THE INFLUENCES OF SCHOOL TYPE AND SOCIAL CONTROL PROCESSES ON JUVENILE DELINQUENCY

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ABSTRACT

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This study incorporates a multidimensional theoretical framework (stemming from Coleman and Hirschi) in order to analyze the effects varying educational structures have on adolescent delinquent behavior. A nationally representative sample of United States youth, Add Health[1], is used to examine how school type exerts social control to influence self-reported delinquency. This study finds that private school students report the lower levels of delinquency than parochial school students and public school students. Specifically, analyses show that even after "selecting into" different types of schools, factors associated with the school, both at the structural and individual/social level, continue to matter. Future research in this domain should focus on school characteristics and peer networks in relation to adolescent delinquency. Policy implications should reallocate funds away from disciplinary policies, such as zero tolerance and move towards practices that will increase adolescents' attachment and legitimate involvement with school.

[1] 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.

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INTRODUCTION

Schools are powerful social institutions that influence the outcomes of millions of future adults by either providing an environment conducive to positive or negative outcomes. Policies such as academic tracking, graduation tests, and zero tolerance have been argued by some scholars to place significant valuable resources on discipline, whereby creating an environment filled with rigid rules and a uniform teaching regime (Wald & Losen, 2003; Christle, Jolivette & Nelson, 2005; Feierman et. al., 2009/10; Mayer & Leone, 2007). These researchers argue that schools that require students to pass certain tests in order to graduate are also more likely to pressure students—who are seen as unable to pass these tests and/or are placed on poor academic tracks—into leaving the school for an alternate type of school. For students who violate the zero tolerance policy experience, disciplinary tactics include, but are not limited to, suspensions, expulsions and out of school placements into alternative school types. After the student finishes their suspension or out of school placement and wants to re-attend their previous school or another public or private school, the request will usually be met with resistance and unfortunately denial of acceptance (Feierman et. al., 2009/10; Mayer & Leone, 2007; Wald & Losen, 2003). This denial of acceptance to school results in a high probability for engagement with delinquent peers, not graduating from high school and often a future of criminal justice involvement (Wald & Losen, 2003; Christle et. al., 2005; Feierman et. al., 2009/10; Mayer & Leone, 2007). Besides school policies, additional school structural components such as school/classroom size, teacher-student ratios and parent-teacher organizations, are argued to attribute to adolescent delinquency (Hellman & Beaton, 1996; Gasper, Deluca & Estacion, 2010; Leung & Ferris, 2008).

Conversely, other scholars argue that it is the individual characteristics of the student and their family that contribute to adolescent delinquency, not school structure. These scholars posit that individual characteristics such as family socioeconomic status, religious belief and geographic location, lead the adolescent to select into particular types of schools (Abdulkadiroglu & Sonmez, 2003; Murnane, 1981; Braddock, 1981; Finn, 1981; Guthrie & Zusman, 1981; Goldberger & Cain, 1982; Noell, 1982). Thus these scholars tend to place focus upon individual characteristics, whereby neglecting the inclusion of school structures.

The school structure vs. individual characteristics debate leads to the overarching question that is explored here which is, do schools as societal institutions matter above and beyond the types of individuals that attend those schools in regards to adolescent delinquency? To answer this question, this paper examines non-violent and violent delinquency among public, parochial, private (with no religious affiliation) and both vocational and alternative schools. If my findings indicate that differences in delinquency between public, parochial, private and both vocational and alternative schools exist even after taking into consideration individual characteristics, then a school effect explanation can be proposed. However, if findings indicate that no differences in delinquency exist among the different school types, then individual characteristics and selection effects are more plausible arguments.

To further understand the school structure vs. individual characteristics debate, I will be using Add Health data, a nationally representative sample of adolescents, their parents and school administrators. Add Health provides a unique opportunity to analyze school variables such as, disciplinary tactics, class size, teaching staff and dress codes, along with individual characteristics such as the adolescent's family socioeconomic status, religious importance, academic achievement, and previous and current non-violent and violent delinquency.

Specifically, this paper asks does the type of school one attends affect their delinquent involvement? And if so, what is it about the school contexts or individuals within the schools that explain these differences? The dataset used and the questions analyzed here contribute significantly to prior studies in that this study examines the dynamic of adolescent delinquency at both the school structural level and the individual level, along with exploring the influences between both levels.

CHAPTER I. BACKGROUND

Enrollment statistics for the 2007-2008 school year report over 49.2 million youth ages 5 to 17 were enrolled in public schools and over 5.9 million students enrolled in parochial and private schools in the U. S. (Snyder & Dillow, 2010). Additionally, according to the National Center for Education Statistics, over 540,900 students were enrolled in alternative schools and 163,000 students were enrolled in vocational schools during the 2007-2008 school year (Snyder & Dillow, 2010). In total, over 55.8 million American youth attended one of the nation's educational institutions for the 2007-2008 school year (Snyder & Dillow, 2010). The majority of students spend, on average, five hours a day, or 25 hours a week, in the classroom, and an additional two hours a week on the way to and from school. American youth are spending a significant amount of time socializing with each other in an environment that is expected to be safe. Yet, a problem still plaguing the educational system is adolescent delinquency.

Recent data from the National Center for Educational Statistics, the U.S. Department of Education and the Bureau of Justice Statistics report that during the 2007-2008 school year 1,701 school age youth fell victim to homicide (Robers et. al., 2010). Additionally, in 2008, 2.2 million adolescents became victims of nonfatal crimes including 619,000 thefts and 629,800 violent crimes, and of these, 1.2 million were victimized at school (Robers et. al., 2010, p. iv). Specifically, 85% public school officials recorded that during the 2007-2008 school year one or more criminal incidents occurred at school, which equates to 43 crimes per 1,000 students enrolled (Robers et. al., 2010). Sixty-two percent of public schools reported at least one criminal incident to the police equating to approximately 704,000 reported crimes (Robers et. al., 2010). During that same year, 75% of public school officials recorded one or more violent criminal incidents and 38% of public schools reported at least one violent incident to the police (Robers

et. al., 2010). These statistics highlight the importance of adolescent delinquency, yet they lack information on the particular underlying mechanisms at play in explaining the differences in adolescent delinquency reported by all of the different American educational institutions.

Literature Review

A closer examination of the statistics focused on crime rates according to either public or private schools for the 2007-2008 school year reveals some startling findings. Among the 9,980 public schools and the 2,940 private schools participating in the 2007-2008 survey, a higher percentage of student and teacher victimization, student theft, student fear and gang violence was reported in public schools in comparison to private schools (Robers et. al., 2010). Although 6% of public school students reported fear of being harmed at school, compared to 1% of private school students, no difference between the two school types was found when exploring student fear of harm when traveling to and from school (Robers et. al., 2010).

Besides lower levels of reported violence and delinquency occurring in private schools, research has found additional differences between private schools and public schools. Public schools have on average larger student enrollments, larger class sizes and larger student-teacher ratios (Alt & Peter, 2002). Public school students also tend to score lower on standardized achievement tests than their private school counterparts (Alt & Peter, 2002; Coleman, 1988; Coleman, Kilgore & Hoffer, 1982; Coleman et. al., 1982; Hoffer et. al., 1985). Besides having more demanding graduation requirements, private school students are also more likely to complete a bachelor's degree or advanced degree earlier in life than are public school students (Alt & Peter, 2002; Coleman, 1988; Coleman, Kilgore & Hoffer, 1982; Coleman, Hoffer & Kilgore, 1982; Hoffer, Greeley & Coleman, 1985).

Alternative schools primarily serve students who are at a higher risk for failure or dropping out of school (Grunbaum et. al, 2000). The majority of students who attend alternative high schools are those who have already engaged in delinquent behavior, which results in their placement into the alternative school (Grunbaum et. al, 2000; Van Acker, 2007). For example, in comparing public to alternative high school students, public school students are less likely to have carried a weapon to school or participated in a physical fight on school grounds (Grunbaum et. al, 2000). Additionally, alternative school teachers and administrative leaders often lack training that helps in effectively working with this subset of adolescent youth (Price, Martin & Robertson, 2010).

Many studies have explored adolescent delinquent behavior by analyzing school size and teacher student relationships, gender and peer relationships, academic achievement and school type (Felson & Staff, 2008; Gasper, Deluca & Estacion, 2010; Haynie, 2002; Hellman & Beaton, 1996; Leung & Ferris, 2008; Wilcox et al., 2009). Findings have established that increases in school size tend to lead to increases in delinquency (Gasper, Deluca & Estacion, 2010; Leung & Ferris, 2008). For example, Leung & Ferris (2008) find lower levels of youth violence in smaller schools. Specifically, students who attend schools with an enrollment over 2,000 experience an increased likelihood of engaging in serious violence by as much as 22% (Leung & Ferris, 2008). Hellman & Beaton (1996) find smaller student-to-teacher ratios to be the most important characteristic of the school environment that can reduce disruption and violence in schools. Additionally, Felson and Staff (2008) find that public school students with lower academic achievement are more likely to engage in delinquency than students who have high academic achievement. Wilcox and colleagues (2009) and Haynie (2002) find delinquent peers to be significantly related to adolescent delinquency (Wilcox et. al, 2009). Specifically, Haynie (2002)

finds the larger proportion of delinquent friends one has the more likely one is to engage in delinquent activities.

Despite this extensive body of literature, there is still a gap in the incorporation of both school-level and individual-level constructs derived from a nationally representative sample of adolescents. School-level constructs refer to different institutional school types, such as private, public, parochial, vocational and alternative, school demographics, composition, school size and student-teacher ratios. Individual-level constructs include, but are not limited to, variables examining delinquent behaviors, attitudes towards investment in one's future, perceptions of school and neighborhood crime and religion's personal importance. This study will contribute to the literature by using a theoretical framework examining the impacts of school-level and individual-level factors on adolescent delinquency.

Structural characteristics of schools are often neglected in research that examines how educational institutions influence adolescent delinquency. Reasons for this neglect derive partly from the lack of studies including more than one type of educational institution with a substantial number of respondents. The main focal variable here that explores institutional setting is school types. Few studies have examined private schools in comparison to public schools. To fill this gap in the literature, this study will use a nationally representative sample of adolescent youth in the U. S. from different educational institutions. Add Health data will be used in order to contribute to a further understanding of delinquency among U.S. adolescents in representative school types. A handful of studies have used Add Health's data set to explore the link between general delinquency and school effects, but the majority of these studies neglect to portion out the different types of educational institutions (Dornbusch et. al, 2001; Hoffman & Dufur, 2008; Harris, Duncan & Boisjoly, 2002). One exception to this is Mocan & Tekin's (2006) cross-

sectional study, which finds Catholic schooling is associated with a reduction in cocaine use and sexual activities of female students in comparison to their female public school counterparts. However their study examines only public and Catholic schools. This study, on the other hand, will look at four different comparison groups, which are private non-religious, parochial, public, and both vocational and alternative schools. Results of reported delinquency will be analyzed in accordance to theoretical constructs.

The primary aim of this research is to investigate if and how the type of educational institution affects adolescent delinquent behaviors, while following a multidimensional theoretical framework. The multidimensional theoretical framework is needed to understand the interplay between the individual characteristics of the adolescent and the structural components of the school the adolescent attends and how this affects delinquent behaviors. This theoretical framework will include components of Coleman's (1988) concepts of social capital such as formal and informal sanctions, integration and regulation, in addition to elements of Hirschi's (1969) social bond theory. This study is designed to test the theoretical arguments of Coleman and Hirschi while examining the effects of institutional-level and individual-level factors on adolescent delinquency.

Theoretical Framework

Coleman's Social Capital

Coleman viewed society as composed of rational thinking actors whose actions are dictated by their surrounding. Therefore, one is a product of one's own environment (Coleman, 1966; Coleman & Hoffer, 1987; Coleman, 1988). To illustrate this definition of society, Coleman pointed to the educational system; explaining that just in the process of attending school, a child is taught how to act and think in accordance with societal norms and regulations

in order to become a productive member of society (Coleman, 1966; Coleman & Hoffer, 1987; Coleman, 1988). To Coleman, the educational system is also an example of a social structure and as such creates an environment for social capital to develop (Coleman & Hoffer, 1987; Coleman, 1988). Social capital is defined by its two main functions as "a part of some aspect of the social structure" and "facilitates certain actions of actors within the social structure," which is created from interaction among people who can facilitate action (Coleman, 1988, pp. S98-S100; Coleman & Hoffer, 1987). In other words, social capital is similar to other forms of capital wherein it is a resource that is productive in maintaining and reinforcing the goals of the societal structure. An example of social capital that reinforces the social cohesion of education is school assemblies that honor those students with high athletic and academic achievements (Coleman & Hoffer, 1987). Similarly, other examples of social capital involving collective events that reinforce educational goals are debate teams, mathematics teams, drama, and music competitions at the regional and state level (Coleman & Hoffer, 1987). This action taken by the individual is external to their self, whereby, society existed prior to the individual's birth and it coercively reinforces and constrains itself through formal and informal sanctions (Coleman, 1966; Coleman & Hoffer, 1987; Coleman, 1988).

Formal & Informal Sanctions

More often than not, in order for one to participate within a social structure, there are certain guidelines and requirements for members to follow in addition to requirements for how the rules will be enforced (Coleman, 1966). Usually enforcement of rules involves formal and informal sanctions. Formal sanctions include written laws and regulations, whereas informal sanctions involve cultural norms encompassing customs, moralities and beliefs (Coleman & Hoffer, 1987; Coleman, 1988; Durkheim, 1895/1982). Formal and informal sanctions vary

depending upon the type of educational institution one is socialized into. When examining informal sanctions, an educational institution that is built on religious dogmas would have different sanctions than an educational institution without basis in religious doctrine. Furthermore, schools that receive state funding must follow state and federal laws and guidelines stipulating separation of church and state. Usually, these types of educational institutions include public, alternative, charter and vocational schools (Bailey & Cooper, 2009; Cooper, 2009; Weinberg, 2009). Private and parochial schools are funded through other sources such as tuition and individual donations. Since the government does not fund private and parochial schools, these institutions are not bounded to the separation of church and state clause and are also not directly affected by budget cuts at the state and federal levels (Cooper, 2009; Weinberg, 2009).

Another example of regulation can be seen in the dress codes and uniform policies of different types of educational institutions. Private and parochial schools uphold strict dress codes specifying the color and type of clothing required for students and faculty to wear; whereas, public and other forms of educational institutions maintain a more relaxed dress code allowing more choices in clothing options for students and faculty (Huss, 2007; Schacter, 2005). Private and parochial school dress codes usually include colored button polo shirts or blouses, sweaters or blazers, khaki pants, or knee length skirts for females (Huss, 2007; Schacter, 2005). Some private and parochial schools provide uniforms for parents to pick up for their kids directly from the school itself (U.S. Dept. Education, 1996). Public and other types of schools' dress codes usually include what is prohibited to wear, anything considered offensive, such as clothing containing skulls, profanity, beer, cigarettes, and shirts that do not cover the stomach region of the body (U.S. Dept. Education, 1996; Gereluk, 2007).

Uniforms: Individuality vs. Collectivity

Interestingly, dress codes, specifically uniforms, have been argued to limit individuation among the students (Wilkins, 1999). Those in opposition to uniforms argue that by making all the students wear the same clothing they are limiting the student's ability to express their own personality by displaying it through their style of clothing (Wilkins, 1999). Those opposed to uniforms suggest violation of first Amendment rights of freedom of expression (Wilkins, 1999). Proponents of uniforms suggest that it encourages self-expression through academics and artistic measures other than clothing. Proponents of the uniforms also argue that by not having a uniform, students are more likely to be distracted and more likely to be consumed with competition to get the newest styles (Huss, 2007; Boutelle, 2008; Firmin, Smith & Perry, 2006). Thus, these proponents of uniforms point to structural components enforcing collectiveness and integration, reflective through uniforms, whereas those who argue against uniforms point to structural components enforcing individuation over integration and collectiveness.

Social Capital & Social Solidarity

Additional resources for social capital found within society are social networks and social ties (Coleman & Hoffer, 1987; Coleman, 1988). These forms of social capital refer to the cultural, family, friends or religious affiliations, which are the bonds that link people together within the social structure (Coleman & Hoffer, 1987; Coleman, 1988). Social solidarity refers to the degree of integration exhibited by society. Religion is a powerful enduring source of social solidarity and operates by maintaining socially desirable results (Greeley, 1997). Take, for example, in some Catholic schools, mandatory religious observances in the form of mass and religious studies classes. These mandatory regular observances reinforce collective consciousness, which in turn strengthens social solidarity through the use of religion (Holy Rosary Catholic School, 2010; Shimabukuro, 2008). Sometimes also found in parochial schools

are mandatory parental involvement and religious education outside of school {i.e., Catechism} (Hallinan, 2002; Holy Rosary Catholic School, 2010; Shimabukuro, 2008). Pedagogical Catholic doctrine encourages faculty to incorporate religious tone and spirituality to all of their classes whenever possible (Shimabukuro, 2008). Catholic education teachers should, throughout their different classes, incorporate the "spirit of God into their lives and, likewise, encourage students' expression of the spirit through their learning" (Shimabukuro, 2008, p. 510; Holy Rosary Catholic School, 2010, pp. 7-8).

The stronger the collective ideations, the more severe and harsh the punishments are to those who violate these beliefs. The strength and severity of the punishments serve as a function used to solidify the institution's standards of regulation and integration (Coleman, Hoffer & Kilgore, 1982; Durkheim, 1895/1982). Take for example, a student in a public school who disrupts class, versus a parochial student who disrupts Morning Prayer or mass by talking to a peer (Holy Rosary Catholic School, 2010). The student who disrupts Morning Prayer or mass would most likely receive a more severe and harsh punishment than the student who disrupts class at another time. Hallinan's (2002) study examining a national representation of U.S. students surveyed in 1996 from both public and Catholic schools finds stricter discipline in Catholic schools than in public schools. Coleman, Hoffer and Kilgore (1982) find school policies in Catholic and non-Catholic private schools lead to greater amounts of homework, lower absences and better discipline in comparison to public schools. Hallinan (2002) suggests that stricter discipline found in Catholic schools provides an orderly environment conducive to learning and in turn this atmosphere enriches higher academic achievement. Taking the prior into consideration, public schools and other educational institutions that do not maintain a strong

collective conscience would possess lower social capital, weaker social solidarity and a lack of a cohesive collective ideation, therefore, resulting in higher levels of delinquency.

Communal Schools

Applying Coleman's macro-level theoretical framework to this study's examination of school type and delinquency, schools are a reflection of the community in which they are located and as communities vary in regulation and integration, so do different educational structures (Coleman, 1966; Coleman & Hoffer, 1987; Durkheim, 1895/1982, p. 54). Societal educational structures whose environment is one of a communal type tend to have smaller student populations, common norms and goals, along with more students involved in community and school activities. Communally organized schools tend to encourage student bonding, resulting in lower levels of deviance and delinquency (Payne, 2008; Payne et al., 2003; Hoffman & Xu, 2002; Leung & Ferris, 2008). Normally, private and parochial schools maintain smaller class sizes and racial homogeneity {with the majority of the student population being white} (Bankston & Caldas, 2000; Hallinan, 2002). The student body size and the teacher to student ratio has been shown to be a significant factor when examining deviance and delinquency; wherein, as student body increases, concurrent increases were found in delinquency (Chen, 2008; Gasper et. al., 2010; Hellman & Beaton, 1996; Leung & Ferris, 2008). School homogeneity and smaller class sizes allow for more social solidarity, which in return increases social control. As a school experiences increasing heterogeneity, break down in regulatory functions tend to follow, resulting in increases in delinquency.

Communal schools, thus, provide a balance of integration and regulation, whereas, non-communal schools would maintain an imbalance between integration and regulation. This non-communal environment is not conducive to learning. Support for balanced integration and

regulation has been shown in studies that find schools in which the students perceive the rules as fair and clear have lower levels of deviance and delinquent behavior, along with lower levels of student victimization (Coleman et. al., 1982; Gottfredson et. al., 2005; Kirk, 2009). In other words, when students perceive the rules as fair and impartial, then they are more apt to integrate into the system and follow the rules of the school. Additional support for communal schools and their positive influence on academic achievement is documented in the research (Dronkers & Robert, 2008; Gibbins & Bickel, 1991; Newmark, 1995). Academic performance and academic achievement are linked with delinquency in that research finds higher academic performance and achievement to have a negative effect on delinquency (Maguine & Loeber, 1996). Researchers find that lower academic performance is associated with onset, frequency, escalation and severity of delinquent behaviors (Maguine & Loeber, 1996). Likewise, research has indicated students with lower academic achievement also maintain higher levels of delinquency in comparison to students with high academic achievement. Maguine & Loeber's (1996) meta-analysis examining over 115 studies from 1950 to 1994 found those with lower academic achievement were more likely to offend and to offend more frequently than those with higher academic achievement. Therefore, schools that maintain a communal environment should see lower levels of delinquency than those educational institutions that do not maintain a balance, because they should reflect higher levels of achievement.

According to Coleman, religion is also a communal institution that reinforces moral beliefs and commitment to the beliefs and the collection of norms associated within membership (Coleman, 1966; Durkheim, 1912/1995). Here, by incorporating private religious educational institutions into the research study for a comparison, I am able to examine the school-level factors related to regulatory capacity as they influence delinquency. Previous research, while

investigating religion's impact on adolescent delinquency, has argued for the inclusion of more than one measure of religion in order to parcel out the true effect religion has on delinquency (Johnson et al., 2000; Regnerus, 2003). Moreover, looking at religious institutions and amount of time one attends church is under-estimating the true impact of religion (Cohen-Zada, 2007). Scholars argue for including a measure of religion's personal importance, in order to get a full picture of the individual's integration into the particular educational institution (Cohen-Zada, 2007; Johnson et al., 2000). Thus, one would expect parochial students in Catholic schools to be more integrated into the school and thus exhibit the lowest levels of delinquency.

Hirschi's Social Control Theoretical Framework

Creating a theoretical framework in which to study integration and regulation at an individual-level is the social control theorist Travis Hirschi (1969). Hirschi proposed certain elements needed to be present in order for one to be bonded to society or socially integrated in order to become a contributing member of society. Although students are considered captive audiences to their teachers, students are independent active participants in the learning process, which is located within the confines of the educational structure they attend. Hirschi's bonds start in the family.

Hirschi's Attachment

Hirschi's first element of the bond, "attachment," refers to one's emotional ties to others in society, especially the connection one has with their parents and other primary groups. One has developed attachment when they have "internalized the norms of society" and have adapted them as a template for proper behavior (Hirschi, 1969, p. 220). As bonds are built between parent and child through interactions, the same process occurs for students and their bond to their educational institution. Attachment to school refers to student's perception of their level of

belonging to their school, wherein they perceive a sense of connectedness and of comfort in the atmosphere of their school (Bergin & Bergin, 2009; Liljeberg et al., 2011; Loukas, Suzuki & Horton, 2006; Payne et al., 2003; Singh, Chang & Dika, 2010). Benefits of attachment to school include socio-emotional components such as willingness and enjoyment to attend the educational institution. This positive disposition has been found to be conducive to learning (Bergin & Bergin, 2009; Liljeberg et al., 2011). Students, on the other hand, who are not bonded to their educational institution frequently report a sense of anomie, which in turn, produces an attitude non-conducive to learning (Bergin & Bergin, 2009). Teachers who provide students with a secure environment that fosters support, understanding, fairness and caring are also allowing for students to form an attachment with their teachers (Bergin & Bergin, 2009; Liljeberg et al., 2011). Students who are attached to teachers tend to maintain higher academic achievement and performance, which is negatively associated with delinquency (Bergin & Bergin, 2009; Liljeberg et al., 2011). Recent studies examining adolescent bonds, particularly in regards to school and teacher bonding, find this type of bonding to have a protective effect for both male and female students against delinquency (Liljeberg et al., 2011; Payne & Gottfredson & Gottfredson, 2003; Payne, 2009).

Educational institutions and personnel need to keep a delicate balance of integration and regulation in order to provide a positive environment for student bonding; any imbalance can cause a weakening of student's attachment to their school and their teachers. An example of this imbalance is illustrated by a teacher who is more concerned with controlling and disciplining students, and is therefore less concerned (and has less time for) with teaching (Bergin & Bergin, 2009). Thus, one would expect to find that a large focus on discipline would lead to students' weak bonds to school, resulting in a tendency for higher rates of delinquency. Public schools

tend to have larger student populations and class sizes, which makes discipline and integration more difficult.

Hirschi's Belief

Another component of Hirschi's elements to the bond is entitled "belief" that references the common value system within society, yet this value system maintains variations "in the strength of moral beliefs" held by those within (Hirschi, 1969, pp. 223-225). Beliefs examined from the context of societal norms and laws have found that adolescents who believe these are necessary and are of an importance to obey are less likely to engage in violence and reoffend (Benda & Turney, 2002; Longshore, Chang & Messina, 2005). Adolescents who value societal and educational norms and laws are less likely to engage in delinquency because they understand the importance assumed by them.

Particularly of interest, religious belief and involvement refers to the importance adolescents place on religion and the number of activities they engage in. Researchers have established religious belief and involvement as being negatively associated with adolescent deviance and delinquency (Baier & Wright, 2001; Johnson et al., 2000; Regnerus, 2003; Regnerus & Elder, 2003). Since religious integration at the individual level includes participation in religious organizations and activities, in addition to the importance one holds personally in regards to religious moral teachings, it would suggest a high level of belief among its students. Thus, one would expect that since parochial schools encourage adherence to religious doctrine within thier structure, they would have higher levels of student bonding than any other educational types. This higher level of bonding through belief suggests that parochial schools would maintain lower levels of delinquency than other types of schools.

Hirschi's Commitment

A third component of the bond is "commitment," referring to the amount one has invested in society, wherein the fear of consequences for engagement in delinquent behaviors outweighs the rewards associated with the delinquent behavior (Hirschi, 1969, p. 222). This component of the bond is related to scholarly work looking at adolescents' attitudes towards deviant behaviors. Studies support Hirschi's assertion that a weak commitment to societal norms and regulations are significant predictors of deviance and delinquent behaviors (Benda & Turney, 2002; Liljeberg et al., 2011; Longshore et al., 2005; Payne, 2009). Adolescents who place value on their schoolwork and have future ambitions involving academic advancement are those less likely to risk these goals by engaging in delinquent behaviors; whereby, the fear of losing these opportunities outweighs the gains associated with delinquent activities (Payne, 2003). Since commitment has at its roots a fear of negative repercussions and has been found to have a negative association to delinquent behaviors, logically then, commitment can be viewed as having a protective or a deterrence effect. Because parochial and private schools are more likely to have more informal regulation and harsh sanctions, then their students should exhibit higher levels of commitment, and thus, lower levels of delinquency.

Hirschi's Involvement

"Involvement" is another one of Hirschi's elements of the bond. This refers to the idea that if adolescents are left to their own devices they will engage in delinquent behaviors (Hirschi, 1969, p. 222). This element of the bond incorporates structured and monitored organizational activities and groups. This component of the social bond has received mixed support. Most studies find that adolescent youth who engage in structured activities have lower risks of engagement in deviant and delinquent behaviors (Denault & Poulin, 2009; Cernkovich &

Giordano, 1992; Hoffman & Xu, 2002). Denault & Poulin's (2009) research specifically examined intensity and breadth of organizational activities of youth in relation to deviant behavior and found those youth who are engaged in said activities at high levels maintained more "positive value towards society" (pp. 1211-1212). Other scholars have noted that school activities affect delinquency differently based upon the racial composition of the school. As such, African American students who participate in school activities in a school with a high minority composition are found to be involved in more delinquency (Hoffman & Xu, 2002). On the other hand, some literature was unable to find any significant effect of school activities on delinquency measures (Lee & Cohen, 2008). Perhaps the specific type of involvement is what is spurring the mixed results by scholars; therefore, this study may shed light by exploring the type of involvement adolescents engage in and its relationship with delinquency. Separating religious involvement from other involvement should contribute to research on the influence of involvement on delinquency.

Involvement also refers to parental monitoring and finds that those who monitor their children reduce the risk their child will engage in deviant behaviors (Coley & Votruba-Drzal, 2009; Lohman & Billings, 2008; Wilder & Watt, 2002). Additionally, involvement can refer to teacher monitoring, wherein schools with smaller population size provide an environment for informal social control in classes with smaller teacher student ratio, most commonly seen in private and parochial schools. Given these arguments, students who attend private and parochial schools should be less likely to engage in delinquency than students in all other types of educational institutions.

CHAPTER II. PRESENT STUDY

Hypotheses

Social solidarity is more likely to be found within private and parochial institutions, which exhibit higher levels of homogeneity and more social control, than in public and other educational institutions. Public and other educational systems maintaining high levels of heterogeneity tend to be characterized by a breakdown in regulatory functions, resulting in more delinquency than in private and parochial educational institutions. Private and parochial schools are most likely to maintain a cohesive balance between integration and regulation. Thus, I hypothesize that students in private and parochial schools will have lower levels of delinquency in comparison to students in other school types. Integration and regulation dictate that those educational institutions that provide high levels of formal regulations and low levels of integration, such as public and other types of schools, will result in an environment conducive to higher levels of delinquency. Those educational institutions that provide high levels of informal regulation and high levels of integration, such as that found in private and parochial schools, will result in an environment conducive to lower levels of delinquency.

Hirschi's social control elements are used in order to provide a theoretical framework for individual level constructs investigating the relationship between delinquency and adolescent bonds. Therefore, those who are more attached to their school and their teachers are thus bonded to the school. In terms of Hirschi's belief component, parochial educational institutions are more likely to have higher levels of belief and integration among students than all other types of educational institutions, resulting in parochial students reporting the lowest levels of delinquency. Similarly, considering Hirschi's commitment element of the bond relating to devotion to normative institutions and those who attend educational institutions that foster lower

levels of commitment to academic goals, are more likely to have higher levels of delinquency, as is the case for public and alternative school types. Following Hirschi's involvement element of the bond, those students who are more involved in structured school activities would be less likely to engage in delinquency as is the case for private and parochial school students. Given the prior, I hypothesize that students from private and parochial schools will have higher levels of Hirschi's bond elements than students from public and vocational/alternative schools. School type affects bonding by providing an atmosphere either conducive to or not conducive for bonding, by allowing opportunities for attachment, commitment, involvement and belief, through a cohesive social solidarity. Therefore, I hypothesize that the elements of the bond mediate the influence of school type on delinquency. In order to illustrate this studies' theoretical framework a path diagram is provided in Figure 1.

Data

The following analysis utilizes waves I and II of the National Longitudinal Study of Adolescent Health (Add Health) conducted by the Carolina Population Center at the University of North Carolina at Chapel Hill. Since Add Health's data are focused upon American youth ranging from seventh to twelfth grade, it encompasses the adolescent ages of 12 to 18 years. In order to produce a nationally representative sample, systematic sampling methods were undertaken, wherein the possible schools were sorted by size, school type, region, level of urbanization and racial composition. From September 1994 through April 1995 students who attended 132 selected schools (80 high schools and 52 middle schools) were given an in-school questionnaire resulting in 90,118 adolescent participants. The cluster sample design encompasses all students from participating schools and was followed by stage two of data collection for Add Health. During stage two of the first wave, a stratified random sample was drawn from the initial

list of participants for a more in depth survey to be completed in the adolescent's home. The wave I in-home interview of Add Health is a nationally representative sample of 20,745 American youth with data collection occurring from April through December 1995. This sample includes oversamples of Chinese, Cuban, Puerto Rican and African Americans with college-educated parents. The majority of the interviews were completed in the adolescents' home with the use of laptop computers that provided participants with audio capabilities for more sensitive questions, which also cut down on time and mistakes due to misreading. Wave II includes a sample of wave I youth except those who were in the twelfth grade or not part of the genetic sample. Wave II data collection occurred from April through August 1996 (about a year after the initial in-home interviews) with a representative sample of 14,738 adolescents. In addition to adolescent questionnaires, other participants who were administered questionnaires at waves I and II were school officials and parents. This study's analysis uses the adolescent, school administration and parental responses because the focus is upon the relationship between school type and adolescent delinquency, specifically examining the mediating role of social bonds.

Measures

Dependent Variables

Adolescent Delinquency: The two dependent variables for analysis come from Wave II of the in-home interview and are separate constructs labeled non-violent delinquency and violent delinquency (see Dornbusch et. al., 2001).

Non-violent delinquency: This measure is created from a series of questions from the adolescent in-home survey asking respondents to report how often they engaged in the following non-violent delinquent activities during the past 12 months: "Paint graffiti or signs on someone else's property or in a public place"; "Deliberately damage property that didn't belong to you";

"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 $50.00"; "Go into a house or building to steal something"; "Sell marijuana or other drugs"; and "Steal something worth less than $50.00." These nine variables are recoded so that a value of 1 indicates that the adolescent engaged in said behavior, whereas a value of 0 suggests no involvement. After recoding, these nine items are summed together to create a count variable with larger numbers indicating the respondent is involved in multiple non-violent delinquent behaviors [range: 0-9]. Cronbach alpha is 0.75.

Violent delinquency: This measure is created from a series of questions from the adolescent in-home survey asking respondents to report how often they engaged in the following violent delinquent behaviors during the past 12 months: got "into a serious physical fight"; "hurt someone badly enough to need bandages or care from a doctor or nurse"; "use or threaten to use a weapon to get something from someone"; "take part in a fight where a group of your friends was against another group"; "you pulled a knife or gun on someone"; and "you shot or stabbed someone." These six variables are recoded so that a value of 1 indicates that the adolescent engaged in said behavior, whereas a value of 0 suggests no involvement. After recoding, these six items are summed together to create a count variable with larger numbers indicating the respondent is involved in multiple violent delinquent behaviors [range: 0-6]. Cronbach alpha is 0.67.

Independent Variables

School Types

Public Schools: This measure is created from a series of questions from wave I of the school's administrative survey, which asked whether their school is a comprehensive public

school, a public magnet school, or a public school of choice [1= yes, 0= no]. The public school sample is comprised of 10,973 adolescent participants. *Private Schools*: This measure is formed from a series of questions of the school's administrative wave I survey, asking if their school type was a private school with no religious affiliation and if their school was a boarding school [1= yes, 0= no]. These two variables were combined to net 257 participants within this category. *Religious/Parochial Schools*: This measure is comprised from wave I of the school administration's survey asking if their school type was Catholic diocesan, Catholic parish, Catholic religious order or other private religious affiliation [1= yes, 0= no]. There are 619 participants within the religious/parochial schools variable. *Other Schools*: This measure is created from a series of questions asked of the school's administration at wave I who answered that their school type was an alternative school, a year around school, an area vocational school or other technical or vocational school [1 = yes, 0 = no]. This variable resulted in a total of 892 survey participants.

School Regulation and Structure

Dress Code: This measure is created from a series of six questions asked across grades 7 through 12 of the school's administration at wave I on whether or not they have a dress code students must obey [1= yes, 0= no]. *Average Class Size:* This measure is created from a question asked of the school's administration at wave I to report what their average class size is for their school [range 10-39]. *Full-Time Teachers with 5 years +:* This measure is created from a question asked of the school's administration at wave I to report what proportion of full-time teachers have worked for their school for 5 years or more [range 0-100]. *Family involvement in PTO:* This measure is created from a question asked of the school's administration at wave I to think about all of the students at your school to report what percentage of students have family

members in the parent-teacher organization or other organizations for parents [range 1-100]. *Discipline:* This measure is created from questions asked of the school's administration at wave I to identify what punishments are deemed as protocol for students who violate rules and regulations set by the school. This measure asks a range of possible disciplinary actions from no policy to expulsion (see Appendix A) for such things as: cheating, fighting with students or teachers, possessing and consuming alcohol, possessing and consuming illegal drugs, smoking on school property, verbal and physically injuring of a student or teacher, stealing school property and possession of a weapon on school grounds. These responses are summed together then the mean is taken to reflect the overall disciplinary environment of the school [range 0-5]. Cronbach alpha is 0.74.

Social Control

Attachment to school: School attachment is created from questions examining school attitudes and a respondent's connection with teachers and his or her school. At wave 1, students were asked how strongly they agree with the following statements: "You feel close to people at your school," "you are happy to be at your school," "you feel like you are part of your school," "the teachers at your school treat students fairly," "you feel safe in your school," and lastly "students at your school are prejudiced." This last variable was reverse coded so that a response of 1 indicates strongly agree and a response of 5 indicates strongly disagree. These responses are summed together then the mean is taken to reflect the student's overall attachment to their school [range 1-5]. Cronbach alpha is 0.74. *Attachment to adults:* This measures the amount of care the adolescent feels from adults in their life. At wave 1, adolescents were asked: "how much do you feel that adults care about you," "how much do you feel that your teachers care about you," "How much do you feel your parents care about you," "how much do you feel that people in

your family understand you." These four variables are coded so that a response of 1 indicates not at all to a response of 5 indicating very much. These responses are summed together then the mean is taken to reflect the student's overall attachment to adults in their life [range 1-5]. Cronbach alpha is 0.65.

Commitment: This measure is created from questions regarding the adolescent's academic grades. Adolescents were asked the following questions during the in-home survey: "at the {most recent grading period/last grading period in the spring}, what was your grade in English or Language arts," "and what was your grade in mathematics," "and what was your grade in history or social studies," "and what was your grade in science." These four variables were recoded so that a value of 4 indicates an A grade and a value of 1 indicates a D grade. These responses are summed together then the mean is taken from graded courses reported to reflect the student's overall grade point average [range 0-4]. Cronbach alpha is 0.74.

Involvement: This measure refers to the number of extra curricular school and community activities and is measured at Wave I asking adolescents to mark the clubs, organizations and teams to which they belong or plan to belong to for the current school year. This involvement measure is coded so that higher scores indicate more involvement in extra curricular activities, ranging from scores of: 0 meaning no activities at all to a maximum of 10. Cronbach alpha is 0.70.

Religious Importance: This scale is comprised of the following questionnaire items: "In the past 12 months, how often did you attend religious services?"; "In the past 12 months how often do you pray?"; "Many churches, synagogues, and other places of worship have special activities for teenagers—such as youth groups, Bible classes, or choir. In the past 12 months, how often did you attend such youth activities?" These questions are reverse coded with higher

scores representing more times one attends religious events [1 = Never, 2 = less than once a month, 3 = greater than once a month but less than once a week, 4 = once a week or more]. Another question is reverse coded with higher scores indicating religion being of high personal importance: "How important is religion to you?" The responses to this question range from a score of 1 meaning "not important at all", to 4 meaning "very important." These four variables are all standardized before scale construction and the mean according to school type is reported. Cronbach alpha is 0.67.

Control Variables

Age: This measure is a continuous variable measured in years constructed from the birth year and the date of the in-home wave I survey; respondents range from 12 to 18 years of age.

Gender: This measure as a dichotomous variable with males = 1 and females = 0.

Race/Ethnicity: This measure is composed of four dummy variables (non-Hispanic black, Hispanic, non-Hispanic white and other), which are derived from the in-home adolescent survey from Wave I asking the respondent to identify their race and ethnicity. Other refers to those adolescents who identified themselves as American Indian/Native American, or Asian or Pacific Islander. Non-Hispanic white is the comparison group.

Family Socioeconomic Status: This measure is assessed by two variables constructed from a series of questions from the Wave I parent in-home survey: parental education and parental occupation. Two separate 5-category scales were created combining their educational level and occupation, resulting in a final range of scores from 1-10.

Prior Non-violent delinquency[2]*:* This measure is created in order to control for previous non-violent delinquency with the same items as the outcome measure, but is taken from Wave I of the survey. Cronbach alpha is 0.79.

Prior Violent delinquency: This measure is created in order to control for previous violent delinquency with the same items as the outcome measure, but is taken from Wave I of the survey. Chronbach alpha is 0.74. The analytic sample for this study is comprised of only respondents who were interviewed at both waves I and II and include only those who have valid data on all measures, after mean imputation[3] was completed as needed, which resulted in a total sample size of 12,741. Adolescents who did not answer or had an invalid answer to the question regarding gender were deleted from this study (n = 16).

Analytic Strategy

The primary focus of this study is to investigate the influence of school type on two forms of adolescent delinquent behavior. It is proposed that attending a parochial school will have a positive influence on social bonds that may ultimately result in less delinquency involvement compared to youths who attend other school types. Particular emphasis is placed on how social bonding mediates the effect of school type. To explore links between school type, social bonds and adolescent delinquency, initial descriptive statistics are provided in Table 1. Furthermore, mean comparisons for all variables are presented for the four school types.

The distributions of the delinquency indices exhibit a large positive skew, wherein the variance is greater than the mean. Because the dependent measure is positively skewed it violates the normality assumption of OLS regression (See, e.g., Haynie, 2002). Therefore,

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[2] Regression models were run without prior non-violent and violent delinquency measures and the suppression effects were still found.

[3] Mean imputation was used on the following variables: age, family socioeconomic status, full-time teachers with 5 or more years of experience, student's family members part of parent teacher organizations, attachment to school, attachment to adults, commitment [GPA], and religious importance.

negative binomial regression will be used because it is designed for highly skewed count variables (DeMaris, 2004, pp. 364-370). Then using negative binomial regression, this study analyzes how school type influences delinquency, by particularly looking at the mediating factors of social bonds. For the above analysis the following models will be tested. Model 1 in Table 2 will regress current non-violent delinquency on school types and prior non-violent and violent delinquency. In model 2 sociodemographic control variables such as the adolescent's gender, age, race, and family socioeconomic status are added to the first model. In model 3, non-violent delinquency is regressed on the school level variables (in addition to the variables from models 1 & 2) in order to examine integration and regulation, which are average class size, proportion of teachers with five or more years of experience, discipline, dress codes and PTO involvement. Model 4 regresses non-violent delinquency on all variables in model 3 and the focal mediating variables of social control and bonding which are, attachment, commitment, involvement and religious importance. Table 3 Models 1 through 4 will replicate Table 2's models but with violent delinquency as the outcome measure.

CHAPTER III. RESULTS

Descriptive Statistics

Table 1 presents descriptive statistics for all study variables, including means/proportions, standard deviations and significant differences for the different school types and the full sample. In the present study, when examining prior and current delinquency, private school students reported significantly lower levels of prior non-violent delinquency and violent delinquency and current non-violent delinquency than public and parochial school students. Private school students also reported significantly lower levels of current violent delinquency compared to public, parochial and vocational/alternative school students.

In terms of social control variables, there are significant differences for all of them by school type. In particular, youths from public schools score significantly lower on most measures, compared to those from private and parochial school students. Youths from private and parochial schools have similar levels of attachment and commitment, while students in private schools score higher on involvement than students in all other school types. Not surprisingly, parochial students have significantly higher levels of religious importance than students in all other school types.

Within school-level variables, all students who attend private and parochial schools have to adhere to dress codes, compared to significantly fewer youth who attend public and other school types. Those youths who attend public schools have larger classes than all other school types. There is more teacher stability at private schools than all other schools. Youths who attend public schools experience far less parental involvement in PTOs than those in all other school types. Students in parochial schools face harsher discipline than youths in all other school types.

Approximately 86% of students in this sample attend a public school, 2% attend a private school, 4.9% attend a parochial school and 7% attend a vocational or alternative school. Among the demographic factors, gender is equally distributed for all school types except for private schools, which have a larger percentage of female students than male students. The average age for students in vocational/alternative is closer to 17 years old, whereas the average age for students in private, parochial and public schools is closer to 16. Private and parochial schools have a significantly larger white student body than public schools, whereas public schools have a significantly larger Hispanic and African American student body than all other school types. Youths attending private schools come from significantly higher family socioeconomic backgrounds than those attending public and vocational/alternative schools.

Multivariate Results

Preliminary analyses indicate that private school students report the fewest delinquent behaviors than any other school type; therefore, private schools will be used as the comparison group. Table 2 presents the negative binomial regression results examining the relationship between school type and non-violent delinquency, controlling for a variety of individual factors including demographics, prior non-violent and violent delinquency, school level variables and social control variables. In Model 1, non-violent delinquency is regressed on the key independent variable, school types, along with prior non-violent and violent delinquency. Although school type is not significant, the difference in the logs of non-violent delinquent acts is expected to be 0.388 units higher for those students who engage in prior non-violent delinquency, while holding all variables constant ($p < .001$). Following the statistical logic of Osgood (2004), after taking the exponent of 0.388, subtracting one from it and multiplying the result by 100, I find that for every unit increase in prior non-violent delinquent acts, students

engage in 47% more non-violent delinquent acts. Likewise, students who previously engaged in violent delinquent acts engage in 6% more non-violent delinquent acts compared to those students with no prior violent delinquency.

In Model 2 of Table 2, factors of gender, age, race and family socioeconomic status are added. Once again prior non-violent and violent delinquency remain significant. The difference in the logs of non-violent delinquent acts is expected to be 0.137 units higher for males compared to females ($p < .001$). I find that males engage in 15% [(e^(0.137) — 1) * 100] more non-violent delinquent acts than females, net of all variables in the model. Furthermore, with each additional year increase in age, youths involvement in non-violent delinquent acts decreases by 6% ($p < .001$). In comparison to white students, Hispanic students engage in 17% more non-violent delinquent acts ($p < .01$), while there are no significant differences between whites and either blacks or "other" racial categories. Interestingly, as family socioeconomic status increases, non-violent delinquent acts increase by 2% ($p < .01$).

In Model 3 of Table 2, the school level variables are added. Difference in the logs of non-violent delinquent acts is expected to be 0.257 units higher for those students who attend public schools, while holding all other variables constant ($p < .05$). In other words, students who attend public schools engage in 29% more non-violent delinquent acts than students in private schools. Model 3 also finds that students who have a dress code engage in 32% more non-violent delinquent acts than those students who do not have a dress code ($p < .001$). Additionally, non-violent delinquent acts decrease by 0.3% and 0.4%, respectively, as both the proportion of full-time teachers with 5 or more years of experience and the number of family members who are part of PTOs increase ($p < .001$). Finally, Model 3 suggests that for every increase in the severity of discipline, non-violent delinquent acts decrease by 16% ($p < .01$).

In Table 2 Model 4, non-violent delinquency is regressed on the focal mediating social control variables. Findings indicate a suppressor effect working through the social control variables, which illuminates the differences between private schools and the other school types. Specifically, in comparison to private school students, public school students engage in 32% more non-violent delinquency; while parochial and vocational/alternative school students engage in 34% more non-violent delinquent acts than private school students ($p < .05$). Thus, because private school students' score significantly lower on the social control measure religious importance than the other schools' students, and this measures significantly reduce non-violent delinquency, it is not until this variable is included in the model that differences in school types emerge. For every unit increase in student's attachment to adults, non-violent delinquent acts decrease by 24% ($p < .001$), and for every unit increase in student's reported level of religious importance, non-violent delinquent acts decrease by 15% ($p < .05$). Also, for every point increase in GPA, students engage in 5% fewer non-violent delinquent acts ($p < .05$).

Table 3 presents the negative binomial regression results examining the relationship between school type and violent delinquency, controlling for a variety of individual factors including prior non-violent and violent delinquency, demographics, school level variables and social control variables. In Model 1, violent delinquency is regressed on the key independent variable, school types, along with prior non-violent and violent delinquency. In comparison to private school students, public school students, parochial school students and vocational/alternative school students engage in 55%, 59% and 57% more violent delinquent acts ($p < .01$). As expected, for every unit increase in prior non-violent delinquent acts, students engage in 9% more violent delinquent acts ($p < .001$) and for every unit increase in prior violent delinquent acts, students engage in 64% more violent delinquent acts ($p < .001$).

In Model 2 of Table 3, gender, age, race, and family socioeconomic status are added. The results show that males engage in 54% more violent delinquent acts compared to females, net of all other variables ($p < .001$). Furthermore, with each additional year increase in age, youths' involvement in violent delinquent acts decreases by 3% ($p < .01$). In comparison to white students, African American students, as well as Hispanic and other students, engage in 32% ($p < .001$), 28% ($p < .001$) and 17% ($p < .01$), respectively, more violent delinquent acts. As family socioeconomic status increases, violent delinquent acts decrease by 2% ($p < .01$).

In Model 3 of Table 3, violent delinquency is regressed on the school level variables while holding all the above prior variables constant. Results find that students who have dress codes engage in 15% more violent delinquent acts than those students who do not have dress codes ($p < .05$). Conversely, violent delinquent acts decrease by 0.2% as the number of family members who are part of PTOs increases ($p < .05$).

In Table 3 Model 4, violent delinquency is regressed on the focal mediating social control variables. With the addition of this block of variables, school types' coefficients increase in magnitude, while the significance of family socioeconomic status diminishes to insignificance. Looking specifically at the social control variables, for every unit increase in students' attachment to adults violent delinquent acts decrease by 19% ($p < .001$), and for every point increase in GPA, students engage in 17% fewer violent delinquent acts ($p < .001$). Moreover, with every unit increase in religious importance violent delinquent acts decrease 11% ($p < .001$).

CHAPTER IV. DISCUSSION & CONCLUSION

Previous research has neglected exploring adolescent delinquency by incorporating both school level and individual level constructs. Rather, prior research on adolescent delinquency has focused primarily on students from public schools and briefly utilizes parochial school students as a comparison group. Being able to utilize the Add Health data has given me a unique opportunity to fill this gap in the research literature, wherein four different school types are analyzed.

I find partial support for my hypothesis, which proposed that students in private and parochial schools will have higher rates of integration and regulation in comparison to students in public and vocational/alternative schools, whereby, providing an atmosphere conducive for learning while at the same time, discouraging delinquent activities. At the bivariate level students in private and parochial schools were found to have the same rates of students' family members participating in PTO and dress code requirements. At the multivariate level dress codes are found to increase both nonviolent and violent delinquency. This finding suggests future research needs to explore this finding further into the debate on integration and collectiveness. At the bivariate level, private school students had more experienced teachers and the lowest levels of harshness in discipline than parochial, public and vocational/alternative schools. Parochial schools had the least experienced teachers and the highest levels of harshness in discipline in comparison to the other school types. And when controlling for these school level variables, public school students reported significantly higher rates of nonviolent delinquency than students in private schools. Similarly, private school students reported the least amount of violent delinquency than students attending a public, parochial and vocational/alternative schools. This finding supports previous

research that examines the effects a communal school atmosphere has on delinquency (Payne, 2008; Payne et al., 2003; Hoffman & Xu, 2002; Leung & Ferris, 2008).

I find partial support for my hypothesis that students from private and parochial schools will have higher levels of Hirschi's bond elements than students from public and vocational/alternative schools. At the bivariate level students from both private and parochial schools reported the higher levels of the following bond elements: attachment to school, attachment to adults, commitment and involvement. Additionally, at the bivariate level parochial students reported the highest rates of religious importance than any other school type. At the multivariate level, when controlling for attachment to school, it was found not significant for either nonviolent or violent delinquency. And when controlling for attachment to adults, it was found to be significant for both nonviolent and violent delinquency. This finding supports previous research on the effects attachment to adults has on delinquency (Bergin & Bergin, 2009; Liljeberg et. al., 2011). This analysis suggests that attachment to adults, but not attachment to school, decreases nonviolent and violent delinquency. And when controlling for religious importance it was found to be negatively associated with delinquency. This is an important finding because it supports previous literature, which states religious belief and religious involvement decreases delinquency (Baier & Wright, 2001; Regnerus, 2003; Regnerus & Elder, 2003). At the bivariate level private school students and parochial school students maintain the same high grade point average in comparison to public and vocational/alternative school students. At the multivariate level when controlling for commitment to academic goals it is found to be significant to both nonviolent and violent delinquency. This finding supports previous research that those who are more committed to academic goals engage in fewer delinquent activities (Benda & Turney, 2002; Liljeberg et al., 2011; Longshore et al., 2005;

Payne, 2009). When controlling for Hirshi's involvement element of the bond, it is found not significant for both nonviolent and violent delinquency. This is an important finding because although involvement was found not significant, it does support some previous research findings (Lee & Cohen, 2008).

In my final hypothesis, I predicted that school type affects bonding by providing an atmosphere either conducive to or not conducive for bonding; by allowing opportunities for attachment, commitment, involvement and belief, through a cohesive social solidarity. Therefore, I hypothesized that the elements of the bond mediate the influence of school type on delinquency. As in the regression on nonviolent delinquency, findings indicated a suppressor effect working through the social control variables, which illuminated the differences between private schools and parochial, public and vocational/alternative school types. Thus, because private school students' score significantly lower on the social control measure religious importance than the other schools' students, and this measures significantly reduce delinquency, it is not until this variable is included in the model that differences in school types emerge for nonviolent delinquency or, in the case of violent delinquency increase in magnitude. A possible explanation for attachment to adults in regards to the suppression effects is that this measure assumes all adult influence is of a non-delinquent nature. However, according to differential association/learning theory, individuals can be attached to other delinquent and/or criminal persons, which could include both parents and teachers. For example, Giordano (2010) finds criminal propensity is passed on from one generation to another. Sampson & Laub (2005) find that adolescents with criminal parents are more likely to be criminal and this finding is particularly robust for both black adolescents and adolescents from single parent households. A possible explanation for commitment in regards to the suppression effect is that adults who are

important to the adolescent and are criminal tend to not praise their adolescent for academic achievement whereby, negatively effecting the adolescents self-esteem which in return increases the likelihood of the adolescent engaging in delinquent activities (Owens, 1994).

While some research may posit that baseline differences in delinquency may be due to differential selection of adolescents into various school types by their parents, and while such reasoning is demonstrated when looking at initial models in this study, a selection argument does not fully account for such differences. Specifically, even after "selecting into" different types of schools, factors associated with the school, both at the structural and individual/social level, continue to matter. This study finds that dress codes, experienced full-time teachers, student's family members involved in PTO and discipline, attachment to adults, commitment and religious importance, are still significant after selecting into the school. Thus, future research along this line should continue to examine these variables and other mechanisms that may contribute to delinquency that are not listed here. Such factors may include, but are not limited to, the type of adults adolescents are attached to (Giordano, 2010; Sampson & Laub, 2005), as well as how social psychological principals of the adolescents themselves, such as self-esteem and self-efficacy mediate or interact with those variables traditionally assumed to affect delinquency (Owens, 1994), i.e., race, gender and family socioeconomic status. Many scholars have found peers and friendship networks to be significant influences on adolescent delinquent behaviors (Haynie, 2001; Haynie, 2002; McGloin, 2009; McGloin & O'Neil, 2009; Thornberry et. al., 1994; Warr & Stafford, 1991). For example, Haynie (2001) found adolescents are more likely to be delinquent if they have delinquent friends; and McGloin & O'Neil (2009) found that even after controlling for prior delinquency, adolescents association with delinquent peers increases their delinquency. Thus, future research should examine how peers influence the relationship

between school type and delinquency; because the majority of friend relationships adolescents make are found within the school they attend. Future research should utilize the peer networking units the Add Health data has to offer in addition to the different school types adolescents attend. Additionally, incorporating qualitative data may lend further insight to those findings, which at first may seem counterintuitive, such as the suppression effects that can only be hypothetically explained here.

As with many research studies, this study has certain limitations that must be addressed. One limitation is in regards to the small sample size of private school students. While the sample size is large enough to run negative binomial regression (n = 257), the small number, also being limited to just one region, may limit the generalizability of results. However, this study is an improvement over past studies, which have chosen to only utilize the public and parochial schools (Mocan & Tekin, 2006; Hoffmann & Durfur, 2008). Thus, while it may be difficult to generalize these results to all private schools, the results presented here do lend some initial insight into the relationship between various school types and juvenile delinquency. Further research using both Add Health and other data is needed in order to provide support for the analyses presented here, as well as to better understand the exact mechanisms at play in such a relationship.

A more precise measurement of the school's level of socioeconomic status than what is available in these data would be useful in further teasing out the effects the schools' climate may have on delinquency. These questions would focus upon how many students who attend the school receive free or reduced lunches and how many students from the school are from single parent families. Similarly a measure from the school administrators asking whether there were

physical conflicts or problems with crime or violence at their school may also be useful in teasing out the effects school climate may have on delinquency.

Policy Implications

These findings have important implications for school policies in regards to delinquency. Students who are more likely to have positive outcomes throughout life are those who attend schools with experienced full-time teachers and less stringent disciplinary actions taken against their students. Public, parochial and vocational/alternative schools should aim to provide a safe communal environment conducive to learning and socializing.

As this analysis has indicated, it is imperative for schools to focus their resources on employing and keeping employed full time teachers with five years or more experience. Teachers who have more experience help students to bond more strongly to them and the school, which in turn, allows the teachers to know more about their students and how to interact with them effectively. Additional teacher training about the proper way to interact and discipline students, especially those with behavioral issues, should also be undertaken. Furthermore, schools should re-evaluate their disciplinary policies in regards to zero tolerance and the toll it has taken on many young lives, as zero tolerance is mirroring the rising rates of prison inmates. So many youth are being unduly labeled delinquent for minor infractions. Such labeling makes them miss class time, which leads to poorer academic achievement, and may result in high school failure—a known correlate of future criminal involvement. Thus, schools should try to include more individually based approaches and strategies including counseling and negotiated discipline, wherein the parties involved in the incident are brought in together to discuss the matter and come to a reasonable appropriate punishment, befitting the circumstance and the individual actor's part.

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APPENDIX A

Variable	*Definition*	*Calculation*
Dependent Variables		
Non-Violent Delinquency	Scale comprised of nine items from the Wave 2 (W2) In-Home questionnaire asking the adolescent how often in the past 12months he or she: paint graffiti or signs on someone else's property or in a public place; deliberately damage property that didn't belong to you; 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; sell marijuana or other drugs; steal something worth less than $50 (α .75)	Each item is coded 1 if the respondent engaged in the activity and 0 if not. Items are then summed to create a scale from 0 to 9
Violent Delinquency	Scale comprised of five items from the Wave 2 (W2) In-Home questionnaire asking the adolescent how often in the past 12 months he or she: got into a serious physical fight; used a weapon in a fight; hurt someone badly enough to need bandages or care from a doctor or nurse; pulled a knife or gun on someone; shot or stabbed someone (α .67)	Each item is coded 1 if the respondent engaged in the activity and 0 if not. Items are then summed to create a scale from 0 to 6
Independent Variables		
School Types		
Public	Dummy variable created from the Wave 1 (W1) School Administrative questionnaire asking whether or school is a: comprehensive public school (not including magnet school or school of choice); public magnet school (e.g., whole school, magnet program, school within a school); public school of choice (open enrollment/non-specialized curriculum).	Each item is coded as a 1 if the response adequately represented the school and 0 if not.

Variable	*Definition*	*Calculation*
Parochial	Dummy variable created from the Wave 1 (W1) School Administrative questionnaire asking whether or school is affiliated with a: Catholic diocesan; Catholic parish; Catholic religious order; other private religious affiliation.	Each item is coded as a 1 if the response adequately represented the school and 0 if not.
Private	Dummy variable created from the Wave 1 (W1) School Administrative questionnaire asking whether or school is a: year-round school; private school, no religious affiliation; boarding school.	Each item is coded as a 1 if the response adequately represented the school and 0 if not.
Vocational/Alternative	Dummy variable created from the Wave 1 (W1) School Administrative questionnaire asking whether or school is an: area vocational school; other technical or vocational school; alternative, stay-in-school, dropout prevention school.	Each item is coded as a 1 if the response adequately represented the school and 0 if not.
School Level Variables		
Dress Code	Dummy variable created from the Wave 1 (W1) School Administrative questionnaire asking if: students must obey a dress code—7th grade; students must obey a dress code—8th grade; students must obey a dress code—9th grade; students must obey a dress code—10th grade; students must obey a dress code—11th grade; students must obey a dress code—12th grade.	Each item is coded as a 1 if the response adequately represented the school and 0 if not.
Average Class Size	Item from W1 School Administrative questionnaire asking, "What is the average class size in your school (not counting study hall, band, etc.)?"	Ranges from 10 to 39 students
Full-Time Teachers with 5 years +	Item from W1 School Administrative questionnaire asking, "Approximately what percentage of your full-time classroom teachers have worked at your school for 5 years or more?"	Ranges from 0% (no teachers) to 100% (all teachers)

Variable	*Definition*	*Calculation*
Family Involvement in PTO	Item from W1 School Administrative questionnaire asking, "Considering all of the children in your school approximately what percentage have family members in the parent-teacher organization or other organization of parents?"	Ranges from 1 (percent) to 100 (percent)
Discipline	Index measure comprised of twelve items from W1 School Administrative questionnaire asking what punishments are deemed as protocol for students who violate the following rules and regulations for the first offense: cheating; fighting with another student; injuring another student; possessing alcohol; possessing an illegal drug; possessing a weapon; drinking alcohol at school; using illegal drug at school; smoking at school; verbally abusing a teacher; physically injuring a teacher; stealing school property (α .74).	Responses are coded 0 (no policy in place), 1 (verbal warning), 2 (minor action), 3 (in school suspension), 4 (out of school suspension), and 5 (expulsion); summed together and the mean is reported
Social Control Variables		
Attachment to School	Index measure comprised of six items from W1 In-Home questionnaire asking the respondent: "you feel close to people at your school"; "You feel like you are part of your school"; "You are happy to be at your school"; "The teachers at your school treat students fairly"; "You feel safe in your school"; "Students at your school are prejudice" (α .74).	Responses are coded from 1 (strongly disagree) to 5 (strongly agree) except the last item which is reverse coded, summed together and the mean is reported
Attachment to Adults	Index measure comprised of four items from W1 In-Home questionnaire asking the respondent: "How much do you feel that adults care about you"; "how much do you feel that your teachers care about you"; "how much do you feel your parents care about you"; "how much do you feel that people in your family care about you" (α .65).	Responses are coded from 1(not at all) to 5 (very much), summed together and the mean is reported

Variable	*Definition*	*Calculation*
Commitment	Grade point average from the W1 In-Home questionnaire asking about four classes: mathematics, science, history or social studies, and English or language arts (α .74).	Continuous variable ranging from 1 (D or lower) to 4 (A)
Involvement	This measure refers to the number of extra curricular school and community activities as is measured at W1 In-School questionnaire asking adolescents to mark the clubs, organizations and teams to which they belong or plan to belong to for the current school year (α .70).	Continuous variable ranging from 0 (no activities at all) to a maximum of 10.
Religious Importance	This index measure is created from four items from the W1 In-Home questionnaire asking: "In the past 12 months, how often did you attend religious services"; "In the past 12 months, how often do you pray"; "Many churches, synagogues, and other places of worship have special activities for teenagers—such as youth group, Bible classes, or choir. In the past 12 months, how often did you attend such youth activities"; "how important is religion to you?" (α .67).	Responses are coded from 1 (not important at all) to 4 (very important), or from 1 (never) to 4 (once a week or more). Variables are standardized before scale construction and the mean according to school type is reported.
Control Variables		
Age	Item comprised from W1 In-Home questionnaire constructed from birth year and date of the survey completion	A continuous variable ranging from 12 to 18 years of age
Gender	Dummy variable comprised from W1 and Wave 2 (W2) from the In-Home questionnaire asking the interviewer to confirm the respondent's sex as either male or female.	Male is coded as 1 and female is coded as 0
Race/Ethnicity: White, Black, Hispanic, & Other	Dummy variables created from W1 In-Home questionnaire indicating whether the respondent is White, Black or African American, Hispanic or Latino, or Asian or Pacific Islander or American Indian/Native American.	Coded 1 if the respondent is a member of the race/ethnic category, 0 otherwise. Non-Hispanic white is the reference category in this analysis

Variable	*Definition*	*Calculation*
Family SES	Scale from W1 Parent Questionnaire averaging the respondent's parents' educational and occupational statuses. Two separate five-category scales were created combining their educational and occupation.	Continuous variable ranging from 1 (parent not in the labor force or never went to school) to 10 (parent has a graduate or professional degree and has a professional job)
Prior Non-Violent Delinquency	Scale comprised of nine items from the W1 In-Home questionnaire asking the adolescent how often in the past 12months he or she: paint graffiti or signs on someone else's property or in a public place; deliberately damage property that didn't belong to you; 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; sell marijuana or other drugs; steal something worth less than $50 (α .79)	Each item is coded 1 if the respondent engaged in the activity and 0 if not. Items are then summed to create a scale from 0 to 9
Prior Violent Delinquency	Scale comprised of five items from the W1 In-Home questionnaire asking the adolescent how often in the past 12 months he or she: got into a serious physical fight; used a weapon in a fight; hurt someone badly enough to need bandages or care from a doctor or nurse; pulled a knife or gun on someone; shot or stabbed someone (α .74)	Each item is coded 1 if the respondent engaged in the activity and 0 if not. Items are then summed to create a scale from 0 to 6

APPENDIX B

Figure 1: Path Diagram of the theoretical framework

Table 1. SAMPLE DESCRIPTION: UNWEIGHTED MEANS & STANDARD DEVIATIONS BY SCHOOL TYPE

	School Type				
Variable	**Pooled**	**Public**	**Private**	**Parochial**	**Other**
Current Adolescent Delinquency					
Non-Violent Delinquency	.80	.81[b, d]	.65[a, c]	.89[b, d]	.69[a, c]
	(1.47)	(1.48)	(1.22)	(1.58)	(1.30)
Violent Delinquency	.55	.56[b]	.27[a, c, d]	.54[b]	.51[b]
	(1.06)	(1.06)	(.70)	(1.11)	(1.05)
Prior Adolescent Delinquency					
Non-Violent Delinquency	1.08	1.09[b]	.91[a, c]	1.15[b, d]	.97[c]
	(1.64)	(1.64)	(1.43)	(1.81)	(1.58)
Violent Delinquency	.87	.89[b, c]	.47[a, c, d]	.77[a, b]	.70 [b]
	(1.27)	(1.29)	(.90)	(1.19)	(1.15)
Controls					
Male	.51	.51[b]	.45[a]	.50	.48
	(.50)	(.50)	(.50)	(.50)	(.50)
Age	16.25	16.23[d]	16.27[d]	16.13[d]	16.83[a, b, c]
	(1.61)	(1.62)	(1.41)	(1.49)	(1.39)
Hispanic	.16	.16[b, c, d]	.04[a, c, d]	.09[a, b, d]	.24[a, b, c]
	(.37)	(.37)	(.18)	(.29)	(.43)
White	.53	.52[b, c]	.61[a]	.67[a, d]	.55[c]
	(.50)	(.50)	(.49)	(.47)	(.50)
Black	.20	.21[b, c, d]	.15[a]	.16[a]	.14[a]
	(.40)	(.40)	(.36)	(.37)	(.35)
Other^	.11	.11[b, c, d]	.19[a, c, d]	.07[a, b]	.06[a, b]
	(.31)	(.31)	(.40)	(.26)	(.23)
Family S.E.S	5.44	5.30[b, c]	8.60[a, d]	6.68[a, d]	5.41[b, c]
	(2.61)	(2.56)	(1.91)	(2.32)	(2.72)
School Level					
Dress Codes	.86	.87[b, c, d]	1[a, d]	1[a, d]	.72[a, b, c]
	(.34)	(.34)	(0)	(0)	(.45)
Ave. Class Size	26.46	27.25[b, c, d]	15.04 [a, c, d]	21.18 [a, b, d]	23.76 [a, b, c]
	(5.71)	(5.38)	(2.45)	(5.44)	(3.87)
% Of Teachers w/	65.28	65.64 [b, c, d]	83.04 [a, c, d]	45.41 [a, b, d]	69.74 [a, b, c]
5 or More yrs.	(20.60)	(19.97)	(2.45)	(23.74)	(19.39)
Fam. PTO Member	22.99	21.23[b, c, d]	41.03[a, d]	44.39[a, d]	24.49[a, b, c]
	(20.68)	(19.88)	(29.85)	(24.67)	(11.05)
Discipline	3.82	3.83 [b, c, d]	3.33 [a, c, d]	4.09 [a, b, d]	3.76 [a, b, c]
	(.33)	(.33)	(.10)	(.17)	(.27)
Social Control					
Attach to School	3.57	3.55[b, c, d]	3.81[a, d]	3.76[a, d]	3.62[a, b, c]
	(.61)	(.61)	(.52)	(.61)	(.60)
Attach to Adults	4.07	4.06[b, c]	4.18[a, d]	4.21[a, d]	4.06[b, c]
	(.60)	(.60)	(.50)	(.58)	(.63)
Commitment	2.72	2.68[b, c, d]	3.10[a, d]	3.10[a, d]	2.85[a, b, c]
GPA	(.79)	(.80)	(.57)	(.68)	(.70)
Involvement	1.65	1.58[b, c]	3.63[a, c, d]	2.48[a, b, d]	1.46[b, c]
	(2.08)	(2.05)	(2.26)	(2.33)	(1.92)
Religious Importance	.002	-.004[b, c]	-.35[a, c, d]	.31[a, b, d]	-.04[b, c]
	(.66)	(.66)	(.69)	(.55)	(.69)
N =	**12,741**	**10,973**	**257**	**619**	**892**

^Other race includes Asian, Pacific Islander, American Indian and Eskimo
(Standard Deviations) are reported within the brackets
a = significantly different from public
b = significantly different from private
c = significantly different from parochial
d = significantly different from other school types

Table 2 Non-Violent Delinquent Outcomes Across School Types

Regressor	Model 1	Model 2	Model 3	Model 4
Intercept	-1.113	-0.445	0.426	1.496
	(.116)	(.208)	(.298)	(.339)
School Type				
Public	0.167	0.211	0.257*	0.279*
	(.116)	(.118)	(.127)	(.127)
Parochial	0.141	0.153	0.202	0.296*
	(.135)	(.135)	(.144)	(.144)
Vocational/Alternative	0.077	0.145	0.247	0.294*
	(.130)	(.132)	(.137)	(.138)
Prior Delinquency				
Non-Violent	0.388***	0.385***	0.385***	0.365***
	(.010)	(.010)	(.010)	(.010)
Violent	0.062***	0.055***	0.060***	0.046**
	(.013)	(.014)	(.014)	(.014)
Controls				
Male		0.137***	0.151***	0.149***
		(.032)	(.032)	(.032)
Age		-0.056***	-0.068***	-0.087***
		(.010)	(.010)	(.012)
African American		-0.056	-0.078	-0.024
		(.042)	(.044)	(.044)
Hispanic		0.153**	0.106*	0.122*
		(.044)	(.048)	(.048)
Other^		0.049	0.060	0.075
		(.052)	(.053)	(.053)
Family S.E.S.		0.020**	0.019**	0.025***
		(.006)	(.006)	(.007)
School Level Variables				
Dress Code			0.279***	0.295***
			(.049)	(.049)
Average Class Size			-0.005	-0.004
			(.003)	(.003)
Full-Time Teachers 5yrs. Experience			-0.003***	-0.003***
			(.001)	(.001)
Family Members in PTO			-0.004***	-0.003***
			(.001)	(.001)
Discipline			-0.146**	-0.134**
			(.050)	(.050)
Social Control Variables				
Attachment to School				-0.031
				(.028)
Attachment to Adults				-0.218***
				(.028)
Commitment/GPA				-0.052*
				(.022)
Involvement				0.008
				(.008)
Religious Importance				-0.140***
				(.024)
X^2	2203.04***	2273.07***	2347.68***	2464.23***

* P < 0.05 **P < 0.01 ***P < 0.001

Other^ race includes Asian, Pacific Islander, American Indian and Eskimo

Table 3 Violent Delinquent Outcomes Across School Types

Regressor	Model 1	Model 2	Model 3	Model 4
Intercept	-1.871	-1.548	-1.081	0.222
	(.142)	(.225)	(.315)	(.354)
School Type				
Public	0.437**	0.365*	0.429**	0.455**
	(.143)	(.145)	(.153)	(.154)
Parochial	0.461**	0.425**	0.473**	0.579**
	(.160)	(.161)	(.169)	(.169)
Vocational/Alternative	0.452**	0.393*	0.492**	0.554**
	(.155)	(.157)	(.162)	(.163)
Prior Delinquency				
Non-Violent	0.089***	0.093***	0.089***	0.071***
	(.010)	(.010)	(.010)	(.010)
Violent	0.497***	0.451***	0.464***	0.439***
	(.013)	(.013)	(.013)	(.013)
Controls				
Male		0.433***	0.458***	0.433***
		(.034)	(.034)	(.034)
Age		-0.028**	-0.042***	-0.059***
		(.010)	(.011)	(.011)
African American		0.280***	0.243***	0.280***
		(.041)	(.043)	(.043)
Hispanic		0.243***	0.205***	0.217***
		(.045)	(.049)	(.049)
Other^		0.154**	0.169**	0.202***
		(.054)	(.057)	(.057)
Family S.E.S.		-0.022**	-0.025***	-0.012
		(.007)	(.007)	(.007)
School Level Variables				
Dress Code			0.325***	0.371***
			(.051)	(.052)
Average Class Size			-0.006	-0.007*
			(.003)	(.003)
Full-Time Teachers 5yrs. Experience			-0.001	-0.002
			(.001)	(.001)
Family Members in PTO			-0.003**	-0.003**
			(.001)	(.001)
Discipline			-0.075	-0.083
			(.052)	(.052)
Social Control Variables				
Attachment to School				-0.019
				(.029)
Attachment to Adults				-0.171***
				(.028)
Commitment/GPA				-0.158***
				(.023)
Involvement				-0.002
				(.008)
Religious Importance				-0.100***
				(.025)
X^2	2523.92***	2746.54***	2811.39***	2937.49***

* P < 0.05 **P < 0.01 ***P < 0.001

Other^ race includes Asian, Pacific Islander, American Indian and Eskimo

	Private	Public	Parochial	Other Sch	NV Delw1	Viodelw1	NV Delw2	Viodelw2	Male	Age	Black	Hispanic	Other Ethn	Family SES	Dress Code	Ave C S	FT5yr	PTO	Discipline	A to S	A to A	GPA	Involve	Relig Impor
Private	1.000																							
Public	-0.357	1.000																						
	0.000																							
Parochial	-0.032	-0.563	1.000																					
	0.000	0.000																						
Other Sch	-0.039	-0.684	-0.062	1.000																				
	0.000	0.000	0.000																					
Nonviodelw1	-0.015	0.015	0.010	-0.020	1.000																			
	0.093	0.093	0.284	0.024																				
Viodelw1	-0.044	0.055	-0.017	-0.035	0.511	1.000																		
	0.000	0.000	0.050	0.000	0.000																			
Nonviodelw2	-0.015	0.013	0.014	-0.021	0.506	0.275	1.000																	
	0.087	0.138	0.117	0.017	0.000	0.000																		
Viodelw2	-0.037	0.024	-0.002	-0.011	0.339	0.500	0.454	1.000																
	0.000	0.007	0.854	0.237	0.000	0.000	0.000																	
Male	-0.017	0.019	-0.001	-0.015	0.123	0.231	0.085	0.185	1.000															
	0.053	0.033	0.873	0.090	0.000	0.000	0.000	0.000																
Age	0.001	-0.062	-0.017	0.098	0.037	-0.033	-0.024	-0.006	0.010	1.000														
	0.884	0.000	0.051	0.000	0.000	0.000	0.006	0.511	0.274															
Black	-0.017	0.048	-0.022	-0.038	-0.052	0.059	-0.042	0.045	-0.042	-0.008	1.000													
	0.057	0.000	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.362														
Hispanic	-0.049	0.000	-0.042	0.063	0.065	0.038	0.052	0.060	-0.011	0.111	-0.216	1.000												
	0.000	0.977	0.000	0.000	0.000	0.000	0.000	0.000	0.234	0.000	0.000													
Other Ethn	0.041	0.031	-0.024	-0.044	0.038	-0.014	0.025	0.002	0.001	0.057	-0.172	-0.150	1.000											
	0.000	0.001	0.008	0.000	0.000	0.121	0.005	0.800	0.920	0.000	0.000	0.000												
Family SES	0.174	-0.135	0.108	-0.004	-0.011	-0.123	0.018	-0.072	-0.006	-0.016	0.024	-0.198	0.083	1.000										
	0.000	0.000	0.000	0.688	0.226	0.000	0.043	0.000	0.523	0.076	0.008	0.000	0.000											
Dress Code	0.057	0.008	0.090	-0.117	-0.018	-0.081	0.033	0.014	-0.100	0.115	0.140	0.068	-0.048	0.061	1.000									
	0.000	0.383	0.000	0.000	0.041	0.000	0.000	0.120	0.000	0.000	0.000	0.000	0.000	0.000										
Ave Class Size	-0.287	0.343	-0.209	-0.130	0.055	0.047	0.032	0.046	0.006	0.119	0.081	0.269	0.156	-0.042	0.062	1.000								
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.481	0.000	0.000	0.000	0.000	0.000	0.000									
FTteach5yr	0.124	0.042	-0.218	0.059	-0.010	0.039	-0.037	-0.010	0.063	-0.015	-0.088	-0.062	-0.118	-0.052	-0.244	-0.187	1.000							
	0.000	0.000	0.000	0.000	0.278	0.000	0.000	0.275	0.000	0.083	0.000	0.000	0.000	0.000	0.000									
PTO	0.125	-0.211	0.234	0.020	-0.029	0.006	-0.029	-0.024	0.029	-0.220	0.006	-0.139	0.010	0.084	-0.055	-0.254	0.000	1.000						
	0.000	0.000	0.000	0.025	0.001	0.472	0.001	0.007	0.001	0.000	0.535	0.000	0.253	0.000	0.000	0.000	0.977							
Discipline	-0.215	0.014	0.182	-0.053	-0.010	0.060	-0.023	0.020	0.026	-0.066	0.135	-0.167	0.036	-0.055	-0.018	0.052	-0.124	0.033	1.000					
	0.000	0.125	0.000	0.000	0.284	0.000	0.011	0.022	0.004	0.000	0.000	0.000	0.000	0.000	0.042	0.000	0.000	0.000						
Attach to School	0.057	-0.081	0.069	0.020	-0.173	-0.201	-0.090	-0.121	-0.029	-0.005	-0.076	-0.007	-0.005	0.111	0.118	-0.075	-0.036	0.013	-0.056	1.000				
	0.000	0.000	0.000	0.023	0.000	0.000	0.000	0.000	0.010	0.573	0.000	0.418	0.581	0.000	0.000	0.000	0.000	0.139	0.000					
Attach to Adults	0.027	-0.039	0.052	-0.006	-0.260	-0.187	-0.177	-0.153	-0.023	-0.120	0.044	-0.009	-0.027	0.058	0.035	0.038	-0.024	0.060	-0.017	0.369	1.000			
	0.002	0.000	0.000	0.510	0.000	0.000	0.000	0.000	0.009	0.000	0.000	0.288	0.002	0.000	0.000	0.000	0.007	0.000	0.062	0.000				
GPA	0.068	-0.128	0.108	0.045	-0.201	-0.313	-0.101	-0.201	-0.187	-0.066	-0.057	-0.094	0.078	0.278	0.127	-0.106	-0.085	0.080	-0.054	0.274	0.187	1.000		
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000			
Involvement	0.136	-0.092	0.090	-0.026	-0.047	-0.093	-0.012	-0.064	-0.099	-0.070	0.021	-0.102	0.029	0.213	0.077	-0.134	-0.046	0.098	-0.044	0.176	0.102	0.270	1.000	
	0.000	0.000	0.000	0.003	0.000	0.000	0.178	0.000	0.000	0.000	0.018	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
Religious Importa	-0.076	-0.023	0.106	-0.016	-0.138	-0.086	-0.102	-0.077	-0.047	-0.112	0.156	-0.064	0.008	0.041	0.005	0.027	-0.060	0.083	0.152	0.069	0.153	0.106	0.072	1.000
	0.000	0.009	0.000	0.072	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.388	0.000	0.614	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	