Add Health design effects.

Measures

We examine three different measures of delinquent acts: *general*, *property*, and *violent delinquent acts*. The general measure is a count variable measuring the number of different

acts (out of seventeen items) that the respondent self-reported. The property (eight items) and violent (six items) delinquent acts are also count measures that are considered in order to provide further evaluation of power-control theory's utility for explaining various domains of delinquent acts—some previous studies have found that power-control theory may have greater potency in explaining common forms of delinquent behavior (e.g., thefts; Hagan et al. 1985; 1161). Appendix B contains the items that comprise each of the three dependent variables.

In order to test the merits of power-control theory, we incorporated measures utilized in a prior test of power-control theory using the Add-Health data (Mack and Lieber 2005) and consistent with prior tests of power-control theory. The following theoretically relevant measures are included in the analyses: maternal relational control, paternal relational control, maternal and paternal instrumental control, parental instrumental control, patriarchal family form, and risk taking/aversion. The two measures of *relational control* (maternal and paternal) were constructed using six items that assessed the degree of attachment or emotional closeness between the parent and the child. The resulting additive scales exhibited high reliability ($\alpha=.74$ for maternal; $\alpha=.78$ for paternal). *Instrumental control* (maternal and paternal) was measured by a single item asking the respondent how often the parent was home when the youth returned from school. *Parental* (not specific to one parent) *instrumental control* was captured by a single item asking whether the parents let the respondent make his/her own decisions about the time he/she had to be home on weekend nights. *Risk taking* was captured by constructing an additive scale comprised of four items asking respondents about their risk taking nature. While this measure is not an ideal construct to capture power-control theory's notion of risk taking, Mack and Leiber (2005) did find that this measure was a significant predictor of nonserious delinquency in their analyses. This additive scale exhibited high reliability ($\alpha=.74$).

A central tenet of power-control theory has been that the relative workplace authority of fathers and mothers is associated with the patterns of gender socialization and control exercised in the family. Unfortunately, there were no explicit measures of workplace authority available in the Add-Health data. However, respondents did report the occupations of their resident parents and we derived measures of occupational prestige from these reports. As noted by Hadjar and colleagues in their test of the tenets of power-control theory, Weber (2003) posited that occupational prestige is linked to authority in the workplace (Hadjar et al. 2007: 40). Because the Add-Health data utilized the broad occupational categories from the 1990 Census codes, we assigned the occupational prestige scores calculated by Nakao and Treas (1989) to the respondents residential parents.² Unfortunately, any parents who were categorized (in the Add-Health data) as military or security (Census categories) were not assigned a prestige score in the Nakao and Treas scheme. A parent who was not employed was assigned a zero on the occupational prestige score. Finally, we coded those parents where the father (or stepfather) scored higher than the mother (or stepmother) on the occupational prestige score as a *patriarchal family form* with all other families being coded as egalitarian.

²Nakao and Treas had 1500 General Social Survey respondents rank 740 occupations and constructed a prestige scale based on the broad categories of the Census.

We also included three measures to capture family structure and family functioning. *Family structure* is a simple dummy variable indicating whether the respondent resides with their biological (or adoptive) parents versus living with a parent and stepparent. We included a measure of *number of siblings* living at home, since greater numbers of children may dilute the control abilities of parents/adults. In order to better capture the distinctive patterns of family structure in AI residences, the presence of a grandparent was considered. *Grandparent* is a dummy measure indicating whether at least one grandparent resided in the household. Finally, *gender* is captured as a dummy variable (female=1), *age* was included as a control variable, and *underclass* was a dummy measure of household resources, based on the parent's response to five questions capturing whether the family had received public assistance, food stamps, a housing subsidy, or government assistance during the past month. Appendix A provides the descriptive statistics for both samples while Appendix B provides the items included in key measures used in the analyses.

Analysis Strategy

The three dependent variables were all count variables, and so we utilized negative binomial regression analyses.³ In order to test for significant gender differences in the effect of the predictor variables on the dependent variables, the post-estimation command in Stata 12 for seemingly unrelated estimation (suest) was used, and a Wald test was conducted for each predictor testing the $H_0: \beta_x \text{ Males} = \beta_x \text{ Females}$ (StataCorp 2011). The results of these post-estimation Wald tests are reported in the results section.⁴

Results

Table 1 presents the respective means for AI males and females on each of the variables included in the analyses. As one can easily adduce from this table, only three of the independent variables display significant mean differences across the two groups—maternal relational control, paternal relational control and parental instrumental control. Surprisingly, AI females displayed significantly lower means on both maternal and paternal relational control, despite expectations to the contrary. Hagan, for instance, argued that risk taking differences among boys and girls were partly derived from the fact that females are socialized to develop stronger affective ties to others, including parents (see also Gilligan 1982). While AI males were subjected to greater parental instrumental control than females ($p < .05$), overall these results suggest that AI males and females were raised in a relatively balanced manner and that we should not expect a great gender gap in delinquent behavior (according to power-control theory). Indeed, the finding that only one of the three measures

³The decision to use negative binomial regression models was based on the results of an analysis comparing the fit of poisson, negative binomial regression, zero inflated poisson, and zero-inflated negative binomial regression models using a procedure in STATA called *countfit* (see Long and Freese 2006:409-414). *Countfit* generates a table of estimates, a table of differences between observed and average estimated probabilities, a graph of any differences, and various tests and measures of fit used to compare count models. These tests revealed that the negative binomial models (for each of the three dependent variables) were either the best fit of the various count models or were essentially equivalent in fit to the zero-inflated negative binomial models.

⁴The SUEST procedure, in conjunction with *test*, is a more appropriate test of whether a variable has a similar effect across the models of two different groups in non-linear analyses, because such an approach assesses whether the impact of a measure differs across groups by taking a ratio of the two coefficients" (Hoetker 2007:338). "By taking a ratio, we have removed the impact of unobserved variation and are left with a ratio of the variable's underlying effects, which can now be compared across groups" (Hoetker 2007:338).

of delinquent behavior—violent delinquent activity—was found to be significantly higher for AI males, provides some support for this thesis.

Table 2 presents the results of the negative binomial regression models estimating the associations between the independent variables with each of the three measures of delinquent acts (general, violent, and property) for AI males and females separately. In the males-only model, we found virtually no support for power-control theory in predicting general delinquent activity. None of the coefficients reached statistical significance, and the overall fit of the model was poor ($p = .085$). For the female-only model, however, we found much stronger support for the merits of power-control theory. Specifically, we found three theoretically relevant measures that are significant predictors of general delinquent activity—patriarchal family form, paternal relational control, and risk taking. As expected, a daughter's affective bond to her father was associated with a reduced proclivity of involvement in delinquent behavior (all other variables held constant). A one-unit increase in paternal relational control is associated with an expected decrease in the rate of general delinquent activity by a factor of .703, holding all other variables in the model constant. Likewise, risk taking was found to increase the rate of delinquent activity, with a one-unit increase in risk taking associated with an increase in the expected number of delinquent acts by approximately 10% (*ceteris paribus*). However, it was the finding that patriarchal family form is a significant predictor of AI female delinquent activity that may be most compelling. Being in a patriarchal family decreased the expected number of delinquent acts by 39.4% (*ceteris paribus*).

A similar pattern emerged when we predicted violent delinquent behavior—for the males-only model, there exists very little support for power-control theory while we found more compelling results when exploring the findings for the female-only model. Again, the male-only model had only one coefficient, number of siblings living at home, that was a significant predictor of the dependent variable ($p < .1$), with more siblings associated with an modest increase (approximately 10 percent) in violent delinquent activity. When examining the female-only results predicting violent delinquent activity, we found a much different set of predictors. Consistent with the female-only model predicting general delinquent activity, three predictors (patriarchal family form, paternal relational control, and risk taking) derived from power-control theory are found again to be significant predictors of violent delinquent behavior. For example, females residing in a patriarchal family form (relative to a balanced family form) are expected to participate in nearly 65% fewer acts of violence, controlling for all other variables in the model.

One additional variable was also found to be a significant predictor of violent delinquent behavior. Having a grandparent reside in the household was associated with a lower involvement in violence (*ceteris paribus*), with females reared in families with a grandparent present expected to participate in nearly 80% fewer acts of violence. Consistent with power-control theory, we found that for AI females, grandparents served an important element of exerting social control over their female grandchildren. We will discuss this finding in greater detail in the discussion section.

The results reported in the last two columns, predicting property delinquent acts, largely reinforce the results found for general and violent delinquent acts—few significant coefficients in the model predicting male property delinquent activity, while five significant predictors are revealed in the model predicting AI female property delinquent behavior. For AI males, parental instrumental control was associated with fewer property delinquent acts, with a one-unit increase in such control associated with a decrease in the expected number of property delinquent acts of approximately 55%. Being a member of the underclass was found to be associated with an increased number of property delinquent acts (controlling for all other variables in the model). For the females, patriarchal family form, paternal relational control, parental instrumental control, risk taking, and age were each found to be significant predictors of AI female involvement in property delinquent acts. Similar to general and violent delinquent activity, patriarchal family form, paternal relational control, and age were each associated with an expected decrease in property delinquent activity, while risk taking (again) was associated with an increase in property delinquent behavior (*ceteris paribus*).

While the aforementioned pattern of significant findings across the male and female models is telling, such an approach fails to consider differences in the samples that influence hypothesis tests. Hence, we conducted post-estimation cross-model hypothesis tests to identify which coefficients were significantly different in their associations with delinquent behavior for the male and female groups. The most robust finding of such comparisons was the difference in the strength of the patriarchal family form coefficient for male- versus female-only models. Patriarchal family form enjoyed a different association with *each* of the three measures of delinquent activity for AI females versus their male counterparts (Wald $\chi^2 = 4.11, 6.54, \text{ and } 4.02$ for general, violent, and property delinquent models respectively). Additionally, we found that in the violent delinquent behavior models, two of the coefficients were significantly different across the gender-specific models: paternal relational control and grandparent. And in the property delinquent activity models, one additional coefficient, underclass, had a different association with property delinquent activity for males versus females ($p. < .05$).

Finally, we also conducted parallel analyses using the non-Hispanic white sample in the Add Health data. These results are reported in Table 3. A cursory examination of these results, compared to those reported in Table 2 (AI sample) indicates some important differences in the pattern of findings. Overall, the most important differences found when comparing the two sets of results were: a) patriarchal family form was not a significant predictor of either male or female involvement in delinquent behavior among non-Hispanic whites; b) maternal relational control was a robust predictor of non-Hispanic white respondent involvement in delinquent activity, while paternal relational control is an important predictor of AI female delinquent activity; and c) having a grandparent reside in the family had no impact on the delinquent activity of non-Hispanic white males and females, but having a grandparent reside with AI females reduced their involvement in violent activity.

While cursory examinations are compelling, this approach fails to consider differences in samples that influence hypothesis tests. Thus, we conducted post estimation cross-model hypothesis tests to identify which coefficients were significantly different in their associations with the dependent variables across the AI and non-Hispanic white groups.

Using analogous models (i.e., the models in the same column in Table 2 and Table 3), we found support for the aforementioned race differences in the correlates of delinquency (test results available upon request). For example, Wald tests of comparison support the notion that patriarchy plays a different role for AI versus non-Hispanic white females (6.28, 8.65, and 5.05 for general, violent and property delinquent models respectively). The two measures of relational control were also found to exert significantly different associations on the dependent variables, when comparing AI versus non-Hispanic white females (Wald test for five of the six coefficients was statistically significant at $p < .05$), as was the grandparent coefficient for the race-specific violent activity models.

Discussion

Although tests of power-control theory have produced mixed results (e.g., Grasmick, Hagan, Blackwell, and Arneklev 1996; Hagan et al. 1985; 1987; Hill and Atkinson 1988; Morash and Chesney-Lind 1991; Jensen and Thompson 1990; Blackwell 2000; 2003), scholars are still intrigued with the core notion that gendered relations in the workplace contribute to the gender gap in delinquent activity. Inspired by Hagan and colleagues' theory, we extended prior work testing power control theory by examining its utility for a sample of AI adolescents. Overall, our study produces mixed support for the merits of power-control theory generally, but stronger support for explaining AI female delinquent activity specifically. Consistent with the theory, both relational (paternal) and instrumental control was found to be a protective factor against delinquent involvement for AI females, while risk taking was found to be associated with an increased risk in delinquent activity among AI females. Only instrumental control was found to reduce property delinquent activity among AI males, however.

As mentioned above, when compared to the results from the non-Hispanic white sample, three unique findings emerged for AI females. The key variable in power-control theory, our measure of patriarchal family form, served as a protective factor, but only for AI females. The question as to why living in a patriarchal family only reduces delinquent activity among AI females, while having no influence on the behavior of white females, is difficult to answer (given data limitations). While speculative, it may be that the AI patriarchal family form is intertwined with economic advantage—that these AI fathers are relatively successful (compared to other AI fathers in balanced families) in the workplace, providing their families with more economic resources that allows the family to resist other criminogenic forces that typify AI experiences (poverty, isolation, unemployment, and other forms of deprivation). Hence, it is economic advantage, not simply family form that provides the family with the opportunity to protect AI daughters from forces that may lead to delinquent behavior. However, tests including an interaction term representing patriarchal family form and our underclass measure failed to reach statistical significance ($p < .1$).

It could also be the case that, contrary to our expectations, AI families are “more patriarchal” when the father is in a superior position in the workplace than the mother, compared to white families. A number of the studies testing power-control theory were conducted twenty years ago—the growth of the dual working couple family in white America, coupled with other economic and cultural changes that are supportive of

egalitarian treatment of men and women, may render the relative position of men and women in the workplace less significant for the most advantaged group (whites) in America.

Second, we found that having a grandparent in the household served as an important protective factor for AI females in reducing involvement in violent activity. As discussed earlier, grandparents occupy an important caregiver role in many AI families and our results suggest that the presence of a grandparent is an important consideration for evaluating protective factors in the lives of AI adolescents. Because there is evidence that grandparents and other adult family members may play a more important role in the family in other racial and minority groups (relative to non-Hispanic whites), additional research should investigate the possible protective factors that such adults may play in the lives of children in the household (Kreider and Ellis 2011).

Third, it was somewhat surprising to find that paternal and not maternal relational control served as a protective factor for AI females. Indeed, this finding is contrary to prior tests of power-control theory (e.g., Hill and Atkinson 1988; Singer and Levine 1988) that found that controls exerted in same sex dyads were effective in reducing delinquent activity. While gender socialization theory posits that fathers will have a greater influence on sons (due to comparative advantage, greater internal rewards, and/or higher external expectations for socializing sons relative to daughters; Carlson 2006:139), empirical evidence suggests that the father's involvement is as important for daughters as it is for sons (Amato and Gilbreth 1999; Carlson 2006). The present study provides further evidence that a close, affective bond between father and daughter serves as an important protective factor for AI females. However, we are aware of no prior studies that have found a protective role for the paternal-daughter affective bond; indeed, there are few studies examining the relationship between AI fathers and daughters (for an exception, see Reinhardt, Evenstad, and Faircloth 2012). Clearly, additional research is needed to explore the role of the father-daughter relational bond in influencing AI adolescent behavior generally.

Overall, these findings provide support for the concern raised by Cernkovich and Giordano (1992) about using only non-Hispanic white samples to test theories of crime and deviance—if we had only conducted our research on the non-Hispanic white sample, our conclusions about power-control theory would differ, especially regarding the role of patriarchy in explaining gender differences in delinquent behavior. Naturally, our study has a number of limitations that should be considered when assessing our results. First, although the Add Health data are a nationally representative sample of schools and students, it must be noted that it is not a sample of AI schools and students specifically. We cannot assess regional or tribal-related variation in delinquent behaviors among our sample of AIs, which is a limitation given that past research has suggested that such variations are important (Whitesell et al. 2012; Young and Joe 2009). Since there are 565 federally recognized tribes and many more tribes that are not formally acknowledged by the United States, each with their own unique cultures and experiences, readers should be cautious in interpreting these results. Additionally, this study cannot evaluate the role of culture and cultural traditions in understanding AI delinquent behavior, which likely is an important omission in understanding AI adolescent behaviors (O'Neil and Mitchell 1996).

Another limitation that warrants mention is that our study was largely a test of the original version of power-control theory and that we were unable to test some of the revisions that have been offered by others since its original conception. For instance, much of the theoretical revisions of power-control theory have posited that important factors mediate the association between structural patriarchy and gendered parenting, including patriarchal gender role beliefs (Hagan et al. 2004), hierarchic self-interest (i.e., an individual expression of such societal dominance ideologies as competition, success orientation, and acceptance of social inequality; Hagan et al. 1998; Hadjar 2004; Hadjar et al. 2007), and sanction threat perceptions (Blackwell 2000). While our study incorporated one revised element—the consideration of relational as well as instrumental controls (Hagan 1990; Morash and Chesney-Lind 1991)—we were not able to incorporate other key measures of revised models such as the mediators mentioned above. Nor did we have access to such variables as ideological or attitudinal measures of patriarchy, as has been employed in some of the more recent tests of “revised” power-control theory (e.g., Grasmick et al. 1996; Hagan et al. 1998; Hadjar et al. 2007). Further research testing power-control theory would be served by incorporating some of these measures.

Likewise, some of our measures restricted our ability to fully test power-control theory. As mentioned before, our measure of patriarchal family form is only a proxy measure, and a more precise measure of whether each parent occupies a command or obey position in the workplace may have produced different results. Additionally, some of our measures of the various controls posited by power-control theory were constructed from a limited number of items. More comprehensive measures may reveal differences not detected in the current study. Finally, we agree with Mack and Leiber (2005), who noted that the best method to test the merits of power-control theory (for any group) would be to “compare male and female sibling pairs to determine if there are differences or similarities in socialization, supervision, and risk taking by gender within individual families” (P. 139). Despite these limitations, we suggest that our findings contribute to our understanding of the risk and protective factors associated with AI adolescent delinquent behavior, as well as contributing to the larger literature exploring the merits of power-control theory for understanding gender-specific behaviors.

Finally, our study highlights the importance of identifying protective factors, as well as risk factors, when explaining AI adolescent behaviors (see Baldwin et al. 2011). Despite the previously mentioned historical events and resultant disadvantages that beset AIs today, many AIs and their families display remarkable resilience. Our study highlights only a few of the protective mechanisms that these families provide to reduce delinquent activity among AI females. Clearly, more research examining protective mechanisms is needed to better understand both AI male and female delinquent behavior, but our findings contribute to a small literature addressing this neglected population.

Acknowledgments

Financial assistance for this study was provided to the authors by National Institutes of Drug Abuse (1R01DA034466-01). The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health. This research uses data from Add Health, a program project directed by Kathleen Mullan Harris and designed by J. Richard Udry, Peter S. Bearman, and Kathleen Mullan

Harris at the University of North Carolina at Chapel Hill, and funded by grant P01-HD31921 from the Eunice Kennedy Shriver National Institute of Child Health and Human Development, with cooperative funding from 23 other federal agencies and foundations. Special acknowledgment is due Ronald R. Rindfuss and Barbara Entwisle for assistance in the original design. Information on how to obtain the Add Health data files is available on the Add Health website (<http://www.cpc.unc.edu/addhealth>). No direct support was received from grant P01-HD31921 for this analysis.

References

- Ackerman, Lillian A. Marital Instability and Juvenile Delinquency among the Nez Percés. *American Anthropology*. 1971; 73:595–603.
- Amato, Paul R.; Gilbreth, Joan G. Nonresident fathers and children's well-being: a meta-analysis. *Journal of Marriage and Family*. 1999; 61:557–573.
- Baldwin, Julie A.; Brown, Betty G.; Wayment, Heidi A.; Nez, Ramona Antone; Brelsford, Kathleen M. Culture and context: Buffering the relationship between stressful life events and risky behaviors in American Indian youth. *Substance Use & Misuse*. 2011; 46:1380–1394. [PubMed: 21810073]
- Blackwell, Brenda S. Perceived sanction threats, gender, and crime: A test and elaboration of power-control theory. *Criminology*. 2000; 38:439–488.
- Blackwell, Brenda S. Power-Control and Social Bonds: Exploring the Effect of Patriarchy. *Criminal Justice Studies*. 2003; 16:131–152.
- Heart, Brave; Horse, Maria Yellow. The return to the sacred path: Healing the historical trauma and historical unresolved grief response among the Lakota through a psychoeducational group intervention. *Smith College Studies in Social Work*. 1998; 68:287–305.
- Heart, Brave; Horse, Maria Yellow; DeBruyn, Lemyra M. The American Indian holocaust: Healing historical unresolved grief. *American Indian and Alaska Native Mental Health Research*. 1998; 8:60–82.
- Carlson, Marcia J. Family structure, father involvement, and adolescent behavioral outcomes. *Journal of Marriage and Family*. 2006; 68:137–154.
- Cernkovich, Stephen A.; Giordano, Peggy C. School bonding, race, and delinquency. *Criminology*. 1992; 30:261–291.
- Chantala, Kim. Guidelines for Analyzing Add Health Data. Carolina Population Center; 2006.
- Davey, M. The New York Times. 2006 Feb 4. As Tribal Leaders, Women Still Fight Old Views; p. A1
- Fuller-Thomson, Esme; Minkler, Meredith. American Indian/Alaskan Native Grandparents Raising Grandchildren: Findings from the Census 2000 Supplementary Survey. *Social Work*. 2005; 50:131–139. [PubMed: 15853190]
- Gilligan, Carol. In a Different Voice: Psychological Theory and Women's Development. Cambridge, MA: Harvard University Press; 1982.
- Grasmick, Harold G.; Hagan, John; Blackwell, Brenda Sims; Arneklev, Bruce J. Risk Preferences and Patriarchy: Extending Power-Control Theory. *Social Forces*. 1996; 75:177–199.
- Greenfeld, Lawrence A.; Smith, Steven K. American Indians and Crime. Washington, DC: U.S. Department of Justice, Bureau of Justice Statistics; 1999.
- Hadjar, Andreas; Baier, Dirk; Boehnke, Klaus; Hagan, John. Juvenile Delinquency and Gender Revisited: The Family and Power-Control Theory Reconceived. *European Journal of Criminology*. 2007; 4:35–58.
- Hagan, John; Ronald Gillis, A.; Simpson, John. The Class Structure of Gender and Delinquency: Toward a Power-Control Theory of Common Delinquent Behavior. *American Journal of Sociology*. 1985; 90:1151–1178.
- Hagan, John; Hefler, Gerd; Classen, Gabriele; Boehnke, Klaus; Merckens, Hans. Subterranean sources of subcultural delinquency beyond the American dream. *Criminology*. 1998; 36:309–342.
- Hagan, John; Simpson, John; Ronald Gillis, A. Class in the Household: A Power-Control Theory of Gender and Delinquency. *American Journal of Sociology*. 1987; 92:788–816.
- Hagan, John; Simpson, John; Ronald Gillis, A. Feminist Scholarship, Relational and Instrumental Control, and a Power-Control Theory of Gender and Delinquency. *The British Journal of Sociology*. 1988; 39:301–336. [PubMed: 3179640]

- Harris, Kathleen Mullan. The National Longitudinal Study of Adolescent Health (Add Health), Waves I & II, 1994–1996; Wave III, 2001–2002; Wave IV, 2007–2009 [machine-readable data and documentation]. Chapel Hill, NC: Carolina Population Center, University of North Carolina at Chapel Hill; 2009.
- Harris, Kathleen M.; Halpern, CT.; Whitsel, E.; Hussey, J.; Tabor, J.; Entzel, P.; Udry, JR. The National Longitudinal Study of Adolescent Health: Research Design. University of North Carolina, Carolina Population Center; 2009.
- Hill, Gary D.; Atkinson, Maxine P. Gender, familial control, and delinquency. *Criminology*. 1988; 26:127–147.
- Jensen, Gary F.; Thompson, Kevin. What's Class Got to Do with It? A Further Examination of Power-Control Theory. *American Journal of Sociology*. 1990; 95:1009–1023.
- Kobayashi, Emiko; Sharp, Susan F.; Grasmick, Harold G. Gender and deviance: a comparison of college students in Japan and the United States. *Deviant Behavior*. 2008; 29:413–439.
- Kopera-Frye, Karen. Needs and Issues of Latino and Native American Nonparental Relative Caregivers: Strengths and Challenges within a Cultural Context. *Family and Consumer Sciences Research Journal*. 2009; 37:394–410.
- Kreider, Rose M.; Ellis, Renee. Current Population Reports, P70-126. Washington DC: U.S. Census Bureau; 2011. Living arrangements of children, 2009.
- Lonczak, Heather S.; Fernandez, Anne; Lisette Austin, G.; Marlatt, Alan; Donovan, Dennis M. Family Structure and Substance Use Among American Indian Youth: A Preliminary Study. *Families, Systems, and Health*. 2007; 25:10–22.
- Mack, Kristin Y.; Leiber, Michael J. Race, Gender, Single-Mother Households, and Delinquency: A Further Test of Power-Control Theory. *Youth & Society*. 2005; 37:115–144.
- Mmari, Kristin N.; Blum, Robert Wm; Teufel-Shone, Nicolette. What Increases Risk and Protection for Delinquent Behaviors among American Indian Youth?: Findings from Three Tribal Communities. *Youth & Society*. 2010; 41:382–413.
- Morash, Merry; Chesney-Lind, Meda. A Reformulation and Partial Test of the Power Control Theory of Delinquency. *Justice Quarterly*. 1991; 8:347–377.
- Morris, Gregory D.; Wood, Peter B. Delinquency and Non-Reservation American Indians: The Role of Unique and General Predictors of Interpersonal and Property Offending. *Journal of Ethnicity in Criminal Justice*. 2010; 8:248–265.
- Nakao, Keiko; Treas, Judith. GSS Methodological Report #70. 1990. Computing 1989 Occupational Prestige Scores.
- O'Neil, Theresa D.; Mitchell, Christina M. Alcohol use among American Indian adolescents: the role of culture in pathological drinking. *Social Science and Medicine*. 1996; 42:565–578. [PubMed: 8643981]
- Pridemore, William A. Review of the literature on risk and protective factors of offending among Native Americans. *Journal of Ethnicity in Criminal Justice*. 2004; 2:45–63.
- Reinhardt, Martin J.; Evenstad, Jan P.; Faircloth, Susan. She has Great Spirit: insight into the relationships between American Indian dads and daughters. *International Journal of Qualitative Studies in Education*. 2012; 25:913–931.
- Shoemaker, Nancy. Introduction. In: Shoemaker, Nancy, editor. *Negotiators of Change: Historical Perspectives on Native American Women*. New York, NY: Routledge; 1995. p. 1-25.
- Singer Simon I, Levine Murray. Power-control theory, gender, and delinquency: A partial replication with additional evidence on the effects of peers. *Criminology*. 1988; 26:627–648.
- StataCorp. Stata Statistical Software: Release 12. College Station, TX: StataCorp LP; 2011.
- Steffensmeier, Darrell; Allan, Emilie. Gender and crime: Toward a gendered theory of female offending. *Annual Review of Sociology*. 1996; 22:459–487.
- Steffensmeier, Darrell; Schwartz, Jennifer. Trends in Girls' Delinquency and the Gender Gap. In: Zahn, Margaret, editor. *The Delinquent Girl*. Philadelphia, PA: Temple University Press; 2009. p. 50-83.
- Uggen, Christopher. Class, Gender, and Arrest: An Intergenerational Analysis of Workplace Power and Control. *Criminology*. 2000; 38:835–862.

- U.S. Census Bureau. Profile of General Population and Housing Characteristics: 2010. 2010. http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=DEC_10_DP_DPDP1&prodType=table
- U. S. Census Bureau. American Indian and Alaska Native Heritage Month: November 2011. Facts for Features; Congress; 2011. Retrieved June 28, 2013 (http://www.census.gov/newsroom/releases/archives/facts_for_features_special_editions/cb11-ff22.html)
- Whitbeck, Les B.; Chen, Xiaojin; Hoyt, Dan R.; Adams, Gary W. Discrimination, historical loss and enculturation: Culturally specific risk and resiliency factors for alcohol abuse among American Indians. *Journal of Studies on Alcohol*. 2004; 65:409–418. [PubMed: 15376814]
- Whitesell, Nancy Rumbaugh; Beals, Janette; Crow, Cecelia Big; Mitchell, Christina M.; Novins, Douglas K. Epidemiology and etiology of substance use among American Indians and Alaska Natives: risk, protection, and implications for prevention. *The American Journal of Drug and Alcohol Abuse*. 2012; 38:376–382. [PubMed: 22931069]
- Young, Robert S.; Joe, Jennie R. Some thoughts about the epidemiology of alcohol and drug use among American Indian/Alaska Native populations. *Journal of Ethnicity in Substance Abuse*. 2009; 8:223–241.

Appendix A. Descriptive Statistics for American Indian and White respondents

Table 4

	Mean	Std. Dev.	Min.	Max.
<i>Dependent Variables</i>				
General Delinquent Acts	2.15 2.78	2.48 3.20	0	17
Violent Delinquent Acts	.43 .82	.87 1.28	0	6
Property Delinquent Acts	.78 1.04	1.41 1.69	0	8
<i>Power control theory</i>				
Patriarchal family form	.34 .33	.47 .47	0	1
Maternal relational control	.06 -.05	.96 1.05	-5.23	1.08
Paternal relational control	.10 -.04	1.04 1.02	-4.57	1.34
Maternal instrumental control	2.16 2.30	1.49 1.57	0	4
Paternal instrumental control	1.18 1.26	1.39 1.47	0	4
Parental instrumental control	.69 .68	.46 .47	0	1
Risk taking/aversion	9.07 8.84	2.54 2.58	4	20
<i>Family structure</i>				
Family structure (2 natural/adoptive parent family=1; step parent family=0)	.62 .53	.48 .50	0	1
Number of siblings	1.41 1.77	1.11 1.39	0	12
Grandparent	.04 .07	.20 .26	0	1

	Mean	Std. Dev.	Min.	Max.
<i>Controls</i>				
Age	15.69 <i>15.91</i>	1.59 <i>1.60</i>	12	21
Underclass	.12 <i>.27</i>	.31 <i>.42</i>	0	1

Note: Statistics for non-Hispanic whites are in regular font; Statistics for American Indians are in italicized font.

Appendix B: Selected measures included in the analyses

Table 5

General Delinquent Acts	Property	Violent
Paint graffiti or signs on someone else's property or in a public place	✓	
Deliberately damage property that didn't belong to you	✓	
Lie to parents or guardians about where you had been or whom you were with		
Take something from a store without paying for it		
Run away from home		
Drive a car without its owner's permission	✓	
Steal something worth more than \$50	✓	
Go into a house or building to steal something	✓	
Use or threaten to use a weapon to get something from someone		✓
Sell marijuana or other drugs	✓	
Steal something worth less than \$50	✓	
Act loud, rowdy, or unruly in a public place		
Take part in a fight where a group of friends was against another group		✓
Pulled a knife or gun on someone		✓
Shot or stabbed someone		✓
Carried a weapon at school		✓
Got into a serious physical fight		✓

Other Variables	Items	Alpha
Maternal Relational Control (Higher values indicate greater relational control.)	<p>Questions were asked about the resident mother.</p> <ol style="list-style-type: none"> Most of the time, your mother is warm and loving toward you. When you do something wrong that is important, your mother talks about it with you and helps you understand why it is wrong. You are satisfied with the way your mother and you communicate with each other. Overall you are satisfied with your relationship with your mother. How close do you feel to your mother/adoptive mother/stepmother? How much do you think she cares about you? 	.74
Paternal Relational Control (Higher values indicate greater relational control.)	<p>Questions were asked about the resident father.</p> <ol style="list-style-type: none"> Most of the time, your father is warm and loving toward you. 	.78

Other Variables	Items	Alpha
	<p>2 You are satisfied with the way your father and you communicate with each other.</p> <p>3 Overall you are satisfied with your relationship with your father.</p> <p>4 How close do you feel to your father/adoptive father/stepfather?</p> <p>5 How much do you think he cares about you?</p>	
Risk Taking (Higher values indicate greater risk taking behavior.)	<p>1 When you have a problem to solve, one of the first things you do is get as many facts about the problem as possible.</p> <p>2 When you are attempting to find a solution to a problem, you usually try to think of as many different ways to approach the problem as possible.</p> <p>3 When making decisions, you generally use as systematic method for judging and comparing alternatives.</p> <p>4 After carrying out a solution to a problem, you usually try to analyze what went right and what went wrong</p>	.74

Table 1

American Indian Adolescent Difference of Means (Males: n=204; Females: n=194)

	American Indian Males	American Indian Females	Wald χ^2
<i>Dependent Variables</i>			
General Delinquent Acts	2.69 (.31)	2.41 (.27)	.46
Violent Delinquent Acts	.91 (.12)	.52 (.08)	8.38**
Property Delinquent Acts	1.05 (.17)	.83 (.16)	.96
<i>Power control theory</i>			
Patriarchal family form	.53 (.05)	.42 (.05)	2.19
Maternal relational control	.30 (.08)	-.07 (.12)	5.95*
Paternal relational control	.28 (.10)	-.15 (.11)	8.52**
Maternal instrumental control	2.61 (.13)	2.63 (.13)	.01
Paternal instrumental control	2.03 (.15)	1.70 (.14)	3.07
Parental instrumental control	.63 (.05)	.78 (.04)	4.62*
Risk taking/aversion	8.69 (.23)	8.82 (.27)	.12
<i>Family structure</i>			
Family structure (2 natural/adoptive parent family=1; step parent family=0)	.82 (.04)	.78 (.04)	.39
Number of siblings	1.89 (.20)	1.99 (.11)	.16
Grandparent	.016 (.008)	.050 (.021)	2.35
<i>Controls</i>			
Age	15.47 (.25)	15.59 (.22)	.19
Underclass	.19 (.04)	.19 (.04)	.00

Linearized standard errors in parentheses below coefficient estimate.

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

Table 2

Negative Binomial Regression of Delinquent Acts among American Indian Adolescents; Incident Rate Ratios reported (Males: n=204; Females: n=194)

	General Delinquent Acts		Violent Delinquent Acts		Property Delinquent Acts	
	Males b	Females b	Males b	Females b	Males b	Females b
Patriarchal family form	1.075 (.232)	.606* (.127)	.961 (.199)	.348** (.141)	1.188 (.369)	.416* (.158)
Maternal relational control	.781 (.160)	1.039 (.084)	.727 (.159)	1.126 (.176)	.716 (.201)	1.024 (.132)
Paternal relational control	.918 (.130)	.703*** (.051)	1.011 (.121)	.619*** (.074)	.874 (.195)	.643*** (.074)
Maternal instrumental control	.936 (.085)	1.044 (.056)	.944 (.083)	1.261 (.177)	.941 (.115)	.989 (.088)
Paternal instrumental control	.913 (.085)	1.027 (.057)	.933 (.095)	1.174 (.110)	.860 (.111)	1.083 (.098)
Parental instrumental control	.660 (.200)	.885 (.198)	.740 (.226)	.738 (.235)	.445* (.182)	.497* (.167)
Risk taking	1.029 (.051)	1.096*** (.031)	1.026 (.049)	1.107* (.044)	1.050 (.074)	1.157*** (.052)
Underclass	1.395 (.378)	.805 (.194)	1.360 (.476)	1.033 (.425)	1.935+ (.705)	.562 (.184)
# of siblings living at home	1.073 (.065)	.961 (.071)	1.094+ (.054)	.962 (.130)	1.005 (.078)	1.023 (.170)
Age	.936 (.062)	.915 (.055)	.887 (.065)	.919 (.086)	.930 (.097)	.831* (.071)
Family structure	.977 (.248)	1.362 (.255)	.707 (.182)	1.206 (.421)	1.246 (.471)	1.437 (.381)
Grandparent	2.082 (1.079)	.656 (.275)	1.667 (.539)	.020*** (.023)	2.683 (.169)	.621 (.298)
Constant	8.871 (9.679)	3.486 (3.501)	8.228 (9.790)	.396 (.730)	3.610 (6.441)	4.436 (6.372)
F (12, 117)	1.66	4.80	1.70	5.79	2.27	4.03
/lnalpha	.037	-.622	-.486	.184	.674	.045
alpha	1.037	.537	.615	1.201	1.963	1.046

Linearized standard errors in parentheses below coefficient estimate.

p<.001,
**
p<.01,
*
p<.05;
+
<.10.

Table 3

Negative Binomial Regression of Delinquent Acts among non-Hispanic White Adolescents; Incident Rate Ratios reported (Males: n=2502; Females: n=2542)

	General Delinquent Acts		Violent Delinquent Acts		Property Delinquent Acts	
	Males b	Females b	Males b	Females b	Males b	Females b
Patriarchal family form	1.018 (.068)	1.040 (.057)	1.013 (.088)	1.237 (.160)	1.119 (.105)	.998 (.092)
Maternal relational control	.801*** (.032)	.848*** (.027)	.811*** (.039)	.767*** (.041)	.745*** (.040)	.815*** (.044)
Paternal relational control	.973 (.031)	.929** (.026)	.984 (.039)	.915 (.060)	.960 (.048)	.888* (.044)
Maternal instrumental control	.967 (.016)	.996 (.016)	.991 (.028)	1.052 (.051)	.931** (.023)	.971 (.028)
Paternal instrumental control	1.008 (.022)	.995 (.020)	1.061 (.035)	1.027 (.042)	.998 (.034)	.996 (.038)
Parental instrumental control	1.133 (.075)	1.065 (.062)	1.065 (.118)	1.175 (.179)	1.183 (.125)	.919 (.093)
Risk taking	1.029** (.011)	1.036*** (.010)	1.022 (.016)	.996 (.023)	1.046** (.017)	1.068*** (.020)
Underclass	.775 (.104)	.926 (.121)	.882 (.143)	1.592* (.365)	.762 (.156)	.880 (.175)
# of siblings living at home	1.010 (.025)	1.021 (.029)	1.012 (.034)	1.009 (.059)	.992 (.038)	1.070 (.060)
Age	.969 (.019)	.895*** (.017)	.955 (.026)	.818*** (.032)	.925** (.027)	.836*** (.030)
Family structure	.857* (.064)	1.058 (.096)	.778* (.077)	.914 (.164)	.879 (.096)	1.174 (.211)
Grandparent	.806 (.168)	.823 (.138)	.913 (.285)	.860 (.338)	.774 (.240)	.931 (.311)
Constant	3.398 (1.143)	6.370 (2.155)	1.114 (.568)	3.736 (2.507)	2.365 (1.269)	4.438 (3.011)
F (12, 117)	7.95	11.20	2.85	7.82	8.52	7.66
/lnalpha	-.107	-.499	.176	.730	.739	.930
alpha	.899	.607	1.193	2.074	2.093	2.534

Linearized standard errors in parentheses below coefficient estimate.

*** p<.001,

** p<.01,

* p<.05.