

Research Plan

Psychological Statistics

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Assessing the Relationships between Non-Resident Biological Fathers, Paternal Relationships,  
and Adolescent Delinquency

Introduction

Most researchers tend to agree that the best environment for children to grow up in is a home where both biological parents are present. The presence and support of both parents in the child's home greatly benefits the child's development, and children living in homes with both biological parents tend to exhibit better performance in school, better social adjustment, and better self-esteem (Flouri, 2008). However, in recent decades, the divorce rate has greatly increased and non-marital births have become more common, leading to an increasing number of children living in single-parent households where their biological father is not a resident (Coley & Medeiros, 2007). Research has found that 50% of all children will live in a home without their biological father at some point during adolescence (Booth, Scott, & King, 2010), and 30% of U.S. children are living away from their father in stepfamilies at any given time (Cobb-Clark & Tekin, 2011).

Because of the increasing frequency with which children are living away from their biological father, extensive research has been conducted to determine how children are affected by living away from their father. Most research in the area has suggested that in general, children living away from their biological father are on average more likely to be suspended or expelled

from school, have depression or anxiety, and exhibit delinquent behavior compared to those that do live with their biological father (Carlson, 2006). However, it is not well understood why children living away from their biological father experience these difficulties.

Some studies suggest that children exhibit this behavior in response to decreased direct social controls, which include things such as supervision of the children and placing restrictions on them (Demuth & Brown, 2004). Living in a separate household from the children makes it more difficult for the father to keep up with his children's activities and help with their supervision. In addition to that, nonresident fathers are less likely to exert authority and set limits (Booth et al., 2010). It is possible that the children living away from their biological father perform more delinquent activities simply because their parents are less able to effectively supervise them and help keep them out of trouble (Demuth & Brown, 2004).

However, other studies suggest that children exhibit more delinquent behavior in response to decreases in indirect social controls such as how close the children feel to their father. Just like living in a home away from the children makes it more difficult for a father to help supervise his children, it also makes it more difficult for him to be involved in their lives and maintain a strong relationship with them (Demuth & Brown, 2004). It has been found that children are less likely to exhibit delinquent behavior if their nonresident biological father stays involved in their lives and actively maintains a relationship with them. (Coley & Medeiros, 2007). Being present and maintaining a good father-child relationship improves the father's ability to communicate with his children, as well as makes it easier for him to supervise them (King and Sobolewski, 2006). It is critical to note that it appears that quality is far more important than quantity when it comes to a nonresident father spending time with his children. It is better for children to be able to spend a small amount of quality time with their father where

they can feel close to him rather than for them to spend a lot of time with him and feel like he's distant (King and Sobolewski, 2006). Also, poor quality time with a nonresident father can be very harmful to children. If there is conflict between the children's mother and nonresident father when they're with him, they are more likely to exhibit delinquent behavior than those who simply don't spend time with him at all (Spruijt, Goede, & Vandervalk, 2004).

The purpose of this study is to examine the relationship between adolescent delinquency and having a nonresident biological father, as well as to evaluate the influence of the father-child relationship on that behavior. This study should provide evidence supporting the connection between adolescent delinquency and having a nonresident father, and possibly provide more information to help clarify whether or not maintaining a good father-child relationship can decrease that tendency toward delinquent behavior.

## Methods

### Sample

The sample for this study consists of 6,504 students from the Add Health Database. The sample was taken from the first wave of the National Longitudinal Study of Adolescents. The students in this sample were in grades 7 to 12 during the 1994-1995 school year, and their ages range from 12 to 21. The sample comes from 80 high schools in the United States selected to represent all U.S. schools in terms of country, urbanicity, size, type, and ethnicity. The students in the sample were 57.56% white, 3.74% Asian, 2.08% Native American, 24.35% African American, and 11.42% Hispanic. The sample was 48.39% male and 51.61% female, and 59.46% of the sample was between the ages of 15 and 17. For the purpose of this study, 17.88% of the sample reported having a non-resident biological father, while 82.12% reported that their biological father was a resident of their home.

## Measures

The data for this study was collected via a self-administered in-home survey. The questions in the survey covered a variety of different areas ranging from simple demographic questions about things such as age, biological sex, grade level, and ethnicity to more complex social questions about things like household structure, academics and education, friends, health, delinquent activity, romantic relationships, and self-esteem. Of particular importance to this study is the delinquency scale, where the participants describe their different delinquent activities and the frequency with which those activities occur. The survey also contains a long, detailed section where the participant is asked to describe their household roster and their relationship to each member of the home. There is also a section directly addressing participants who have a non-resident biological father. The questions in that section address whether or not the participants ever lived with their biological father, as well as their current relationship with him

For the purpose of this study, several variables were manipulated to more directly address the questions being asked. To determine the residency status of the participant's father, each variable concerning household roster was examined and broken down to find responses indicating that the participant's biological father is not a resident in their home. Those responses were then compiled into a single variable showing the number of participants with resident and non-resident biological fathers. The delinquency variables examined how often participants exhibited behaviors like destruction of property, lying to parents, stealing, and fighting. However, very few participants reported actually participating in those activities, so instead of viewing the frequency with which participants performed each different delinquent activity, the responses to each variable were grouped as either "yes" or "no," and the participants were then grouped based on how many of the different delinquent behaviors they had exhibited in the

previous year. In order to examine the participants' relationship with their nonresident biological father, questions were asked regarding how often they communicate with him, how close they feel to him, and how satisfied they are with their relationship with him.

### Implications

This study examines the relationship between having a nonresident biological father and delinquent behavior in children, as well as whether or not the father-child relationship can help prevent delinquent behavior in that situation. As an increasing number of adolescents are living in homes away from their father, it is important that people understand the relationship between that living situation and the increased likelihood that children will participate in delinquent behavior. The choice to participate in delinquent behavior by adolescents resulted in 2.11 million arrests in 2008, and the CDC reported that violence was the second leading cause of death for adolescents in 2010 (Cobb-Clark & Tekin, 2011). If the results of this study show a relationship between adolescent delinquency and having a nonresident father, and that maintaining a good father-child relationship can help prevent that behavior, maybe parents would be able to use that information to help keep their children out of trouble. Perhaps fathers that live away from their children could make an extra effort to be a part of their lives, and perhaps mothers would be more willing to work with ex-husbands for the good of their children. The information could also help society see that children with a nonresident biological father may need some extra guidance, and judges in divorce courts could use the information to make better provisions for children of divorce.

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Psychological Statistics

Professor Woods

Research Plan

The Association Between Sports Involvement and Academic Achievement in Adolescents

## **Introduction**

Lumpkin and Favor discuss that in 1978, a poll of attitudes toward public schools stated 45 percent of the people felt extracurricular activities had a significant part in schools (2012). In following years, that percentage declined to 31 percent in the year of 1984, jumped back up to 39 percent in 1985, and then took a major leap up to 63 percent in 1997 (Lumpkin and Favor, 2012). This dramatic spurt was a result of much more studies being done, and an ending result of finding a positive association between the participation in extracurricular activities and academic achievements (Lumpkin and Favor, 2012). If one were to select a handful of people and ask if he or she participated in sports in high school, one would probably say yes. Sports involvement is the most well known school-sponsored activity despite sex and ethnicity (Miller, Melnick, Barnes, Farrell, and Sabo, 2005). Even though not all have played sports, being apart of any school-sponsored activity is seen to be beneficial to academic outcomes rather than other activities outside of school (Dumais, 2009). There have been studies shown to prove this false, but there have not been enough in comparison to positive results. In fact, according to Trudeau and Shephard, studies that did not find a large positive relationship, did not find a negative one in return (2008). Critics of this positive relationship say that participating in sports is a distraction, and time and effort spent to having success on the field is time lost to having success in the classroom (Eitle, 2005). It has been found that not only does sports involvement associate with



better grades, but it helps with popularity, self-esteem, and confidence as well. An adolescent involved in sports is more involved with the school, which in return leads to more friends and a better social life. Being engaged with sports is not only beneficial for academics, but it's positively related to all aspects for an adolescent. There are questions to be further examined regarding sports involvement and academics; such as does it differ among sex and ethnicity? Also, does physical activity have the same benefits as sports?

### **Literature Review**

Before Title IX, women were discriminated against in the sports world. Sports were for men not women. In 1972, Title IX was passed to allow equal opportunity for both sexes to participate in sports. "The year before Title IX was passed, only 8% of girls played school sports" (Glennie and Stearns, 2012, p. 532). Presently, an abundant amount of girls now play sports with 49 percent, but still not as much as boys do with 61 percent (Glennie and Stearns, 2012). According to Pearson, Crissey, and Riegle-Crumb, girls have less of an interest in masculine-oriented classes such as math and science and are not as likely to attain these types of degrees going in to college; in addition boys are less likely to take a foreign language class (2009). In a study done by Pearson et al. (2009), results showed both boys and girls involved in sports are more likely to take those classes, and this is beneficial for both boys and girls. It seems to be more of a benefit for girls in regards to competition and self-confidence in taking masculine-dominated courses. As a whole, boys are more involved in sports than girls are.

Another question being looked at is if academic achievement and involvement in sports differ among different ethnic groups with also taking sex into account. In general, with taking all races into account, it has been found that positive academic outcomes along with sports involvement is seen more with white adolescents (Pearson et al., 2009). Previous studies have

varied of which ethnic group is more involved with sports because one found that whites are more likely, one found that African Americans are more likely, and one even found that there was no significant difference among races (Glennie and Stearns, 2012). Some researchers believe there are certain aspects that affect sport involvement among races such as: socioeconomic status, location of school, and racial composition (Glennie and Stearns, 2012). These meaning that lower social classes are less likely to participate, those at a school in a rural area are more likely than those in an urban setting, and if minorities are predominant the more likely those will participate in sports (Glennie and Stearns, 2012). All of these were studied to be true except for one, which is the most shocking. Among schools that are predominantly African American, for both boys and girls all sports participation drops, but the participation rate for African Americans drop at a faster rate than whites (Glennie and Stearns, 2012). Therefore, it is concluded that African Americans maybe play into the stereotypical role of being an athlete at a school where they are in the minority, where as if they are in the majority, they feel less pressure to participate in sports (Glennie and Stearns, 2012). In the findings of Glennie and Stearns, boys and girls have different participation models by ethnicity; African American boys are more probable than white boys to participate in sports and white girls are more probable than African American girls to participate in sports (2009). African Americans' participation in sports is reduced because on average they have a lower socioeconomic status and their academic achievements are lower than whites, yet when these concepts are controlled, African American girls are more likely to participate in sports than white girls (Glennie and Stearns, 2012). Regardless of concepts being controlled, African American boys are always more likely to play sports than white boys (Glennie and Stearns, 2012).

On a statistical level in a study done by Lumpkin and Favor (2012), all ethnicities, such as White, Hispanic/Latino, Black/ African American, Asian, American Indian, Multi-Racial, and Unknown, showed greater percentages in having a 3.0 GPA or above or a 3.5 GPA or above among athletes than those of non-athletes with the exception of Black/African American having a lower percentage of 3.5 GPA or above than the non-athletes percentage and also the same case with Unknown. In this same study, it was also found among all ethnicities, graduation rates were significantly higher for athletes than non-athletes, and with this finding, it is concluded that high-school sports may be beneficial to help give minorities opportunities to graduate (Lumpkin and Favor, 2012).

Another aspect to consider is that those who engage in some form of physical activity that's not categorized as a sport. Physical activity includes walking, jogging, biking, hiking, working out, swimming, running, etc., casually as opposed to as a competitive sport. In multiple studies, it has been found that adolescents, who engage in more hours of physical activity or also engage in more extreme physical activity, hold better academic achievements than those who are not physically active (Fox, Barr-Anderson, Neumark-Sztainer, and Wall, 2010). In recent research, it has also been found that physical activity can even have a definite influence on learning and memory (Trudeau and Shephard, 2008). Along with some positive attributes that sports involvement helps obtain, physical activity of any kind also helps with better self-esteem or self-image and even body image (Trudeau and Shephard, 2008). When talking about physical activity and sports involvement, sports involvement has to do with the school in which the adolescent is playing for and receiving his or her education from. Therefore, that adolescent being involved in sports then results in being more attached to the school, which then results in higher academic achievement; whereas with physical activity, it is looked at as being physically

active benefits you greatly rather than watching TV or playing video games. The more a child or adolescent watches TV, the more the weakening of academic achievements (Trudeau and Shephard, 2008).

As talked about above, the following study will be examining sport involvement and physical activity and academic achievement. It will also be taken further and examined by different sexes and different ethnicities. Differences in ethnicity and GPA contemplated, as also will differences in sex and GPA. Overall, the goal is to see the differences in adolescents who participate in sports or physical activities or don't participate among different ethnicities and sex and also their GPA's as a result, and to be able to make decisions based on those differences or no differences.

## **Method**

### **Sample**

The participants are from the first wave of the National Longitudinal Study of Adolescent Health or the AddHealth Database. This included a representative sample from eighty high schools with adolescents ranged from 12 to 21. Respect was given to the eighty high schools in region of country, urbanity, size, type, ethnicity, and age. These adolescents were from grade 7 to grade 12 during the 1994-1995 year. The majority of the sample ranged from grade 9 to 11. This sample incorporated 6,504 participants, 52% female and 48.5% male. For the majority in regards to ethnicity, Whites (57%) and African Americans (22.5%) make up over half the sample. An important percentage needed is the percentage of participation in a sport and the percentage of participation in physical activity that occurred at least once or more the past week. For sports, it was 70.65% who had participated and 29.36% who hadn't at all, and for physical activity, it was 83.51% who had participated and 16.5% who hadn't at all.

## Measures

A self-administered In-Home Questionnaire was used to assess areas of interest. This questionnaire included topics such as: social and demographic information, self-esteem, daily activities, academics and education, parental relationships, friendships, and expectations, income, and employment. Of these given topics, variables such as sports involvement, physical activity, grades, GPA, age, grade level, sex, and ethnicity will be examined closer. The questionnaire contains detailed questions including the quantity or frequency of a given topic (“How many times have you played an active sport in the past week?”) and also ratings (“On a scale of 1 to 5 how much do you want to go to college?”).

Variables of the given topics will be measured accordingly. For example, academics will be measured by questions about which letter grade received in certain subjects and also GPA estimates. The GPA is derived from taking the average of letter grades received by the participant in classes such as, English, Mathematics, Science, and History. Also, GPA estimates was managed to only use 1, 2, 3, and 4, instead of number and decimal form; therefore, GPA is coded as 1 if less than 2 and coded as 2 if greater than or equal to 2 but less than 3, and so on. Ethnicity will be coded as following, 1=Multiple Race, 2=Hispanic or Latino, 3=Black or African American, 4=American Indian or Native American, 5=Asian or Pacific Islander, 6=White, and 7=Unknown or Other. Daily activities will be asked in two questions, sports involvement and physical activity, and will be measured by quantity of how many times participated. Sex of participant will be coded as 1 (male) or 2 (female). Grade level is simply measured by choosing the number of the grade the participant is currently in.

## Implications

If this study is proven to be true, then schools can help by encouraging sports involvement and physical activity. It has been said that reasons for inconsistent findings on this topic is because of the fact that the ones who do well in school are the ones who generally choose to play sports (Miller, et al., 2005). If this is the case, then maybe the school, teachers, and/or parents should encourage playing a sport to the adolescent(s) who seem to be struggling academically or personally to see if there is some sort of increase. Sports contribute to high academics in emphasizing hard work and success, the “no pass, no play” rule encourages athletes to keep good grades in order to play, it keeps students intertwined into the school socially, and it promotes self-confidence (Pearson, et al., 2009). These reasons all result and play back to performance in the classroom.

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